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1. Introduction

AGJV Pty Ltd (AGJV) was commissioned by Laing O'Rourke (LOR) to provide contamination and waste classification advice for the detailed design of Sydney Metro Central Station Main (CSM) works project. The primary aim of the AGJV contamination advice is to identify key risks to human health and the environment associated with soil and groundwater and support durability assessments that will inform:

- Construction procedures, protocols and management measures.
- Design of the project.

To facilitate early stages of the CSM project AGJV has been requested by LOR to undertake a review of the current contamination investigations to provide an initial understanding of the soil and groundwater contamination status and the associated risks and waste management requirements. This report summarises the information presented in the previous investigations.

Additional characterisation works are proposed to increase sampling density at the site in order to meet sampling density requirements outlined in the scope of work and tender criteria (SWTC) and to confirm the reliability of the data collected. These works will be presented in subsequent revisions to this summary report or as stand-alone reports.

LOR has identified three separate project work areas for the CSM project, these include:

- The Metro Station Box works
- The Central Walk East
- The Sydney Yard project access area

These areas have generally been assessed separately within this document.

The approximate boundaries of the CSM project areas are presented in **Figure 1, Appendix A.**

1.1 Objectives

The objectives of this assessment is to:

- Summarise the potential impacts of soil contamination within the station platforms on the proposed construction and eventual development of the Metro Station Box and the Central Walk East.
- Summarise the contamination status of soils within the proposed excavation areas with regard to commercial / industrial land use.
- Provide an in-situ waste classification based on the existing data.
- Provide preliminary input for the management and remediation of identified contamination during construction and the detailed design of CSM metro infrastructure.

1.2 Purpose of this report

The purpose of this report is to provide a summation of existing reports in order to meet the objectives outlined above.

1.3 Scope of work

A detailed review of available information and data sources was undertaken to identify relevant property details and potentially contaminating sources and activities and the below reports were identified to contain relevant contamination information and data for CSM project area:

- GHD (2017a) Sydney Metro City and Southwest, Central Station – Contamination Assessment
- Golder-Douglas (2017a) Contamination Assessment Report – Central Station Works, dated 24 July 2017
- Golder-Douglas (2017b) Targeted Environmental Site Assessment – Central Station Gasworks Site, dated 24 July 2017
- Golder-Douglas (2017c) Sydney Metro - Central Station Gasworks – Slit Trenching Soil Sampling, dated 21 September 2017
- Golder-Douglas (2016) Contamination Assessment Report – Sydney Yard Access Bridge (SYAB), dated 30 September 2016

Contamination data provided in existing reports has been re-tabulated to allow holistic re-assessment of the soil and groundwater against adopted human health, ecological and waste classification criteria.

This report has subsequently been developed to summarise the findings of the document review and re-assessment of the existing data set. Conclusions and recommendations have been made, based on the existing available data, with regard to the potential human health and ecological risks during construction and design of the CSM project, which are presented in this report. Please note that no intrusive sampling was undertaken as part of this desktop based contamination assessment. Additional sampling and characterisation for waste classification will be completed as part of the future stages of works.

2 Site setting

2.1 Site identification

A summary of the station identification details is included in **Table 2-1**. The investigation locations are presented in **Figure 1, Appendix A**.

Table 2-1 – Site identification summary

Information	Site Details
Street Address	Central Station, Chippendale
Lot and DP number	Lot 118, DP1078271
Investigation area (m^2)	MBW – 9,000 m^2 CWE – 1,500 m^2 SYPAA – 8,000 m^2
Local Government Area	City of Sydney Council
Local Land Use Zoning	SP2 – Infrastructure: Railway under the Sydney Local Environmental Plan 2012.
Current land use	Railway station
Proposed land use	Railway and metro station

The current surrounding land uses include:

- North – Belmore Park followed by Sydney CBD consisting of high density mixed use commercial and residential properties.
- East – Commercial and industrial properties, followed by medium to high density residential properties.
- South – Railway yard followed by Prince Alfred Park and medium density residential properties.
- West – Mixed commercial and high density residential properties.

2.2 Site history

The AGJV conducted a review of the available relevant reports for CSM project area outlines in **Section 1.3** to obtain the previous land use and activities of the site and surrounding area, which may have contributed to potential contamination at the site.

In general, the investigation area has been used for railway activities (i.e. station platforms and railway corridors) for over 140 years (since prior to 1878). The surrounding areas have been used for mixed commercial, industrial (i.e. ex-railway gasworks) and residential. A tunnel and a station box were built for eastern suburban trains in 1979 known as platforms 24 and 25.

The Golder Associates / Douglas Partners (2017b) report made reference to a Site History of Ex-Railway associated gasworks at Sydney Yard by Rail Services Australia (RSA) in 2000. Three gasworks were identified within this report and were reported to have been in operation between 1878 and 1905.

These three former gasworks are referred to as Gasworks 1 (to the west of Gasworks 2), Gasworks 2 (immediately southwest of Platforms 14 and 15) and Gasworks 3 (located approximately 150 m south west of Gasworks 2). Given the date the former gasworks were in operation and subsequent development of the Central Station precinct since, the locations of the former gasworks infrastructure are not well understood and the locations currently considered are relatively uncertain. The probable locations of the gasworks are presented in **Figure 1, Appendix A**.

Gasworks 2 appears to be the only former gasworks site to have been investigated to date from a contaminated land perspective. This location is directly above the southern end of the proposed Metro Station Box. A summary of the review of the historical site use, is provided in **Table 2** below.

Table 2-2 – Site history summary

Information	Details
Current Land Use	Railway station
History of site land use	As a railway station from 1855 Gas works between 1878 and 1905 .
History of surrounding land use	Commercial, residential, industrial. Commercial context since 1930's. Gasworks between 1878 and 1905.

*. https://gallery.records.nsw.gov.au/index.php/galleries/through-the-lens-central-railway-station/

2.3 Potential Sources of Impact

Based on historical and current site activities the potential source of impact have been identified:

- Onsite activities associated with railway use, which includes fill beneath platforms and ballast as fill along the rail lines.
- Historical gas works activities in the close proximity of Central Station south of the Central Station platforms.
- Leaks and spills from fuel storage and infrastructure from a service station situated on Regent Street.

Soil mapping reports a low probability for acid sulphate soils to be present beneath the site.

2.4 Environmental setting

2.4.1 Topography

The study area is within the lower Parramatta River Catchment, which hosts a sections of harbour coastline including Blackwattle Bay and Cockle Bay, with Sheas Creek and Alexandra Canal draining towards Cooks River in the south.

The project area is situated in the inner suburbs of Sydney and surrounded by suburbs including Darlington, Ultimo, Darlinghurst, Surry Hills, Haymarket and Alexandria.

The topography of the area is characterised by a gentle slope towards Blackwattle Bay and Cockle Bay with local slopes towards former creek lines. To the south of the site the surface slopes towards Cooks River. Ground surface elevations within the project area range from approximately 27 metres above Australian Height Datum (AHD) to the southeast of the site around Surry Hills, to 0 metres AHD (sea level) along the shore of the Parramatta River/Sydney Harbour. The maximum depth in the Parramatta River adjacent to the project boundary is around 20 metres.

According to the *NSW Globe KML Data* from Land and Property Information, the investigation area is located at an elevation of approximately 20 m Australian Height Datum (AHD).

2.4.2 Hydrology

The investigation area is generally flat and sealed so surface water runoff is expected to run off towards surrounding developed drainage systems on or off-site. Natural drainage of surface water in this area has largely been altered due to the presence of the railway infrastructure and surrounding developments.

Surface water flow is expected to follow the local topography on-site and flow north or be intercepted by drainage lines located in the investigation area. The nearest waterway is Cockle Bay and Blackwattle Bay approximately 1,000 m north to northwest.

2.4.3 Soils

2.4.3.1 General

The investigation area is located in the “Blacktown” soil landscape. The Blacktown soil landscape occurs in the Cumberland lowlands between the Georges and Parramatta Rivers in the south-west of Sydney. Its landscape comprises of gently undulating rises on Wianamatta Group shales with local relief to 30 m and no rock outcrop. The underlying geology comprises Ashfield Shale consisting of laminite and dark grey siltstone. It features moderately deep (<100 cm) red and brown podzolic soils on crests, upper slopes and well-drained areas; deep (150-300 cm) yellow podzolic soils and soloths on lower slopes and in areas of poor drainage (OEH, 2016).

2.4.3.2 Acid sulphate soils

NSW Government mapping (Department of Land and Water Conservation (DLWC), 1997) provides information on the probability of the occurrence of acid sulphate soils (ASS) within the investigation area.

Central Station is mapped as no known occurrences of acid sulphate soil materials.

2.4.4 Geology

The study area is located within the Sydney Basin. Lithologies in the study area, from youngest to oldest, comprise:

- Unlithified sediments of varying thickness (usually a few metres but known to reach 10 metres or more) mainly comprising residual soils. Alluvium and/or colluvium also occur in some creek channels and river valleys with a large area of Quaternary dune and alluvial sediment to the southeast.
- Residual soils host disjointed zones of perennial saturation, but alluvial bodies may create more extensive zones
- Basalt dykes, volcanic breccias. These intrusive features are associated with high permeability in the fractured sandstones immediately surrounding the dyke, although the dykes themselves can range from low to high permeability, hence high inflows in other excavations. Geotechnical investigations in the project are have identified 2 dykes running east-southeast, one of which runs through the proposed excavation.
- Ashfield Shale (of the Wianamatta Group), occurring as bodies of limited thickness on higher ground
- Mittagong Formation, consisting of interlayered shale and sandstone forming a thin transition zone between the Ashfield Shale and underlying Hawkesbury Sandstone
- Hawkesbury Sandstone, with a maximum thickness of 290 metres (Pells, 2004).

The 1:100,000 Sydney Basin geology map (NSW Department of Mineral Resources, 1983), indicates the surface geology of the study area primarily consists of Triassic-aged Ashfield Shale deposits, which comprise shallow marine sediments characterised by black to dark grey shale and laminite, and some sandstone beds.

The Mittagong Formation is considered a transitional phase between the Hawkesbury Sandstone and the Ashfield Shale and (regionally) is commonly of approximates thicknesses of 5–10 metres beneath the ground surface in the region. Within the site, the Mittagong Formation is typically in the vicinity of 2 to 3 m thick. In terms of engineering properties, it is grouped with the Hawkesbury Sandstone (Pells, 2004), but has hydraulic properties similar to the overlying Ashfield Shale (Tametta & Hewitt, 2004).

The Triassic Hawkesbury Sandstone deposits underlie the Mittagong Formation and outcrop to the northwest of the site where the Parramatta River has incised through the overlying Ashfield Shale and Mittagong Formation deposits. The Hawkesbury Sandstone thickness in the general region is at least 180 metres. The unit comprises massive and interbedded/crossbedded quartzose sandstone with a variable clay matrix. The interbedded laminite, shale and quartz to lithic sandstones of the Newport Formation provide an effectively impermeable basement to the Hawkesbury Sandstone aquifer.

Quaternary alluvium, comprising silty to peaty quartz sand, silt and clay, overlies these older deposits along the Parramatta River and where some of the larger creeks drain into the river and estuary. In project area they form relatively deep palaeochannel fill deposits. Anthropogenic fill, consisting of excavation waste rock, demolition rubble, industrial and household waste, overlies the alluvium in some areas.

2.4.5 Hydrogeology

2.4.5.1 Mapping

The investigation area is on the edge of costal dune sands (high potential for groundwater movement) and shale, sandstone and other sedimentary basins (low potential for groundwater movement). Salinity levels range from less than 1,000 to greater than 14,000 milligrams per litre (Department of Water Resources, 1987).

2.4.5.2 Existing Groundwater Bores

A review of the NSW Department of Primary Industries – Office of Water / Water Administration Ministerial Corporation information 5 September 2017 indicates that there are no registered boreholes within the investigation area, or within 500 m radius of the investigation area.

3 Basis for assessment

3.1 Relevant guidelines

The framework for the contamination assessment made herein, was developed in accordance with guidelines "made or approved", by the NSW EPA under Section 105 of the *Contaminated Land Management Act, 1997*. These guidelines include, but are not limited to the following:

- NSW EPA (1995) Contaminated Sites: Sampling Design Guidelines.
- Office of Environment and Heritage (2011) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites.
- NEPM (2013) National Environment Protection (Assessment of Site Contamination) Amendment Measure (No.1), National Environment Protection Council (NEPC).
- NSW EPA (2014) Waste Classification Guidelines, Part 1: Classifying Waste.
- NSW EPA (2015) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997.
- Australian Standard 4482.1/1997, Guide to the sampling and investigation of potentially contaminated soil 1997.

3.2 Potential contaminants of concern

The following contaminants were investigated in soil; and groundwater during previous investigations and are considered to be the primary contaminants of concern:

- Asbestos (soil only).
- Hydrocarbons including total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylene (BTEX), Polycyclic aromatic hydrocarbons (PAH), phenols and volatile organic compounds (VOC).
- Heavy metals.
- Organochlorine pesticides (OCP), Organophosphorus pesticides (OPP) and Polychlorinated biphenyls (PCB).
- Cyanide.
- Nutrients including ammonia, sulphate and sulphide.

The adopted health and/or environmental assessment criteria selected for these chemicals are discussed in **Section 3.3**.

These contaminants are considered to be related to rail land use and gasworks which have been the land use for the MBW footprint and Central Station. Although PFAS was tested for seep water samples during the previous investigation, AGJV did not consider a potential source of PFAS at MBW, the Central Station or immediate surrounds, therefore PFAS is not considered as a COPC for MBW.

3.3 Contamination assessment criteria

The following provides a summary of the criteria selected for the assessment.

3.3.1 Soil assessment criteria

Site investigation levels have been adopted from assessment criteria presented in NEPM (2013).

Given the investigation area zoning is SP2 – railway infrastructure and will continue to be so into the future, health screening levels (HSL) and health investigation levels (HIL) for commercial / industrial activities have been selected as the investigation screening criteria, and are discussed in the following

sections. Ecological investigation levels (EIL) and ecological screening levels (ESL) for commercial / industrial use are also discussed.

3.3.1.1 Health screening levels (HSL) for petroleum hydrocarbons

The NEPM (2013) presents health screening levels (HSLs) for fuel derived petroleum hydrocarbons, which are generic criteria based on a series of reasonably conservative assumptions in order to be protective of human health for a variety of land use types. For the purposes of selecting health based investigation levels for this site, an industrial/commercial land use has been adopted.

3.3.1.2 Health investigation levels (HILs) for other contaminants

For non-petroleum hydrocarbons, the NEPM 2013 HILs have been adopted for a commercial industrial purpose. The HILs take into account direct contact pathways, including incidental ingestion and dermal contact.

3.3.1.3 Health criteria for intrusive maintenance workers (IMW)

The NEPM 2013 HSL for fuel derived petroleum products were adopted as initial screening criteria to assess the potential risk to intrusive maintenance workers in construction trenches and excavations. The HSL were selected because they are more stringent than other IMW published values.

3.3.1.4 Ecological investigation levels (EILs) and ecological screening levels (ESLs)

The NEPM (2013) includes ecological investigation levels (EIL) for heavy metals and naphthalene and ecological screening levels (ESL) for petroleum hydrocarbons. The applicability of ecological screening levels (ESLs) and ecological investigation levels (EILs) to the investigation area were evaluated. The construction of metro infrastructure within the investigation area will be either covered by hard surface or part of an active rail corridor. This will significantly reduce the potential for terrestrial ecosystems (flora and fauna) to be exposed to contamination within the investigation area.

The EILs and ESLs have therefore not been adopted for this contamination assessment.

3.3.1.5 Management limits

The NEPM (2013) includes “management limits” for total petroleum hydrocarbons (TPH). Management limits have been developed to minimise the formation of LNAPL, fire and explosions and damage to buried infrastructure (such as buried services). Management limits are applied after consideration of relevant HSLs. Where TPH concentrations are less than the adopted HSL, consideration will be given to management limits for a commercial/industrial land use.

Management limits for coarse soil have been assumed given the coarse nature of fill material of the investigation area.

3.3.1.6 Asbestos

The amended NEPM provides guidance relating to the assessment of known and suspected asbestos contamination in soil and addresses both friable and non-friable forms of asbestos. The health screening levels for asbestos in soil have been adopted from the Western Australian Department of Health (WA DoH) *Guidelines for Remediation and Management of Asbestos Contaminated Sites in Western Australia* (WA DoH 2009). The NEPM also refers to the WA DoH Guidelines for further information on risk assessment, remediation and management procedures.

The NEPM guidance emphasises that the assessment and management of asbestos contamination should take into account the condition of the asbestos materials and the potential for damage and resulting release of asbestos fibres. Therefore, for the purposes of assessing the significance of asbestos in soil contamination, three terms are used as summarised below:

- Bonded asbestos containing material (Bonded ACM) – sound condition although possibly broken or fragmented and the asbestos is bound in a matrix such as cement or resin.
- Fibrous asbestos (FA) – friable asbestos materials such as severely weathered ACM and asbestos in the form of loose fibrous materials such as insulation.

- Asbestos fines (AF) – including free fibres of asbestos, small fibre bundles and also fragmented ACM that passes through a 7 mm x 7 mm sieve.

From a risk to human health perspective, FA and AF are considered to be equivalent to “friable” asbestos in Safe Work Australia (2011), which is defined therein as ‘*material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos*’.

Bonded asbestos ACM in sound condition represents a low human health risk. However, both FA and AF materials have a significantly higher potential to generate, or be associated with, free asbestos fibres and may represent a significant human health risk if disturbed and fibres are made airborne.

Appendix B (Management of Small-Scale Low-Risk Soil Asbestos Contamination) of the WA DoH Guidelines (2009) describes a simplified action level based on visual inspection of surface contamination. It should be noted that this process is intended for single residential blocks where the asbestos is bonded, present at the surface only, and there is little free fibre present – hence this is not considered directly applicable to the site, but may be a useful “rule of thumb” for approximating the significance of observed surface contamination.

3.3.2 Groundwater and seep water assessment criteria

3.3.2.1 Human health screening levels

The HSLs for petroleum hydrocarbons for commercial / industrial land use have also been adopted for the assessment of groundwater to characterise the risk posed to receptors by potential hydrocarbon vapour intrusion.

3.3.2.2 Human health

No potable water abstractions have been identified and the investigation area is supplied with reticulated town water supplies. Therefore, the Australian Drinking Water Guidelines (ADWG) have not been adopted for this assessment. As discussed in **Section 2.2.2**, the nearest receptor (Cockle Bay/Blackwattle bay) is approximately 1,000 m away and groundwater (if contaminated) would be considered likely to attenuate across this distance, however there is the potential for groundwater to be discharged into this receptor during dewatering activities. These water bodies are expected to be associated with recreational boating and potentially fishing only. Diving or swimming is not expected to occur. Therefore the guidelines for recreational water quality in National Health and Medical Research Council (NHMRC) 2008 have been adopted for this assessment.

These guidelines are associated with incidental ingestion of water and area generally based on incidental consumption of 200 ml of impacted water per day as opposed to 2 Litres per day which the GILs for drinking water are based on. On this based they are expected to be more representative of type of exposure that will occur to construction and maintenance workers during construction and operation of the project and have been adopted as a screening value for this exposure pathway. Commercial users of the metro/commuters are unlikely to come into contact with the groundwater.

3.3.2.3 Ecological criteria

Based on the site hydrogeology discussed in **Section 2,** it has been assumed for this assessment that groundwater in the area has potential to discharge to the nearby aquatic systems of Cockle Bay and/or Blackwattle Bay. Therefore, the assessment criteria nominated for this assessment are the Marine Waters Groundwater Investigation Levels (GILs) from the NEPM (2013).

The assessment of seep water included the analysis of PFAS compounds. The OEH Science draft (2017) criteria for 95% protection of marine and fresh water ecosystems was initially adopted for screening the PFAS results. Given the release of PFAS NEMP in January 2018, the seep water laboratory analytical results were reviewed and compared to the guideline values in PFAS NEMP during the preparation of this report.

3.3.2.4 Trade waste criteria

To evaluate the groundwater disposal option during the construction phase of the metro infrastructure, the groundwater analytical results have also been compared to Sydney Water's Trade Waste Acceptance Standards 2017-18 (Sydney Water June 2017).

3.4 Waste classification guidelines

For waste classification, the concentrations of the chemicals in the samples analysed have been compared to the criteria outlined in Table 2 of the NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste.* The guidelines provide criteria for assessing the appropriate waste classification for material requiring offsite disposal and subsequently assessing the required disposal location for solid and liquid wastes. The classification process for non–liquid wastes focuses on the potential for the waste to release chemical contaminants into the environment through contact with liquids (leachates).

The first test used to chemically assess waste is the Specific Contaminant Concentration (SCC) test, which determines the total concentration of each contaminant in the waste sample. The guidelines set different contaminant thresholds (CT) for the total concentration of each contaminant in order for waste to be classified as either general solid waste, restricted solid waste or hazardous waste.

Higher contaminant thresholds are provided if the soil sample result is coupled with toxicity characteristics leaching procedure (TCLP) testing and comparison against a TCLP contaminant threshold criteria.

The toxicity characteristics leaching procedure (TCLP) test estimates the potential for waste to release chemical contaminants into a leaching liquid.

4 Previous investigation program

4.1 Scope of works summary

A tabulated summary of the previous contamination investigations completed is provided in **Table 4-1** below. The investigation locations discussed in the table are presented on **Figure 1, Appendix A**.

Table 4-1 – Summary of previous investigations

Date	Report reference	Summary scope of works
2017	GHD (2017a)	GHD was commissioned by TfNSW to undertake a contamination assessment in the vicinity of Central Station Platforms 12 to 23 to inform the proposed Central Concourse and Metro Station Box. GHD completed an intrusive soil investigation including: • Eighteen boreholes (SRT_CBH001 to SRT_CBH018) advanced to a maximum depth of 8.1 m bgl. • Two geotechnical boreholes (SRT_BH086 and SRT_CBH018) advanced to a maximum inclined depth of 45.1 m bgl. • Groundwater monitoring wells where installed in 5 borehole locations (SRT_CBH001, 007, 010, 015, 017) • One round of groundwater monitoring.
July 2017	Golder-Douglas (2017a)	Golder-Douglas was commissioned by TfNSW to undertake a Contamination Assessment of the Central Station Main works (CSM) area to inform contamination decisions of prospective tenderers for the CSM works project. Golder-Douglas completed intrusive site works including: • Advancement of 16 geotechnical boreholes (SRT_BH039, 040, 043, 048, 049, 050, 053, 054, 056, 058, 060, 063, 064, 067, 068 and 069) to a maximum depth of 40.1 m bgl. • Installation of 10 groundwater wells (SRT_BH047, 048, 050, 052, 053, 055, 059, 061, 063 and 064) to a maximum depth of 25.0 m bgl. • One round of groundwater monitoring.
July 2017	Golder-Douglas (2017b)	Golder-Douglas was commissioned by TfNSW to undertake a targeted Environmental Site Assessment (ESA) in and around the estimated footprint of a former gasworks site within the Central Station Precinct. Golder-Douglas completed intrusive site works including: • Advancement of 5 boreholes (SRT_BH081 to SRT_BH085) to a maximum depth of 10 m bgl. • Non-destructive digging (NDD) of a test pit with contamination sampling (NDD030). • Installation of 3 groundwater monitoring wells (SRT_081, 082 and 084) to a maximum depth 9.4 m bgl. • One round of groundwater monitoring.
September 2017	Golder-Douglas (2017c)	Golder-Douglas was commissioned by TfNSW to collect opportunistic fill/soil samples during the excavation of slit trenches within the footprint of the proposed Metro Station Box and estimated footprint of the former gasworks facility (Gasworks 2). The slit trenches where excavated using NDD methods to identify services and utilities present onsite as part of the Metro Station Box preparation works. The fill/soil samples were analysed for COPC to provide a preliminary in situ waste classification to assist with the future management of the material.

Date	Report reference	Summary scope of works
September 2016	Golder-Douglas (2016)	Golder-Douglas was commissioned by TfNSW to assess contamination and acid sulphate soil (ASS) status of soil samples collected for the geotechnical investigation aspect of the Sydney Yard Access Bridge (SYAB) Works Package. Golder-Douglas as completed intrusive site works including: • Advancement of 5 geotechnical boreholes (SRT_BH042, 044, 045, 046 and SRT_BH074) to a maximum depth of 27.0 metres below ground level (m bgl). Installation of 2 groundwater wells (SRT_BH045, 074).

4.2 Sampling locations

The sampling locations are presented in **Figure 2, Appendix A** and the sampling schedule for each soil and groundwater sampling location investigated is summarised in **Table 4-2** and **Table 4-3** respectively.

Table 4-2 – Summary of soil sampling locations

Report Ref	Location	SRT Borehole ID	Investigation method	Depth of samples analysed (m bgl)	Analysis
GHD 2017a	Metro Station Box	CBH001	Borehole / monitoring well	0.12, 0.45, 0.9, 1.6, 2.35, 3.7	Asbestos identification, 8 heavy metals[1], TRH, BTEX, PAH, Phenols, VOCs, OCP, OPP, PCB and TCLP (metals or PAH).
		CBH002	Borehole	0.12, 0.45, 0.9, 1.3, 3.0	
		CBH003	Borehole	0.45, 0.95, 1.7	
		CBH004	Borehole	0.12, 0.45, 1.9, 2.9, 3.9	
		CBH005	Borehole	0.12, 0.45, 0.9, 2.0, 2.9	
		CBH006	Borehole	0.1, 0.9, 2.0, 4.0, 5.0	
		CBH007	Borehole/monitoring well	0.3, 0.9, 1.5, 2.1, 3.9, 4.9, 5.9	
		CBH008	Borehole	0.15, 0.9, 1.6, 2.1	
		CBH009	Borehole	0.15, 0.4, 0.9, 1.9, 2.9, 3.9	
		CBH010	Borehole/monitoring well	0.2, 0.9, 1.6, 2.9, 1.6, 2.9, 3.9	
		CBH011	Borehole	0.2, 1.0, 2.1, 3.1, 4.1	Asbestos identification, 8 heavy metals[1], TRH, BTEX, PAH, Phenols, VOCs and OCP/OPP/PCB.
		CBH012	Borehole	0.4, 1.0, 1.6, 2.8	
		CBH013	Borehole	0.2, 0.8, 2.1, 4.1, 5.9	Asbestos identification, 8 heavy metals[1], TRH, BTEX, PAH, Phenols, VOCs and OCP/OPP/PCB.
		CBH014	Borehole	0.4, 1.1, 2.9	
		BH086[4]	Borehole	0.3, 2.4, 2.6, 3.9, 10.5, 28.85	Asbestos identification, 8 heavy metals[1], TRH, BTEX, PAH, Phenols, VOCs and OCP/OPP/PCB
		BH087	Borehole	0.4, 0.7, 2.0, 12.2, 15.2, 18.1, 27.8	

Report Ref	Location	SRT Borehole ID	Investigation method	Depth of samples analysed (m bgl)	Analysis
	Central Walk East	CBH015	Borehole/monitoring well	0.15, 0.4, 0.9, 2.0, 2.8, 3.4, 4.9	Asbestos identification, 8 heavy metals[1], TRH, BTEX, PAH, Phenols, VOCs, OCP, OPP, PCB and TCLP (metals or PAH).
		CBH016	Borehole	0.15, 0.4, 1.9, 2.5	
		CBH017	Borehole/monitoring well	0.45, 0.9, 2.8, 3.9	
		CBH018	Borehole	0.4, 0.9, 1.5, 2.0	
Golder-Douglas 2017a	Metro Station Box	BH039	Borehole/monitoring well	0.95, 1.9	Asbestos identification, 8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, OCPs, PCBs, VOCs
		BH048	Borehole/monitoring well	1.1, 2.0, 4.0	Asbestos identification, 8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs
		BH049	Borehole	1.5, 4.0, 4.5	8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs
		BH053	Borehole/monitoring well	2.0, 3.0, 12.6	8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs
		BH064	Borehole/monitoring well	5.5, 8.0	Aggressivity (pH, EC, Chloride, Sulphate)
		NDD002[5]	NDD hole	0.85	Asbestos identification
	Central Walk East	BH040	Borehole	0.1, 0.5	Asbestos identification, 8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs.
		BH041A	Borehole	0.6, 3.0	Aggressivity (pH, EC, Chloride, Sulphate)
		BH043	Borehole	0.6, 3.0	Aggressivity (pH, EC, Chloride, Sulphate)
		BH051	Borehole	0.2, 0.9, 2.4, 3.9	Asbestos identification, 8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs

Report Ref	Location	SRT Borehole ID	Investigation method	Depth of samples analysed (m bgl)	Analysis
		BH054	Borehole	0.6, 1.5, 2.5, 3.0	Asbestos identification, 8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs
		BH055	Borehole	3.1	Aggressivity (pH, EC, Chloride, Sulphate)
		BH057	Borehole	0.5	Aggressivity (pH, EC, Chloride, Sulphate)
		BH058	Borehole	4.5	ASS Aggressivity (pH, EC, Chloride, Sulphate)
		BH062A	Borehole	1.5, 2.1, 2.4, 3.85	Aggressivity (pH, EC, Chloride, Sulphate)
	Sydney Yard project access area	BH067	Borehole	0.9, 1.7, 2.5	Asbestos identification, 8 heavy metals[1],, Cation Suite, TRH, BTXN, PAHs, Aggressivity (pH, EC, Chloride, Sulphate), OCPs, PCBs
		BH068	Borehole	0.7, 3.3	Asbestos identification, 8 heavy metals[1], Cation Suite, TRH, BTXN, PAHs, OCPs, PCBs
		BH069	Borehole	5.25	Aggressivity (pH, EC, Chloride, Sulphate)
Golder-Douglas 2017b	Metro Station Box	BH006	Borehole/monitoring well	Sample depth not available	Analysis schedule not available
		BH006A	Borehole/monitoring well		
		NDD030	NDD hole	0.15, 0.35, 0.65, 0.75, 0.9, 1.65, 1.8, 1.9, 2.2	Asbestos Identification, 15 heavy metals[2], TRH, BTEX, PAHs, Phenols, OCPs, OPPs, PCBs, SVOCs, VOCs, Acid Sulphate Soils, Inorganic parameters
		BH082	Borehole/monitoring well	0.2, 0.4, 2.0, 3.2	Asbestos identification and quantification, 15 heavy metals2, TRH, BTEX, PAHs, Phenols, OCPs, OPPs, PCBs, SVOCs, VOCs, Inorganic parameters
		BH083	Borehole	0.4, 1.4, 2.0	Asbestos Identification, 15 heavy metals[2], TRH, BTEX, PAHs, Phenols, OCPs, PCBs, SVOCs, VOCs, Acid Sulphate Soils, Inorganic parameters
		BH084	Borehole/monitoring well	0.2, 0.9, 1.4, 3.0, 7.6	

Report Ref	Location	SRT Borehole ID	Investigation method	Depth of samples analysed (m bgl)	Analysis
		BH085	Borehole	0.2, 0.9, 3.0, 4	Asbestos Identification, 15 heavy metals2, TRH, BTEX, PAHs, Phenols, PCBs, SVOCs, VOCs, Inorganic parameters
	Sydney Yard project access area	BH081	Borehole/monitoring well	0.2, 0.5, 1.9	Asbestos Identification, 15 heavy metals2, TRH, BTEX, PAHs, Phenols, OCPs, PCBs, SVOCs, VOCs, Inorganic parameters
Golder-Douglas 2017c	Metro Station Box	ST01	Slit Trench	0.0	Asbestos, 12 heavy metals[3], TRH, BTEX, PAHs, OCPs, OPPs, SVOCs, VOCs, Cyanide
		ST02	Slit Trench	0.0, 0.5,	
		ST03	Slit Trench	0.0, 0.7	
		ST04	Slit Trench	0.1, 0.5	
		ST05	Slit Trench	0.3, 0.5, 1.2	
		ST06	Slit Trench	0.2, 1.5	
		ST07	Slit Trench	0.0, 1.5	
		ST08	Slit Trench	0.1, 0.6	
		ST09	Slit Trench	0.0, 0.9	
		ST10	Slit Trench	1.5	
		ST11	Slit Trench	0.6	
Golder-Douglas 2016	Sydney Yard project access area	SRT_BH044	Borehole	2.5, 4.0, 5.5	ASS, Aggressivity
		SRT_BH045	Borehole/monitoring well	0.9, 1.5, 2.4	Metals, Cation suite, TRH, BTEXN, PAHs, OCPs, PCBs, Asbestos identification.
		SRT_BH046	Borehole	3.0, 4.0, 5.5	ASS, Aggressivity

[1] Heavy metals include: arsenic, cadmium, chromium (III+VI), copper, lead, mercury, nickel, zinc.

[2] Heavy metals include: aluminium, antimony, arsenic, barium, cadmium, chromium (III+VI), copper, lead, manganese, mercury, nickel, selenium, silver, vanadium, zinc.

[3] Heavy metals include: arsenic, cadmium, chromium (III+VI), copper, lead, mercury, molybdenum, nickel, selenium, silver, tin, zinc.

[4] SRT_BH086B was a geotechnical borehole identification for log in the GHD 2017 report. The borehole was moved slightly from its original location twice due to refusal during drilling. The location is represented in this report SRT_BH086. The shallow soil samples reported in this report were collected from its original location (SRT_BH086). The deep soil samples reported in this report were collected from the moved location (BH086B).

[5] NDD002 was a surface fragment sample analysed for asbestos that was reported in the Golder Associates / Douglas Partners (2017a) contamination assessment report. No chemical data or soil profile information was included in this report.

Table 4-3 – Summary of groundwater and seep water sampling locations

Report Ref	Location	Sample location ID	Purpose	Analysis
GHD 2017a	Metro Station Box	SRT_BH006	Deep groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, OCP, OPP, PCB, VOCs and aggressivity (pH, EC, sulphate, chloride)
		SRT_BH006A	Groundwater monitoring well	
		SRT_BH039	Deep groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, and aggressivity (pH, EC, sulphate, chloride)
		SRT_BH048	Shallow groundwater aquifer	
		SRT_BH053	Shallow groundwater aquifer	
		SRT_BH084	Shallow groundwater aquifer	
		SRT_CBH001	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, OCP, OPP, PCB, VOCs and aggressivity (pH, EC, sulphate, chloride)
		SRT_CBH007	Shallow groundwater aquifer	
	Central Walk East	SRT_BH055	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, OCP, OPP, PCB, VOCs and aggressivity (pH, EC, sulphate, chloride)
		SRT_CBH015	Shallow groundwater aquifer	
		SRT_CBH017	Shallow groundwater aquifer	
	Central Precinct	Site1_Pump14_Water	Seep water	8 heavy metals[1], TRH, BTEX, PAH, PFAS, Cyanide, Ammonia, major cations and anions and aggressivity (pH, EC, sulphate, chloride)
		Site2_NBT_Water	Seep water	
		Site3_Pump13-Water	Seep sample	
		SRT_BH047	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, and aggressivity (pH, EC, sulphate, chloride)

Report Ref	Location	Sample location ID	Purpose	Analysis
		SRT_BH052	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, and aggressivity (pH, EC, sulphate, chloride)
		SRT_BH059	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions, OCP, OPP, PCB, VOCs and aggressivity (pH, EC, sulphate, chloride)
		SRT_BH060	Shallow groundwater aquifer	
		SRT_BH063	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEX, PAH, Phenols, Cyanide, Ammonia, major cations and anions and aggressivity (pH, EC, sulphate, chloride)
Golder-Douglas 2017a	Metro Station Box	SRT_BH039	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEXN, PAHs, Nitrogen, Ammonia, phosphorus, TOC, TDS, alkalinity, sulphate reducing bacteria and Aggressivity (pH, EC, sulphate and Chloride)
		SRT_BH048	Shallow groundwater aquifer	
		SRT_BH053	Shallow groundwater aquifer	
		SRT_BH064	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEXN, PAHs, Nitrogen, Ammonia, phosphorus, TOC, TDS, alkalinity, sulphate reducing bacteria, VOCs, SVOCs, total Cyanide and Aggressivity (pH, EC, sulphate and Chloride)
	Central Walk East	SRT_BH055	Shallow groundwater aquifer	Aggressivity (pH, EC, sulphate and Chloride)
	Central Precinct	SRT_BH052	Shallow groundwater aquifer	8 heavy metals[1], TRH, BTEXN, PAHs, Nitrogen, Ammonia, phosphorus, TOC, TDS, alkalinity, sulphate reducing bacteria and Aggressivity (pH, EC, sulphate and Chloride)
		SRT_BH047	Shallow groundwater aquifer	Aggressivity (pH, EC, sulphate and Chloride)
		SRT_BH050	Shallow groundwater aquifer	Aggressivity (pH, EC, sulphate and Chloride)
		SRT_BH059	Shallow groundwater aquifer	Aggressivity (pH, EC, sulphate and Chloride)
		SRT_BH063	Shallow groundwater aquifer	Aggressivity (pH, EC, sulphate and Chloride)

Report Ref	Location	Sample location ID	Purpose	Analysis
Golder-Douglas 2017b	Metro Station Box	SRT_BH006	Deep groundwater aquifer	12 heavy metals[2], TRH, BTEXN, PAHs, Phenols, Nitrogen, Ammonia, phosphorus, sulphate, Iron, Cyanide
		SRT_BH006A	Shallow groundwater aquifer	12 heavy metals[2], TRH, BTEXN, PAHs, Phenols, Nitrogen, Ammonia, phosphorus, sulphate, Iron, Cyanide
		SRT_BH064	Shallow groundwater aquifer	12 heavy metals[2], TRH, BTEXN, PAHs, Phenols, OCPs, SVOCs, VOCs, Nitrogen, Ammonia, phosphorus, sulphate, Iron, Cyanide
		SRT_BH082	Shallow groundwater aquifer	
		SRT_BH084	Shallow groundwater aquifer	
	Sydney Yard project access area	SRT_BH081	Shallow groundwater aquifer	12 heavy metals[2], TRH, BTEXN, PAHs, Phenols, OCPs, SVOCs, VOCs, Nitrogen, Ammonia, phosphorus, sulphate, Iron, Cyanide

[1] Heavy metals include: arsenic, cadmium, chromium (III+VI), copper, lead, mercury, nickel, zinc.

[2] Heavy metals include: aluminium, antimony, arsenic, barium, cadmium, chromium (III+VI), copper, lead, manganese, mercury, nickel, zinc.

4.3 Soil sampling density

The sampling density of previous contamination investigations is summarised in **Table 4-4** below.

Based on the information presented the following comments are made in regard to sampling design guidance:

- The minimum sampling density recommended in the NSW sampling design guidance (NSW EPA, 1995) is approximately 21 samples for the MBW. The sampling density in MBW meets the sampling design requirements.
- The minimum sampling density recommended in the NSW sampling design guidance is approximately 7 samples for the CWE. The sampling density in CWE meets the sampling design requirements. However it is noted that these sample locations are all contained within the Central Station boundary and no samples have been collected from the eastern area of the CWE under Chalmers Street.
- The minimum sampling density recommended in the NSW sampling design guidance is approximately 19 samples for the SYPAA. The sampling density in SYPAA does not meet the sampling design requirements (NSW EPA, 1995).
- There is no specific sampling density requirement of the characterisation of solid waste and virgin excavated natural material (VENM), however, there is sampling density requirements listed in the excavated natural material (ENM) and in the NEPM (NEPM, 2013) for stockpiled material. In addition, EPA Victoria published an Industrial Waste Resource Guidelines Soil Sampling (EPA Victoria 2009) which include sampling density for in-situ and stockpile soil sampling. These guideline values can be used as a guide for sampling density for waste classification purposes.
- The ENM exemption requires a minimum sampling rate of approximately 1 sample per 100 m^3 and the NEPM also recommends a sampling density of 1 sample per 25 m^3.
- Based on these sampling densities additional sampling could be considered to build confidence in the characterisation of the waste prior to disposal.
- It is understood that additional sampling will be undertaken as part of additional site investigations to validate the current investigation data and as part of construction works.

Table 4-4 – Summary of soil sampling density

Investigation area	Strata	Sampling locations	Sample location density	Sample quantity per strata	Encountered strata thickness	Approximate in-situ sampling density
Footprint of MBW (9,000 m^2) Excavation to 25 m to 30 m bgl	Fill	32	One location per 281 m^2	66	0.0 – 3.2 m	One sample per 436 m^3
	Alluvium / Residual	26	One location per 346 m^2	53	0 – 9 m	One sample per 1,500 m^3,
	Shale (including weathered shale)	8	One location per 1,125 m^2	10	0.5 – 3 m	One sample per 2,250 m^3
	Mittagong Formation (siltstone)	1	One location per 9,000 m^2	0	0.6 - 1.2 m	not available

Investigation area	Strata	Sampling locations	Sample location density	Sample quantity per strata	Encountered strata thickness	Approximate in-situ sampling density
	Sandstone (including dolerite and quartzite)	2	One location per 4,500 m^2	6	35+	One sample per 37,500 m^3
	Basalt	0	0 per m^2	0	12.5 m	0 per m^3
Footprint of CWE (1,500 m^2) Excavation to 5 m bgl	Fill	7	One location per 215 m^2	21	1.65 – 2.9 m	One sample per 207 m^3
	Alluvium / Residual	3	One location per 500 m^2	4	0.5 m	One sample per 187 m^3
	Shale	2	One location per 750 m^2	2	2 – 2.5 m	One sample per 1,650 m^3
Footprint of SYPAA (8,000 m^2) Excavation depth unknown	Fill	4	One location per 2,000 m^2	4	NA	NA
	Residual	4	One location per 2,000 m^2	6	NA	NA

5 Previous investigation results

5.1 Field observations

5.1.1 Stratigraphy

The soil profile at the site was similar across all investigation locations.

Fill materials were identified at all the intrusive investigation locations with fill varying in thickness. Fill material generally consisted of brown/grey gravels, sand and gravelly clays, with anthropogenic material including sandstone fragments, bricks, bitumen, ash and coal.

The natural soils overlying the bedrock varied on the site from alluvial to residual in origin. Alluvium was generally encountered in the southern parts of the Metro Station Box, consisting of orange brown sands and clayey sands. The alluvium was underlain by residual material consisting of orange brown/grey sandy or gravelly clays with ironstone gravel inclusions. Bedrock was encountered in the majority of investigation locations.

Table 5-1 below summarises the sub-surface profile encountered at each of the investigation areas and detailed soil profile information for each borehole is supplied in the borehole logs provided in **Appendix C**. Please note that boreholes logs for ND0002 were not included in the reviewed investigation reports. All borehole logs provided to GHD from previous investigations are included in this report.

Slit trenching was undertaken in 2017 (Golder Associates / Douglas Partners, 2017c) using non-destructive drilling (NDD) techniques primarily for the purposes of exposing Services. A summary of the soil profile encountered during the trenching works is included in **Appendix C.**

Table 5-1 – Summary of soil profiles

Report Ref	Number of boreholes	Strata Encountered	Depth Range of Strata (m bgl)	Description Summary
Metro Station Box				
GHD (2017a)	5	Fill	0 – 1.88	Gravel and gravelly clay
	8	Fill	0 – 1.2	Sandy gravel and gravelly clay
		Alluvium/Residual	0.7 - 9.57	Clayey sand, Sand and gravelly clay
		Bedrock	>1.7	Dark grey shale
	3	Fill	0 – 0.8	Gravelly cobbles and gravel, ballast
		Residual	0.7 – 4.0	Sandy clay and clay
		Bedrock	>2.4	Grey shale

Report Ref	Number of boreholes	Strata Encountered	Depth Range of Strata (m bgl)	Description Summary
Golder – Douglas (2017a)	4	Fill	0 – 2.2	Sandy gravel, silty clay and gravelly clay
		Residual	1.5 – 2.4	Sandy clay and clay
		Bedrock	>2.4	Sandstone, basalt, siltstone,
Golder – Douglas (2017b)	3	Fill	0 – 3.2	Clayey sand, sand
		Residual	2.0 – 7.8	Clay, sandy clay
		Bedrock	6.0 - >7.8	Shale, sandstone
	1	Fill	0 – 3.9	Sand
		Residual	>3.9	Clay
Golder – Douglas (2017c)	11	Fill	0 – 1.5	Sand and gravel (ballast)
Central Walk East				
GHD (2017a)	1	Fill	0 – 2.9	Clayey cobbles and gravelly sand
		Residual	>1.65	Gravelly clay
	1	Fill	0 – 2.9	Gravel, clayey sand, sandy clay
		Bedrock	>2.9	Dark grey shale
	1	Fill	0 – >2.6	Clayey cobbles and gravelly clay
	1	Fill	0 – 2.9	Sandy gravel and gravelly clay
		Residual	2.9 – 3.5	Clay
		Bedrock	>3.5	Dark brown and grey shale

Report Ref	Number of boreholes	Strata Encountered	Depth Range of Strata (m bgl)	Description Summary
		Alluvium/Residual	0.4 - >8.1	Gravelly sand, sand, gravelly clay
		Bedrock	>2.1	Grey shale
Golder – Douglas (2017a)	2	Fill	0 – 2.5	Gravelly clayey sand
		Bedrock	>2.5	Grey shale then sandstone
	4	Fill	0 – 3.0	Gravel, silty sandy gravel
		Residual	0.26 – 3.5	Clay, silty clay
		Bedrock	>1.4	Shale, laminite, sandstone
	1	Fill	0 – 1.5	Clay, silty clay
		Alluvium/Residual	1.5 – 5.15	Clay, silty gravelly clay, sand
		Bedrock	>5.15	Sandstone
	2	Fill	0 – 3.2	Gravelly clayey sand, cobbles, sand
		Alluvium	3.2 – 4.5	Clayey silt, sand, sandy clay
		Bedrock	4.5 - >11.55	Shale, sandstone, basalt
Sydney Yard project access area				
Golder – Douglas (2017a)	1	Fill	0-0.3	Sandy Clay and Silty Clay
		Residual	0.3-17.0	Silty Clay
		Bedrock	>17.0	Grey Shale then Sandstone
	1	Fill	0-1.65	Gravelly Sand, Sandy Clay, Clay

Report Ref	Number of boreholes	Strata Encountered	Depth Range of Strata (m bgl)	Description Summary
		Residual	>1.65	Clay
	1	Fill	>0	Sandy Gravel
Golder – Douglas (2017b)	1	Fill	0 – 0.5	Top soil
		Residual	0.5 - 6.4	Clay
		Bedrock	>6.4	Shale, Sandstone
Golder-Douglas (2016)	2	Fill	0 – 1.1	Gravels, clayey gravels
		Residual	0.9 – 6.5	Clay, silty clay
		Bedrock	1.8 - >6.5	Siltstone, sandstone
	2	Fill	0 – 1.5	Sandy, clayey gravels
		Alluvium	1.2 – 2.8	Sand
		Residual	2.3 – 5.5	Clay
		Bedrock	>5.1	Siltstone, sandstone
	1	Residual	0.17 – 4.5	Silty clay
		Bedrock	>4.5	Siltstone, sandstone

5.1.2 Visual and olfactory indications of contamination

5.1.2.1 Metro Station Box

Fill was encountered at all locations with observed visual and olfactory indications of potential contamination summarised in **Table 5-2**.

Table 5-2 - Visual and olfactory indications of contamination, Metro Station Box

Sample location	Depth range (m bgl)	Description	PID (ppm)
SRT_CBH001	0.12-0.40	Strong hydrocarbon odour, hydrocarbon staining and solidified bituminous material with some coal.	<0.1
SRT_CBH002	0.12-0.45	Strong hydrocarbon odour, hydrocarbon staining and solidified bituminous material with some coal.	1.0
SRT_CBH003	0.12-0.4	Strong hydrocarbon odour, hydrocarbon staining and solidified bituminous material with some coal.	2.0
SRT_CBH004	0.12-0.4	Strong hydrocarbon odour, hydrocarbon staining and solidified bituminous material with some coal.	2.7

Sample location	Depth range (m bgl)	Description	PID (ppm)
SRT_CBH005	0.12-0.4	Hydrocarbon staining, extremely strong hydrocarbon odour, solidified bituminous material.	2.7
SRT_CBH007	0.12-0.35	Hydrocarbon staining, very strong hydrocarbon odour, solidified bituminous material.	2.0
SRT_CBH008	0.12-0.25	Hydrocarbon staining, distinct hydrocarbon odour, some coal slag.	2.0
SRT_CBH009	0.12-0.3	Hydrocarbon staining, distinct hydrocarbon odour, some coal slag.	0.9
SRT_CBH010	0.12-0.3	Hydrocarbon staining, strong hydrocarbon odour, some coal slag.	9.3
SRT_BH082	0.5-0.6	Fragments, slag.	0.5
	0.6-0.9	Concrete and bricks.	0.5
	0.9-1.3	Fragments of slag.	0.1
SRT_BH084	0.0-0.4	Fragments of slag.	0.2
	0.6	Concrete, steel.	n/a
SRT_NDD030	0.3	Lens of ashy slag material.	n/a
	0.6	Black tar like material with distinct tar like odour.	n/a
	1.5-1.8	Black staining, strong hydrocarbon odour.	n/a
	1.5-2.0	Wooden rail sleepers, large boulders, bricks.	n/a
ST03	0.7	Sub angular sandstone gravel and brick fragments.	0.5
ST04	0.7	Refusal on terracotta.	0.5
ST05	0.3	Some brick fragments	0.4
	1.2	Some brick fragments	0.4
ST11	0.6	Strong oily odour, possible traces of tar. A metal pipe (noticed to be intact) was noted adjacent the sample collection location.	1.0

- n/a: not available

ACM was not observed in the majority of boreholes, with the expectations being:

- SRT_NDD002 – fragments of potential bonded asbestos cement sheeting where encountered during slit trenching works. No soil profile data was provided.
- "Asbestos" – three fragments of potential bonded asbestos sheeting encountered in unknown fill material at 0.5 m bgl.

A description of the soils encountered, samples collected and the PID readings, were available, are recorded in the borehole logs provided in **Appendix C**.

5.1.2.2 Central Walk East

Fill was encountered at all locations with observed visual and olfactory indications of potential contamination summarised in **Table 5-3**.

Table 5-3 - Visual and olfactory indications of contamination, Central Walk East

Sample location	Depth range (m bgl)	Description	PID (ppm)
SRT_CBH015	0.14-2.5	Weak hydrocarbon odour, ash and furnace waste.	1.8
	2.5-2.9	Brick fragments and ash.	n/a
SRT_CBH016	1.5-2.6	Ash, slag, brick fragments, concrete, metal and terracotta.	<0.1
SRT_CBH017	0.14-0.2	Weak hydrocarbon odour, some coal refuse.	n/a
	2.1-2.9	Some ash.	n/a
SRT_BH051	0.9-2.9	Tar odour.	n/a
SRT_BH054	0.1-2.5	Hydrocarbon odour.	n/a

- n/a: not available

No suspected asbestos containing material was observed during the investigation.

A description of the soils encountered, samples collected and the PID readings are recorded in the borehole logs provided in **Appendix C**.

5.1.2.3 Sydney Yard project access area

Fill was encountered at all locations with the exception of SRT_BH074. No observed visual and olfactory indications of potential contamination were encountered.

A description of the soils encountered, samples collected and the PID readings are presented in the borehole logs provided in **Appendix C**.

5.1.3 Groundwater

Groundwater was sampled from both installed groundwater wells and was sampled during the below events:

- Golder-Douglas - Groundwater sampling was completed between 21 and 23 September 2016 and between 21 October and 15 November 2016.
- Golder-Douglas - Groundwater sampling was completed on the 8 June 2017.
- GHD - Groundwater sampling was completed between 1 and 3 November 2017, and additional sampling was conducted between 14 and 16 November 2017.

Based on the measured groundwater depths and subsurface soil profiles, groundwater appears to be encountered in two separate aquifers. A shallow aquifer within the alluvium and residual soil profile, followed by a deep aquifer in the sandstone bedrock profile. The shallow aquifer ranges between 14.725 mAHD (SRT_BH063) and 19.785 mAHD (SRT_BH059) in groundwater elevation while the deeper aquifer ranged between 2.68 mAHD (SRT_BH006) and 3.02 mAHD (SRT_BH039).

The groundwater observed during sampling was generally described as clear or brown and cloudy. A number of wells were observed to be dry and no sample was able to be obtained (SRT_BH050 and SRT_CBH010, (GHD, 2017c). Groundwater wells with very limited water volume, where purging was not possible, were sampled using the grab sample method (SRT_BH055 and SRT_BH060 (GHD, 2017c). The groundwater quality parameters collected are summarised in **Table 5-4**.

A deep groundwater aquifer is identified in the sandstone bedrock. There is insufficient locations installed in the deep groundwater aquifer to assess the groundwater flow direction.

It should be noted that shallow groundwater levels are likely to fluctuate with variations in climatic and site conditions. Based on the inferred groundwater contours, groundwater flow direction is expected to be generally in a southern direction for the shallow groundwater aquifer. Interpolated groundwater contours are included in **Figure 9, Appendix A**. Due to an insufficient number of wells screened within the deep aquifer it groundwater flow directions and flow gradients were unable to be interpolated. It is

expected that the eastern suburbs railway (ESR) currently acts as the primary point of discharge for deeper aquifer system.

Table 5-4 – Summary of groundwater quality field parameters

Monitoring Well	Report Reference	Target Strata	Date Sampled	SWL (mbTOC)	SWL (mAHD)	BOC (mbTOC)	DO (mg/L)	EC (µS/cm)	pH	Redox (mV)	Temp (°C)	Observation / Comments
SRT_CBH001	GHD (2017)	Residual	02/11/2017	5.981	15.419	8.065	1.91	2,365	5.51	192.3	20.1	Yellow-cloudy
SRT_CBH007	GHD (2017)	Residual	02/11/2017	5.525	15.945	6.72	2.48	206.1	5.20	215.6	19.8	Clear
SRT_CBH010	GHD (2017)	Shale	02/11/2017	4.682	16.868	4.72	-	-	-	-	-	Dry Well
SRT_CBH015	GHD (2017)	Shale	03/11/2017	3.855	18.955	5.91	0.57	756	5.91	59.9	19.7	Grey cloudy
SRT_CBH017	GHD (2017)	Shale	02/11/2017	3.064	19.756	4.94	0.00	164.7	5.97	-9.0	19.7	Grey cloudy
SRT_BH006	Golder-Douglas (2017b)	Sandstone	08/06/2017			29.5	3.74	731.0	6.37	245.2	19.5	-
	GHD (2017c)		14/11/2017	17.92	2.68	32.00	0.58	865	6.24	132	19.9	Clear-cloudy
SRT_BH006A	Golder-Douglas (2017b)	Residual	08/06/2017		-	7.0	0.82	393.1	5.72	230.7	20.4	-
	GHD (2017c)		14/11/2017	4.705	15.915	6.80	0.70	398	5.81	66	20.0	Grey cloudy
SRT_BH039	Golder-Douglas (2017a)	Sandstone	22/09/2016	15.7	-	22.71	3.33	7890	12.2	-	19	-
	GHD (2017c)		03/11/2017	17.15	3.02	22.71	1.52	1,632	11.17	-16.4	20.4	Cloudy
SRT_BH047	Golder-Douglas (2017a)	Residual / Sandstone	23/09/2016	4.32	-	6.92	1.63	776	7.82	-	18.5	-
	GHD (2017c)		03/11/2017	4.413	16.897	6.92	0.41	426.2	7.38	134.2	19.4	Clear
SRT_BH048	Golder-Douglas (2017a)	Residual / Siltstone	23/09/2016	4.07	-	6.375	2.37	452	8.67	-	17.3	-
	GHD (2017c)		02/11/2017	4.287	17.233	6.375	0.89	260.8	5.71	61.4	19.3	Clear
SRT_BH050	Golder-Douglas (2017a)	Fill / Residual	23/09/2016	2.57	-	2.77	5.69	346	9.13	-	18	-
	GHD (2017c)		03/11/2017	2.615	18.775	2.77	-	-	-	-	-	Dry Well
SRT_BH052	Golder-Douglas (2017a)	Residual / Sandstone	23/09/2016	5.92	-	7.90	5.24	740	10.8	-	18.3	-
	GHD, 2017c		03/11/2017	6.105	15.295	7.90	5.42	363.1	8.63	126.4	19.8	Cloudy
SRT_BH053	Golder-Douglas (2017a)	Siltstone	23/09/2016	4.99	-	9.92	2.45	341	7.7	-	18	-
	GHD (2017c)		02/11/2017	5.511	16.019	9.92	1.70	301.1	6.36	51.2	19.5	Grey cloudy
SRT_BH055	Golder-Douglas (2017a)	Fill / Shale	15/11/2016	3.32	-	3.475	3.36	1136	12.6	-107	19.1	-
	GHD (2017c)		02/11/2017 16/11/2017	3.295 3.260	19.565 19.60	3.475	-	-	-	-	-	Grab sample
SRT_BH059	Golder-Douglas (2017a)	Fill / Shale	21/10/2016	3.7	-	6.00	3.4	434	5.7	107	19.2	-
	GHD (2017)		03/11/2017	3.055	19.785	6.00	5.09	380.8	7.00	147.4	19.8	Clear
SRT_BH060	GHD (2017)	Fill / Residual	03/11/2017 16/11/2017	4.092 3.820	18.768 19.04	4.285	-	-	-	-	-	Grab sample

Monitoring Well	Report Reference	Target Strata	Date Sampled	SWL (mbTOC)	SWL (mAHD)	BOC (mbTOC)	DO (mg/L)	EC (µS/cm)	pH	Redox (mV)	Temp (°C)	Observation / Comments
SRT_BH061	Golder-Douglas (2017a)	-	23/09/2016	Dry	-	-	-	-	-	-	-	-
SRT_BH063	Golder-Douglas (2017a)	Siltstone / Sandstone	21/09/2016	9.62	-	14.53	6.41	821	6.83	-	19.5	-
	GHD (2017c)		02/11/2017	10.685	14.725	14.53	0.15	770	6.56	71.5	21.3	Brown cloudy
SRT_BH064	Golder-Douglas (2017b)	Fill / Residual	22/09/2016	1.62	-	9.25	5.08	436	8.33	-	19.5	-
	Golder-Douglas (2017b)		08/06/2017	1.195	19.119	4.414	0.0	633.0	11.26*	48.8	20.7	
SRT_BH081	Golder-Douglas (2017b)	Residual / Shale	08/06/2017	3.966	16.824	7.929	6.11	39.3	6.15	451.7	20.1	
SRT_BH082	Golder-Douglas (2017b)	Residual	08/06/2017	4.483	16.285	7.923	1.09	226.9	5.73	370.8	19.8	
SRT_BH084	Golder-Douglas (2017b)	Residual / Sandstone	08/06/2017	4.706	15.899	9.32	0.28	328.3	5.98	239.9	20.9	
	GHD (2017c)		03/11/2017	4.525	-	9.25	0.51	235.0	6.35	44.1	20.4	Brown cloudy

* Data suggest result has been impacted by grout initial sample results during bore development were 7.73

- SWL: Standing water level
- mbTOC: metres below top of casing
- BOC: Bottom of casing (depth of well)
- DO: Dissolved oxygen
- EC: Electrical conductivity
- Redox: Reduction and oxidation potential

5.1.4 Seep water observations

A hydrocarbon sheen was observed at water presented at site 1 (pump room at eastern suburban platform) however no odour was noted. The noted hydrocarbon sheen is likely related to the operation of the pump room.

No odour or sheen was noted at site 2 and site 3 during the seep water sampling.

5.2 Laboratory analytical results

5.2.1 Soil results for Metro Station Box

The soil investigation laboratory results are presented in **Table B1, Appendix B**. The exceedances of adopted screening criteria are presented **Figure 4**, **Appendix A**. A summary of any exceedances of the laboratory analytical results are provided in **Table 5-5** below.

Table 5-5 – Summary of Metro Station Box soil assessment against health screening criteria and management limits

Borehole	Asbestos	Metals	TRH	BTEX	PAH	OCP, OPP, PCB, Phenols
SRT_CBH01	ND	N	***ML***	N	***HH***	N
SRT_CBH02	ND	N	***ML***	N	***HH***	N
SRT_CBH03	ND	N	N	N	N	N
SRT_CBH04	ND	N	***ML***	N	***HH***	N
SRT_CBH05	ND	N	***ML***	N	***HH***	N
SRT_CBH06	ND	N	***ML***	N	***HH***	N
SRT_CBH07	ND	N	N	N	N	N
SRT_CBH08	ND	N	***ML***	N	***HH***	N
SRT_CBH09	ND	N	***ML***	N	***HH***	N
SRT_CBH10	ND	N	***ML***	N	***HH***	N
SRT_CBH11	ND	N	N	N	N	N
SRT_CBH12	ND	N	N	N	N	N
SRT_CBH13	ND	N	N	N	N	N
SRT_CBH14	ND	N	N	N	N	N
SRT_NDD002	***AD***	-	-	-	-	-
SRT_NDD030	ND	N	***ML***	N	***HH***	N
ST11	ND	N	***ML***	N	***HH***	N
Asbestos	***AD***	-	-	-	-	-

- AD: Asbestos detected
- ND: asbestos was not reported in soil samples analysed.
- N: no exceedance of adopted screening criteria discussed in Section 3.3.

- HH: exceedance of adopted health screening criteria for commercial / industrial land use discussed in Section 3.3.
- ML: exceedance of adopted management limits discussed in Section 3.3.
- ST11: sample collected from slit trench 11.

5.2.1.1 Heavy metals

All soil samples submitted for analysis reported heavy metal concentrations below the adopted health investigation levels for commercial and industrial land use.

5.2.1.2 BTEX

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.1.3 TRH

The majority of soil samples submitted for analysis reported concentrations of TRH were below the nominated soil screening criteria for human health.

Four samples reported concentrations for TRH in the fraction >C10-C16 (F2) exceeding the management limits guideline of 1000 mg/kg:

- SRT_CBH004_0.12-0.4: 1200 mg/kg
- SRT_CBH005_0.12-0.5: 1400 mg/kg
- SRT_CBH010_0.2-0.25: 7100 mg/kg
- SRT_FD01_18092017 (SRT_CBH009_0.15-0.25): 1700 mg/kg

Eleven samples had reported concentrations for TRH in fraction >C16-C34 (F3) exceeding the management limits guideline of 3500 mg/kg:

- SRT_CBH001_0.12-0.2: 13000 mg/kg
- SRT_CBH002_0.12-0.3: 3900 mg/kg
- SRT_CBH004_0.12-0.4: 6400 mg/kg
- SRT_CBH005_0.12-0.5: 9200 mg/kg
- SRT_CBH006_0.1-0.2: 4800 mg/kg
- SRT_CBH008_0.15-0.2: 8000 mg/kg
- SRT_CBH009_0.15-0.25: 4300 mg/kg
- SRT_FD01_18092017 (SRT_CBH009_0.15-0.25) : 9900 mg/kg
- SRT_CBH010_0.2-0.25: 16000 mg/kg
- SRT_NDD030_0.65: 9200 mg/kg
- ST11_0.65: 4500 mg/kg

All identified impact is at depths shallower than 1 m bgl and primarily within fill material.

5.2.1.4 PAH

Concentrations of PAH were generally low or below the laboratory limit of reporting with the following exceptions which reported benzo(a)pyrene TEQ values greater than the nominated HIL D guideline of 40 mg/kg:

- SRT_CBH001_0.12-0.2: 190 mg/kg
- SRT_CBH002_0.12-0.3: 42 mg/kg
- SRT_CBH004_0.12-0.4: 110 mg/kg

- SRT_CBH005_0.12-0.5: 150 mg/kg
- SRT_CBH006_0.1-0.2: 82 mg/kg
- SRT_CBH008_0.15-0.2: 150 mg/kg
- SRT_CBH009_0.15-0.25: 56 mg/kg
- SRT_FD01_18092017 (SRT_CBH009_0.15-0.25) : 190 mg/kg
- SRT_CBH010_0.2-0.25: 180 mg/kg
- SRT_NDD030_0.65: 51 mg/kg
- ST11_0.6: 88 mg/kg

Concentrations of Total PAHs exceeded the HIL D guideline of 4000 mg/kg in one sample:

- SRT_CBH010_0.2-0.25 : 4997 mg/kg

All identified impact is at depths shallower than 1 m bgl and primarily within fill material.

5.2.1.5 Phenols

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.1.6 OCP, OPP and PCB

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.1.7 Asbestos

A total of 55 soil samples of fill material were submitted for analysis for absence / presence of asbestos. However an asbestos sample was recovered at SRT_NDD002 which was found to contain chrysotile and amosite asbestos. An asbestos sample was also recovered during slit trenching works within the footprint of the suspected Gasworks 2 contained three potential ACM fragments, which was found to contain chrysotile asbestos.

The exceedances are also presented in **Figure 4, Appendix A**.

5.2.2 Soil results for Central Walk East

The soil investigation laboratory results are presented in **Table B2, Appendix B**. The exceedances of adopted screening criteria is presented in **Figure 5**, **Appendix A**. A summary of any exceedances of the laboratory analytical results are provided in **Table 5-6** below.

Table 5-6 – Summary of Central Walk East soil assessment against health screening criteria and management limits

Borehole	Asbestos	Metals	TRH	BTEX	PAH	OCP, OPP, PCB, Phenols
SRT_CBH14	ND	N	N	N	N	N
SRT_CBH15	ND	N	***ML***	N	***HH***	N
SRT_CBH16	ND	N	***ML***	N	***HH***	N
SRT_CBH17	ND	N	N	N	N	N
SRT_CBH18	ND	N	***ML***	N	***HH***	N

- AD: Asbestos detected
- ND: asbestos was not reported in soil samples analysed.

- N: no exceedance of adopted screening criteria discussed in Section 4.
- HH: exceedance of adopted health screening criteria for commercial / industrial land use discussed in Section 4.
- ML: exceedance of adopted management limits discussed in Section 4

5.2.2.1 Heavy metals

All soil samples submitted for analysis reported heavy metal concentrations below the adapted health investigation levels for commercial and industrial land use.

5.2.2.2 BTEX

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.2.3 TRH

The majority of soil samples submitted for analysis reported concentrations of TRH were below the nominated soil screening criteria for human health.

Five samples reported concentration for TRH in fraction >C16-C34 (F3) exceeding the management limits guideline of 3500 mg/kg:

- SRT_CBH015_0.15-0.2: 11000 mg/kg
- SRT_CBH015_0.9-1.0: 3700 mg/kg
- SRT_CBH016_0.15-0.2: 3800 mg/kg
- SRT_FD01_260917 (SRT_CBH016 0.15-0.2): 3520 mg/kg.
- SRT_CBH018_0.15-0.25: 3900 mg/kg

All identified impact is at depths shallower than 1 m bgl and primarily within fill material.

5.2.2.4 PAH

Concentrations of PAH were generally low or below the laboratory limit of reporting with the following exceptions which reported benzo(a)pyrene TEQ values greater than the nominated HIL D guideline of 40 mg/kg:

- SRT_CBH015_0.15-0.2: 300 mg/kg
- SRT_CBH015_0.9-1.0: 76 mg/kg
- SRT_CBH016_0.15-0.2: 67 mg/kg
- SRT_CBH018_0.15-0.25: 120 mg/kg

All identified impact is at depths shallower than 1 m bgl and primarily within fill material.

5.2.2.5 Phenols

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.2.6 OCP, OPP and PCB

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.2.7 Asbestos

A total of 12 soil samples of fill material were submitted for analysis for absence / presence of asbestos. No asbestos was detected in any of the samples submitted for analysis. No fragments of potential ACM were noted during field investigations completed during this assessment.

5.2.3 Sydney Yard project access area - Project Access/Works Area

The soil investigation laboratory results are presented in **Table B3, Appendix B**.

5.2.3.1 Heavy metals

All soil samples submitted for analysis reported heavy metal concentrations below the adapted health investigation levels for commercial and industrial land use.

5.2.3.2 BTEX

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.3.3 TRH

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.3.4 PAH

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.3.5 Phenols

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.3.6 OCP, OPP and PCB

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial and industrial land use.

5.2.3.7 Asbestos

No asbestos was detected in any of the samples submitted for analysis.

5.2.4 Groundwater results

The groundwater investigation laboratory results are presented in **Table B8 and B9, Appendix B**. The exceedance of adopted screening criteria are presented in **Figure 8, Appendix A**. A summary of any exceedances of the laboratory analytical results are provided below.

5.2.4.1 Heavy Metals

The majority of groundwater samples submitted for analysis reported concentrations of heavy metals below the laboratory reporting limit and below the nominated screening criteria for marine aquatic ecosystems.

Twelve samples had reported concentrations for heavy metals above the nominated screening criteria, these are detailed below.

- Chromium (III+VI) exceeded the GIL marine water quality of 0.0044 mg/L in SRT_BH052 (0.006 mg/L), SRT_BH055 (0.006 mg/L) and SRT_BH060 (0.01 mg/L)
- Copper exceeded the GIL marine water quality of 0.0013 mg/L in SRT_BH048 (0.002 mg/L), SRT_BH052 (0.012 and 0.003 mg/L), SRT_BH063 (0.003 mg/L) and SRT_BH064 (0.004 and 0.002 mg/L
- Mercury exceeded the GIL marine water quality of 0.0001 mg/L in SRT_BH055 (0.0003 mg/L) and SRT_BH064 (0.0002 and 0.0001 mg/L)
- Nickel exceeded the GIL marine water quality of 0.007 mg/L in SRT_BH048 (0.008 mg/L), SRT_BH052 (0.007 mg/L), SRT_BH053 (0.019 and 0.014 mg/L), SRT_BH063 (0.009 mg/L),

SRT_BH064 (0.011, 0.01, 0.009 and 0.007 mg/L), SRT_CBH007 (0.008 mg/L) and SRT_CBH015 (0.014 mg/L)

- Zinc exceeded the GIL marine water quality criteria of 0.015 mg/L in SRT_BH006 (0.017 mg/L), SRT_BH006A (0.017 mg/L), SRT_BH039 (0.018 mg/L), SRT_BH063 (0.25 mg/L), SRT_BH081 (0.016 mg/L), SRT_BH084 (0.031 mg/L), SRT_CBH007 (0.024 mg/L), SRT_CBH015 (0.026 mg/L) and SRT_BH063 (0.25 mg/L).

Metals concentrations are expected to be associated with background groundwater as they appear to be present in well SRT_BH063, which is not located at the site and not expected to be in significant hydraulic connection.

5.2.4.2 TRH, BTEX and PAH

The majority of samples submitted for analysis reported concentrations below the adopted screening levels for commercial industrial land use and marine aquatic ecosystems.

Three sample locations had reported concentrations of benzene above the recreational guideline of 10 µg/L, in SRT_BH064 (36, 16 and 15 µg/L). This well is located in the vicinity of former gasworks (gasworks 2). This may represent potential risk to construction and maintenance coming into contact with the groundwater.

5.2.4.3 VOCs and SVOCs

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial industrial land use and marine aquatic ecosystems.

5.2.4.4 Phenols, OCP, OPP and PCB

The samples submitted for analysis reported concentrations below the adopted screening levels for commercial industrial land use and marine aquatic ecosystems.

5.2.4.5 Cyanide

The majority of samples submitted for analysis reported concentrations below the adopted screening levels for commercial industrial land use and marine aquatic ecosystems.

Four samples reported concentrations for cyanide above the nominated screening criteria, these are detailed below.

- Cyanide exceeded the GIL marine water quality criteria of 0.004 mg/L in SRT_BH064 (0.036 mg/L, 0.023 mg/L, 0.023 mg/L, 0.02 mg/L). This well is located in the vicinity of the former gasworks and the presence of cyanide may be associated with this historical use.

5.2.4.6 Ammonia

The majority of samples submitted for analysis reported concentrations below the adopted screening levels for marine aquatic ecosystems.

Seven samples reported concentrations for ammonia above the nominated screening criteria, these are outlined below.

- Ammonia exceeded the GIL marine water quality criteria of 0.91 mg/L, SRT_BH039 (5.45, 5.2 and 5.1 mg/L) and SRT_BH064 (4.9, 4.3, 4.3 and 1.9 mg/L). SRT_BH064 is located in the vicinity of the former gasworks (Gasworks 2) and the presence of ammonia may be associated with this historical use. The high levels of ammonia at SRT_BH039 may be reflective of deeper gasworks impacts in the deeper aquifer system, however it is noted that high ammonia concentrations were not present in deep well SRT_BH006 located closer to the gasworks. Further to this other contaminants typically associated with gasworks such as cyanide and PAHs were also absent.

5.2.5 Seep water

The seep water laboratory results are presented in **Table B10, Appendix B**. The exceedance of adopted screening criteria are shown on **Figure 8, Appendix A**. A summary of any exceedances of the laboratory analytical results are summarised below.

5.2.5.1 Heavy Metals

The majority of groundwater samples submitted for analysis reported concentrations of heavy metals below the laboratory reporting limit and below the nominated screening criteria for marine aquatic ecosystems.

The three samples submitted for analysis reported concentrations for heavy metals above the nominated screening criteria, these are detailed below.

- Cadmium (Total) exceeded the GIL for marine water and recreational guideline of 0.0007 mg/L, in Site 3 (0.043 mg/L)
- Chromium (III+VI) (Total) exceeded the GIL for marine water of 0.0044 mg/L in Site 1 (0.023 mg/L) and Site 3 (0.047 mg/L)
- Copper (Total) exceeded the GIL for marine water of 0.0013 mg/L in Site 1 (0.24 mg/L) and Site 3 (2 mg/L)
- Copper (Dissolved) exceeded the GIL for marine water of 0.0013 mg/L in Site 1 (0.014 mg/L) and Site 3 (0.004 mg/L)
- Lead (Total) exceeded the GIL for marine water of 0.0044 mg/L in Site 1 (0.065 mg/L) and Site 3 (1.2 mg/L)
- Mercury (Total) exceeded the GIL for marine water of 0.0001 mg/L in Site 1 (0.0003 mg/L)
- Nickel (Total) exceeded the GIL for marine water of 0.007 mg/L, in Site 1 (0.01 mg/L) and Site 3 (0.26 mg/L)
- Zinc (Total) exceeded the GIL for marine water of 0.015 mg/L in Site 1 (0.65 mg/L), Site 2 (0.026 mg/L) and Site 3 (15 mg/L), which also exceeded the Sydney Water trade waste criterion.
- Zinc (Dissolved) exceeded the GIL guideline of 0.015 mg/L in Site 3 (0.036 mg/L).

5.2.5.2 TRH, BTEX and PAH

The samples submitted for analysis reported concentrations below the adopted screening levels, however, low level concentrations of TRH <C10 were detected in all samples.

Concentrations of BTEX and PAHs in seep water samples were below the laboratory reporting limits and the adopted screening criteria

5.2.5.3 PFAS

AGJV noted that a PFAS assessment of the seep water was undertaken in November 2017, prior to the release of PFAS National Environmental Management Plan (NEMP) in January 2018. During the preparation of this report, the seep water PFAS laboratory analytical results were reviewed and compared to the interim marine water guideline values in the PFAS NEMP. The PFOA and PFOS concentrations in seep water samples collected in November 2017 were below the interim marine water guideline values in the PFAS NEMP for protection of 95% marine ecosystem species, which applies to slightly to moderately disturbed system. .

5.2.5.4 Cyanide and Ammonia

The samples submitted for analysis reported concentrations below the laboratory reporting limits.

6 Waste Classification

6.1 Waste classification of soil for Metro Station Box

Soil sampling results have been compared against the NSW waste classification criteria in **Table B4 and B7, Appendix B**. The exceedances of adopted screening criteria are presented **Figure 6**, **Appendix A**. A summary of the waste classification results is presented in **Table 6-1** below.

Table 6-1 – Summary of soil waste classification, Metro Station Box

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
GHD (2017a)	CBH013	0 – 0.7	0.2 – 0.3	Fill	GSW	Sandy gravel and sand, grey and brown
		0.7 – 5.7	0.8 – 0.9 2.1 – 2.2 4.1 – 4.2	Natural residual soil	GSW / VENM	Sandy and gravelly clays, orange and brown
		5.7 – 6.0	5.9 – 6.0	Bedrock	GSW / VENM	Weathered shale, grey.
	CBH014	0 – 0.65	0.4 – 0.5	Fill	GSW	Cobbles and sandy gravel, dark grey
		0.65 – 3.0	1.1 – 1.2 2.9 – 3.0	Bedrock	GSW / VENM	Weathered shale, grey.
	BH086	0 – 7.7	0.3 2.4 3.9	Fill	GSW	Clayey sand and cobbles, dark brown, bricks and ballast
		7.7 – 9.53	-	Natural residual soil	NA	Clay, red brown.
		9.53 – 45.1	10.5 – 10.6 28.85–28.95	Bedrock	GSW / VENM	Sandstone
	BH087	0 – 0.6	0.4 – 0.5	Fill	GSW	Gravel and sandy gravel, brown, grey, ballast.
		0.6 – 2.4	0.7 – 0.8 2.0 – 2.1	Natural residual soil	GSW / VENM	Sandy clay, red-brown and grey

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
		2.4 – 40.4	12.2-12.3 15.2-15.3 18.1-18.2 27.8-27.9	Bedrock	HW	Shale, Siltstones, Dolerite, Quartzite and Sandstones. Nickel exceeds NSW EPA (2014) Restricted Solid Waste CT2 criteria at SRT_BH087 15.2-15.3. No TCLP analysis performed.
	CBH001	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.4	0.12 – 0.2	Fill	HW	Gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.4 – 0.8	0.45 – 0.55	Fill	GSW	Gravelly sand, light brown
		0.8 – 8.1	0.9 – 1.0 1.6 – 2.2 2.35 – 2.5 3.7 – 3.9	Natural residual soil	GSW / VENM	Gravelly and clayey sand alluvium, followed by gravelly clay residual soils.
	CBH002	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.4	0.12 – 0.3	Fill	HW	Gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.4 – 3.1	0.45 – 0.55 0.9 – 1.0 1.3 – 1.5 3.0 – 3.1	Soil	GSW / VENM	Clay, brown and grey.

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
	CBH003	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.35	-	Fill	HW	Gravel, black, hydrocarbon odour/staining with solidified bituminous material. This material is consistent with material found in CBH001, CBH002, CBH004 and CBH005, and therefore classified as HW.
		0.35 – 1.88	0.45 – 0.55 0.95 – 1.2 1.7 – 1.85	Fill	GSW	Sandy and gravelly clay, brown and grey
	CBH004	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.4	0.12 – 0.4	Fill	HW	Gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.4 – 0.9	0.45 – 0.55	Fill	GSW	Sandy clay, brown and grey with sandstone cobbles
		0.9 – 4.0	1.9 – 2.0 2.9 – 3.0 3.9 – 4.0	Natural residual soil	GSW / VENM	Sandy clay, orange and grey.
	CBH005	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.4	0.12 – 0.4	Fill	HW	Gravel, black, hydrocarbon odour/staining with solidified bituminous material

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
		0.4 – 0.8	0.45 – 0.55	Fill	GSW	Clay, orange/brown.
		0.8 – 2.1	0.9 – 1.0 2.0 – 2.1	Natural residual soil	GSW / VENM	Clay, brown and grey
		2.1 – 3.0	2.9 – 3.0	Bedrock	GSW / VENM	Weathered shale, brown and grey.
	CBH006	0 – 0.1	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.1 – 0.8	0.1 – 0.2	Fill	HW	Gravelly clay, brown, some sand.
		0.8 – 6.0	2.0 – 2.1 3.0 – 3.1 4.0 – 4.1 5.0 – 5.1	Natural residual soil	GSW / VENM	Clayey sand, brown, alluvium, followed by clay, orange brown, residual soils.
	CBH007	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.35	0.3 – 0.35	Fill	GSW	Gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.35 – 1.2	0.9 – 1.0	Fill	GSW	Sand, light brown, trace gravels.
		1.2 – 6.0	1.5 – 1.6 2.1 – 2.2 3.9 – 4.0 4.9 – 5.0	Natural residual soil	GSW / VENM	Silty sand, brown alluvium, followed by clay, orange and brown, residual soils.

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
			5.9 – 6.0			
		6.0 – 7.0	-	Bedrock	NA	Weathered shale, grey.
	CBH008	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.25	0.15 – 0.2	Fill	HW	Sandy gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.25 – 1.1	0.9 – 1.0	Fill	GSW	Clayey gravel, brown and grey.
		1.1 – 1.7	1.6 – 1.7	Natural residual soil	GSW / VENM	Clay, brown and grey.
		1.7 – 2.2	2.1 – 2.2	Bedrock	GSW / VENM	Weather shale, dark grey.
	CBH009	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.3	0.15 – 0.25	Fill	HW	Sandy gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.3 – 1.1	0.4 – 0.5 0.9 – 1.0	Fill	GSW	Gravelly clay, brown and grey.
		1.1 – 1.7	-	Natural residual soil	GSW / VENM	Clay, orange brown and grey. The material at this location is similar to that in nearby investigation locations, and is considered to be classified as GSW / VENM

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
		1.7 – 3.0	1.9 – 2.0 2.9 – 3.0	Bedrock	GSW / VENM	Weathered shale, dark grey.
	CBH010	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 0.3	0.2 – 0.25	Fill	HW	Sandy gravel, black, hydrocarbon odour/staining with solidified bituminous material
		0.3 – 0.7	-	Fill	GSW	Gravelly clay, orange brown. The material at this location is similar to that in nearby investigation locations, and is considered to be classified as GSW
		0.7 – 1.7	1.6 – 1.7	Natural residual soil	GSW / VENM	Gravelly clay, brown and grey
		1.7 – 4.8	2.9 – 3.0 3.9 – 4.0	Bedrock	GSW / VENM	Weathered shale, brown and grey.
	CBH011	0.0 – 0.7	0.2 – 0.3	Fill	GSW	Gravelly Cobbles, angular, grey, ballast cobbles and gravels
		0.7 – 2.5	1.0 – 1.1 2.1 – 2.2	Soil	GSW	Sandy clay (residual) orange brown
		2.5 – 4.2	3.1 – 3.2 4.1 – 4.2	Natural residual soil	GSW	Clay (residual) pale grey, medium plasticity

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
	CBH012	0.0 – 0.8	0.4 – 0.5	Fill	GSW	Gravelly Cobbles, angular, grey, ballast cobbles and gravels
		0.8 – 1.7	1.0 – 1.1 1.6 – 1.7	Natural residual soil	GSW	Clay, low plasticity, grey mottled brown (Residual)
		1.7 – 3.0	2.8 – 3.0	Shale	GSW / VENM	Weathered shale
Golder-Douglas 2017a	BH039	0-0.1	-	Asphalt	NA	Road surface
		0.1-1.7	0.95 – 1.4	Fill	GSW	Sandy Gravel - Medium to coarse grained Clay- grey and orange brown
		1.7-2.4	1.9 – 2	Natural residual soil	GSW	Gravelly sandy clay – dark grey brown
		2.4-35	-	Bedrock	NA	Sandstone – grey to dark grey, medium to coarse grained, pale grey with grey bands
	BH048	0-0.1	-	Platform surface	Concrete / GSW	Concrete and Pavers
		0.1-1.5	1.1 – 1.2	Fill	GSW	Gravel – medium to course grained, dark grey Gravelly clay – pale grey, orange to red brown
		1.5-4.6	2 – 2.1 4 – 4.1	Natural residual soil	GSW	Silty clay – fine to medium grained, pale grey, orange to red brown, dark grey

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
		4.6 – 5.85	-	Bedrock	NA	Weathered bedrock, laminate dark grey and orange brown
		5.85-20.13	-	Bedrock	NA	Siltstone to sandstone – dark grey to pale grey, fine to medium grained
	BH049	0-0.1	-	Platform surface	Concrete / GSW	Concrete and Pavers
		0.1-1.5	1.5	Fill	GSW	Clay and silty clay – pale grey, brown and orange, medium grained
		1.5-4.9	4 4.5	Natural residual soil	GSW	Silty gravelly clay – pale brown, fine grained gravel
		4.9-20.28	-	Bedrock	NA	Sandstone – fine to medium grained, pale grey, dark red
	BH053	0-0.1	-	Platform surface	Concrete / GSW	Concrete and Pavers
		0.1-1.5	-	Fill	NA	Gravel to silty clay – dark grey, orange and brown
		1.5-3	2 3	Natural residual soil	GSW	Silty clay to gravelly sandy clay – grey, dark brown and orange to red
		3-7.54	-	Bedrock	NA	Mud/siltstone to clay – grey brown
		7.54-20.15	12.6 – 12.7	Bedrock	GSW	Basalt – fine to medium grained, grey

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
	NDD002	0.0-0.85	0.85	Fill	Special waste (asbestos)	Fill, details of the fill not available
Golder-Douglas 2017b	BH082	0-0.5	0.2 0.4	Fill	GSW	Top soil – sandy loam, dark brown and grey
		0.5-3.2	2 3.2	Fill	GSW	Sand/ Clayey sand – medium grained, white grey, brown grey
		3.2-7.8	-	Natural soil	NA	Clay/ sandy clay – medium grained, pale grey and orange
		7.8-8	-	Bedrock	NA	Sandstone – medium grained, white/pale yellow
	BH083	0-0.2	-	Concrete	Concrete / GSW	Concrete
		0.2-2	0.4 1.4 2	Fill	GSW	Sand and sandy gravel/clay – medium grained, orange, brown
		2-6	-	Natural soil	NA	Clay – orange white mottled
		6-7.8	-	Bedrock	NA	Shale and some sandstone – fine to medium grained, pale grey/yellow
	BH084	0-2.8	0.2 0.9 1.4	Fill	GSW	Sand – medium grained, dark grey to pale orange

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
		2.8-7.8	3 7.6	Natural soil	GSW	Clay – orange/ grey mottled
		7.8-9.38	-	Bedrock	NA	Sandstone – medium grained, pale orange, pale grey
	BH085	0-0.1	-	Rail ballast	NA	Rail ballast
		0.1-3.9	0.2 0.9 3	Fill	GSW	Sand – medium grained, dark grey/ brown to white
		3.9-7.9	4	Natural soil	GSW	Clay – grey orange mottled, dark red, grey
	NDD030	0-2.2	0.10 0.35 0.65 0.65-75 0.9 1.85 1.9 2.2	Fill	RSW RSW HW RSW RSW RSW HW RSW	Rail ballast Fill, sandy clayey gravel Fill sandy clay Fill: sandy clay and clayey gravel, intersected with a concrete slab at 1.8 m.
	ST01	0-0.4	0	Fill	GSW	Gravel (ballast) – dark grey
	ST02	0-0.8	0	Fill	GSW	Gravel (ballast) – dark grey

Report Ref	Investigation location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
Golder-Douglas 2017c			0.5	Fill	GSW	Gravel (ballast) – dark grey
	ST03	0-0.7	0	Fill	GSW	Sandy silt – dark brown
			0.7	Fill	GSW	Gravelly sand – dark brown- brown
	ST04	0-0.7	0.1	Fill	GSW	Silty sand – dark brown, fine to coarse grained
			0.5	Fill	GSW	Sandy gravel – dark brown, fine to coarse grained
	ST05	0-1.3	0.3	Fill	GSW	Silty sand – brown – dark brown, fine to coarse grained
			1.2	Fill	GSW	Sandy gravel – brown
	ST06	0-1.5	0.2	Fill	GSW	Gravel (ballast) – dark grey
			1.5	Fill	GSW	Sand – brown, fine to coarse grained
	ST07	0-1.5	0	Fill	GSW	Gravel (ballast) – dark grey
			1.5	Fill	GSW	Gravel (ballast) – dark grey
	ST08	0-0.6	0.2	Fill	GSW	Gravel (ballast) – dark grey
			0.6	Fill	RSW	Gravel (ballast) – dark grey
	ST09	0-0.9	0	Fill	GSW	Clayey gravel (ballast) – dark grey
			0.9	Fill	GSW	Gravelly sand – dark grey- brown, fine to coarse grained
	ST10	0-1.5	1.5	Fill	GSW	Gravelly sand – brown, fine to coarse grained
	ST11	0-1	0.6	Fill	HW	Gravel – dark grey – black, strong oily odour

- NA: Classification not available due to no classification testing
- GSW: NSW EPA (2014) General Solid Waste
- RSW: NSW EPA (2014) Restricted Solid Waste
- HW: NSW EPA (2014) Hazardous Waste
- VENM: virgin excavated natural material
- ST: samples collected from excavated slit trenches using NDD to identify services and utilities present on site.

6.2 Waste classification of soil for Central Walk East

Soil sampling results have been compared against the NSW waste classification criteria in **Table B5 and B7, Appendix B**. The exceedances of adopted screening criteria are presented **Figure 7**, **Appendix A**. A summary of the waste classification results is presented in **Table 6-2** below.

Table 6-2 – Summary of soil waste classification, Central Walk East

Report Ref	Borehole location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
GHD 2017a	CBH015	0 – 0.14	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.14 – 2.5	0.15 – 0.2 0.4 – 0.5 0.9 – 1.0 2.0 – 2.1	Fill	HW	Sandy gravel, dark grey, with ash and furnace waste. Samples SRT_CBH015 0.15-0.2 and SRT_CBH015 0.9-1.0 were classified as HW, and SRT_CBH015 0.4-0.5 classified as RSW. However, all samples were within a fill layer of similar visual consistency, therefore this layer is classified as HW.
		2.5 – 2.9	2.8 – 2.9	Fill	GSW	Gravelly clay, orange-brown and grey, brick and ash fragments.
		2.9 – 3.5	3.4 – 3.5	Natural residual soil	GSW / VENM	Clay, brown.
		3.5 – 6.0	4.9 – 5.0	Bedrock	GSW / VENM	Weathered shale, dark brown to grey.
GHD 2017a	CBH016	0 – 0.14	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.14 – 1.5	0.15 – 0.2 0.4 – 0.5	Fill	HW	Clayey cobbles, brown, sandstone gravels. Sample SRT_CBH016 0.15-0.2 was classified as HW, and SRT_CBH016 0.4-0.5 classified as GSW. However, all samples were within a fill layer of similar visual consistency, therefore this layer is classified as HW.
		1.5 – 2.6	1.9 – 2.0 2.5 – 2.6	Fill	GSW	Gravelly clay, dark grey, ash, slag and building rubble.

Report Ref	Borehole location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
GHD 2017a	CBH017	0 – 0.14	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.14 – 0.8	0.45 – 0.55	Fill	RSW	Clayey sand and gravel, brown and black, some hydrocarbon odours and staining.
		0.8 – 2.9	0.9 – 1.0 2.8 – 2.9	Fill	GSW	Clayey sand and sandy clays, brown and dark grey.
		2.9 – 5.1	3.9 – 4.0	Bedrock	GSW / VENM	Weathered shale, dark grey.
GHD 2017a	CBH018	0 – 0.12	-	Concrete	Concrete / GSW	Concrete and Pavers
		0.12 – 1.5	0.15 – 0.25 0.4 – 0.5 0.9 – 1.0	Fill	HW	Clayey cobbles, brown, sandstone gravels. Sample SRT_CBH018 0.15-0.25 was classified as HW, and SRT_CBH018 0.4-0.5 and SRT_CBH018 0.9-1.0 classified as GSW. However, all samples were within a fill layer of similar visual consistency, therefore this layer is classified as HW.
		1.5 – 1.65	1.5 – 1.65	Fill	RSW	Gravelly sand, brown, with some sandstone gravels/cobbles
		1.65 – 2.2	2.0 – 2.2	Natural residual soil	GSW / VENM	Gravelly clay, dark grey.
	BH040	0-1.7	0.1 – 0.15 0.5 – 0.55	Fill	RW	Gravel to silty sandy gravel – fine to coarse grained, grey

Report Ref	Borehole location	Range of Profile (m bgl)	Depths of samples analysed	Soil profile type	Classification	Descriptions and comments
Golder – Douglas 2017a		1.7-1.9	-	Natural residual soil	NA	Clay – dark grey
		1.9 – 7.2	-	Bedrock	NA	Shale, siltstone, sandstone – brown grey, grey
	BH051	0-0.1	-	Platform surface	Concrete / GSW	Concrete and Pavers
		0.1-2.9	0.2 – 0.25 0.9 – 1 2.4 – 2.5	Fill	RSW	Gravelly clayey cobbles and sand – medium to coarse grained, red brown, dark grey
		2.9-14.64	-	Bedrock	NA	Weathered bedrock – shale into siltstone to sandstone – dark brown grey, fine to medium grained
	BH054	0-0.2	-	Platform surface	NA	Ceramic tiles over concrete slab
		0.2-2.5	0.6 – 0.67 1.5 – 1.51	Fill	GSW	Gravelly clayey sand – fine to coarse grained, yellow brown, hydrocarbon odour
		2.5-15.1	2.5 – 2.55 3 – 3.15	Bedrock	GSW	Extremely weathered bedrock – shale to sandstone – fine grained, grey, no hydrocarbon odour

- NA: Classification not available due to no classification testing
- GSW: NSW EPA (2014) General Solid Waste
- RSW: NSW EPA (2014) Restricted Solid Waste
- HW: NSW EPA (2014) Hazardous Waste

6.3 Waste classification of soil for Sydney Yard project access area

Soil sampling results have been compared against the NSW waste classification criteria in **Table B6 and B7, Appendix B**. A summary of the waste classification results is presented in **Table 6-3** below.

Table 6-3 – Summary of soil waste classification, Sydney Yard project access area

Report Ref	Borehole location	Range of Profile (m bgl)	Depth of samples analysed	Soil profile type	Classification	Descriptions and comments
Golder-Douglas 2017a	BH067	0-0.1	-	Fill (topsoil)	NA	Topsoil – dark brown, silty clay
		0.1-0.3	-	Fill	NA	Clay – sandy clay with some gravel
		0.3-3.65	0.9 – 1 1.5 – 1.6 2.4 – 2.5	Natural residual soil	GSW / VENM	Silty clay – red, brown and grey
		3.65-10.11	-	Bedrock	NA	Shale to sandstone – red and dark grey, pale grey
	BH068	0-1.65	0.7	Fill	GSW	Sand – medium to coarse grained, pale orange, red brown
		1.65-3.4	3.3 – 3.4	Natural residual soil	GSW / VENM	Clay – orange to red brown, pale grey
Golder-Douglas 2017b	BH081	0-0.5	0.2 0.5	Fill	GSW	Top soil – medium grained, sandy loam, dark brown, grey
		0.5-6.4	1.9	Natural soil	GSW / VEMN	Clay – orange/white mottled
		6.4-8.07	-	Bedrock	NA	Shale mudstone into sandstone – fine grained, grey
Golder-Douglas 2016	BH042	0-0.9	-	Fill	NA	Gravel to clayey gravel – medium to coarse grained, brown, grey
		0.9-1.8	1.5 - 1.6	Natural residual soil	GSW / VENM	Silty clay – brown

Report Ref	Borehole location	Range of Profile (m bgl)	Depth of samples analysed	Soil profile type	Classification	Descriptions and comments
		1.8-8.1	-	Bedrock	NA	Weathered rock – siltstone – pale grey and red brown
		8.1-25	-	Bedrock	NA	Sandstone – medium grained, pale grey
	BH044	0-1.1	-	Fill	NA	Gravel to gravelly sand – medium to coarse grained
		1.1-6.5	-	Natural residual soil	NA	Clay – red-brown
		6.5-11.8	-	Bedrock	NA	Siltstone to sandstone – dark grey, find to medium grained
	BH045	0-1.2	0.9 – 1	Fill	GSW	Sandy Clayey gravel – fine to coarse grained, grey
		1.2-2	1.5 – 1.6	Aeolian deposits	GSW	Sand – medium grained, yellow
		2-5.1	2.4 – 2.5	Natural residual soil	GSW	Clay – grey and red brown
		5.1-20.1	-	Bedrock	NA	Siltstone to sandstone – red-brown to grey, fine to medium grained

- NA: Classification not available due to no classification testing
- GSW: NSW EPA (2014) General Solid Waste
- RSW: NSW EPA (2014) Restricted Solid Waste
- HW: NSW EPA (2014) Hazardous Waste

6.4 Waste classification of groundwater

The groundwater laboratory results were assessed against the Sydney Water trade waste criteria, and are presented in **Table B8, Appendix B**.

The majority of the analytes for heavy metals, PAH and BTEX were below the laboratory screening criteria or below the waste criteria concentrations.

However, the pH criteria of between 7-10 pH units was not met, as the lowest detected pH of 6.1 was observed in SRT_CBH007 and the highest pH of 12.2 in SRT_BH039.

The groundwater sampled during the GHD 2017a investigation has generally met the Sydney Water acceptance standard of trade wastewater with the exception of pH. Neutralisation may be required if groundwater is discharged into Sydney Water's wastewater system during the construction of metro infrastructure (i.e. from dewatering).

The analytical parameters of the groundwater samples were within the Sydney Water's acceptance standards. However it should be noted that some analysis (i.e. BOD and suspended solids) of groundwater needs to be undertaken and an agreement with Sydney Water needs to be reached prior to the discharge of pumped groundwater into Sydney Water's wastewater system.

7 Acid sulphate soil assessment

Formation of Acid Sulphate Soils

ASS comprise either existing soils where pyrite has oxidised to result in a soil pH<4, termed Actual Acid Sulphate Soils (ASS) or soils containing sufficient pyrite (Fe_2S) to produce enough sulphuric acid on exposure in order to form ASS, termed Potential Acid Sulphate Soils (PASS).

ASS formation results from the production of pyrite (Iron Sulphide) typically from sulphur within seawater and iron within estuarine sediments under reducing (oxygen deficient) environments, aided by the presence of organics, mainly within fine grained sediments, sand containing fine grained sediments and peat. PASS are typically found below the water table. ASS are usually the result of exposure or drainage of PASS deposits

ASS commonly occur in waterlogged, saline sediments rich in iron and sulphate. Such environments include tidal flats, salt marshes and mangrove swamps below about RL 5m AHD. They can also form as bottom sediments in coastal rivers and creeks.

ASS have mostly formed in the Holocene period, (i.e. 10,000 years ago to present day) predominantly in the 7,000 years since the last rise in sea level.

It is generally considered that ASS which formed prior to the Holocene period would already have oxidised and leached during periods of low sea level which occurred during ice ages, exposing pyritic coastal sediments to oxygen.

Discussion of results

The AGJV conducted a review of ASS data collected by Golder-Douglas (2017a) and Golder-Douglas (2016). ASS results for soil samples collected during these investigations are presented in **Table B11, Appendix B**. A summary of these results are presented below.

A total of three samples exceeded the ASSMAC (1998) Action Criteria - Fine soils (>1,000 tonnes) for Total Potential Activity (TPA):

- SRT_BH044 4.0-4.45 m bgl (45 mole H^+/t)
- SRT_BH063 1.3-1.5 m bgl (52 mole H^+/t)
- SRT_BH084 7.6 m bgl (19 mole H^+/t)

Two samples exceeded the ASSMAC (1998) Action Criteria – fine soils (<1,000 tonnes) for TPA:

- SRT_BH046 4.0-4.5 m bgl (100 mole H^+/t)
- SRT_BH083 4.0 m bgl (110 mole H^+/t)

Soil and landscape characteristics indicative of ASS were not observed (as described in Table 2.3, Acid Sulphate Soils Assessment Guidelines, 1998).

The exceedances of the TPA and Peroxide Oxidisable Sulfur (SPOS) are affected by non-pyritic sulphur (e.g. organics) which will not form acid when exposed but react with the strong oxidising agent to give a ‘false positive’ result in the SPOCAS test. The SCR results predicts the actual amount of pyritic sulphur only which is existing in the sample. This sulfur can produce acid upon oxidisation. The SCR (once oxidised) plus any existing acidity present represents the maximum acidity that can be produced for the sample.

Although the TPA action criteria were exceeded in five samples, the samples tested are not considered PASS or ASS on the following basis:

- The existing acidity (TAA) plus SCR results (where pyritic sulphur was detected above LOR) exceeded the action criteria (19 to 110 Mols H+/ tonne vs criteria 18 Mols H+/tonne), but this was due to existing acidity of 16 to 110 Mols H+/tonne, and not propensity to produce further acidity on exposure.

- The pre-oxidation sulfur (SKCl) measured was at or just above the laboratory practical quantification limit and negligible sulphur has historically been oxidized. The materials tested were predominantly residual soil samples which is not an ASS environment.
- The materials tested were predominantly residual soil samples which is not an ASS environment.
- Soil and landscape characteristics indicative of ASS were not observed (as described in Table 2.3, Acid Sulphate Soils Assessment Guidelines, 1998).

8 Conceptual Model

Based on the current information, the following conceptual model (CM) has been developed for the Metro Station Box, Central Walk East and Sydney Yard project access area. The CM for the project work areas for the CSM project during construction is presented in **Figure 10, Appendix A** and the CM for the operational metro station is presented in **Figure 11, Appendix A.**

8.1 Sources

The investigation area and surrounding areas have a history of railway use and commercial / industrial activities including former gasworks.

Additionally, based on previous investigation works, the historical and current sources of contamination include:

- Presence of fill material across the investigation areas (including ballast under tracks) and beneath platforms.
- Contamination from historical gasworks activities, although the only real impact appears to be within shallow soils at SRT_BH064. It is noted however, that there is uncertainty around the exact locations of formers gasworks sites.
- Contamination associated with long-term rail activities on site, which may have included poor environmental practices (including dumping of waste solids and liquids), handling dangerous goods and maintenance of trains (i.e. asbestos brakes).
- Use of pesticides or herbicides for weed or insect control. Particularly along the rail corridor.

8.1.1 Soil Sources

Contaminants of primary concern in soil relating to the historical and current land use identified across the investigation areas include:

- Asbestos (present in fill soil only). ACM fragments where observed in fill at 2 locations in the southern end of the Metro Station Box area, a NDD hole (SRT_NDD002) and during slit trenching works to identify services. While no ACM was identified in other contamination boreholes or detected in soils samples across the three investigation areas, there remains an ongoing potential for ACM to be present in fill material onsite. This is due to the heterogeneous nature of the fill and the lack of understanding of the origins and placement of the fill inside the investigation area.
- Hydrocarbons including total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), volatile organic carbons (VOC) and phenols. Hydrocarbon impacts where found in fill present in the Metro Station Box and Central Walk East. The majority of the exceedances of the adopted screening criteria where from benzo(a)pyrene (human health criteria) and TRH >C10-C16 (F2) and TRH >C16-C34 (F3) fractions (management limits) detected in shallow sandy gravel or gravelly clay fill (<0.5 m bgl) present under the Suburban and Intercity Platforms and where associated with solidified tar/bituminous materials with tar odours present in the fill. The exceedances within the suburban platforms and inside the suspected footprint of the former gasworks relate fill materials, which include solidified tar/bituminous materials, ash and coal wastes and which extend to depths of up to 3.9 m bgl.

Impact above the adopted human health criteria and management limits are primarily associated with the fill materials. However, it is noted that the works have primarily focused on the fill, alluvium and residual soils with limited characterisation of the deeper bedrock.

It is noted that the Sydney Yard project access area has had limited contamination characterisation works. This reduces the confidence in the interpretation of risks in this area.

8.1.2 Groundwater Sources

Contaminants of primary concern in groundwater relating to the historical and current land use identified across the investigation areas include metals, cyanide and ammonia. These contaminants

represent potential risks to marine water, which are expected to be a potential receiving environment for site discharge. The impacts appear to be localised to the probable location of former Gasworks 2.

Metals are expected to be associated with background water quality conditions, but will require further consideration before offsite discharge during construction and operation to prevent impacts to the receiving marine receptor.

The pH in groundwater generally falls outside the adopted ranges for discharge to marine water and trade waste criteria and will need further consideration before offsite discharge of groundwater seepage.

Benzene concentrations in shallow groundwater at isolated locations near the former gasworks (Gasworks 2) may represent a risk to construction and maintenance workers coming into contact with groundwater during construction and operation.

8.2 Contaminants of potential concern

The following contaminants were investigated in soil and groundwater during previous investigations and are considered to be the primary contaminants of concern.

- Asbestos (soil only)
- Hydrocarbons including total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylene (BTEX), Polycyclic aromatic hydrocarbons (PAH), phenols and volatile organic compounds (VOC)
- Heavy metals
- Organochlorine pesticides (OCP), Organophosphorus pesticides (OPP) and Polychlorinated biphenyls (PCB).
- Cyanide
- Nutrients including ammonia, sulphate and sulphide (groundwater only) which are related to former gasworks. AGJV note that ammonia, sulphate and sulphide soil impacts may also be present, however these nutrients do not have criteria listed for soils in the NEPM. Further, given that soil samples will be analysed for PAHs and cyanide which are also considered to be key contaminants for gasworks, AGJV does not consider that the analysis of these nutrients are essential soil COPC.

8.3 Pathways

The primary pathways by which receptors could potentially be exposed to the sources of contamination outlined above are considered to be:

- Dermal contact with contaminated shallow soils.
- Incidental ingestion of contaminated shallow soils
- Interaction with impacted soil and associated vapours during construction and operation that have potential to ignite, explode and or cause damage to infrastructure.
- Inhalation of asbestos fibres from impacted fill.
- Vertical and horizontal migration of contamination through the unsaturated zone into the saturated zone and subsequent horizontal migration within the groundwater into the Metro Station Box with capture and discharge to surface waters. It is noted that the Metro Station Box will act as the primary discharge point for groundwater.
- Surface runoff and sediment transport into storm water drainage and subsequent transport and discharge to surface waters.

8.4 Receptors

Potential receptors during the construction and operational phase of metro infrastructure on the investigation area may include:

- Human health during construction phase – metro infrastructure construction workers and current and commercial land users. Construction workers are considered to be the most sensitive receptors during the project construction phase. The greatest potential for receptor exposure will be during excavation and handling of shallow fill soils during construction of the Metro Station Box and during services installation in the Sydney Yard project access area. It is expected that the Central Walk East area will be tunnelled and that impacted shallows soils will have lower potential for being intersected.
- Human health during operation phase – metro infrastructure operation workers, intrusive maintenance workers and future commercial land users. Future metro infrastructure operation workers are considered to be the most sensitive receptors during the metro operation phase.
- Environment – Surrounding surface water bodies (including Cockle Bay and Blackwattle Bay).

8.5 Potential Source-Pathway-Receptor Linkages

Based on the current information, a CM has been developed as presented in **Table 8-1**. The CM shows the source-pathway-receptors linkages identified for the site and a discussion on where they are likely to be complete.

Table 8-1 – Source Pathway Receptor (SPR) summary – Metro Station Box

Sources	Pathway	Receptor	Potentially Complete?
Uncontrolled fill across the investigation area and contamination associated with long-term rail activities on site which may have included dangerous goods and maintenance of trains (including asbestos brakes).	Accidental ingestion of impacted soil and dust and dermal contact with impacted soil.	Workers on site during construction of the metro primarily in the MBW footprint	Likely
		Intrusive maintenance workers during operation of the metro infrastructure.	Potentially - Intrusive maintenance workers in areas outside of the MBW footprint would potentially contact impacted material which would require management.
		Future users of the metro infrastructure	Unlikely, given that all material within the metro box perimeter will be removed and disposed offsite. In addition, the metro box will be an enclosed structure which will prevent commuters from coming into contact with exposed soil or dust.
	Inhalation of asbestos fibres	Workers on site during construction of the metro primarily in the MBW footprint.	Potentially – if remaining asbestos containing material (ACM) is encountered and activities liberate the fibres into air.
		Intrusive maintenance workers during operation of the metro infrastructure.	Potentially – if remaining asbestos containing material (ACM) is encountered and activities liberate the fibres into air.
		Future users of the metro infrastructure	Unlikely – While it is expected that commuters will have no contact with impacted soils, there is a possibility that maintenance works could liberate asbestos into commuter areas if not managed properly.
Contamination from historical gasworks activities	Accidental ingestion of impacted soil and dust and dermal contact with impacted soil.	Workers on site during construction of the metro primarily in the MBW footprint	Likely
		Intrusive maintenance workers during operation of the metro infrastructure.	Likely if maintenance works are planned within the area of the former gasworks.

Sources	Pathway	Receptor	Potentially Complete?
		Future users of the metro infrastructure	Unlikely, given that all material within the metro box perimeter will be removed and disposed offsite. In addition, the metro box will be an enclosed structure which will prevent commuters from coming into contact with exposed soil or dust.
	Inhalation of vapour from gasworks waste	Workers on site during construction who are working within the MBW footprint.	Potentially, if concentrations in the gasworks waste represent a vapour risk. Further investigation is required to characterise the vapour risk.
		Intrusive maintenance workers during operation of the metro infrastructure.	Potentially, if concentrations in the gasworks waste represent a vapour risk. Further investigation is required to characterise the vapour risk.
		Future users of the metro infrastructure	Potentially – if the concentrations in the gasworks waste represents a vapour risk and vapours intrude into the metro box and accumulate. Further investigation is required to characterise the vapour risk. Any risk identified will be mitigated in the design of the metro box.
Contaminated groundwater (i.e. contaminated by former gasworks)	Accidental ingestion of contaminated groundwater and dermal contact with contaminated groundwater	Construction workers during construction of metro infrastructure	Likely – Isolated concentrations of benzene in groundwater could represent a risk to construction workers. Further investigation is required to characterise the risk at the former gasworks site.
		Intrusive maintenance workers during the operations of the metro infrastructure.	Likely – Isolated concentrations of benzene in groundwater could represent a risk to construction workers. Further investigation is required to characterise the risk at the former gasworks site.
		Users of the metro infrastructures	Unlikely - commuters are not expected to come into direct contact with groundwater during operation.
	Inhalation of hydrocarbon vapour generated from contaminated groundwater.	Construction workers during construction of metro infrastructure.	Potentially – vapour management measures will be required during construction to manage this risk.

Sources	Pathway	Receptor	Potentially Complete?
		Intrusive maintenance workers during the operations of the metro infrastructure.	Potentially – vapour management measures will be required during construction to manage this risk.
		Users of the metro infrastructures	Potentially – if vapour intrudes into the constructed metro box.
	Vertical and horizontal migration through the unsaturated zone into the saturated zone and horizontal migration within the groundwater	Aquatic ecological and recreational receptors	Unlikely - current data suggests water quality is potentially above aquatic marine and recreational water quality criteria. The metro box is expected to reduce these risks and groundwater will be captured by the metro box and treated prior to disposal to surface water. At the time this RAP was prepared, the water discharge option was still under evaluation.
	Migration via drainage / dewatering of the excavation and subsequent discharge via stormwater or sewage	Aquatic ecological and recreational receptors	Unlikely – water from the dewatering process will be collected and treated prior to discharge. At the time this RAP was prepared, the water discharge option was still under evaluation.

9 Conclusions and recommendations

In accordance with the objectives, purpose and limitations detailed in **Section 1**, and based on the information contained within this assessment, the following conclusions are made for the completed investigations at Central Station. The information is also summarised in **Figures 3 to 9, Appendix A**. Detailed findings of the human health assessment are presented in **Section 5** and the soil waste classification are presented in **Section 6**.

9.1 Sampling density

The sampling density of the existing data set have been reviewed with reference to the recommended sampling density outlined in NSW EPA (1995) *Sampling Design Guidelines*. In summary, the following points are noted:

- Sampling densities across the Metro Station Box and Central Walk East areas meet the recommended minimum requirements of the NSW Sampling design guidance.
- The sampling density across the Sydney Yard project access area currently do not meet the recommended minimum NSW sampling design guidance.

There are no specific sampling density requirements for waste classification and VENM purposes other than to be confident that the data is representative of the material being managed. Recommended stockpile sampling densities (per m^3) provided in the NEPM are higher than those currently completed. These sampling densities provide a guide for the in-situ waste classification currently completed.

It is noted that limited sampling has been completed within the deeper bedrock (2 locations only). This data gap represents an uncertainty for characterising the presence of potential gasworks impact in deeper zones.

9.2 Contamination status

9.2.1 Soil

In summary, contamination was primarily reported within the shallow fill and posed potential health risks to metro infrastructure construction workers and future metro infrastructure operation workers (via ingestion and direct contact) from work within with MBW footprint.

Exceedance of management limits was reported at a number of investigation locations. The exceedance of management limits were developed to minimise the potential for LNAPL formation, fire and explosions and damage to infrastructure. The management limits are relevant for operating sites where significant sub-surface leakage of petroleum compounds has occurred and when decommissioning industrial and commercial sites. Given that sub-surface leakage of petroleum compounds have not been reported within the MBW footprint and Central Station and that there were no exceedances of HSLs in soil samples, the exceedance of management limits in shallow soil samples are not considered to require additional environmental management during construction. Further to this the durability of the metro box infrastructure is being assessed by structural engineers as part of the design works.

Asbestos has been encountered within fill and there is potential for inhalation of asbestos fibres during construction and operational maintenance works.

9.2.2 Groundwater and seep water

There is a potential risk to construction and operational maintenance workers coming into direct contact with impacted groundwater in the area of the former gasworks (Gasworks 2). Impact may have migrated into the deeper aquifer system, increasing the risk of exposure to potential impact in deeper groundwater.

The reported heavy metal concentrations in groundwater and seep water are expected to represent background concentrations. Metals concentrations in run off are expected to be elevated in the Sydney CBD urban environment however, the metals do represent a potential risk to the marine aquatic ecosystems and recreational users in the nearest surface water bodies (Cockle Bay and/or Blackwattle Bay). AGJV noted the elevated total zinc concentration in an unfiltered seep water sample (Site 3_pump 13). This seep water sample was collected from the tunnel wall, where residual paint on the wall may have impacted the sample. The dissolved zinc concentration in the filtered sample of this location was comparable with other filtered seep samples and groundwater samples.

Concentrations of cyanide and ammonia in groundwater also represent a risk to marine environments.

The pH in the groundwater is also commonly outside the criteria adopted for marine aquatic ecosystems.

Benzene at BH064 represents an isolated location where concentrations present are above recreational criteria for receptors in Blackwattle and/or Cockle Bay. Isolated impacts such as this are unlikely to materially affect the quality of any seepage water in the metro box being discharged to surface water, however, it does represent a potential risk to construction workers within the metro box coming into contact with groundwater.

Benzo(a)pyrene exceedances of the adopted human health criteria are all a result of the LOR for the laboratory being above the adopted criteria. No other PAH's have been detected in groundwater samples from the site.

AGJV noted that a PFAS assessment of the seep water was undertaken in November 2017, prior to the release of PFAS National Environmental Management Plan (NEMP) in January 2018. During the preparation of this report, the seep water PFAS laboratory analytical results were reviewed and compared to the interim marine water guideline values in the PFAS NEMP. The PFOA and PFOS concentrations in seep water samples collected in November 2017 were below the interim marine water guideline values in the PFAS NEMP.

It is noted that there is no expected historical source of PFAS contamination at MBW and in the immediate areas surrounding the MBW. The analysis of PFAS in seep water samples was requested by TfNSW at the time of the investigation.

9.3 Classification of waste

9.3.1 Soils

The results suggest that impact is primarily associated with fill. The fill in the Central Walk East area is primarily characterised as restricted to hazardous waste. The fill is expected to be at depths of up to 3 m in this area. There is also the potential for presence of asbestos. These depths need to be considered relative to the Central Walk East tunnelling works proposed in this area.

The fill material in the Metro Station Box ranges between general solid and restricted solid waste. The occurrence of hazardous waste samples is primarily restricted to samples less than 0.65 m bgl. There is also the potential for presence of asbestos in these areas.

There is limited sampling in the Sydney Yard project access area. All samples collected are classified as general solid waste. However there is also the potential for presence of asbestos.

All residual and alluvial materials have been classified as general solid waste / VENM. The bedrock samples have identified elevated concentrations of the zinc. These are expected to be represent

background conditions, however, further testing is required to confirm that this is not associated with impact from site activities.

9.3.2 Water

Metals, cyanide, pH, nitrogen, ammonia, phosphate and benzene in groundwater seeping into excavations during construction and operation will require further consideration and potentially management before disposal to marine receptors.

The groundwater and seep water within the investigation area have generally met the Sydney Water's acceptance standard for trade wastewater with the exception of pH in both groundwater and seep water and zinc in seep water. However it should be noted that some analysis (i.e. BOD and suspended solids) of water needs to be undertaken and an agreement with Sydney Water needs to be reached prior to the discharge of pumped groundwater into Sydney Water's wastewater system.

9.4 Consideration for construction works

Based on the findings of the investigations completed to date the following should be considered during the construction of metro infrastructure:

- The deeper groundwater aquifer in the sandstone was observed to contain concentrations of elevated zinc and ammonia. Potential contamination may warrant further consideration where the proposed end use or construction method results in a risk to human health or the environment.
- The construction and operation of the infrastructure should consider the long-term impacts on the groundwater regime and address the associated contamination risks. Where groundwater is extracted for the purposes of assessment, construction or long-term management; chemical analysis will be necessary to assess risks and disposal requirements. Chemical analysis should, as a minimum, incorporate assessment for the presence of volatile hydrocarbons, metals and ammonia.
- Asbestos management and unexpected finds protocol should be included in the construction management plan for the development of rail infrastructure or any other intrusive land development or construction works.
- The construction management plan should incorporate procedures to manage the risk of direct contact during the excavation of fill the Metro Station Box and Central Walk East.
- A remedial action plan or a contamination management plan should be prepared and implemented for metro box, central walk east and Sydney Yard.
- Additional in-situ waste classification program should be included in site remedial action plans (RAP).
- Observation of materials during excavation is required to ensure that the fill soil is as per the soil classification discussed in this report. An appropriately qualified and experienced environmental consultant should be engaged to provide waste classification of excavated fill soils as they are removed.
- Consideration should be given to treatment of groundwater seepage for construction of the project.

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11 Limitations

It is noted that AGJV does not rely on any data collected and reported by other consultants.

This report has been prepared by AGJV for LOR and may only be used and relied on by LOR for the purpose agreed between AGJV and LOR as set out in **Section 1** of this report.

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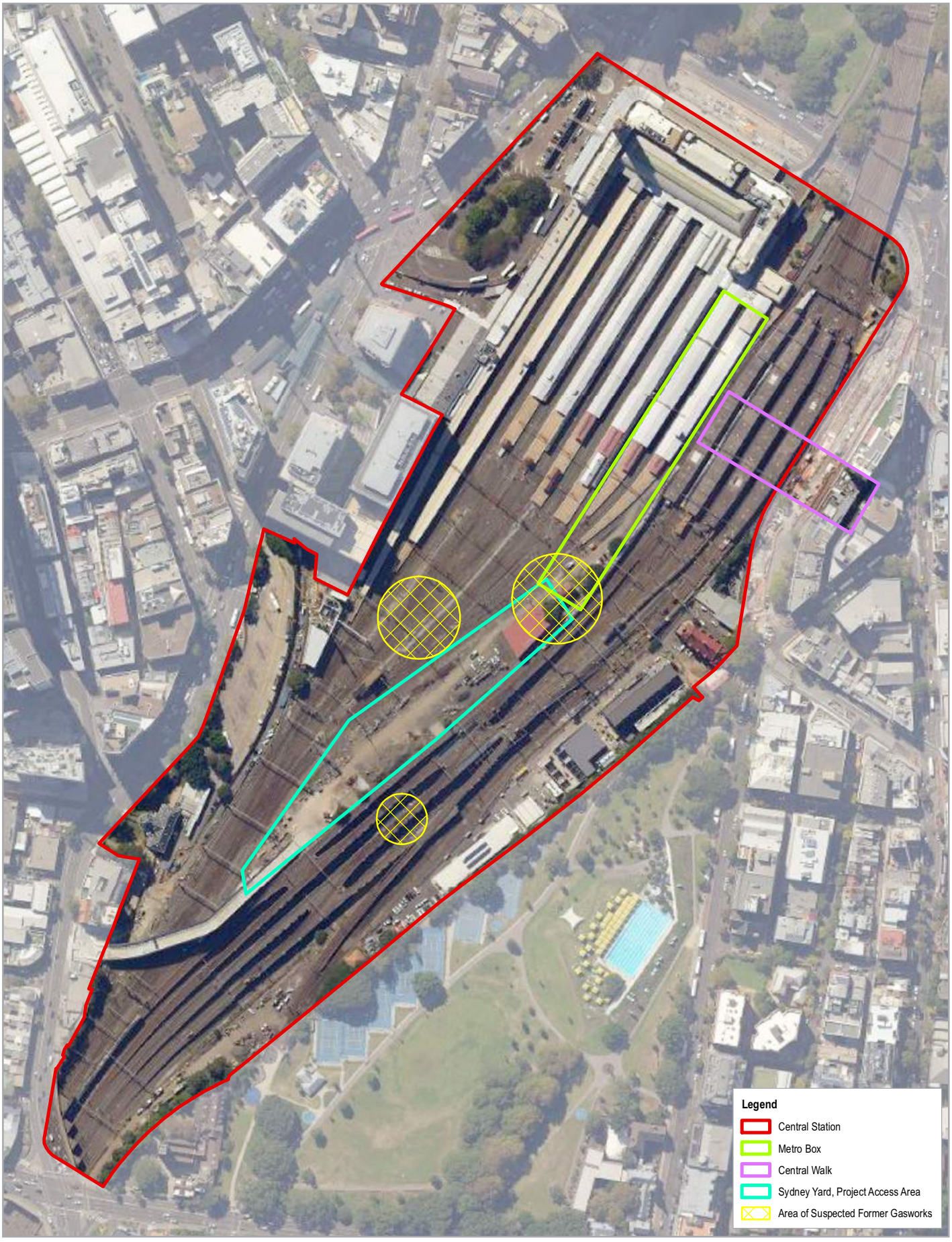
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Appendices

Appendix A
Figures



Paper Size ISO A4

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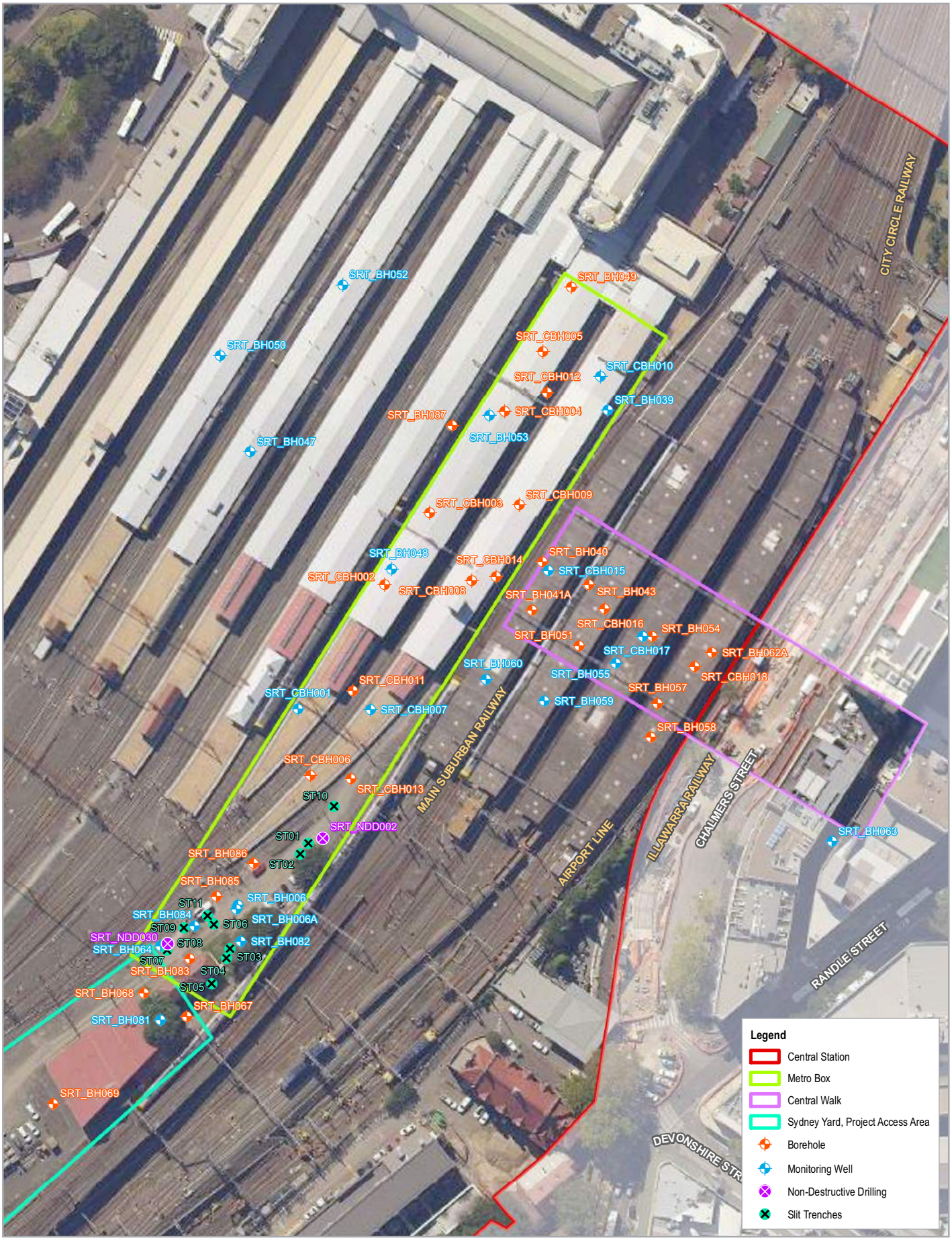
Central Station Main Works - Site Setting

Project No. **21-27234**
Revision No. **-**
Date **06/05/2019**

Figure 1

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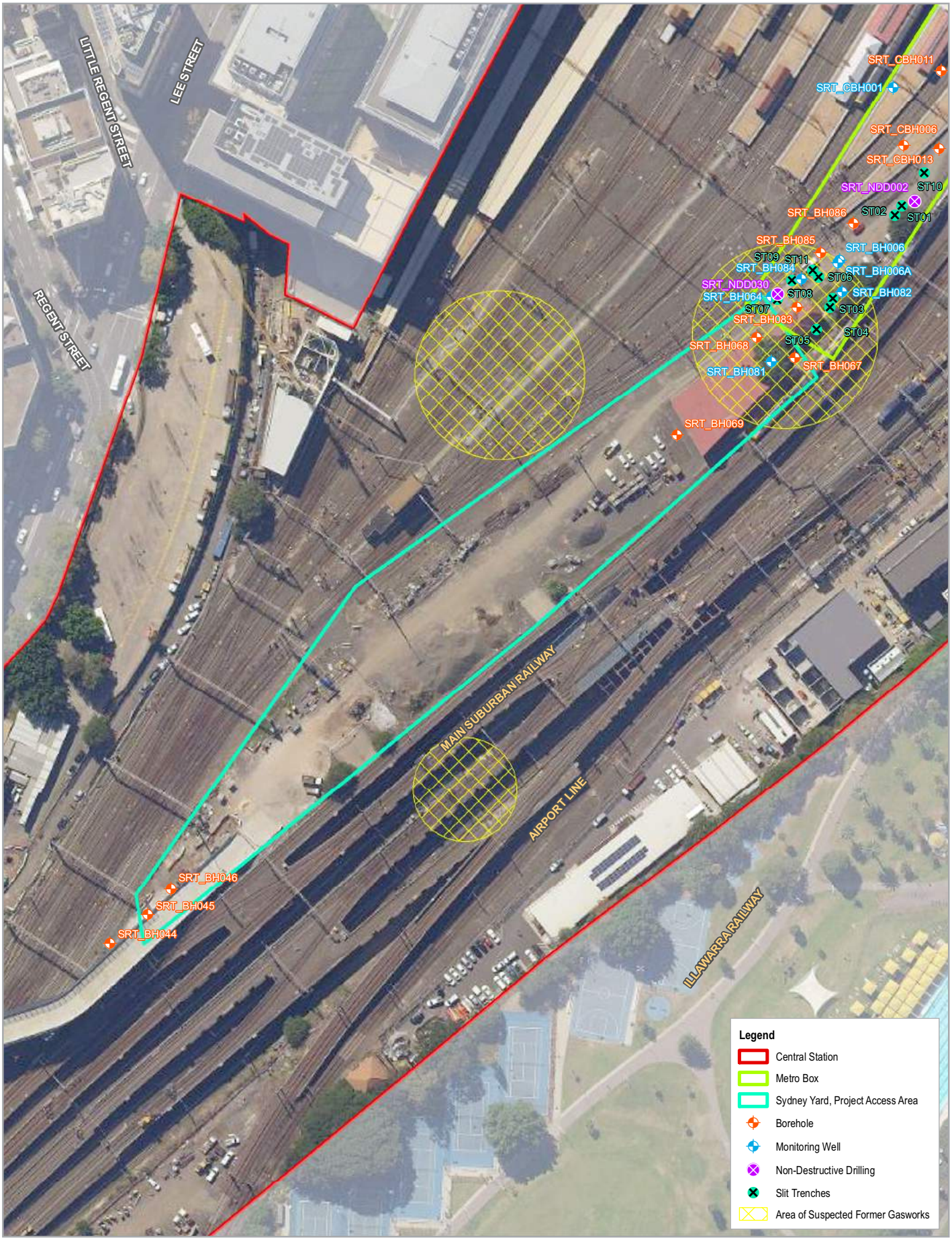
Central Station Box and Central Walk East - Sample Locations

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Revision No. **-**
Date **06/05/2019**

Figure 2

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Central Station Main Works

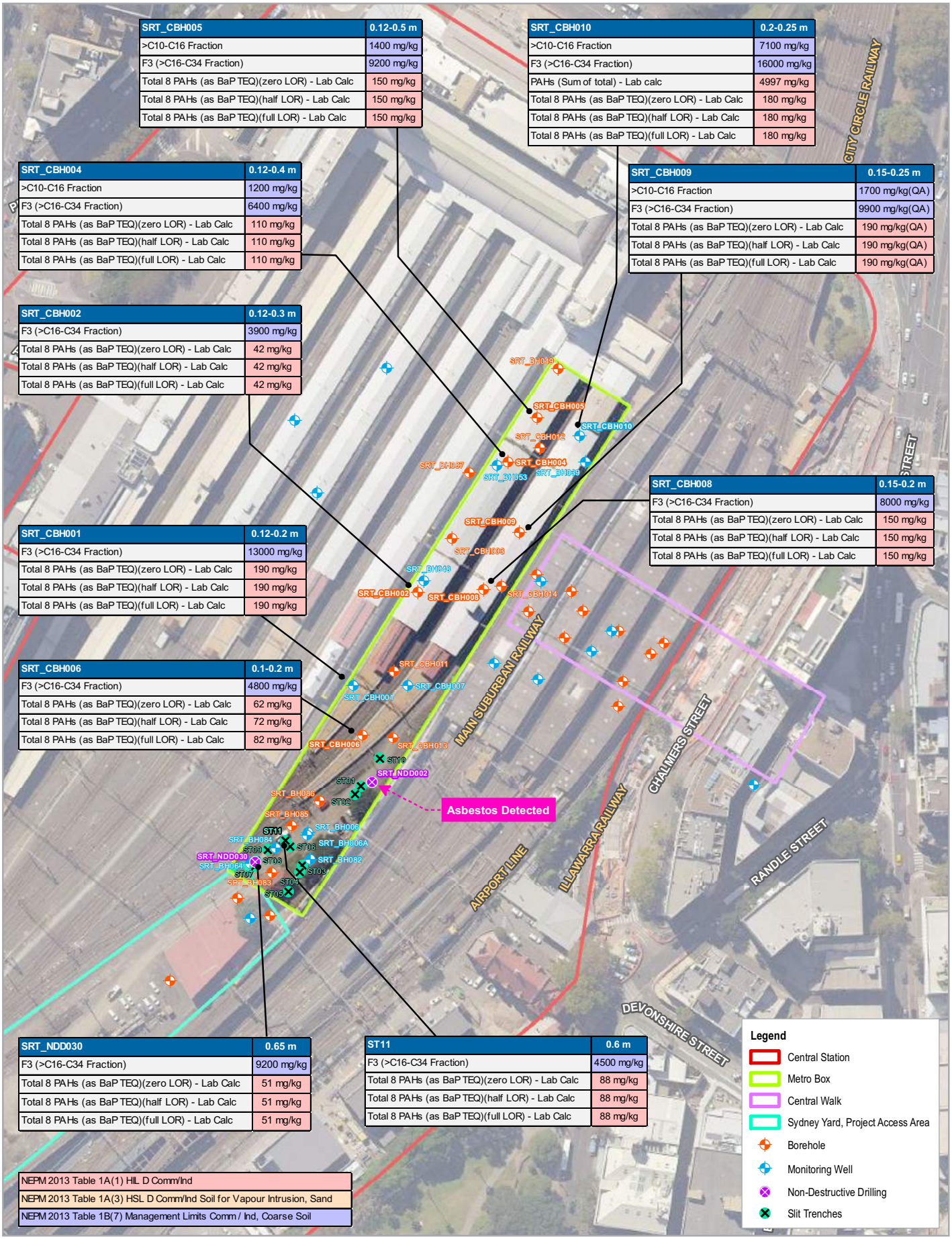
Sydney Yard - Project Access/ Works Area - Sample Locations

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Figure 3

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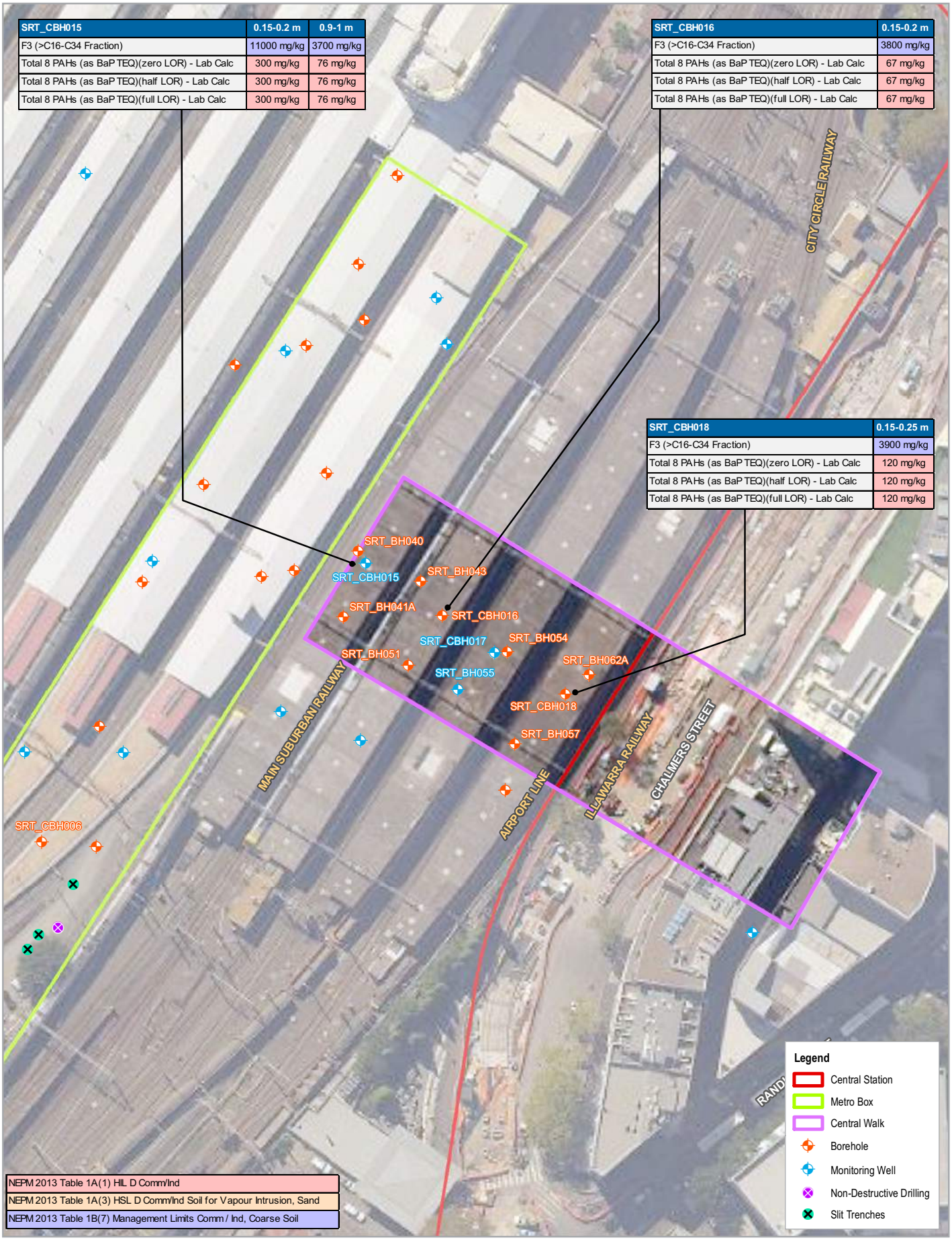
Metro Station Box - Soil Exceedances

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Date **06/05/2019**

Figure 4

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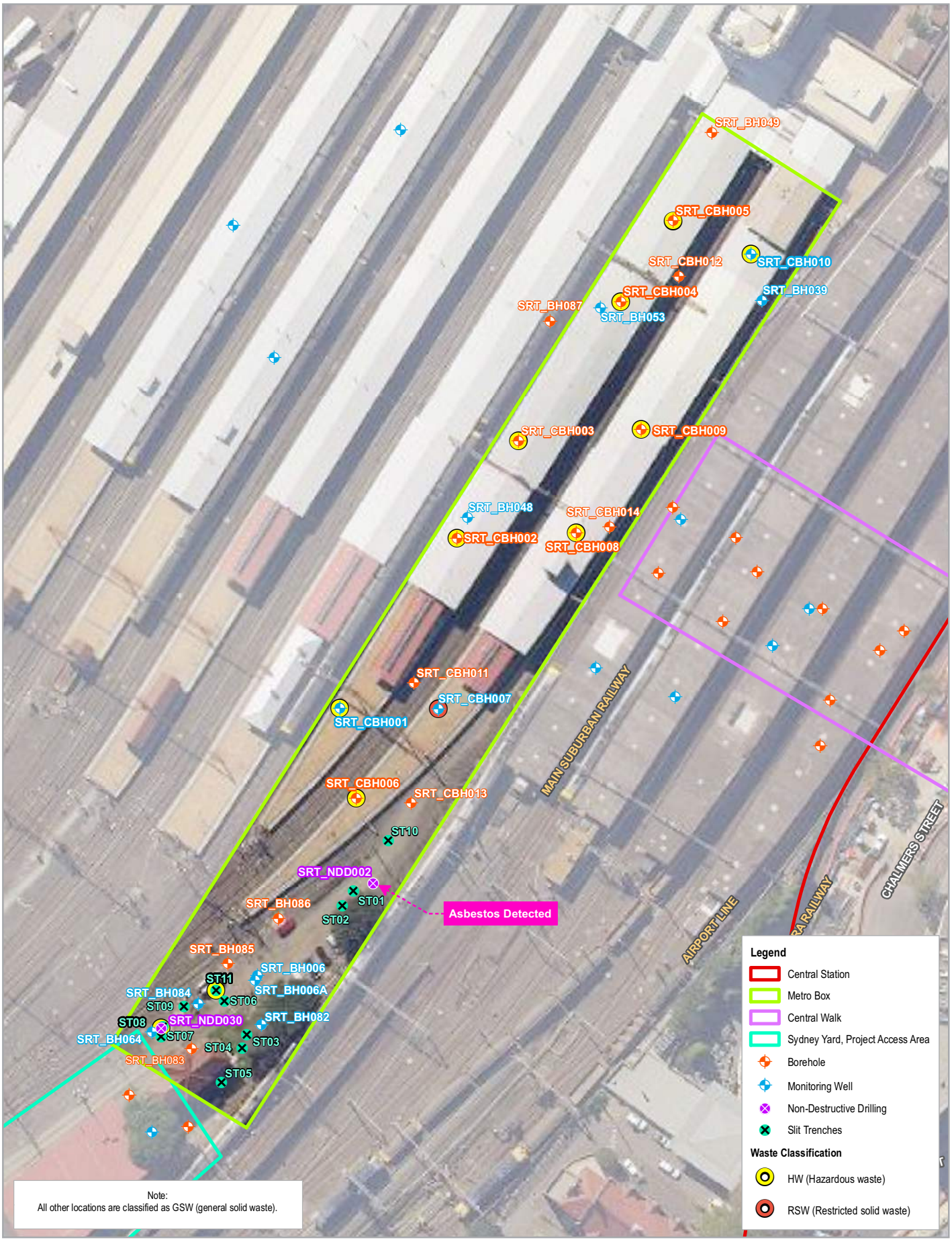
Central Walk East - Soil exceedances

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Date **06/05/2019**

Figure 5

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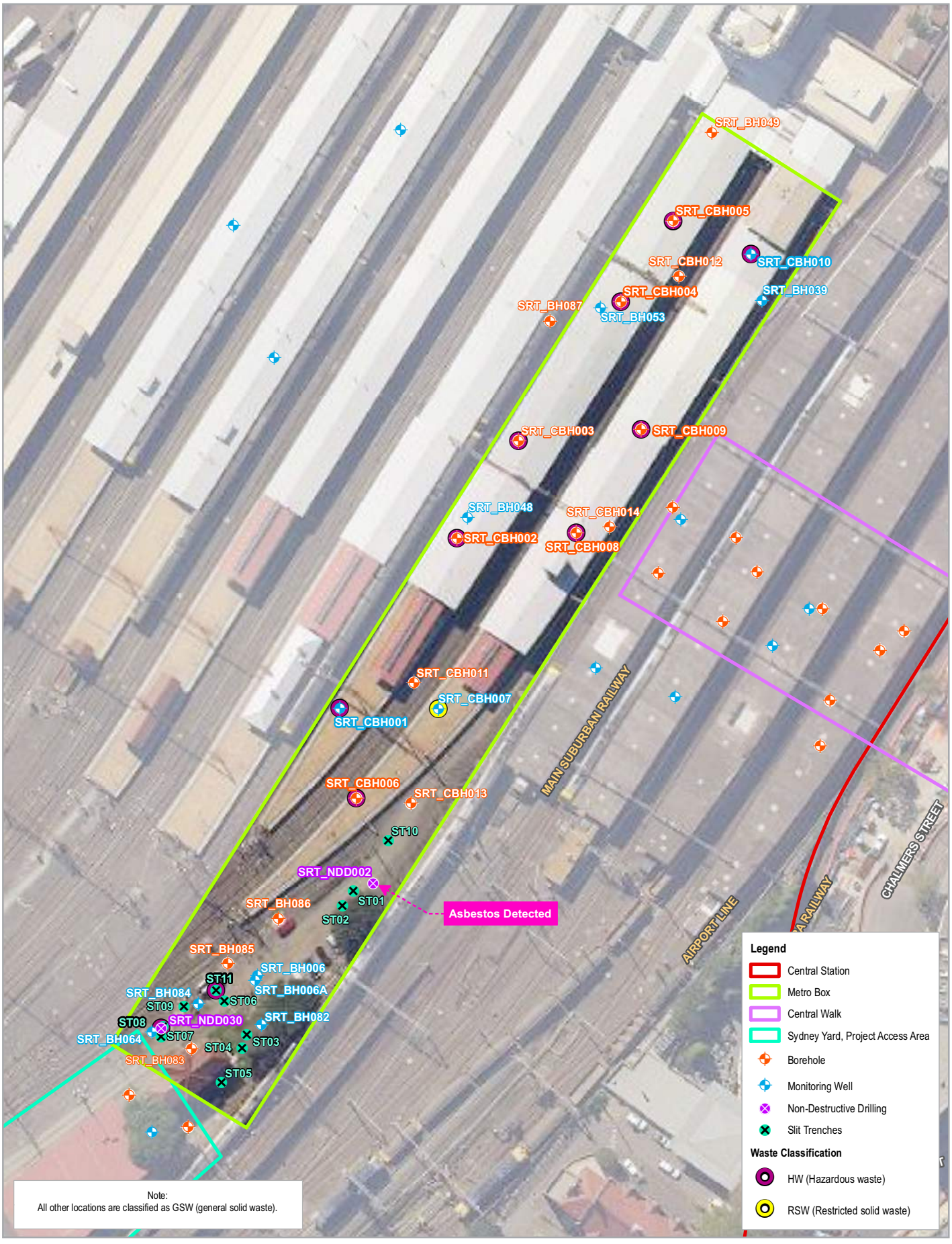
Metro Station Box - Fill
Waste Classification Summary

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Figure 6

G:\21\27234\GIS\Maps\Deliverables\21_27234_CONTAMINATION_Z006_MSB_WasteClassificationSummary.mxd
Print date: 06 May 2019 - 14:59

Data source: General Topo0 - NSW LPI DTDB 2012, 2018. Aerial Imagery - Sixmaps 2018 . Created by: kqvelasco



Paper Size ISO A4

0 9 18 27 36

Metres

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

AGJV

Laing O' Rourke
Central Station Main Works

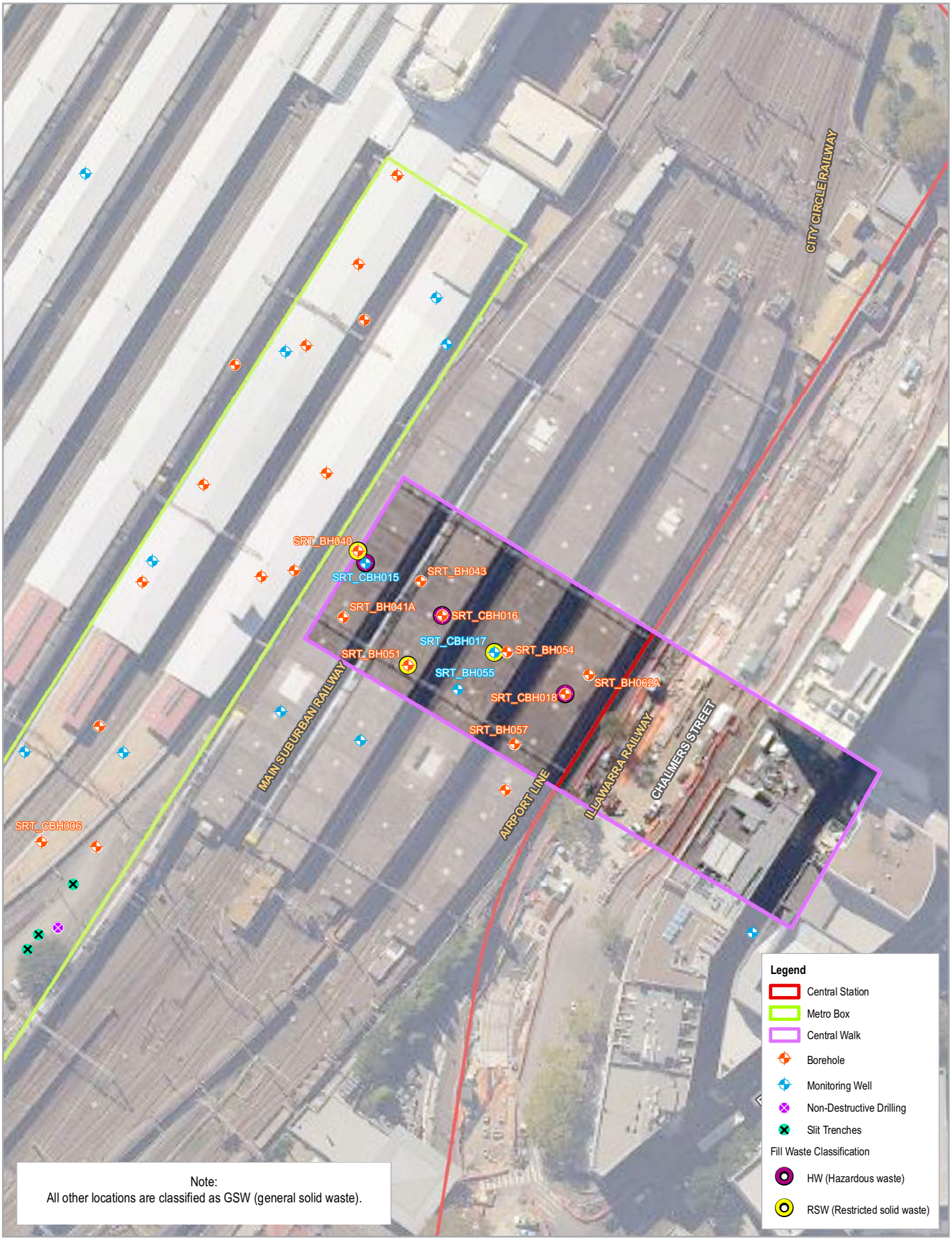
Metro Station Box - Fill Waste Classification Summary

Project No. **21-27234**
Revision No. **-**
Date **06/05/2019**

Figure 6

G:\21\27234\GIS\Maps\Deliverables\21_27234_CONTAMINATION_Z006_MSB_WasteClassificationSummary.mxd
Print date: 06 May 2019 - 16:36

Data source: General Topo0 - NSW LPI DTDB 2012, 2018. Aerial Imagery - Sixmaps 2018 . Created by: kqvelasco



Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

AGJV

Laing O' Rourke
Central Station Main Works

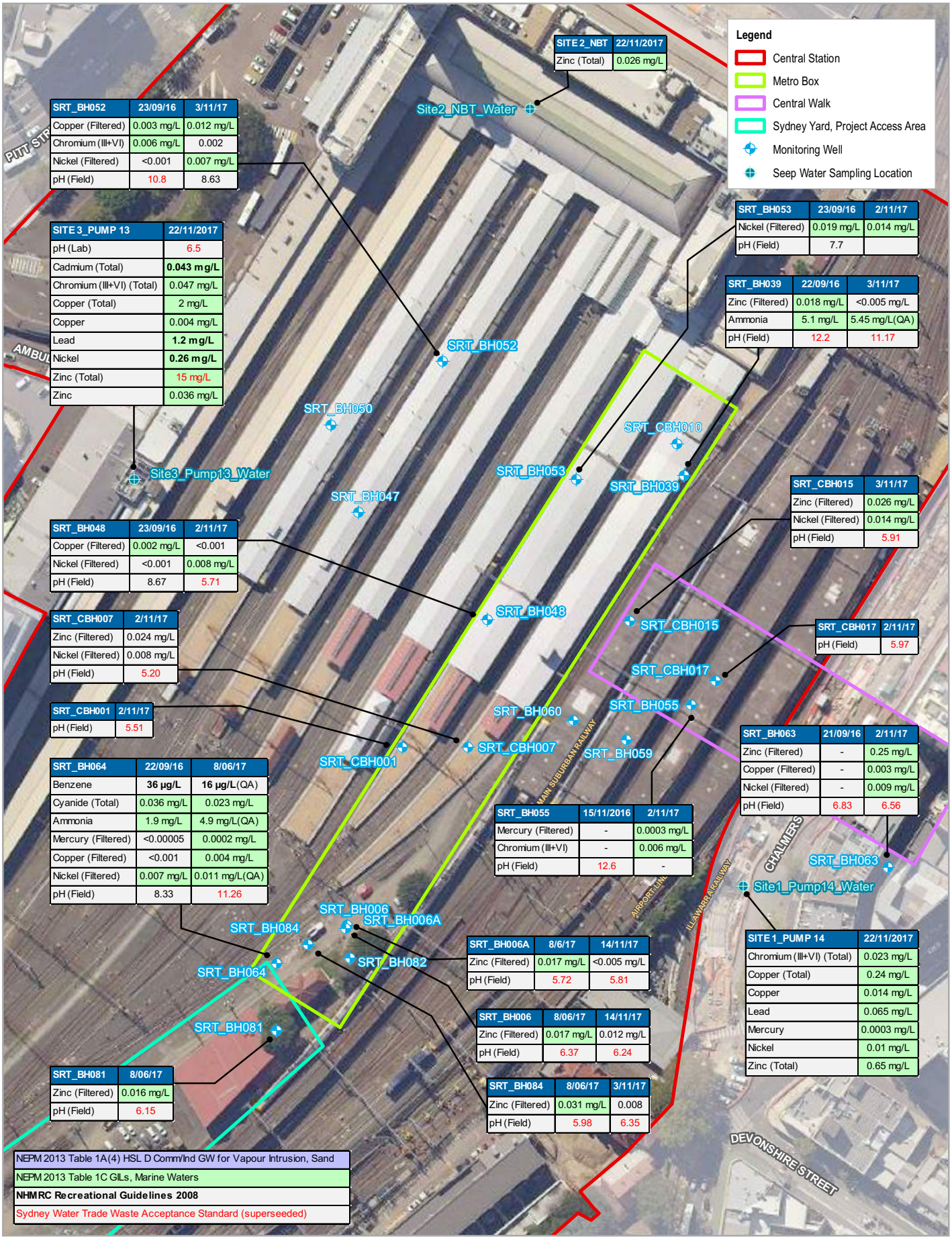
Central Walk East -
Waste Classification Summary

Project No. **21-27234**
Revision No. **-**
Date **06/05/2019**

Figure 7

G:\21\27234\GIS\Maps\Deliverables\21_27234_CONTAMINATION_Z007_CWE_WasteClassificationSummary.mxd
Print date: 06 May 2019 - 16:43

Data source: General Topo0 - NSW LPI DTDB 2012, 2018. Aerial Imagery - Sixmaps 2018 . Created by: kqvelasco



SITE 2_NBT	22/11/2017
Zinc (Total)	0.026 mg/L

SRT_BH052	23/09/16	3/11/17
Copper (Filtered)	0.003 mg/L	0.012 mg/L
Chromium (III+VI)	0.006 mg/L	0.002
Nickel (Filtered)	<0.001	0.007 mg/L
pH (Field)	10.8	8.63

SITE 3_PUMP 13	22/11/2017
pH (Lab)	6.5
Cadmium (Total)	**0.043 mg/L**
Chromium (III+VI) (Total)	0.047 mg/L
Copper (Total)	2 mg/L
Copper	0.004 mg/L
Lead	**1.2 mg/L**
Nickel	**0.26 mg/L**
Zinc (Total)	15 mg/L
Zinc	0.036 mg/L

SRT_BH053	23/09/16	2/11/17
Nickel (Filtered)	0.019 mg/L	0.014 mg/L
pH (Field)	7.7	

SRT_BH039	22/09/16	3/11/17
Zinc (Filtered)	0.018 mg/L	<0.005 mg/L
Ammonia	5.1 mg/L	5.45 mg/L(QA)
pH (Field)	12.2	11.17

SRT_CBH015	3/11/17
Zinc (Filtered)	0.026 mg/L
Nickel (Filtered)	0.014 mg/L
pH (Field)	5.91

SRT_BH048	23/09/16	2/11/17
Copper (Filtered)	0.002 mg/L	<0.001
Nickel (Filtered)	<0.001	0.008 mg/L
pH (Field)	8.67	5.71

SRT_CBH007	2/11/17
Zinc (Filtered)	0.024 mg/L
Nickel (Filtered)	0.008 mg/L
pH (Field)	5.20

SRT_CBH017	2/11/17
pH (Field)	5.97

SRT_CBH001	2/11/17
pH (Field)	5.51

SRT_BH063	21/09/16	2/11/17
Zinc (Filtered)	-	0.25 mg/L
Copper (Filtered)	-	0.003 mg/L
Nickel (Filtered)	-	0.009 mg/L
pH (Field)	6.83	6.56

SRT_BH064	22/09/16	8/06/17
Benzene	**36 µg/L**	**16 µg/L**(QA)
Cyanide (Total)	0.036 mg/L	0.023 mg/L
Ammonia	1.9 mg/L	4.9 mg/L(QA)
Mercury (Filtered)	<0.00005	0.0002 mg/L
Copper (Filtered)	<0.001	0.004 mg/L
Nickel (Filtered)	0.007 mg/L	0.011 mg/L(QA)
pH (Field)	8.33	11.26

SRT_BH055	15/11/2016	2/11/17
Mercury (Filtered)	-	0.0003 mg/L
Chromium (III+VI)	-	0.006 mg/L
pH (Field)	12.6	-

SITE 1_PUMP 14	22/11/2017
Chromium (III+VI) (Total)	0.023 mg/L
Copper (Total)	0.24 mg/L
Copper	0.014 mg/L
Lead	0.065 mg/L
Mercury	0.0003 mg/L
Nickel	0.01 mg/L
Zinc (Total)	0.65 mg/L

SRT_BH006A	8/6/17	14/11/17
Zinc (Filtered)	0.017 mg/L	<0.005 mg/L
pH (Field)	5.72	5.81

SRT_BH006	8/06/17	14/11/17
Zinc (Filtered)	0.017 mg/L	0.012 mg/L
pH (Field)	6.37	6.24

SRT_BH084	8/06/17	3/11/17
Zinc (Filtered)	0.031 mg/L	0.008
pH (Field)	5.98	6.35

SRT_BH081	8/06/17
Zinc (Filtered)	0.016 mg/L
pH (Field)	6.15

Paper Size ISO A4

0 10 20 30 40

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

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Laing O' Rourke
Central Station Main Works

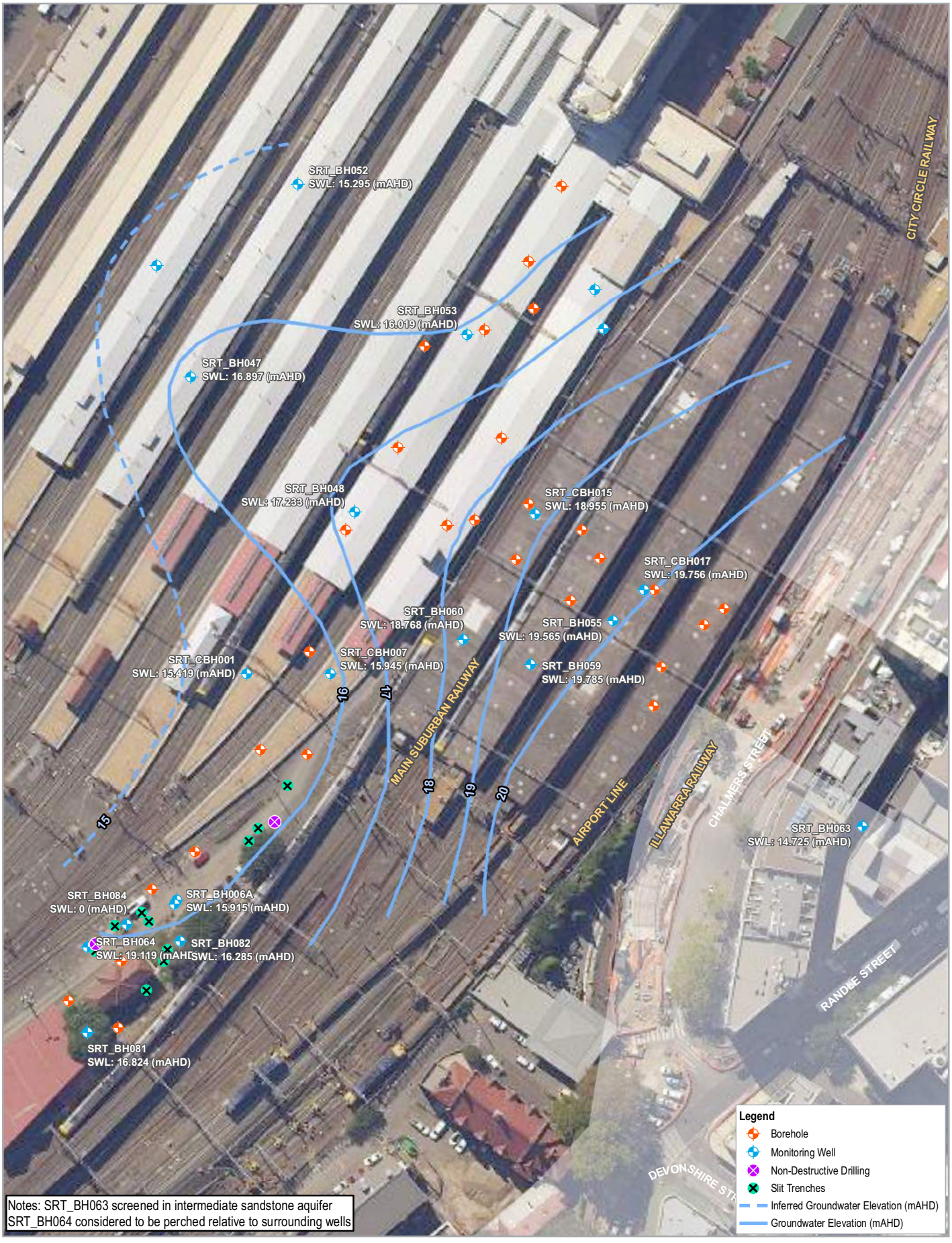
Groundwater and Seep Water Exceedances

Project No. **21-27234**
Revision No. **-**
Date **06/05/2019**

Figure 8

G:\21\27234\GIS\Maps\Deliverables\21_27234_CONTAMINATION_Z008_GW_GroundwaterSeepWaterExceedances.mxd
Print date: 06 May 2019 - 15:19

Data source: General Topo0 - NSW LPI DTDB 2012, 2018. Aerial Imagery - Sixmaps 2018 . Created by: kqvelasco



Paper Size ISO A4

0 10 20 30 40

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

AGJV

Laing O' Rourke
Central Station Main Works

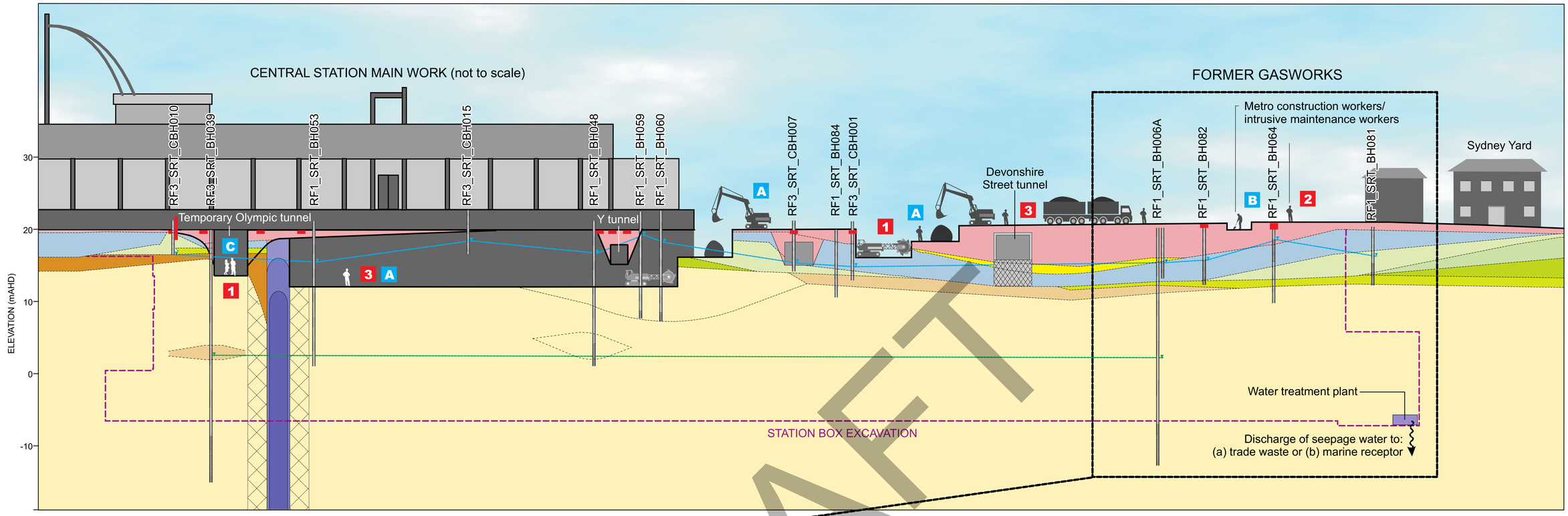
Groundwater Monitoring Wells - Shallow GW Contours

Project No. **21-27234**
Revision No. **-**
Date **06/05/2019**

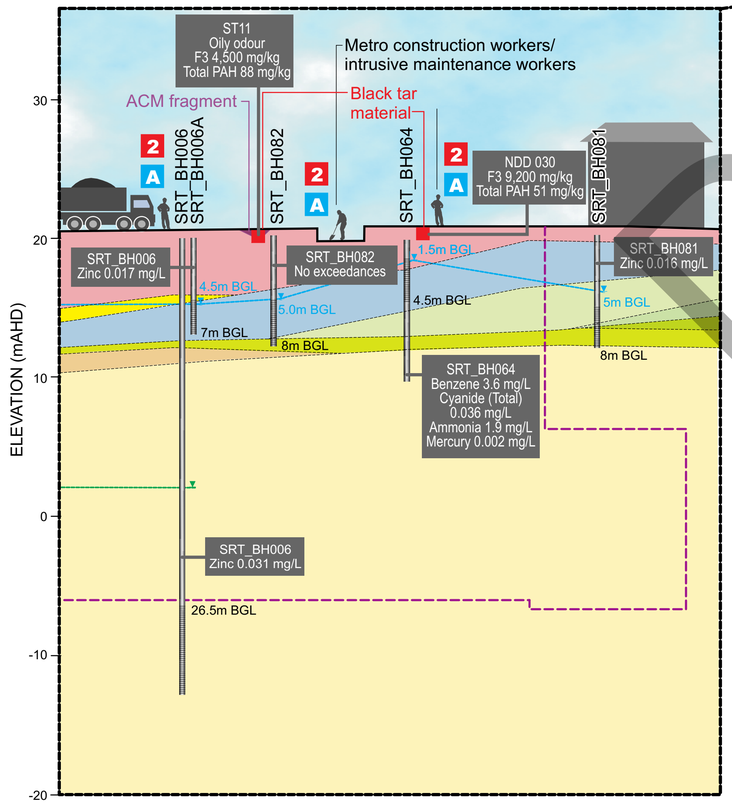
Figure 9

G:\21\27234\GIS\Maps\Deliverables\21_27234_CONTAMINATION_Z009_GW_ShallowGWContours.mxd
Print date: 06 May 2019 - 15:27

Data source: General Topo - NSW LPI DTDB 2018. Aerial Imagery - Sixmaps 2018. Created by: kqvelasco



SCHEMATIC DIAGRAM ONLY - SCALE IS APPROXIMATE



PATHWAYS

1. Direct contact from contaminated shallow soil
2. Potential migration of surface impacts into subsurface soils
3. Ingestion and inhalation of soils and dust, including asbestos fibres

RECEPTORS

- A Metro construction workers
- B Intrusive maintenance workers
- C Commercial users/commuters

GEOLOGY

- Fill
- Residual Soil
- Shale
- Shale I
- Ash II
- Mittagong Laminate
- Sandstone III
- Sandstone IV
- Quatenary Sandstone
- Sandstone
- Jv-HW
- Jv-MW
- Dyke

LEGEND

- Human health exceedances Shallow (0.05m BGL) F2 (>C10-C16 Fraction) F3 (>C16-C36 Fraction) Total PAHs (Refer to Appendix B Table 1)
- ACM fragment
- Inferred groundwater level (shallow aquifer)
- Inferred groundwater level (deep aquifer)
- Inferred goelogical boundary

DRAFT

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NSW Transport for NSW

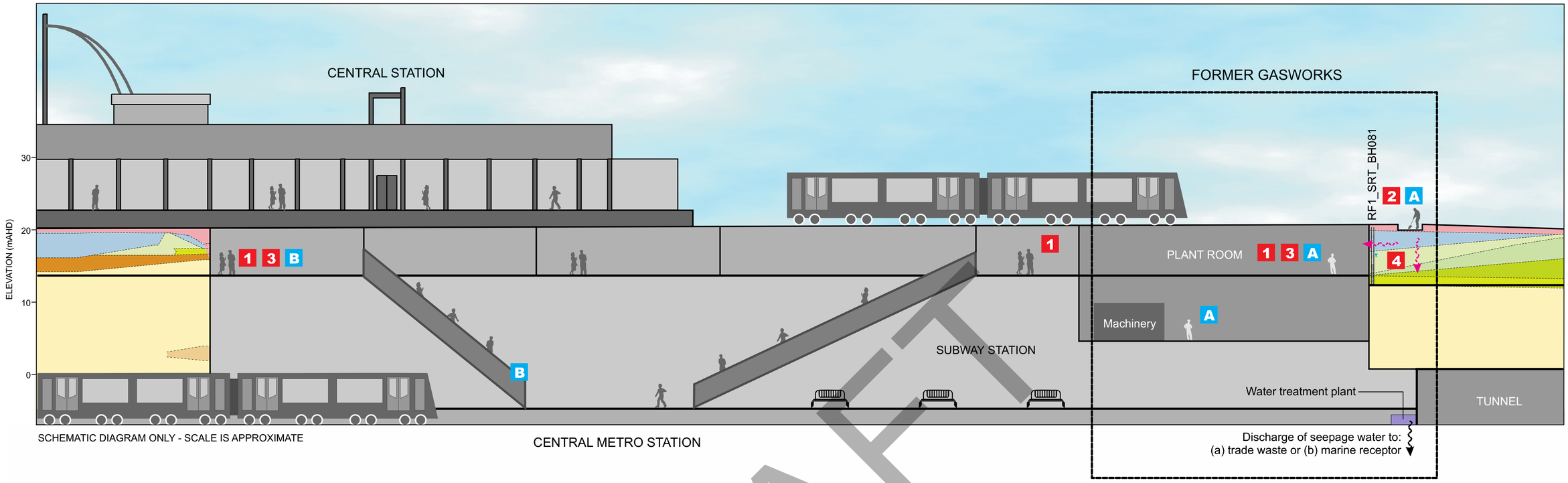
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LAING O'ROURKE AGJV AURECON / GHD INFRASTRUCTURE

DRAWN B.WATT
DESIGNED J.TOMLINSON
DRG CHECK
DESIGN CHECK
APPROVED

CONCEPTUAL MODEL DURING CONSTRUCTION

FILE No. 21-27234_LTN_01.cdr | SHEET 1 OF 1
STATUS: | ©
DRG No. FIGURE 10 | EDMS No.



DRAFT

PATHWAYS

1 Direct contact or inhalation vapours from contaminated shallow soil

2 Ingestion of soils and dust

3 Direct contact or inhalation of vapours from contaminated groundwater

4 Vertical or horizontal migration of contamination from the former gasworks into the saturated zone

RECEPTORS

A Intrusive maintenance workers/Metro workers

B Commercial users/commuters

GEOLOGY

- Fill
- Residual Soil
- Shale
- Shale I
- Ash II
- Mittagong Laminate
- Sandstone III
- Sandstone IV
- Sandstone

LEGEND

- Inferred groundwater level (shallow aquifer)
- Inferred goelogical boundary

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LAING O'ROURKE

AGJV AURECON / GHD INFRASTRUCTURE

DRAWN B.WATT

DESIGNED J.TOMLINSON

DRG CHECK

DESIGN CHECK

APPROVED

CONCEPTUAL MODEL DURING OPERATIONS

FILE No. 21-27234_LTN_02.cdr | SHEET 1 OF 1

STATUS:

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DRG No. FIGURE 12

EDMS No.

Appendix B
Results tables

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

					Inorganics						Major Ions					Asbestos	Metals																								BTEXN							TRH - NEPM 2013								TRH - NEPM 1999										
			pH (Field)	Electrical conductivity (field)	Moisture (%)	Cyanide (Free)	Cyanide (Total)	Moisture Content (dried @ 103°C)	Moisture Content (dried @ 40°C)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Chloride	Asbestos	Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene
			pH Units	µS/cm	%	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					1			1											2		0.4	5	5	5		0.1		5				5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HIL D Comm/Ind						1500													3000		900	3600	24000	1500	60000	730		6000	10000			400000																															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																																																	
0-1m																																	3	NL	NL			230		260		NL																										
1-2m																																	3	NL	NL			NL		370		NL																										
2-4m																																	3	NL	NL			NL		630		NL																										
>4m																																	3	NL	NL			NL		NL		NL																										
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																										700		1000	3500	10000																				
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																																																		
	SRT_BH039	0.95-1.4	5/07/2017	-	-	18	-	-	-	-	-	380	120	540	30	-	-	450	<7	<4	5	<0.4	<1	3	3	8	<0.1	-	<1	<2	<1	-	<1	7	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH039	1.9-2	5/07/2016	-	-	18	-	-	-	-	-	50	250	660	60	-	-	-	-	<4	5	<0.4	9	75	19	-	<0.1	-	24	-	-	-	110	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH048	1.1-1.2	11/07/2016	-	-	21	-	-	-	-	-	30	120	550	40	-	-	-	-	<4	-	<0.4	10	25	24	-	<0.1	-	<1	-	-	-	9	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	11	0.6	3.3
	SRT_BH048	2-2.1	11/07/2016	-	-	19	-	-	-	-	-	50	140	600	40	-	-	-	-	4	-	<0.4	9	26	23	-	<0.1	-	1	-	-	-	13	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	6.3	0.7	1.7
	SRT_BH048	4-4.1	11/07/2016	4.9	36	21	-	-	-	-	41	20	150	760	40	<10	-	-	-	5	-	<0.4	11	46	20	-	<0.1	-	5	-	-	-	38	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	1.6	0.2	0.4
	SRT_BH049	1.5	6/07/2016	4.6	34	17	-	-	-	-	32	93	140	480	20	<10	-	-	-	7	-	<0.4	13	26	21	-	<0.1	-	1	-	-	-	14	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.4	<0.1	0.1
	SRT_BH049	4	6/07/2016	5.4	29	17	-	-	-	-	34	68	260	650	70	<10	-	-	-	6	-	<0.4	11	30	19	-	<0.1	-	1	-	-	-	6	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.2	<0.1	<0.1
	SRT_BH049	4.5	6/07/2016	5.2	32	14	-	-	-	-	35	20	220	660	80	<10	-	-	-	9	-	<0.4	8	37	20	-	<0.1	-	<1	-	-	-	4	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.2	<0.1	<0.1
	SRT_BH053	2	6/07/2016	-	-	25	-	-	-	-	-	67	360	1000	130	-	-	-	-	11	-	<0.4	9	43	17	-	<0.1	-	8	-	-	-	44	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.6	0.1	0.1
	SRT_BH053	3	6/07/2016	-	-	27	-	-	-	-	-	79	350	1200	160	-	-	-	-	6	-	<0.4	7	42	16	-	<0.1	-	7	-	-	-	27	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH053	12.6-12.7	7/07/2016	8.6	-	-	-	-	-	-	35	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	5.5-5.95	24/06/2016	5.6	38	-	-	-	-	-	53	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8-8.04	6/07/2016	5.6	39	-	-	-	-	-	53	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH081	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5400	<7	9	210	<0.4	9	210	740	260	1.8	-	12	<2	<1	-	27	230	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	240	<100	240	<25	<50	110	160	-	1.8	<0.1	0.1
	SRT_BH081	0.2	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH081	0.5	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,000	<7	8	47	<0.4	23	16	120	23	0.3	-	2	<2	<1	-	78	33	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.4	<0.1	<0.1
	SRT_BH081	0.5	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH081	1.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4100	<7	9	40	<0.4	12	6	24	2	<0.1	-	<1	<2	<1	-	53	2	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH081	1.9	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.4	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3700	<7	6	93	<0.4	4	170	200	100	0.2	-	7	<2	<1	-	13	130	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.6	<0.1	<0.1
	SRT_BH082	2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,000	<7	<4	11	<0.4	10	2	4	3	<0.1	-	3	<2	<1	-	20	5	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH082	2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7400	<7	<4	6	<0.4	6	<1	3	1	<0.1	-	2	<2	<1	-	17	1	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH082	3.2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,000	<7	8	17	<0.4	30	12	17	2	<0.1	-	2	<2	<1	-	74	6	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
QC200	SRT_BH082		30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6260	<5	<5	<10	<1	4	<5	<5	<5	<0.1	-	<2	<5	<2	-	9	<5	<0.2	<0.5	<0.5	<0.5	<0.5	0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5
	SRT_BH083	0.4	31/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4200	<7	<4	93	<0.4	8	86	230	120	0.3	-	9	<2	<1	-	12	59	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.6	<0.1	<0.1
	SRT_BH083	1.4	31/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8800	<7	<4	13	<0.4	7	3	13	8	<0.1	-	2	<2	<1	-	13	4	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH083	2	1/06/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,000	<7	7	23	<0.4	22	14	13	6	<0.1	-	2	<2	<1	-	80	5	<0.2	<0.5	<1	<1	<2	<1	-	-	-	-	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH084	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8300	<7	10	130	2	34	250	360	270	0.3	-	26	<2	<1	-	39	310	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	430	320	750	<25	<50	190	340	-	0.5	<0.1	<0.1
	SRT_BH084	0.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	450	<7	<4	5	<0.4	<1	3	3	8	<0.1	-	<1	<2	<1	-	<1	7	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH084	1.4	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9800	<7	<4	13	<0.4	6	2	6	9	<0.1	-	3	<2	<1	-	14	5	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH084	3	1/06/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,000	<7	<4	21	<0.4	18	11	13	5	<0.1	-	1	<2	<1	-	59	3	<0.2	<0.5	<1	<1	<2	<1	-	-	-	-	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH084	7.6	1/06/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2700	<7	<4	200	<0.4	13	10	12	100	<0.1	-	17	<2	<1	-	59	82	<0.2	<0.5	<1	<1	<2	<1	-	-	-	-	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH085	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9600	8	22	210	3	37	400	450	500	0.4	-	29	<2	<1	-	45	400	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	850	490	1300	<25	<50	310	720	-	3	<0.1	<0.1
	SRT_BH085	0.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	370	<7	<4	5	<0.4	<1	1	2	18	<0.1	-	<1	<2	<1	-	<1	2	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH085	3	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	<7	<4	2	<0.4	<1	<1	<1	2	<0.1	-	<1	<2	<1	-	<1	2	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	SRT_BH085	4	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	<7	<4	30	<0.4	22	9	13	5	0.1	-	3	<2	<1	-	11	8	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
SRT_BH085_0.3	SRT_BH086	0.3-0.3	9/10/2017	-	-	-	-	-	8.8	-	-	-	-	-	-	No Asbestos Detected	-	-	67	-	1.5	19	210	400	-	0.5	-	37	-	-	-	330	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	290	<100	-	<20	<20	120	180	300	2.7	<0.5	<0.5
SRT_BH085_2.4	SRT_BH086	2.4-2.4	9/10/2017	-	-	-	-	-	14	-	-	-	-	-	-	No Asbestos Detected	-	-	19	-	<0.4	15	49	63	-	0.4	-	5.4	-	-	-	110	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	2.2	<0.5	<0.5
SRT_BH085_2.6	SRT_BH086	2.6-2.6	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	No Asbestos Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_3.9	SRT_BH086	3.9-3.9	9/10/2017	-	-	-	-	-	8.1	-	-	-	-	-	-	-	-	-	2.2	-	<0.4	<5	10	5.7	-	<0.1	-	<5	-	-	-	11	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH086_10.5_10.6	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	-	3.5	-	-	-	-	-	-	-	-	-	2.9	-	<0.4	8.1	<5	6.9	-	<0.1	-	6.3	-	-	-	40	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH086_28.85_28.95	SRT_BH086	28.85-28.95	15/11/2017	-	-	-	-	-	3.8	-	-	-	-	-	-	-	-	-	<2	-	<0.4	<5	<5	<5	-	<0.1	-	<5	-	-	-	15	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_FD01_151117	SRT_BH086	10.5-10.6	15/11/2017	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	<1	9	<5	10	-	<0.1	-	9	-	-	-	59	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5
SRT_BH086_0.4_0.5	SRT_BH087	0.4-0.5	22/10/2017	-	-	-	-	-	9.5	-	-	-	-	-	-	No Asbestos Detected	-	-	3	-	<0.4	7.2	190	6.1	-	<0.1	-	9.8	-	-	-	50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH086_0.7_0.8	SRT_BH087	0.7-0.8	22/10/2017	-	-	-	-	-	22	-	-	-	-	-	-	-	-	-	4.2	-	<0.4	7.4	28	22	-	<0.1	-	<5	-	-	-	8.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	170	<100	-	<20	25	150	67	242	<0.5	<0.5	<0.5
SRT_BH086_2.0_2.1	SRT_BH087	2-2.1	22/10/2017	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	5.9	-	<0.4	8	29	20	-	<0.1	-	<5	-	-	-	16	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH087_12.2_12.3	SRT_BH087	12.2-12.3	15/11/2017	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	7.5	-	<0.4	<5	14	<5	-	<0.1	-	36	-	-	-	62	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH087_15.2_15.3	SRT_BH087	15.2-15.3	15/11/2017	-	-	-	-	-	7.6	-	-	-	-	-	-	-	-	-	5.4	-	<0.4	29	48	<5	-	0.1	-	200	-	-	-	31	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH087_18.1_18.2	SRT_BH087	18.1-18.2	15/11/2017	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	<2	-	<0.4	9.8	<5	5.9	-	<0.1	-	15	-	-	-	35	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BH087_27.8_27.9	SRT_BH087	27.8-27.9	15/11/2017	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	2.1	-	<0.4	8.5	<5	13	-	<0.1	-	7.6	-	-	-	54	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH001_0.12-0.2	SRT_CBH001	0.12-0.2	20/09/2017	-	-	-	-	-	3.5	-	-	-	-	-	-	No Asbestos Detected	-	-	2.3	-	0.6	<5	180	75	-	<0.1	-	8.8	-	-	-	87	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	270	280	13,000	1500	-	<20	100	10,000	4300	14,400	490	<20	<20
SRT_CBH001_0.45_0.55	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	-	4.6	-	-	-	-	-	-	No Asbestos Detected	-	-	<2	-	<0.4	7.2	<5	37	-	<0.1	-	<5	-	-	-	39	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.8	<0.5	<0.5
SRT_CBH001_0.9_1.0	SRT_CBH001	0.9-1	21/09/2017	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	<2	-	<0.4	6.9	<5	11	-	<0.1	-	<5	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH001_1.6-2.2	SRT_CBH001	1.6-2.2	5/10/2017	-	-	-	-	-	9.5	-	-	-	-	-	-	No Asbestos Detected	-	-	<2	-	<0.4	8.6	6.3	57	-	<0.1	-	<5	-	-	-	13	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.7	<0.5	<0.5
SRT_CBH001_2.35-2.5	SRT_CBH001	2.35-2.5	5/10/2017	-	-	-	-	-	8.1	-	-	-	-	-	-	-	-	-	<2	-	<0.4	7.7	<5	5.2	-	<0.1	-	<5	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH001_3.7-3.9	SRT_CBH001	3.7-3.9	5/10/2017	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	3.1	-	<0.4	11	12	14	-	<0.1	-	<5	-	-	-	6.4	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_FD03_210917	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	-	8.8	-	-	-	-	-	-	-	-	-	2.2	-	<0.4	5.4	5.8	44	-	<0.1	-	<5	-	-	-	56	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.4	<0.5	<0.5
SRT_CBH002_0.12-0.3	SRT_CBH002	0.12-0.3	20/09/2017	-	-	-	-	-	1.4	-	-	-	-	-	-	No Asbestos Detected	-	-	<2	-	<0.4	<5	22	<5	-	<0.1	-	<5	-	-	-	26	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<160	<160	650	700	3900	340	-	<160	390	3600	970	4960	110	21	<20
SRT_CBH002_0.45_0.55	SRT_CBH002	0.45-0.55	21/09/2017	-	-	-	-	-	16	-	-	-	-	-	-	No Asbestos Detected	-	-	7.7	-	<0.4	11	11	18	-	<0.1	-	<5	-	-	-	42	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH002_0.9_1.0	SRT_CBH002	0.9-1	21/09/2017	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	6.1	-	<0.4	9.1	10	140	-	<0.1	-	<5	-	-	-	5.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH002_1.3-1.5	SRT_CBH002	1.3-1.5	5/10/2017	-	-	-	-	-	15	-	-	-	-	-	-	No Asbestos Detected	-	-	23	-	<0.4	19	33	24	-	<0.1	-	<5	-	-	-	8.7	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH002_30.-3.1	SRT_CBH002	30-3.1	5/10/2017	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	5.1	-	<0.4	11	48	21	-	<0.1	-	<5	-	-	-	22	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH003_0.45_0.55	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-	-	-	17	-	-	-	-	-	-	No Asbestos Detected	-	-	6.8	-	<0.4	8.7	17	24	-	<0.1	-	<5	-	-	-	6.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH003_0.95-1.2	SRT_CBH003	0.95-1.2	5/10/2017	-	-	-	-	-	12	-	-	-	-	-	-	No Asbestos Detected	-	-	11	-	<0.4	11	37	24	-	<0.1

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

			Inorganics						Major Ions					Asbestos	Metals																													BTEXN						TRH - NEPM 2013						TRH - NEPM 1999								
	pH (Field)	Electrical conductivity (field)	Moisture (%)	Cyanide (Free)	Cyanide (Total)	Moisture Content (dried @ 103°C)	Moisture Content (dried @ 40°C)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Chloride	Asbestos	Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene
	pH Units	µS/cm	%	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			1			1											2		0.4	5	5	5		0.1		5				5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HIL D Comm/Ind				1500													3000		900	3600	240000	1500	60000	730		6000	10000			400000																															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																																																
0-1m																																3	NL	NL			230		260		NL																												
1-2m																																3	NL	NL			NL		370		NL																												
2-4m																																3	NL	NL			NL		630		NL																												
>4m																																3	NL	NL			NL		NL		NL																												
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																							700		1000	3500	10000																						
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																																																
SRT_CBH006_5.0-5.1	SRT_CBH006	5-5.1	20/09/2017	-	-	-	-	-	21	-	-	-	-	-	-	-	No Asbestos Detected	-	-	15	-	<0.4	29	55	26	-	<0.1	-	<5	-	-	-	22	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH007_0.30-0.35	SRT_CBH007	0.3-0.35	19/09/2017	-	-	-	-	-	9.8	-	-	-	-	-	-	-	No Asbestos Detected	-	-	3.4	-	<0.4	12	31	88	-	0.3	-	14	-	-	-	130	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	1300	220	-	<20	45	1000	500	1545	50	<20	<20
SRT_CBH007_0.9-1.0	SRT_CBH007	0.9-1	19/09/2017	-	-	-	-	-	19	-	-	-	-	-	-	-	No Asbestos Detected	-	-	3.9	-	<0.4	11	52	34	-	<0.1	-	6	-	-	-	29	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	0.6	<0.5	<0.5
SRT_CBH007_1.5_1.6	SRT_CBH007	1.5-1.6	22/09/2017	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	<2	-	<0.4	<5	5.2	34	-	0.1	-	<5	-	-	-	21	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH007_2.1_2.2	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	-	22	-	-	-	-	-	-	-	-	-	-	12	-	<0.4	26	10	32	-	<0.1	-	<5	-	-	-	22	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH007_3.9_4.0	SRT_CBH007	3.9-4	22/09/2017	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	6.4	-	<0.4	7.3	23	40	-	<0.1	-	<5	-	-	-	14	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH007_4.9_5.0	SRT_CBH007	4.9-5	22/09/2017	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	8.3	-	<0.4	8	23	34	-	<0.1	-	<5	-	-	-	16	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH007_5.9_6.0	SRT_CBH007	5.9-6	22/09/2017	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	7.8	-	<0.4	9.4	29	35	-	<0.1	-	<5	-	-	-	19	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_FD01_220917	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	7.6	-	<0.4	17	9.6	31	-	<0.1	-	<5	-	-	-	20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH008_0.15-0.2	SRT_CBH008	0.15-0.2	19/09/2017	-	-	-	-	-	4.5	-	-	-	-	-	-	-	No Asbestos Detected	-	-	7.8	-	<0.4	5.2	120	21	-	0.1	-	7	-	-	-	43	<0.5	<0.5	<0.5	<0.5	<1	<1.5	-	<80	<80	620	670	8000	910	-	<80	340	6900	2400	9640	420	<20	49
SRT_CBH008_0.9-1.0	SRT_CBH008	0.9-1	19/09/2017	-	-	-	-	-	19	-	-	-	-	-	-	-	No Asbestos Detected	-	-	14	-	<0.4	11	51	23	-	0.1	-	12	-	-	-	91	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH008_1.6-1.7	SRT_CBH008	1.6-1.7	20/09/2017	-	-	-	-	-	9.5	-	-	-	-	-	-	-	No Asbestos Detected	-	-	3.6	-	<0.4	8.9	40	20	-	<0.1	-	6.9	-	-	-	42	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH008_2.1-2.2	SRT_CBH008	2.1-2.2	20/09/2017	-	-	-	-	-	10	-	-	-	-	-	-	-	No Asbestos Detected	-	-	10	-	<0.4	14	47	25	-	<0.1	-	16	-	-	-	80	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<32	<32	<50	<50	<100	<100	-	<32	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH009_0.15-0.25	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	1.2	-	-	-	-	-	-	-	No Asbestos Detected	-	-	6.5	-	<0.4	<5	100	12	-	<0.1	-	6.1	-	-	-	50	<1	<1	<1	<1	<2	<3	-	<160	<160	410	590	4300	470	-	<160	330	4000	1200	5530	180	<20	43
SRT_CBH009_0.4-0.5	SRT_CBH009	0.4-0.5	18/09/2017	-	-	-	-	-	18	-	-	-	-	-	-	-	No Asbestos Detected	-	-	20	-	<0.4	20	68	26	-	<0.1	-	8.8	-	-	-	52	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.1	<0.5	<0.5
SRT_CBH009_0.9_1.0	SRT_CBH009	0.9-1	25/09/2017	-	-	-	-	-	13	-	-	-	-	-	-	-	No Asbestos Detected	-	-	22	-	<0.4	14	35	14	-	<0.1	-	<5	-	-	-	13	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH009_1.9_2.0	SRT_CBH009	0.9-2	25/09/2017	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	8.8	-	<0.4	16	62	20	-	<0.1	-	5.7	-	-	-	32	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH009_2.9_3.0	SRT_CBH009	2.9-3	25/09/2017	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	9.4	-	<0.4	13	56	29	-	<0.1	-	16	-	-	-	65	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_FD01_18092017	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	6	-	<0.4	<5	130	8.3	-	<0.1	-	<5	-	-	-	31	<1	<1	<1	<1	<2	<3	-	<200	<200	1600	1700	9900	1200	-	<200	1100	9000	2700	12,800	520	22	120
SRT_CBH010_0.2-0.25	SRT_CBH010	0.2-0.25	18/09/2017	-	-	-	-	-	5.9	-	-	-	-	-	-	-	No Asbestos Detected	-	-	8.4	-	<0.4	11	110	36	-	<0.1	-	8.3	-	-	-	70	<1	<1	<1	6.7	8.6	15	-	<160	<160	4700	7100	16,000	1500	-	<160	5600	16,000	3900	25,500	600	41	210
SRT_CBH010_0.9-1.0	SRT_CBH010	0.9-1	18/09/2017	-	-	-	-	-	16	-	-	-	-	-	-	-	No Asbestos Detected	-	-	8.1	-	<0.4	16	53	22	-	<0.1	-	<5	-	-	-	19	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH010_1.6_1.7	SRT_CBH010	1.6-1.7	25/09/2017	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	10	-	<0.4	14	62	26	-	<0.1	-	5.1	-	-	-	49	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH010_2.9_3.0	SRT_CBH010	2.9-3	25/09/2017	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	40	-	<0.4	17	67	27	-	<0.1	-	5.3	-	-	-	37	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH010_3.9_4.0	SRT_CBH010	3.9-4	25/09/2017	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	13	-	<0.4	14	48	22	-	<0.1	-	6.8	-	-	-	30	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BD01_231017	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	6.1	-	<0.4	13	6	12	-	<0.1	-	<5	-	-	-	15	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH011_0.2_0.3	SRT_CBH011	0.2-0.3	23/10/2017	-	-	-	-	-	2.6	-	-	-	-	-	-	-	No Asbestos Detected	-	-	<2	-	<0.4	12	140	6.2	-	<0.1	-	16	-	-	-	43	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	600	570	-	<20	20	300	510	830	<0.5	<0.5	<0.5
SRT_CBH011_1.0_1.1	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	5.2	-	<0.4	13	5.5	11	-	<0.1	-	<5	-	-	-	15	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH011_2.1_2.2	SRT_CBH011	2.1-2.2	23/10/2017	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	<2	-	<0.4	<5	<5	<5	-	<0.1	-	<5	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH011_3.1_3.2	SRT_CBH011	3.1-3.2	23/10/2017	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	<2	-	<0.4	<5	5.4	19	-	<0.1	-	<5	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH011_4.1_4.2	SRT_CBH011	4.1-4.2	23/10/2017	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	<2	-	<0.4	<5	10	21	-	<0.1	-	<5	-	-	-	7.7	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH012_0.4_0.5	SRT_CBH012	0.4-0.5	24/10/2017	-	-	-	-	-	7.3	-	-	-	-	-	-	-	No Asbestos Detected	-	-	3.7	-	0.7	22	440	71	-	<0.1	-	14	-	-	-	130	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	56	56	<0.5	<0.5	<0.5
SRT_CBH012_1.0-1.1	SRT_CBH012	1-1.1	24/10/2017	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-	-	2.1	-	<0.4	<5	25	24	-	<0.1	-	<5	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH012_1.6-1.7	SRT_CBH012	1.6-1.7	24/10/2017	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	11	-	<0.4	5.2	23	17	-	<0.1	-	<5	-	-	-	11	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH012_2.8_3.0	SRT_CBH012	2.8-3	24/10/2017	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	6.3	-	<0.4	12	40	19	-	<0.1	-	18	-	-	-	87	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH013_0.2_0.3	SRT_CBH013	0.2-0.3	25/10/2017	-	-	-	-	-	9.9	-	-	-	-	-	-	-	No Asbestos Detected	-	-	29	-	0.5	8.2	150	200	-	0.2	-	8.4	-	-	-	110	<0.1	<0.1	<0.1	0.1	<0.2	<0.3	-	<20	<20	<50	<50	150	<100	-	<20	<20	82	110	192	0.9	<0.5	<0.5
SRT_CBH013_0.8_0.9	SRT_CBH013	0.8-0.9	25/10/2017	-	-	-	-	-	12	-	-	-	-	-	-	-	No Asbestos Detected	-	-	3.3	-	<0.4	5.5	17	240	-	<0.1	-	<5	-	-	-	12	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH013_2.1_2.2	SRT_CBH013	2.1-2.2	25/10/2017	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	4.3	-	<0.4	9.6	<5	7.5	-	<0.1	-	<5	-	-	-	6.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH013_4.1_4.2	SRT_CBH013	4.1-4.2	25/10/2017	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	<2	-	<0.4	<5	6.2	13	-	<0.1	-	<5	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH013_5.9_6.0	SRT_CBH013	5.9-6	25/10/2017	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	8.6	-	<0.4	<5	22	13	-	<0.1	-	<5	-	-	-	5.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_BD01_251017	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	2.8	-	<0.4	6.6	15	130	-	<0.1	-	<5	-	-	-	17	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH014_0.4_0.5	SRT_CBH014	0.4-0.5	25/10/2017	-	-	-	-	-	7.5	-	-	-	-	-	-	-	No Asbestos Detected	-	-	5.4	-	2.1	10	130	88	-	0.5	-	15	-	-	-	180	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	180	<100	-	<20	<20	110	120	230	2	<0.5	<0.5
SRT_CBH014_1.1_1.2	SRT_CBH014	1.1-1.2	25/10/2017	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	2.3	-	<0.4	<5	26	12	-	<0.1	-	7.9	-	-	-	47	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5
SRT_CBH014_2.9_3.0	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	4.4	-	<0.4	7.3	35	18	-	<0.1	-	25	-	-	-	90	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	140	<100	-	<20	22	120	<50	142	<0.5	<0.5	<0.5
Asbestos	SRT_NDD002	0.85	30/06/2018	-	-	-	-	-	-	-	-	-	-	Chrysotile & Amosite Asbestos detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_NDD030	0.15	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	6900	<7	14	76	0.7	8	180	170	330	0.2	-	10	<2	<1	-	78	140	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	1300	390	1700	<25	<50	650	850	-	0.4	<0.1	<0.1
	SRT_NDD030	0.35	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	5200	<7	21	190	0.7	5	230	120	330	0.2	-	16	<2	<1	-	48	130	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	1.1	<0.1	<0.1
	SRT_NDD030	0.65	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	240	<7	<4	6	0.4	<1	1	330	51	<0.1	-	2	<2	<1	-	9	220	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	590	590	9200	1800	12,000	<25	180	6900	3600	-	110	20	1.6
	SRT_NDD030	0.65-0.75	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	4900	<7	13	120	<0.4	6	160	150	260	1.1	-	11	<2	<1	-	23	120	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	410	150	560	<25	<50	200	280	-	4	<0.1	0.7
	SRT_NDD030	0.75	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	4300	<7	9	77	<0.4	6	91	170	210	6.7	-	8	<2	<1	-	32	150	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	770	270	1000	<25	<50	430	450	-	12	0.1	2.4
	SRT_NDD030	0.9	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	5000	<7	37	80	<0.4	14	99	240	250	1.7	-	16	<2	<1	-	34	170	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	790	210	1000	<25	<50	540	340	-	17	0.2	3.2
	SRT_NDD030	1.65	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	3900	<7	16	88	<0.4	11	150	220	180	3.3	-	13	<2	<1	-	23	440	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	640	170	810	<25	<50	400	320	-	11	0.2	3.1
	SRT_NDD030	1.8	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	4600	<7	10	84	<0.4	9	100	170	120	2.4	-	10	<2	<1	-	24	200	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	490	150	640	<25	<50	310	250	-	11	0.2	1.8
	SRT_NDD030	1.8	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	4820	<5	10	80	<1	9	104	176	92	1.9	-	10	<5	<2	-	22	199	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	230	<100	230	<10	<50	140	130	270	3.4	<0.5	<0.5
	SRT_NDD030	1.8	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	4500	<7	13	85	<0.4	10	590	180	120	2.7	-	14	<2	<1	-	24	220	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	3	<0.1	0.5
	SRT_NDD030	1.9	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	5000	<7	28	140	0.4	10	220	430	180	6.9	-	13	<2	<1	-	26	290	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	5	0.2	0.8
	SRT_NDD030	2.2	4/04/2017	-	-	-	-	-	-	-	-	-	-	-	3300	<7	<4	170	<0.4	2	16	71	15	0.1	-	1	<2	<1	-	7	45	0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	ST01	0	2/08/2017	-	-	2.9	<0.5	<0.5	-	-	-	-	-	-	-	-	<4	-	<0.4	<1	130	4	-	<0.1	<1	12	<2	<1	<1	-	30	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	ST02	0	2/08/2017	-	-	9.1	<0.5	<0.5	-	-	-	-	-	-	-	-	<4	-	<0.4	<1	96	9	-	<0.1	3	31	<2	<1	<1	-	34	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	ST02	0.5	2/08/2017	-	-	10	<0.5	<0.5	-	-	-	-	-	-	-	-	<4	-	<0.4	<1	110	11	-	<0.1	<1	26	<2	<1	1	-	38	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1
	ST03		4/08/2017	-	-	-	<1	<1	-	15	-	-	-	-	-	-	31	-	1	<0.5	138	272	-	0.2	<2	13	<5	<2	28	-	178	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<25	<25	<50	<50	190	<100	190	<10	<50	<100	150	150	0.8	<0.5	<0.5
	ST03	0	4/08/2017	-	-	20	<0.5	<0.5	-	-	-	-	-	-	-	-	20	-	0.9	<1	89	110	-	0.1	<1	13	<2	<1	12	-	240

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

			Inorganics						Major Ions					Asbestos	Metals																BTEXN						TRH - NEPM 2013						TRH - NEPM 1999								
	pH (Field)	Electrical conductivity (field)	Moisture (%)	Cyanide (Free)	Cyanide (Total)	Moisture Content (dried @ 103°C)	Moisture Content (dried @ 40°C)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Chloride	Asbestos	Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene
	pH Units	µS/cm	%	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			1			1											2		0.4	5	5	5		0.1		5					5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HIL D Comm/Ind				1500													3000		900	3600	240000	1500	60000	730		6000	10000				400000																						
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																																				
0-1m																															3	NL	NL			230		260		NL											
1-2m																															3	NL	NL			NL		370		NL											
2-4m																															3	NL	NL			NL		630		NL											
>4m																															3	NL	NL			NL		NL		NL											
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																							700		1000	3500	10000								

Field ID **Location Code** **Sample Depth** **Sampled Date**

- = not analysed
NL = no limit

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

| | | | | PAHs | | | | | | | | | | | | | | | | | | | | | | Phenols | | | | | | | | | | | | | | | | | VOCs | | | | | | | | | | | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

| | | | | PAHs | | | | | | | | | | | | | | | | | | | | | | | | Phenols | | | | | | | | | | | | | | | | | | | | | | VOCs | | | | | | | | | | | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

| | PAHs | | | | | | | | | | | | | | | | | | | Phenols | | | | | | | | | | | | | | | | | | | | | | VOCs | | | | | | | | | | | | | | | | | | |

| | | |

| | | | | | | | | | | | | | | | | SVOCs | | | | | | | | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

Sydney Metro
Central Station Box
Central Station Main Works

| | | | | | | | | | | | | | | | SVOCs | | | | | | | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

| | | | | OC Pesticides | | | | | | | | | | | | | | | | | | | | | OP Pesticides | | | | | | | | | | | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

| | | | | OC Pesticides | | | | | | | | | | | | | | | | | | | | | OP Pesticides | | | | | | | | | | | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

| | OC Pesticides | | | | | | | | | | | | | | | | | | | | | OP Pesticides | | | | | | | | | | | | | | | | | | |

| | | | | MAH | | | | | | ated Hydro | | PCBs | | | | | | | | | Herbicides | | Chlorinated Hydrocarbons | | | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

| | | | | MAH | | | | | | Chlorinated Hydrocarbons | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

| | MAH | | | | | | ated Hydro | | PCBs | | | | | | | Herbicides | | Chlorinated Hydrocarbons | | | | | | |

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

				lates		
				Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
				mg/kg	mg/kg	mg/kg
LOR						
NEPM 2013 Table 1A(1) HIL D Comm/Ind						
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand						
0-1m						
1-2m						
2-4m						
>4m						
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil						
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**			
	SRT_BH039	0.95-1.4	5/07/2017	-	-	-
	SRT_BH039	1.9-2	5/07/2016	-	-	-
	SRT_BH048	1.1-1.2	11/07/2016	-	-	-
	SRT_BH048	2-2.1	11/07/2016	-	-	-
	SRT_BH048	4-4.1	11/07/2016	-	-	-
	SRT_BH049	1.5	6/07/2016	-	-	-
	SRT_BH049	4	6/07/2016	-	-	-
	SRT_BH049	4.5	6/07/2016	-	-	-
	SRT_BH053	2	6/07/2016	-	-	-
	SRT_BH053	3	6/07/2016	-	-	-
	SRT_BH053	12.6-12.7	7/07/2016	-	-	-
	SRT_BH064	5.5-5.95	24/06/2016	-	-	-
	SRT_BH064	8-8.04	6/07/2016	-	-	-
	SRT_BH081	0.2	29/05/2017	<1	<1	<1
	SRT_BH081	0.2	29/05/2018	-	-	-
	SRT_BH081	0.5	29/05/2017	-	-	-
	SRT_BH081	0.5	29/05/2018	-	-	-
	SRT_BH081	1.9	29/05/2017	-	-	-
	SRT_BH081	1.9	29/05/2018	-	-	-
	SRT_BH082	0.2	29/05/2017	-	-	-
	SRT_BH082	0.4	29/05/2017	<1	<1	<1
	SRT_BH082	2	30/05/2017	<1	<1	<1
	SRT_BH082	2	30/05/2017	<1	<1	<1
	SRT_BH082	3.2	30/05/2017	-	-	-
QC200	SRT_BH082		30/05/2017	<0.5	<0.5	<0.5
	SRT_BH083	0.4	31/05/2017	<1	<1	<1
	SRT_BH083	1.4	31/05/2017	-	-	-
	SRT_BH083	2	1/06/2017	<1	<1	<1
	SRT_BH084	0.2	29/05/2017	<1	<1	<1
	SRT_BH084	0.9	29/05/2017	-	-	-
	SRT_BH084	1.4	29/05/2017	-	-	-
	SRT_BH084	3	1/06/2017	<1	<1	<1
	SRT_BH084	7.6	1/06/2017	-	-	-
	SRT_BH085	0.2	29/05/2017	<1	<1	<1
	SRT_BH085	0.9	29/05/2017	-	-	-
	SRT_BH085	3	30/05/2017	-	-	-
	SRT_BH085	4	30/05/2017	-	-	-
SRT_BH085_0.3	SRT_BH086	0.3-0.3	9/10/2017	-	-	-
SRT_BH085_2.4	SRT_BH086	2.4-2.4	9/10/2017	-	-	-
SRT_BH085_2.6	SRT_BH086	2.6-2.6	9/10/2017	-	-	-
SRT_BH085_3.9	SRT_BH086	3.9-3.9	9/10/2017	-	-	-
SRT_BH086_10.5_10.6	SRT_BH086	10.5-10.6	15/11/2017	-	-	-
SRT_BH086_28.85_28.95	SRT_BH086	28.85-28.95	15/11/2017	-	-	-
SRT_FD01_151117	SRT_BH086	10.5-10.6	15/11/2017	-	-	-
SRT_BH086_0.4_0.5	SRT_BH087	0.4-0.5	22/10/2017	-	-	-
SRT_BH086_0.7_0.8	SRT_BH087	0.7-0.8	22/10/2017	-	-	-
SRT_BH086_2.0_2.1	SRT_BH087	2-2.1	22/10/2017	-	-	-
SRT_BH087_12.2_12.3	SRT_BH087	12.2-12.3	15/11/2017	-	-	-
SRT_BH087_15.2_15.3	SRT_BH087	15.2-15.3	15/11/2017	-	-	-
SRT_BH087_18.1_18.2	SRT_BH087	18.1-18.2	15/11/2017	-	-	-
SRT_BH087_27.8_27.9	SRT_BH087	27.8-27.9	15/11/2017	-	-	-
SRT_CBH001_0.12-0.2	SRT_CBH001	0.12-0.2	20/09/2017	-	-	-
SRT_CBH001_0.45_0.55	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-
SRT_CBH001_0.9_1.0	SRT_CBH001	0.9-1	21/09/2017	-	-	-
SRT_CBH001_1.6-2.2	SRT_CBH001	1.6-2.2	5/10/2017	-	-	-
SRT_CBH001_2.35-2.5	SRT_CBH001	2.35-2.5	5/10/2017	-	-	-
SRT_CBH001_3.7-3.9	SRT_CBH001	3.7-3.9	5/10/2017	-	-	-
SRT_FD03_210917	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-
SRT_CBH002_0.12-0.3	SRT_CBH002	0.12-0.3	20/09/2017	-	-	-
SRT_CBH002_0.45_0.55	SRT_CBH002	0.45-0.55	21/09/2017	-	-	-
SRT_CBH002_0.9_1.0	SRT_CBH002	0.9-1	21/09/2017	-	-	-
SRT_CBH002_1.3-1.5	SRT_CBH002	1.3-1.5	5/10/2017	-	-	-
SRT_CBH002_30.-3.1	SRT_CBH002	30-3.1	5/10/2017	-	-	-
SRT_CBH003_0.45_0.55	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-
SRT_CBH003_0.95-1.2	SRT_CBH003	0.95-1.2	5/10/2017	-	-	-
SRT_CBH003_1.7-1.85	SRT_CBH003	1.7-1.85	5/10/2017	-	-	-
SRT_FD02_210917	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-
SRT_CBH004_0.12-0.4	SRT_CBH004	0.12-0.4	20/09/2017	-	-	-
SRT_CBH004_0.45_0.55	SRT_CBH004	0.45-0.55	21/09/2017	-	-	-
SRT_CBH004_1.9_2.0	SRT_CBH004	1.9-2	26/09/2017	-	-	-
SRT_CBH004_2.9_3.0	SRT_CBH004	2.9-3	26/09/2017	-	-	-
SRT_CBH004_3.9_4.0	SRT_CBH004	3.9-4	26/09/2017	-	-	-
SRT_CBH005_0.12-0.5	SRT_CBH005	0.12-0.5	20/09/2017	-	-	-
SRT_CBH005_0.45_0.55	SRT_CBH005	0.45-0.55	21/09/2017	-	-	-
SRT_CBH005_0.9_1.0	SRT_CBH005	0.9-1	21/09/2017	-	-	-
SRT_CBH005_2.0_2.1	SRT_CBH005	2-2.1	26/09/2017	-	-	-
SRT_CBH005_2.9-3.0	SRT_CBH005	2.9-3	26/09/2017	-	-	-
SRT_FD01_210917	SRT_CBH005	0.45-0.55	21/09/2017	-	-	-
SRT_CBH006_0.1-0.2	SRT_CBH006	0.1-0.2	19/09/2017	-	-	-
SRT_CBH006_0.9-1.0	SRT_CBH006	0.9-1	19/09/2017	-	-	-
SRT_CBH006_2.0-2.1	SRT_CBH006	2-2.1	20/09/2017	-	-	-
SRT_CBH006_4.0-4.1	SRT_CBH006	4-4.1	20/09/2017	-	-	-

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

				Phthalates		
				Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
				mg/kg	mg/kg	mg/kg
LOR						
NEPM 2013 Table 1A(1) HIL D Comm/Ind						
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand						
0-1m						
1-2m						
2-4m						
>4m						
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil						
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**			
SRT_CBH006_5.0-5.1	SRT_CBH006	5-5.1	20/09/2017	-	-	-
SRT_CBH007_0.30-0.35	SRT_CBH007	0.3-0.35	19/09/2017	-	-	-
SRT_CBH007_0.9-1.0	SRT_CBH007	0.9-1	19/09/2017	-	-	-
SRT_CBH007_1.5_1.6	SRT_CBH007	1.5-1.6	22/09/2017	-	-	-
SRT_CBH007_2.1_2.2	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-
SRT_CBH007_3.9_4.0	SRT_CBH007	3.9-4	22/09/2017	-	-	-
SRT_CBH007_4.9_5.0	SRT_CBH007	4.9-5	22/09/2017	-	-	-
SRT_CBH007_5.9_6.0	SRT_CBH007	5.9-6	22/09/2017	-	-	-
SRT_FD01_220917	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-
SRT_CBH008_0.15-0.2	SRT_CBH008	0.15-0.2	19/09/2017	-	-	-
SRT_CBH008_0.9-1.0	SRT_CBH008	0.9-1	19/09/2017	-	-	-
SRT_CBH008_1.6-1.7	SRT_CBH008	1.6-1.7	20/09/2017	-	-	-
SRT_CBH008_2.1-2.2	SRT_CBH008	2.1-2.2	20/09/2017	-	-	-
SRT_CBH009_0.15-0.25	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-
SRT_CBH009_0.4-0.5	SRT_CBH009	0.4-0.5	18/09/2017	-	-	-
SRT_CBH009_0.9_1.0	SRT_CBH009	0.9-1	25/09/2017	-	-	-
SRT_CBH009_1.9_2.0	SRT_CBH009	0.9-2	25/09/2017	-	-	-
SRT_CBH009_2.9_3.0	SRT_CBH009	2.9-3	25/09/2017	-	-	-
SRT_FD01_18092017	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-
SRT_CBH010_0.2-0.25	SRT_CBH010	0.2-0.25	18/09/2017	-	-	-
SRT_CBH010_0.9-1.0	SRT_CBH010	0.9-1	18/09/2017	-	-	-
SRT_CBH010_1.6_1.7	SRT_CBH010	1.6-1.7	25/09/2017	-	-	-
SRT_CBH010_2.9_3.0	SRT_CBH010	2.9-3	25/09/2017	-	-	-
SRT_CBH010_3.9_4.0	SRT_CBH010	3.9-4	25/09/2017	-	-	-
SRT_BD01_231017	SRT_CBH011	1-1.1	23/10/2017	-	-	-
SRT_CBH011_0.2_0.3	SRT_CBH011	0.2-0.3	23/10/2017	-	-	-
SRT_CBH011_1.0_1.1	SRT_CBH011	1-1.1	23/10/2017	-	-	-
SRT_CBH011_2.1_2.2	SRT_CBH011	2.1-2.2	23/10/2017	-	-	-
SRT_CBH011_3.1_3.2	SRT_CBH011	3.1-3.2	23/10/2017	-	-	-
SRT_CBH011_4.1_4.2	SRT_CBH011	4.1-4.2	23/10/2017	-	-	-
SRT_CBH012_0.4_0.5	SRT_CBH012	0.4-0.5	24/10/2017	-	-	-
SRT_CBH012_1.0-1.1	SRT_CBH012	1-1.1	24/10/2017	-	-	-
SRT_CBH012_1.6-1.7	SRT_CBH012	1.6-1.7	24/10/2017	-	-	-
SRT_CBH012_2.8_3.0	SRT_CBH012	2.8-3	24/10/2017	-	-	-
SRT_CBH013_0.2_0.3	SRT_CBH013	0.2-0.3	25/10/2017	-	-	-
SRT_CBH013_0.8_0.9	SRT_CBH013	0.8-0.9	25/10/2017	-	-	-
SRT_CBH013_2.1_2.2	SRT_CBH013	2.1-2.2	25/10/2017	-	-	-
SRT_CBH013_4.1_4.2	SRT_CBH013	4.1-4.2	25/10/2017	-	-	-
SRT_CBH013_5.9_6.0	SRT_CBH013	5.9-6	25/10/2017	-	-	-
SRT_BD01_251017	SRT_CBH014	2.9-3	25/10/2017	-	-	-
SRT_CBH014_0.4_0.5	SRT_CBH014	0.4-0.5	25/10/2017	-	-	-
SRT_CBH014_1.1_1.2	SRT_CBH014	1.1-1.2	25/10/2017	-	-	-
SRT_CBH014_2.9_3.0	SRT_CBH014	2.9-3	25/10/2017	-	-	-
Asbestos	SRT_NDD002	0.85	30/06/2018	-	-	-
	SRT_NDD030	0.15	4/04/2017	<1	<1	<1
	SRT_NDD030	0.35	4/04/2017	<1	<1	<1
	SRT_NDD030	0.65	4/04/2017	<10	<10	<10
	SRT_NDD030	0.65-0.75	4/04/2017	<1	<1	<1
	SRT_NDD030	0.75	4/04/2017	<1	<1	<1
	SRT_NDD030	0.9	4/04/2017	<1	<1	<1
	SRT_NDD030	1.65	4/04/2017	<1	<1	<1
	SRT_NDD030	1.8	4/04/2017	<1	<1	<1
	SRT_NDD030	1.8	4/04/2017	<0.5	<0.5	<0.5
	SRT_NDD030	1.8	4/04/2017	<1	<1	<1
	SRT_NDD030	1.9	4/04/2017	<1	<1	<1
	SRT_NDD030	2.2	4/04/2017	<1	<1	<1
	ST01	0	2/08/2017	<1	<2	<1
	ST02	0	2/08/2017	<1	<2	<1
	ST02	0.5	2/08/2017	<1	<2	<1
	ST03		4/08/2017	<0.5	<0.5	<0.5
	ST03	0	4/08/2017	<1	<2	<1
	ST03	0	4/08/2017	<1	<2	<1
	ST03	0.7	4/08/2017	<1	<2	<1
	ST04	0.1	4/08/2017	<1	<2	<1
	ST04	0.5	4/08/2017	<1	<2	<1
	ST05	0.3	4/08/2017	<1	<2	<1
	ST05	1.2	4/08/2017	<1	<2	<1
	ST06	0.2	9/08/2017	<1	<2	<1
	ST06	1.5	9/08/2017	<1	<2	<1
	ST07	0	11/08/2017	<1	<2	<1
	ST07	1.5	11/08/2017	<1	<2	<1
	ST08	0.1	11/08/2017	<1	<2	<1
	ST08	0.6	11/08/2017	<1	<2	<1
	ST09	0	14/08/2017	<1	<2	<1
	ST09	0.9	14/08/2017	<1	<2	<1
	ST10	1.5	17/08/2017	<1	<2	<1
	ST11	0.6	17/08/2017	<1	<2	<1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre

Appendix B
Table B1
Metro Station Box - Human Health, Soil Analytical Data

	Phthalates		
	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
	mg/kg	mg/kg	mg/kg
LOR			
NEPM 2013 Table 1A(1) HIL D Comm/Ind			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand			
0-1m			
1-2m			
2-4m			
>4m			
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil			

Field ID	Location Code	Sample Depth	Sampled Date
- = not analysed			

NL = no limit

Appendix B
Table B2
Central Walk - Human Health, Soil Analytical Data

Sydney Metro
Central Walk
Central Station Main Works

				Inorganics			Major Ions					Asbestos									BTEXN							TRH - NEPM 2013							TRH	
				pH (Field)	Electrical conductivity (field)	Moisture (%)	Moisture Content (dried @ 103°C)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Chloride	Asbestos (Fines and Fibrous FA+AF)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction
				pH Units	µS/cm	%	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%w/w	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR						1	1								2	0.4	5	5	5	0.1	5	5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20
NEPM 2013 Table 1A(1) HIL D Comm/Ind															3000	900	3600	240000	1500	730	6000	400000															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																					
0-1m																						3	NL	NL			230		260		NL						
1-2m																						3	NL	NL			NL		370		NL						
2-4m																						3	NL	NL			NL		630		NL						
>4m																						3	NL	NL			NL		NL		NL						
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																														700		1000	3500	10000			
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																			
	SRT_BH040	0.1-0.15	4/09/2017	8.6	89	15	-	<10	8700	1200	340	160	<10	-	<4	2	55	190	320	<0.1	12	290	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	71	71	820	380	-	<25	170
	SRT_BH040	0.5-0.55	4/09/2016	8	93	19	-	10	5600	2700	730	360	10	-	5	0.8	9	260	200	0.5	12	120	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	160	<100	-	<25	<50
QC100	SRT_BH040		4/09/2017	-	-	8.1	-	-	-	-	-	-	-	-	<4	4.2	180	470	990	0.1	28	730	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	53	53	570	320	-	<25	110
QC200	SRT_BH040		4/09/2017	-	-	5	-	-	-	-	-	-	-	-	5	11	140	594	950	0.2	26	987	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	60	60	440	170	-	<10	110
	SRT_BH041A	0.2-0.3	14/11/2016	9.4	120	-	-	66	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	1.4-1.5	14/11/2016	8.7	170	-	-	99	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	0.6-0.9	4/09/2016	8.3	47	-	-	10	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	3-3.05	4/09/2016	7.3	-	-	-	10	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	9	90	12	-	20	1400	1200	430	160	<10	-	4	<0.4	5	35	72	0.2	5	30	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	160	<100	-	<25	<50
	SRT_BH051	0.9-1	20/09/2016	7.7	140	15	-	110	740	600	450	110	<10	-	<4	<0.4	8	25	17	0.1	8	40	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50
	SRT_BH051	2.4-2.5	20/09/2016	7.3	60	11	-	25	2500	280	320	50	<10	-	8	<0.4	6	42	86	0.1	4	49	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50
	SRT_BH051	3.9-4	20/09/2016	6	31	-	-	21	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	8.2	170	14	-	60	1600	280	670	110	10	-	5	<0.4	7	39	45	<0.1	4	26	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50
	SRT_BH054	1.5-1.51	26/10/2016	8.1	130	-	-	70	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	7.3	45	16	-	20	2400	640	500	50	<10	-	8	<0.4	8	36	26	<0.1	13	64	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50
	SRT_BH054	3-3.15	26/10/2016	6.4	17	-	-	10	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH055	3.1-3.15	20/10/2016	6.5	-	-	-	<10	-	-	-	-	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH057	0.5	21/10/2016	7.5	150	-	-	120	-	-	-	-	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	1.5-1.6	2/11/2016	7.8	110	-	-	100	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.1-2.2	2/11/2016	6.7	140	-	-	160	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.4-3	2/11/2016	5.9	59	-	-	59	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	3.85-4	3/11/2016	6	-	-	-	24	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	-	-	-	4.5	-	-	-	-	-	-	No Asbestos detected	<2	0.6	8.9	85	140	0.2	7.1	250	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	320	320	11,000	1800	-	<20	98
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	13	-	-	-	-	-	-	-	3	<0.4	9.4	82	81	0.3	11	220	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	73	73	1500	210	-	<20	41
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	-	-	-	15	-	-	-	-	-	-	No Asbestos detected	3.7	<0.4	8	140	140	0.4	13	150	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	130	130	3700	430	-	<20	39
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	-	-	-	6.2	-	-	-	-	-	-	-	3.4	<0.4	<5	130	120	0.2	<5	120	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	51	51	480	120	-	<20	<20
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	-	-	-	12	-	-	-	-	-	-	No Asbestos detected	9.7	<0.4	8.1	86	160	0.3	9.5	71	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	560	200	-	<20	<20
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	-	-	-	7.4	-	-	-	-	-	-	-	8.1	<0.4	10	37	29	<0.1	21	67	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	-	-	-	9	-	-	-	-	-	-	-	7.7	<0.4	10	40	37	<0.1	21	77	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	120	<100	-	<20	<20
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	-	-	-	15	-	-	-	-	-	-	No Asbestos detected	2.8	<0.4	6.9	77	31	<0.1	14	31	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	430	440	3800	560	-	<20	220
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	-	-	-	19	-	-	-	-	-	-	No Asbestos detected	14	<0.4	7.2	29	68	0.2	<5	31	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	10	-	-	-	-	-	-	-	3.3	<0.4	5.6	31	210	0.3	<5	45	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	10	-	-	-	-	-	-	-	4.8	<0.4	8.7	51	130	0.4	<5	76	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	260	<100	-	<20	<20
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	-	-	22.4	-	-	-	-	-	-	-	-	6	<1	6	159	80	<0.1	12	64	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	330	340	3520	880	4740	<10	140
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	16	-	-	-	-	-	-	No Asbestos detected	40	<0.4	7.7	28	40	<0.1	<5	21	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	250	<100	-	<20	<20
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	-	-	-	14	-	-	-	-	-	-	No Asbestos detected	3.7	<0.4	7	26	120	0.3	<5	24	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	-	-	-	26	-	-	-	-	-	-	No Asbestos detected	<2	<0.4	<5	38	33	<0.1	10	85	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	-	-	-	8.6	-	-	-	-	-	-	No Asbestos detected	6.1	<0.4	18	31	37	<0.1	17	67	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	84	84	240	<100	-	<20	47
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	14.6	-	-	-	-	-	-	-	-	72	<1	7	24	12	<0.1	3	16	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	1040	170	1210	<10	<50
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	-	-	-	8.9	-	-	-	-	-	-	No Asbestos detected	2.6	<0.4	9.8	34	95	<0.1	5.2	28	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	370	370	3900	560	-	<20	130
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	-	-	-	17	-	-	-	-	-	-	No Asbestos detected	2.9	<0.4	21	16	40	<0.1	9.1	25	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	180	<100	-	<20	<20
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	-	-	-	19	-	-	-	-	-	-	No Asbestos detected	3.7	<0.4	8.4	15	84	0.2	<5	34	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	52	52	200	<100	-	<20	51
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	-	-	-	20	-	-	-	-	-	-	No Asbestos detected	23	<0.4	11	13	34	<0.1	<5	22	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	96	96	1000	<100	-	<20	<20
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	-	-	-	8.2	-	-	-	-	-	-	-	7.7	<0.5	9.3	81	29	<0.1	47	150	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	28

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B2
Central Walk - Human Health, Soil Analytical Data

				- NEPM 1999			PAHs																				Phenols													
				C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo[b+j]fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(half LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	3/4-Methylphenol (m/p-cresol)	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2-chlorophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-nitrophenol	Pentachlorophenol
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				50	50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	1	1	0.5	0.5	5	0.5	0.5	0.2	1	20	1	5	1
NEPM 2013 Table 1A(1) HIL D Comm/Ind																								4000	40	40	40														660
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																						NL																		
0-1m																						NL																		
1-2m																						NL																		
2-4m																						NL																		
>4m																						NL																		
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																								
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																						
	SRT_BH040	0.1-0.15	4/09/2017	450	510	1130	0.5	<0.1	0.1	0.2	0.2	0.2	-	0.5	-	0.2	0.3	<0.1	0.4	<0.1	0.2	<0.1	0.2	3	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH040	0.5-0.55	4/09/2016	<100	140	140	2.1	<0.1	<0.1	0.1	1.1	1.2	-	2	-	0.7	1	<0.1	2.1	<0.1	1	<0.1	0.8	12	1.7	1.7	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-
QC100	SRT_BH040		4/09/2017	290	420	820	0.7	<0.1	0.1	0.2	0.4	0.3	-	0.7	-	0.3	0.4	<0.1	0.6	<0.1	0.2	<0.1	0.2	4.3	<0.5	0.5	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH040		4/09/2017	280	250	640	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	0.2-0.3	14/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	1.4-1.5	14/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	0.6-0.9	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	3-3.05	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	140	<100	140	1.9	0.3	<0.1	0.6	0.9	0.83	-	1	-	0.4	0.9	<0.1	1.9	0.1	0.4	<0.3	2.3	12	1.1	1.1	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.9-1	20/09/2016	<100	<100	-	7	0.6	<0.1	3	3	2.3	-	3.6	-	1	2.8	0.2	7.6	0.6	1.1	<0.7	11	44	3.3	3.3	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	2.4-2.5	20/09/2016	<100	<100	-	2.6	<0.1	0.3	0.7	1.1	1.1	-	2	-	0.5	1.1	0.1	2.6	0.2	0.5	<0.2	2	15	1.5	1.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	<100	<100	-	0.4	<0.1	<0.1	<0.1	0.2	0.1	-	0.3	-	0.2	0.2	<0.1	0.3	<0.1	0.1	<0.1	<0.1	1.9	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	1.5-1.51	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	<100	<100	-	0.3	<0.1	<0.1	0.1	<0.1	0.06	-	<0.2	-	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	0.4	1.2	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	3-3.15	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH055	3.1-3.15	20/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH057	0.5	21/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	1.5-1.6	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.1-2.2	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.4-3	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	3.85-4	3/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	6900	3300	10,298	340	12	3.5	75	190	190	93	-	84	110	150	60	320	8.1	110	<0.5 - 2.9	300	2048.5	300	300	300	<4	<4	<4	<2	<2	<25	<2	<2	<2	<4	<50	<4	<25	<4
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	900	450	1391	33	0.6	4.2	8.2	19	15	7.6	-	11	9	17	5.2	30	<2	9.4	<0.5	22	191.2	25	25	25	<4	<4	<4	<2	<2	<25	<2	<2	<2	<4	<50	<4	<25	<4
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	2300	1100	3439	86	2.1	9.7	16	55	50	30	-	38	26	46	11	82	2.9	23	<0.5 - 2.3	63	543	76	76	76	2.3	<1	<1	<0.5	0.8	<5	<0.5	<0.5	0.5	<1	<20	<1	<5	<1
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	400	170	570	12	<0.5	2.3	3	5.7	5	3.2	-	4.5	2.7	5.7	1.1	12	1.4	2.3	<0.5	17	77.9	7.8	7.8	7.8	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	400	300	700	12	<0.5	1.2	1.3	6.2	7.4	4.8	-	6.5	4.9	6.7	1.7	10	<0.5	4.1	<0.5	5.7	72.5	11	11	11	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	67	<50	67	1.4	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	-	<0.5	<0.5	0.6	<0.5	1.4	<0.5	<0.5	<0.5	2	6	<0.5	0.6	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	120	<50	120	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	1	2.5	<0.5	0.6	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	2600	900	3720	110	18	<2	59	51	40	25	-	23	22	48	14	110	14	24	12 - 18	190	766	67	67	67	<4	<4	<4	<2	<2	<25	<2	<2	<2	<4	<50	<4	<25	<4
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<50	<50	<50	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	0.8	2.4	<0.5	0.6	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	<50	<50	<50	1	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	-	<0.5	<0.5	0.6	<0.5	1	<0.5	<0.5	<0.5	<0.5	3.2	0.6	1	1.3	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	230	72	302	8.7	<0.5	1	1.4	5.1	4.2	2.8	-	3.2	2.3	4	1.3	8.4	<0.5	2.2	<0.5	6.1	50.7	6.9	6.9	6.9	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	2950	1310	4400	82.5	9.7	1.2	32.3	29.2	21.1	28	-	10.8	10	27.1	2.8	86.3	7.6	8.2	7 - 12.6	126	495	31.9	31.9	31.9	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	220	76	296	11	2.1	<0.5	7.1	4.8	3.9	2.9	-	3.4	2.2	4.4	0.8	14	2.7	2	<0.5 - 1.6	22	83.3	6.1	6.1	6.1	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	<0.5	0.6	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	69	<50	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	230	82	359	1.7	<0.5	<0.5	1	0.7	0.5	0.5	-	<0.5	<0.5	0.8	<0.5	2.1	<0.5	<0.5	<0.5	3.6	10.9	0.6	0.9	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	880	320	1200	65.1	6.2	0.9	30.1	27.7	20	24.8	-	11.3	11.3	22	2.5	89	7.5	9	1 - 1.4	108	437	30.1	30.1	30.1	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	2800	820	3750	210	46	<2	130	96	73	51	-	45	43	82	26	260	64	47	3.1 - 9.9	370	1552.9	120	120	120	<4	<4	<4	<2	<2	<25	<2	<2	<2	<4	<50	<4	<25	<4
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	140	80	220	4.7	<0.5	0.6	1.5	2.3	2.1	1.7	-	1.7	0.8	2.1	<0.5	5.2	<0.5	0.8	<0.5	4.9	28.4	2.8	3	3.3	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	150	110	311	2.7	<0.5	<0.5	0.7	1.3	1.5	1.5	-	1.3	0.7	1.4	<0.5	2.8	<0.5	0.6	<0.5	2.5	17	2	2.2	2.5	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	1100	140	1240	52	11	<0.5	27	40	22	14	-	19	13	26	4.6	64	14	11	<0.5	98	415.6	35	35	35	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	92	<50	120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.4	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<20	<1	<5	<1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

| | | | | | | VOCs | | | | | |

Appendix B
Table B2
Central Walk - Human Health, Soil Analytical Data

Sydney Metro
Central Walk
Central Station Main Works

				OC Pesticides																OP Pesticides																							
				DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Tokuthion	Azinphos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2
NEPM 2013 Table 1A(1) HIL D Comm/Ind				3600		2000				100				50		80	2500	160					2000																					
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																										
0-1m																																										
1-2m																																										
2-4m																																										
>4m																																										
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																										
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																									
	SRT_BH040	0.1-0.15	4/09/2017	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH040	0.5-0.55	4/09/2016	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC100	SRT_BH040		4/09/2017	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH040		4/09/2017	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	0.2-0.3	14/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	1.4-1.5	14/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	0.6-0.9	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	3-3.05	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.9-1	20/09/2016	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	2.4-2.5	20/09/2016	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	1.5-1.51	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	3-3.15	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH055	3.1-3.15	20/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH057	0.5	21/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	1.5-1.6	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.1-2.2	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.4-3	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	3.85-4	3/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<0.2	<5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B2
Central Walk - Human Health, Soil Analytical Data

Sydney Metro
Central Walk
Central Station Main Works

													MAH					enated Hydroca		PCBs							erbicid	Chlorinated Hydrocarbons												
			Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Bromomethane	Dichlorodifluoromethane	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Dinoseb	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HIL D Comm/Ind																											7													
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																								
0-1m																																								
1-2m																																								
2-4m																																								
>4m																																								
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																								
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																						
	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH040	0.5-0.55	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
QC100	SRT_BH040		4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH040		4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	0.2-0.3	14/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH041A	1.4-1.5	14/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	0.6-0.9	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH043	3-3.05	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.9-1	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	2.4-2.5	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	1.5-1.51	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	3-3.15	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH055	3.1-3.15	20/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH057	0.5	21/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	1.5-1.6	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.1-2.2	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.4-3	2/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH062A	3.85-4	3/11/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B2
Central Walk - Human Health, Soil Analytical Data

				Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,2-dichloroethene	Dichloromethane	Vinyl chloride
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HIL D Comm/Ind												
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand												
0-1m												
1-2m												
2-4m												
>4m												
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil												
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**									
	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	-	-
	SRT_BH040	0.5-0.55	4/09/2016	-	-	-	-	-	-	-	-	-
QC100	SRT_BH040		4/09/2017	-	-	-	-	-	-	-	-	-
QC200	SRT_BH040		4/09/2017	-	-	-	-	-	-	-	-	-
	SRT_BH041A	0.2-0.3	14/11/2016	-	-	-	-	-	-	-	-	-
	SRT_BH041A	1.4-1.5	14/11/2016	-	-	-	-	-	-	-	-	-
	SRT_BH043	0.6-0.9	4/09/2016	-	-	-	-	-	-	-	-	-
	SRT_BH043	3-3.05	4/09/2016	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.9-1	20/09/2016	-	-	-	-	-	-	-	-	-
	SRT_BH051	2.4-2.5	20/09/2016	-	-	-	-	-	-	-	-	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	-	-	-	-	-	-	-	-	-
	SRT_BH054	1.5-1.51	26/10/2016	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	-	-	-	-	-	-	-	-	-
	SRT_BH054	3-3.15	26/10/2016	-	-	-	-	-	-	-	-	-
	SRT_BH055	3.1-3.15	20/10/2016	-	-	-	-	-	-	-	-	-
	SRT_BH057	0.5	21/10/2016	-	-	-	-	-	-	-	-	-
	SRT_BH062A	1.5-1.6	2/11/2016	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.1-2.2	2/11/2016	-	-	-	-	-	-	-	-	-
	SRT_BH062A	2.4-3	2/11/2016	-	-	-	-	-	-	-	-	-
	SRT_BH062A	3.85-4	3/11/2016	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	-	-	-	-	-	-
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	-	-	-	-	-	-
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B3
Sydney Yard - Project Access/Works Area - Human Health, Soil Analytical Data

Sydney Metro
Sydney Yard
Central Station Main Works

			Inorganics		Major Ions					Metals															BTEXN						TRH - NEPM 2013							TRH	
			pH (Field)	Electrical conductivity (field)	Moisture (%)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Chloride	Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction
			pH Units	µS/cm	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					1									2		0.4	5	5	5		0.1	5				5	0.1	0.1	0.1	0.1	0.2	0.3	20	20	50	50	100	100	50	20	20
NEPM 2013 Table 1A(1) HIL D Comm/Ind														3000		900	3600	240000	1500	60000	730	6000	10000			400000															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																									
0-1m																											3	NL	NL			230	260		NL						
1-2m																											3	NL	NL			NL	370		NL						
2-4m																											3	NL	NL			NL	630		NL						
>4m																											3	NL	NL			NL	NL		NL						
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																		700		1000	3500	10000			
Location Code	**Sample Depth**	**Sampled Date**																																							
SRT_BH042	1.5-1.6	15/07/2016	-	-	12	-	140	190	360	30	-	-	-	4	-	<0.4	8	1	16	-	-	<1	-	-	-	8	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	<100	<100	-	<25	<50
SRT_BH044	2.5-2.95	22/06/2016	4.8	61	-	99	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	4-4.45	22/06/2016	5.1	46	-	57	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	5.5-5.95	22/06/2016	5.3	37	-	48	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	-	-	8	-	630	190	160	40	-	-	-	<4	-	<0.4	8	4	7	-	-	3	-	-	-	7	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	<100	<100	-	<25	<50
SRT_BH045	1.5-1.6	8/07/2016	-	-	5.5	-	430	300	140	300	-	-	-	<4	-	<0.4	6	5	10	-	-	2	-	-	-	7	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	110	110	-	<25	<50
SRT_BH045	2.4-2.5	8/07/2016	-	-	4.5	-	220	74	80	20	-	-	-	<4	-	<0.4	4	1	3	-	-	<1	-	-	-	2	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	<100	<100	-	<25	<50
SRT_BH046	3-3.45	24/06/2016	4.8	48	-	66	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	4-4.45	24/06/2016	4.8	57	-	74	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	5.5-5.95	24/06/2016	5.1	29	-	24	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	-	-	19	-	2200	340	330	100	-	-	-	11	-	<0.4	30	64	360	-	0.4	5	-	-	-	59	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	<100	<100	-	<25	<50
SRT_BH067	1.7-1.8	15/07/2016	-	-	19	-	1700	330	330	70	-	-	-	14	-	<0.4	23	40	290	-	0.2	3	-	-	-	42	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	<100	<100	-	<25	<50
SRT_BH067	2.5-2.95	24/06/2016	5	46	-	52	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	-	-	14	-	3600	1200	650	170	-	-	-	28	-	1	16	150	700	-	0.7	13	-	-	-	580	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	140	<100	-	<25	<50
SRT_BH068	3.3-3.4	15/07/2016	-	-	21	-	580	290	490	80	-	-	-	10	-	<0.4	10	25	68	-	<0.1	2	-	-	-	44	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	<100	<100	-	<25	<50
SRT_BH081	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	5400	<7	9	210	<0.4	9	210	740	260	1.8	12	<2	<1	27	230	<0.2	<0.5	<1	<1	<2	<1	<25	<25	<50	<50	240	<100	240	<25	<50
SRT_BH081	0.2	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<25	<25	<50	<50	-	-	-	-	-
SRT_BH081	0.5	29/05/2017	-	-	-	-	-	-	-	-	-	14,000	<7	8	47	<0.4	23	16	120	23	0.3	2	<2	<1	78	33	<0.2	<0.5	<1	<1	<2	<1	<25	<25	<50	<50	<100	<100	<50	<25	<50
SRT_BH081	0.5	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<25	<25	<50	<50	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	-	-	-	-	-	-	-	-	-	4100	<7	9	40	<0.4	12	6	24	2	<0.1	<1	<2	<1	53	2	<0.2	<0.5	<1	<1	<2	<1	<25	<25	<50	<50	<100	<100	<50	<25	<50
SRT_BH081	1.9	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<25	<25	<50	<50	-	-	-	-	-
SRT_BH69	5.28-5.35	21/06/2016	5.5	-	-	38	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B3
Sydney Yard - Project Access/Works Area - Human Health, Soil Analytical Data

Sydney Metro
Sydney Yard
Central Station Main Works

			- NEPM 1999			PAHs																	Phenols																			
			C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo(a) pyrene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(half LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2-chlorophenol	2-methylnaphthalene	2-methylphenol	2-nitrophenol	3-methylcholanthrene	4-chloro-3-methylphenol	4-nitrophenol	Acetophenone	Pentachlorophenol
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			50	50	50	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4		1	1	0.5	0.5	5	0.5	0.5		0.2	1		1	5			1
NEPM 2013 Table 1A(1) HIL D Comm/Ind																					4000	40	40	40																			660
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																									
0-1m																				NL																					
1-2m																				NL																					
2-4m																				NL																					
>4m																				NL																					
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																									
Location Code	**Sample Depth**	**Sampled Date**																																								
SRT_BH042	1.5-1.6	15/07/2016	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	2.5-2.95	22/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	4-4.45	22/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	5.5-5.95	22/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	1.5-1.6	8/07/2016	<100	<100	120	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	2.4-2.5	8/07/2016	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	3-3.45	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	4-4.45	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	5.5-5.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	<100	<100	-	0.9	<0.1	<0.1	<0.1	0.5	0.52	0.8	0.2	0.5	<0.1	0.9	<0.1	0.2	<0.1	0.3	5	0.7	0.7	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	1.7-1.8	15/07/2016	<100	<100	-	0.9	<0.1	<0.1	<0.1	0.7	0.54	0.9	0.2	0.6	<0.1	0.8	<0.1	0.2	<0.1	0.1	4.9	0.7	0.8	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	<100	<100	-	1.7	<0.1	0.1	0.6	1	1.1	1	0.7	0.9	0.2	1.7	<0.1	0.9	<0.1	0.7	11	1.6	1.6	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	3.3-3.4	15/07/2016	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	110	160	-	1.8	<0.1	0.1	0.1	1	0.9	3.2	<0.5	1	<0.1	1.7	<0.1	0.7	<0.1	<0.5	11	1.3	1.3	1.3	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<0.2	<0.2	<0.5	<0.2	<0.2	<0.5	<1	<4	<1	<1
SRT_BH081	0.2	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.5	29/05/2017	<100	<100	-	0.4	<0.1	<0.1	<0.1	0.2	0.2	0.3	0.1	0.2	<0.1	0.4	<0.1	<0.1	<0.1	0.4	2.2	<0.5	<0.5	<0.5	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<0.2	<0.2	-	<0.2	<0.2	-	<1	<4	-	<1
SRT_BH081	0.5	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<0.2	<0.2	-	<0.2	<0.2	-	<1	<4	-	<1
SRT_BH081	1.9	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH69	5.28-5.35	21/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B3
Sydney Yard - Project Access/Works Area - Human Health, Soil Analytical Data

			SVOCs																							PCBs								
			Phenol	1,2,4,5-tetrachlorobenzene	4,6-Dinitro-2-methylphenol	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	4,4 DDD	4,4 DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5		5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HIL D Comm/Ind			240000												3600					100				50		80	2500								7
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																																			
0-1m																																			
1-2m																																			
2-4m																																			
>4m																																			
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																			
Location Code	**Sample Depth**	**Sampled Date**																																	
SRT_BH042	1.5-1.6	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	2.5-2.95	22/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	4-4.45	22/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH044	5.5-5.95	22/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH045	1.5-1.6	8/07/2016	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH045	2.4-2.5	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	3-3.45	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	4-4.45	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH046	5.5-5.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
SRT_BH067	1.7-1.8	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
SRT_BH068	3.3-3.4	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	<0.2	<0.5	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH081	0.2	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.5	29/05/2017	<0.2	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.5	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	<0.2	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH69	5.28-5.35	21/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

					Asbestos	Metals																BTEXN							TRH - NEPM 2013							TRH - NEPM 1999										
				Cyanide (Total)	Asbestos	Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
				mg/kg	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR								2		0.4	5	5	5		0.1		5					5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5	0.5	0.5	0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)				320				100		20	100		100		4	100	40	20	100				10	288	600			1000								650				10000					
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)				1280				400		80	400		400		16	400	160	80	400				40	1152	2400			4000								2600				40000					
NSW EPA (2014) Special Waste (Asbestos)																																													
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																											
	SRT_BH039	0.95-1.4	5/07/2017	-	-	-	-	<4	-	<0.4	4	24	14	-	<0.1	-	2	-	-	-	-	16	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH039	1.9-2	5/07/2016	-	-	-	-	5	-	<0.4	9	75	19	-	<0.1	-	24	-	-	-	-	110	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH048		23/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	1.1-1.2	11/07/2016	-	-	-	-	<4	-	<0.4	10	25	24	-	<0.1	-	<1	-	-	-	-	9	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	11	0.6	3.3	4.3	4.6
	SRT_BH048	2-2.1	11/07/2016	-	-	-	-	4	-	<0.4	9	26	23	-	<0.1	-	1	-	-	-	-	13	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	6.3	0.7	1.7	2.6	2.7
	SRT_BH048	4-4.1	11/07/2016	-	-	-	-	5	-	<0.4	11	46	20	-	<0.1	-	5	-	-	-	-	38	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	1.6	0.2	0.4	0.7	0.6
	SRT_BH049	1.5	6/07/2016	-	-	-	-	7	-	<0.4	13	26	21	-	<0.1	-	1	-	-	-	-	14	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.4	<0.1	0.1	0.2	0.2
	SRT_BH049	4	6/07/2016	-	-	-	-	6	-	<0.4	11	30	19	-	<0.1	-	1	-	-	-	-	6	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.2	<0.1	<0.1	0.1	<0.1
	SRT_BH049	4.5	6/07/2016	-	-	-	-	9	-	<0.4	8	37	20	-	<0.1	-	<1	-	-	-	-	4	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.2	<0.1	<0.1	0.1	<0.1
	SRT_BH053		23/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	2	6/07/2016	-	-	-	-	11	-	<0.4	9	43	17	-	<0.1	-	8	-	-	-	-	44	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.6	0.1	0.1	0.3	0.2
	SRT_BH053	3	6/07/2016	-	-	-	-	6	-	<0.4	7	42	16	-	<0.1	-	7	-	-	-	-	27	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH053	12.6-12.7	7/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	5.5-5.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8-8.04	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.4	29/05/2017	-	-	3700	<7	6	93	<0.4	4	170	200	100	0.2	-	7	<2	<1	-	13	130	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.6	<0.1	<0.1	<0.1	0.3
	SRT_BH082	2	30/05/2017	-	-	11,000	<7	<4	11	<0.4	10	2	4	3	<0.1	-	3	<2	<1	-	20	5	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH082	2	30/05/2017	-	-	7400	<7	<4	6	<0.4	6	<1	3	1	<0.1	-	2	<2	<1	-	17	1	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH082	3.2	30/05/2017	-	-	20,000	<7	8	17	<0.4	30	12	17	2	<0.1	-	2	<2	<1	-	74	6	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
QC200	SRT_BH082	0.2	30/05/2017	-	-	6260	<5	<5	<10	<1	4	<5	<5	<5	<0.1	-	<2	<5	<2	-	9	<5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5
QC200	SRT_BH082	0.2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<10	<50	<50	<100	<100	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
	SRT_BH083	0.4	31/05/2017	-	-	4200	<7	<4	93	<0.4	8	86	230	120	0.3	-	9	<2	<1	-	12	59	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.6	<0.1	<0.1	<0.1	0.4
	SRT_BH083	1.4	31/05/2017	-	-	8800	<7	<4	13	<0.4	7	3	13	8	<0.1	-	2	<2	<1	-	13	4	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH083	2	1/06/2017	-	-	20,000	<7	7	23	<0.4	22	14	13	6	<0.1	-	2	<2	<1	-	80	5	<0.2	<0.5	<1	<1	<2	<1	-	-	-	-	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH084	0.2	29/05/2017	-	-	8300	<7	10	130	2	34	250	360	270	0.3	-	26	<2	<1	-	39	310	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	430	320	750	<25	<50	190	340	-	0.5	<0.1	<0.1	<0.1	0.3
	SRT_BH084	0.9	29/05/2017	-	-	450	<7	<4	5	<0.4	<1	3	3	8	<0.1	-	<1	<2	<1	-	<1	7	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH084	1.4	29/05/2017	-	-	9800	<7	<4	13	<0.4	6	2	6	9	<0.1	-	3	<2	<1	-	14	5	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH084	3	1/06/2017	-	-	15,000	<7	<4	21	<0.4	18	11	13	5	<0.1	-	1	<2	<1	-	59	3	<0.2	<0.5	<1	<1	<2	<1	-	-	-	-	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH084	7.6	1/06/2017	-	-	2700	<7	<4	200	<0.4	13	10	12	100	<0.1	-	17	<2	<1	-	59	82	<0.2	<0.5	<1	<1	<2	<1	-	-	-	-	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH085	0.2	29/05/2017	-	-	9600	8	22	210	3	37	400	450	500	0.4	-	29	<2	<1	-	45	400	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	850	490	1300	<25	<50	310	720	-	3	<0.1	<0.1	0.1	1
	SRT_BH085	0.9	29/05/2017	-	-	370	<7	<4	5	<0.4	<1	1	2	18	<0.1	-	<1	<2	<1	-	<1	2	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH085	3	30/05/2017	-	-	1000	<7	<4	2	<0.4	<1	<1	<1	2	<0.1	-	<1	<2	<1	-	<1	2	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	SRT_BH085	4	30/05/2017	-	-	25,000	<7	<4	30	<0.4	22	9	13	5	0.1	-	3	<2	<1	-	11	8	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH085_0.3	SRT_BH086	0.3-0.3	9/10/2017	-	Not Detected	-	-	67	-	1.5	19	210	400	-	0.5	-	37	-	-	-	-	330	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	290	<100	-	<20	<20	120	180	300	2.7	<0.5	<0.5	<0.5	1.4
SRT_BH085_2.4	SRT_BH086	2.4-2.4	9/10/2017	-	Not Detected	-	-	19	-	<0.4	15	49	63	-	0.4	-	5.4	-	-	-	-	110	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	2.2	<0.5	<0.5	<0.5	1.3
SRT_BH085_2.6	SRT_BH086	2.6-2.6	9/10/2017	-	Not Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_3.9	SRT_BH086	3.9-3.9	9/10/2017	-	-	-	-	2.2	-	<0.4	<5	10	5.7	-	<0.1	-	<5	-	-	-	-	11	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH086_10.5_10.6	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	2.9	-	<0.4	8.1	<5	6.9	-	<0.1	-	6.3	-	-	-	-	40	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH086_28.85_28.95	SRT_BH086	28.85-28.95	15/11/2017	-	-	-	-	<2	-	<0.4	<5	<5	<5	-	<0.1	-	<5	-	-	-	-	15	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD01_151117	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	<5	-	<1	9	<5	10	-	<0.1	-	9	-	-	-	-	59	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH086_0.4_0.5	SRT_BH087	0.4-0.5	22/10/2017	-	Not Detected	-	-	3	-	<0.4	7.2	190	6.1	-	<0.1	-	9.8	-	-	-	-	50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH086_0.7_0.8	SRT_BH087	0.7-0.8	22/10/2017	-	-	-	-	4.2	-	<0.4	7.4	28	22	-	<0.1	-	<5	-	-	-	-	8.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	170	<100	-	<20	25	150	67	242	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH086_2.0_2.1	SRT_BH087	2-2.1	22/10/2017	-	-	-	-	5.9	-	<0.4	8	29	20	-	<0.1	-	<5	-	-	-	-	16	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH087_12.2_12.3	SRT_BH087	12.2-12.3	15/11/2017	-	-	-	-	7.5	-	<0.4	<5	14	<5	-	<0.1	-	36	-	-	-	-	62	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH087_15.2_15.3	SRT_BH087	15.2-15.3	15/11/2017	-	-	-	-	5.4	-	<0.4	29	48	<5	-	0.1	-	200	-	-	-	-	31	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH087_18.1_18.2	SRT_BH087	18.1-18.2	15/11/2017	-	-	-	-	<2	-	<0.4	9.8	<5	5.9	-	<0.1	-	15	-	-	-	-	35	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BH087_27.8_27.9	SRT_BH087	27.8-27.9	15/11/2017	-	-	-	-	2.1	-	<0.4	8.5	<5	13	-	<0.1	-	7.6	-	-	-	-	54	-	-	-	-	-	-	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH001_0.12-0.2	SRT_CBH001	0.12-0.2	20/09/2017	-	Not Detected	-	-	2.3	-	0.6	<5	180	75	-	<0.1	-	8.8	-	-	-	-	87	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	270	280	13,000	1500	-	<20	100	10,000	4300	14,400	490	<20	<20	65	180
SRT_CBH001_0.45_0.55	SRT_CBH001	0.45-0.55	21/09/2017	-	Not Detected	-	-	<2	-	<0.4	7.2	<5	37	-	<0.1	-	<5	-	-	-	-	39	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.8	<0.5	<0.5	<0.5	0.8
SRT_CBH001_0.9_1.0	SRT_CBH001	0.9-1	21/09/2017	-	-	-	-	<2	-	<0.4	6.9	<5	11	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH001_1.6-2.2	SRT_CBH001	1.6-2.2	5/10/2017	-	Not Detected	-	-	<2	-	<0.4	8.6	6.3	57	-	<0.1	-	<5	-	-	-	-	13	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.7	<0.5	<0.5	<0.5	0.7
SRT_CBH001_2.35-2.5	SRT_CBH001	2.35-2.5	5/10/2017	-	-	-	-	<2	-	<0.4	7.7	<5	5.2	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH001_3.7-3.9	SRT_CBH001	3.7-3.9	5/10/2017	-	-	-	-	3.1	-	<0.4	11	12	14	-	<0.1	-	<5	-	-	-	-	6.4	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD03_210917	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	2.2	-	<0.4	5.4	5.8	44	-	<0.1	-	<5	-	-	-	-	56	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.4	<0.5	<0.5	<0.5	0.6
SRT_CBH002_0.12-0.3	SRT_CBH002	0.12-0.3	20/09/2017	-	Not Detected	-	-	<2	-	<0.4	<5	22	<5	-	<0.1	-	<5	-	-	-	-	26	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<160	<160	650	700	3900	340	-	<160	390	3600	970	4960	110	21	<20	39	38
SRT_CBH002_0.45_0.55	SRT_CBH002	0.45-0.55	21/09/2017	-	Not Detected	-	-	7.7	-	<0.4	11	11	18	-	<0.1	-	<5	-	-	-	-	42	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH002_0.9_1.0	SRT_CBH002	0.9-1	21/09/2017	-	-	-	-	6.1	-	<0.4	9.1	10	140	-	<0.1	-	<5	-	-	-	-	5.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH002_1.3-1.5	SRT_CBH002	1.3-1.5	5/10/2017	-	Not Detected	-	-	23	-	<0.4	19	33	24	-	<0.1	-	<5	-	-	-	-	8.7	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH002_30.-3.1	SRT_CBH002	30-3.1	5/10/2017	-	-	-	-	5.1	-	<0.4	11	48	21	-	<0.1	-	<5	-	-	-	-	22	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH003_0.45_0.55	SRT_CBH003	0.45-0.55	21/09/2017	-	Not Detected	-	-	6.8	-	<0.4	8.7	17	24	-	<0.1	-	<5	-	-	-	-	6.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH003_0.95-1.2	SRT_CBH003	0.95-1.2	5/10/2017	-	Not Detected	-	-	11	-	<0.4	11	37	24	-	<0.1	-	<5	-	-	-	-	6.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH003_1.7-1.85	SRT_CBH003	1.7-1.85	5/10/2017	-	Not Detected	-	-	16	-	<0.4	18	72	25	-	<0.1	-	16	-	-	-	-	110	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD02_210917	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-	-	4.5	-	<0.4	6.9	11	26	-	<0.1	-	<5	-	-	-	-	5.9	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	0.7	<0.5	<0.5	<0.5	<0.5
SRT_CBH004_0.12-0.4	SRT_CBH004	0.12-0.4	20/09/2017	-	Not Detected	-	-	<2	-	<0.4	<5	150	89	-	<0.1	-	<5	-	-	-	-	30	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<160	<160	1100	1200	6400	530	-	<160	650	6100	1500	8250	330	50	40	120	110
SRT_CBH004_0.45_0.55	SRT_CBH004	0.45-0.55	21/09/2017	-	Not Detected	-	-	<2	-	<0.4	37	20	38	-	0.1	-	8.3	-	-	-	-	21	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1	<0.5	<0.5	<0.5	<0.5
SRT_CBH004_1.9_2.0	SRT_CBH004	1.9-2	26/09/2017	-	Not Detected	-	-	2	-	<0.4	58	29	<5	-	<0.1	-	19	-	-	-	-	40	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH004_2.9_3.0	SRT_CBH004	2.9-3	26/09/2017	-	-	-	-	2.6	-	<0.4	55	29	<5	-	<0.1	-	24	-	-	-	-	36	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH004_3.9_4.0	SRT_CBH004	3.9-4	26/09/2017	-	-	-	-	<2	-	1.1	56	97	<5	-	0.1	-	89	-	-	-	-	110	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	0.6
SRT_CBH005_0.12-0.5	SRT_CBH005	0.12-0.5	20/09/2017	-	Not Detected	-	-	<2	-	<0.4	<5	170	<5	-	<0.1	-	5	-	-	-	-	37	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<160	<160	1400	1400	9200	720	-	<160	690	8600	2200	11,490	480	48	60	170	150
SRT_CBH005_0.45_0.55	SRT_CBH005	0.45-0.55	21/09/2017	-	Not Detected	-	-	9.6	-	<0.4	12	9.8	27	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH005_0.9_1.0	SRT_CBH005	0.9-1	21/09/2017	-	Not Detected	-	-	4.7	-	<0.4	8	12	17	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH005_2.0_2.1	SRT_CBH005	2-2.1	26/09/2017	-	-	-	-	3.3

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

					Asbestos	Metals																BTEXN							TRH - NEPM 2013							TRH - NEPM 1999										
				Cyanide (Total)	Asbestos	Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
				mg/kg	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR								2		0.4	5	5	5		0.1		5					5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5	0.5	0.5	0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)				320				100		20	100		100		4	100	40	20	100				10	288	600			1000								650				10000					
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)				1280				400		80	400		400		16	400	160	80	400				40	1152	2400			4000								2600				40000					
NSW EPA (2014) Special Waste (Asbestos)																																													
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																											
SRT_CBH007_4.9_5.0	SRT_CBH007	4.9-5	22/09/2017	-	-	-	-	8.3	-	<0.4	8	23	34	-	<0.1	-	<5	-	-	-	-	16	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH007_5.9_6.0	SRT_CBH007	5.9-6	22/09/2017	-	-	-	-	7.8	-	<0.4	9.4	29	35	-	<0.1	-	<5	-	-	-	-	19	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD01_220917	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	7.6	-	<0.4	17	9.6	31	-	<0.1	-	<5	-	-	-	-	20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH008_0.15-0.2	SRT_CBH008	0.15-0.2	19/09/2017	-	Not Detected	-	-	7.8	-	<0.4	5.2	120	21	-	0.1	-	7	-	-	-	-	43	<0.5	<0.5	<0.5	<0.5	<1	<1.5	-	<80	<80	620	670	8000	910	-	<80	340	6900	2400	9640	420	<20	49	76	140
SRT_CBH008_0.9-1.0	SRT_CBH008	0.9-1	19/09/2017	-	Not Detected	-	-	14	-	<0.4	11	51	23	-	0.1	-	12	-	-	-	-	91	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH008_1.6-1.7	SRT_CBH008	1.6-1.7	20/09/2017	-	Not Detected	-	-	3.6	-	<0.4	8.9	40	20	-	<0.1	-	6.9	-	-	-	-	42	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH008_2.1-2.2	SRT_CBH008	2.1-2.2	20/09/2017	-	Not Detected	-	-	10	-	<0.4	14	47	25	-	<0.1	-	16	-	-	-	-	80	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<32	<32	<50	<50	<100	<100	-	<32	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH009_0.15-0.25	SRT_CBH009	0.15-0.25	18/09/2017	-	Not Detected	-	-	6.5	-	<0.4	<5	100	12	-	<0.1	-	6.1	-	-	-	-	50	<1	<1	<1	<1	<2	<3	-	<160	<160	410	590	4300	470	-	<160	330	4000	1200	5530	180	<20	43	54	53
SRT_CBH009_0.4-0.5	SRT_CBH009	0.4-0.5	18/09/2017	-	Not Detected	-	-	20	-	<0.4	20	68	26	-	<0.1	-	8.8	-	-	-	-	52	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1.1	<0.5	<0.5	<0.5	<0.5
SRT_CBH009_0.9_1.0	SRT_CBH009	0.9-1	25/09/2017	-	Not Detected	-	-	22	-	<0.4	14	35	14	-	<0.1	-	<5	-	-	-	-	13	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH009_1.9_2.0	SRT_CBH009	0.9-2	25/09/2017	-	-	-	-	8.8	-	<0.4	16	62	20	-	<0.1	-	5.7	-	-	-	-	32	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH009_2.9_3.0	SRT_CBH009	2.9-3	25/09/2017	-	-	-	-	9.4	-	<0.4	13	56	29	-	<0.1	-	16	-	-	-	-	65	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD01_18092017	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	6	-	<0.4	<5	130	8.3	-	<0.1	-	<5	-	-	-	-	31	<1	<1	<1	<1	<2	<3	-	<200	<200	1600	1700	9900	1200	-	<200	1100	9000	2700	12,800	520	22	120	130	170
SRT_CBH010_0.2-0.25	SRT_CBH010	0.2-0.25	18/09/2017	-	Not Detected	-	-	8.4	-	<0.4	11	110	36	-	<0.1	-	8.3	-	-	-	-	70	<1	<1	<1	6.7	8.6	15	-	<160	<160	4700	7100	16,000	1500	-	<160	5600	16,000	3900	25,500	600	41	210	180	170
SRT_CBH010_0.9-1.0	SRT_CBH010	0.9-1	18/09/2017	-	Not Detected	-	-	8.1	-	<0.4	16	53	22	-	<0.1	-	<5	-	-	-	-	19	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH010_1.6_1.7	SRT_CBH010	1.6-1.7	25/09/2017	-	-	-	-	10	-	<0.4	14	62	26	-	<0.1	-	5.1	-	-	-	-	49	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH010_2.9_3.0	SRT_CBH010	2.9-3	25/09/2017	-	-	-	-	40	-	<0.4	17	67	27	-	<0.1	-	5.3	-	-	-	-	37	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH010_3.9_4.0	SRT_CBH010	3.9-4	25/09/2017	-	-	-	-	13	-	<0.4	14	48	22	-	<0.1	-	6.8	-	-	-	-	30	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BD01_231017	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	6.1	-	<0.4	13	6	12	-	<0.1	-	<5	-	-	-	-	15	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH011_0.2_0.3	SRT_CBH011	0.2-0.3	23/10/2017	-	Not Detected	-	-	<2	-	<0.4	12	140	6.2	-	<0.1	-	16	-	-	-	-	43	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	600	570	-	<20	20	300	510	830	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH011_1.0_1.1	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	5.2	-	<0.4	13	5.5	11	-	<0.1	-	<5	-	-	-	-	15	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH011_2.1_2.2	SRT_CBH011	2.1-2.2	23/10/2017	-	-	-	-	<2	-	<0.4	<5	<5	<5	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH011_3.1_3.2	SRT_CBH011	3.1-3.2	23/10/2017	-	-	-	-	<2	-	<0.4	<5	5.4	19	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH011_4.1_4.2	SRT_CBH011	4.1-4.2	23/10/2017	-	Not Detected	-	-	<2	-	<0.4	<5	10	21	-	<0.1	-	<5	-	-	-	-	7.7	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH012_0.4_0.5	SRT_CBH012	0.4-0.5	24/10/2017	-	-	-	-	3.7	-	0.7	22	440	71	-	<0.1	-	14	-	-	-	-	130	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	56	56	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH012_1.0-1.1	SRT_CBH012	1-1.1	24/10/2017	-	-	-	-	2.1	-	<0.4	<5	25	24	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH012_1.6-1.7	SRT_CBH012	1.6-1.7	24/10/2017	-	-	-	-	11	-	<0.4	5.2	23	17	-	<0.1	-	<5	-	-	-	-	11	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH012_2.8_3.0	SRT_CBH012	2.8-3	24/10/2017	-	-	-	-	6.3	-	<0.4	12	40	19	-	<0.1	-	18	-	-	-	-	87	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH013_0.2_0.3	SRT_CBH013	0.2-0.3	25/10/2017	-	Not Detected	-	-	29	-	0.5	8.2	150	200	-	0.2	-	8.4	-	-	-	-	110	<0.1	<0.1	<0.1	0.1	<0.2	<0.3	-	<20	<20	<50	<50	150	<100	-	<20	<20	82	110	192	0.9	<0.5	<0.5	<0.5	<0.5
SRT_CBH013_0.8_0.9	SRT_CBH013	0.8-0.9	25/10/2017	-	Not Detected	-	-	3.3	-	<0.4	5.5	17	240	-	<0.1	-	<5	-	-	-	-	12	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH013_2.1_2.2	SRT_CBH013	2.1-2.2	25/10/2017	-	-	-	-	4.3	-	<0.4	9.6	<5	7.5	-	<0.1	-	<5	-	-	-	-	6.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH013_4.1_4.2	SRT_CBH013	4.1-4.2	25/10/2017	-	-	-	-	<2	-	<0.4	<5	6.2	13	-	<0.1	-	<5	-	-	-	-	<5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH013_5.9_6.0	SRT_CBH013	5.9-6	25/10/2017	-	-	-	-	8.6	-	<0.4	<5	22	13	-	<0.1	-	<5	-	-	-	-	5.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_BD01_251017	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	2.8	-	<0.4	6.6	15	130	-	<0.1	-	<5	-	-	-	-	17	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH014_0.4_0.5	SRT_CBH014	0.4-0.5	25/10/2017	-	Not Detected	-	-	5.4	-	2.1	10	130	88	-	0.5	-	15	-	-	-	-	180	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	180	<100	-	<20	<20	110	120	230	2	<0.5	<0.5	<0.5	0.9
SRT_CBH014_1.1_1.2	SRT_CBH014	1.1-1.2	25/10/2017	-	-	-	-	2.3	-	<0.4	<5	26	12	-	<0.1	-	7.9	-	-	-	-	47	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH014_2.9_3.0	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	4.4	-	<0.4	7.3	35	18	-	<0.1	-	25	-	-	-	-	90	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	140	<100	-	<20	22	120	<50	142	<0.5	<0.5	<0.5	<0.5	<0.5
	SRT_NDD030	0.15	4/04/2017	-	-	6900	<7	14	76	0.7	8	180	170	330	0.2	-	10	<2	<1	-	78	140	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	1300	390	1700	<25	<50	650	850	-	0.4	<0.1	<0.1	<0.1	0.3
	SRT_NDD030	0.35	4/04/2017	-	-	5200	<7	21	190	0.7	5	230	120	330	0.2	-	16	<2	<1	-	48	130	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	1.1	<0.1	<0.1	0.1	0.6
	SRT_NDD030	0.65	4/04/2017	-	-	240	<7	<4	6	0.4	<1	1	330	51	<0.1	-	2	<2	<1	-	9	220	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	590	590	9200	1800	12,000	<25	180	6900	3600	-	110	20	1.6	130	93
	SRT_NDD030	0.65-0.75	4/04/2017	-	-	4900	<7	13	120	<0.4	6	160	150	260	1.1	-	11	<2	<1	-	23	120	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	410	150	560	<25	<50	200	280	-	4	0.1	0.7	0.6	2.3
	SRT_NDD030	0.75	4/04/2017	-	-	4300	<7	9	77	<0.4	6	91	170	210	6.7	-	8	<2	<1	-	32	150	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	770	270	1000	<25	<50	430	450	-	12	0.1	2.4	2.7	7.3
	SRT_NDD030	0.9	4/04/2017	-	-	5000	<7	37	80	<0.4	14	99	240	250	1.7	-	16	<2	<1	-	34	170	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	790	210	1000	<25	<50	540	340	-	17	0.2	3.2	5.7	10
	SRT_NDD030	1.65	4/04/2017	-	-	3900	<7	16	88	<0.4	11	150	220	180	3.3	-	13	<2	<1	-	23	440	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	640	170	810	<25	<50	400	320	-	11	0.2	3.1	3.3	8.5
	SRT_NDD030	1.8	4/04/2017	-	-	4600	<7	10	84	<0.4	9	100	170	120	2.4	-	10	<2	<1	-	24	200	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	490	150	640	<25	<50	310	250	-	11	0.2	1.8	3.4	6.7
	SRT_NDD030	1.8	4/04/2017	-	-	4820	<5	10	80	<1	9	104	176	92	1.9	-	10	<5	<2	-	22	199	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	230	<100	230	<10	<50	140	130	270	3.4	<0.5	<0.5	0.6	2.1
	SRT_NDD030	1.8	4/04/2017	-	-	4500	<7	13	85	<0.4	10	590	180	120	2.7	-	14	<2	<1	-	24	220	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	3	<0.1	0.5	0.7	2.1
	SRT_NDD030	1.9	4/04/2017	-	-	5000	<7	28	140	0.4	10	220	430	180	6.9	-	13	<2	<1	-	26	290	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	5	0.2	0.8	1.2	2.8
	SRT_NDD030	2.2	4/04/2017	-	-	3300	<7	<4	170	<0.4	2	16	71	15	0.1	-	1	<2	<1	-	7	45	0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST01	0	2/08/2017	<0.5	-	-	-	<4	-	<0.4	<1	130	4	-	<0.1	<1	12	<2	<1	<1	-	30	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST02	0	2/08/2017	<0.5	-	-	-	<4	-	<0.4	<1	96	9	-	<0.1	3	31	<2	<1	<1	-	34	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST02	0.5	2/08/2017	<0.5	-	-	-	<4	-	<0.4	<1	110	11	-	<0.1	<1	26	<2	<1	1	-	38	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST03		4/08/2017	<1	-	-	-	31	-	1	<0.5	138	272	-	0.2	<2	13	<5	<2	28	-	178	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<25	<25	<50	<50	190	<100	190	<10	<50	<100	150	150	0.8	<0.5	<0.5	<0.5	<0.5
	ST03	0	4/08/2017	<0.5	-	-	-	20	-	0.9	<1	89	110	-	0.1	<1	13	<2	<1	12	-	240	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	100	<100	100	<25	<50	<100	100	-	0.4	<0.1	<0.1	<0.1	0.2
	ST03	0	4/08/2017	<0.5	Not Detected	-	-	27	-	1	<1	160	240	-	0.3	<1	14	<2	<1	19	-	190	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.5	<0.1	<0.1	<0.1	0.3
	ST03	0.7	4/08/2017	<0.5	Not Detected	-	-	8	-	<0.4	<1	160	89	-	0.4	<1	28	<2	<1	11	-	78	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	240	<100	240	<25	<50	<100	200	-	0.4	<0.1	<0.1	<0.1	0.3
	ST04	0.1	4/08/2017	<0.5	Not Detected	-	-	14	-	0.8	<1	160	250	-	0.3	<1	9	<2	<1	11	-	140	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.8	<0.1	<0.1	0.1	0.4
	ST04	0.5	4/08/2017	<0.5	Not Detected	-	-	23	-	<0.4	<1	210	260	-	0.4	<1	8	<2	<1	15	-	190	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	1.2	<0.1	0.1	0.2	0.6
	ST05	0.3	4/08/2017	<0.5	Not Detected	-	-	8	-	0.7	<1	330	750	-	0.5	<1	10	<2	<1	21	-	230	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	120	<100	120	<25	<50	<100	100	-	1	<0.1	0.1	0.2	0.6
	ST05	1.2	4/08/2017	<0.5	Not Detected	-	-	6	-	1	<1	170	440	-	0.5	<1	33	<2	<1	12	-	320	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.4	<0.1	<0.1	<0.1	0.3
	ST06	0.2	9/08/2017	<0.5	Not Detected	-	-	<4	-	<0.4	<1	110	28	-	<0.1	<1	6	<2	<1	1	-	39	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST06	1.5	9/08/2017	<0.5	Not Detected	-	-	<4	-	<0.4	<1	13	24	-	0.7	<1	3	<2	<1	10	-	42	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST07	0	11/08/2017	<0.5	Not Detected	-	-	<4	-	<0.4	<1	120	9	-	<0.1	<1	11	<2	<1	<1	-	38	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1	<0.1	<0.1	<0.1
	ST07	1.5	11/08/2017	<0.5	Not Detected	-	-	8	-	<0.4	<1	120	280	-	0.7	<1	5	<2	<1	4	-	270	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.4	<0.1	<0.1	<0.1	0.2
	ST08	0.1	11/08/2017	<0.5	Not Detected	-	-	<4	-	<0.4	<1	180	61	-	<0.1	<1	10	<2	<1	2	-	180	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.3	<0.1	<0.1	<0.1	0.2
	ST08	0.6	11/08/2017	<0.5	Not Detected	-	-	12	-	<0.4	<1	200	130	-	0.2	<1	22	<2	<1	10	-	120	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	300	110	410	<25	<50	180	160	-	4	0.1	0.3	1.4	2
	ST09	0	14/08/2017	<0.5	Not Detected	-	-	7	-	<0.4	<1	140	79	-	0.4	<1	20	<2	<1	6	-	93	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	200	100	310	<25	<50	<100	160	-	0.8	<0.1	<0.1	0.1	0.5
	ST09	0.9	14/08/2017	<0.5	-	-	-	5	-	<0.4	<1	100	76	-	1	<1	13	<2	<1	5	-	75	<0.2	<0.5	<1	<1	<2	<1	-	<25	<25	<50	<50	600	260	860	<25	<50	300	420	-	2.

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

| | | | | PAHs | | | | | | | | | | | | | | | | Phenols | | | | | | | | | | | | | | | |

Appendix B
Table B4
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Sydney Metro
Metro Station Box
Central Station Main Works

| | PAHs | | | | | | | | | | | | | | | | | Phenols | | | | | | | | | | | | | | | | |

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

| | | | | VOCs | | | |

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

| | | | VOCs | | |

				SVOCs																					OC Pesticides																					
				Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl) ether	Carbazole	Chlorobenzilate	Diphenylamine	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Isophorone	Isosafrole	Methapyrilene	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Pentachlorobenzene	Phenacetin	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	4,4 DDD	4,4 DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR																									0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NSW EPA (2014) General Solid Waste CT1 (No Leaching)																																							60								
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)																																							240								
NSW EPA (2014) Special Waste (Asbestos)																																														
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																												
	SRT_BH039	0.95-1.4	5/07/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	SRT_BH039	1.9-2	5/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048		23/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	1.1-1.2	11/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	SRT_BH048	2-2.1	11/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	4-4.1	11/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH049	1.5	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	SRT_BH049	4	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH049	4.5	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053		23/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	2	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	SRT_BH053	3	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	12.6-12.7	7/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	5.5-5.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8-8.04	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	SRT_BH082	0.4	29/05/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH082	2	30/05/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH082	2	30/05/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH082	3.2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH082	0.2	30/05/2017	<0.5	-	<0.5	<0.5	-	<2.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QC200	SRT_BH082	0.2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH083	0.4	31/05/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH083	1.4	31/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH083	2	1/06/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH084	0.2	29/05/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH084	0.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH084	1.4	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH084	3	1/06/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	-	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	SRT_BH084	7.6	1/06/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH085	0.2	29/05/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_BH085	0.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH085	3	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH085	4	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_0.3	SRT_BH086	0.3-0.3	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_BH085_2.4	SRT_BH086	2.4-2.4	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_BH085_2.6	SRT_BH086	2.6-2.6	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_3.9	SRT_BH086	3.9-3.9	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_10.5_10.6	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_28.85_28.95	SRT_BH086	28.85-28.95	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_151117	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_0.4_0.5	SRT_BH087	0.4-0.5	22/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_0.7_0.8	SRT_BH087	0.7-0.8	22/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_BH086_2.0_2.1	SRT_BH087	2-2.1	22/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_12.2_12.3	SRT_BH087	12.2-12.3	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_15.2_15.3	SRT_BH087	15.2-15.3	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_18.1_18.2	SRT_BH087	18.1-18.2	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_27.8_27.9	SRT_BH087	27.8-27.9	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_0.12-0.2	SRT_CBH001	0.12-0.2	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH001_0.45_0.55	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH001_0.9_1.0	SRT_CBH001	0.9-1	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH001_1.6-2.2	SRT_CBH001	1.6-2.2	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH001_2.35-2.5	SRT_CBH001	2.35-2.5	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH001_3.7-3.9	SRT_CBH001	3.7-3.9	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_FD03_210917	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH002_0.12-0.3	SRT_CBH002	0.12-0.3	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.05	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_CBH002_0.45_0.55	SRT_CBH002	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH002_0.9_1.0	SRT_CBH002	0.9-1	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH002_1.3-1.5	SRT_CBH002	1.3-1.5	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH002_30.-3.1	SRT_CBH002	30-3.1	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH003_0.45_0.55	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH003_0.95-1.2	SRT_CBH003	0.95-1.2	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH003_1.7-1.85	SRT_CBH003	1.7-1.85	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_FD02_210917	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_0.12-0.4	SRT_CBH004	0.12-0.4	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.05	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_CBH004_0.45_0.55	SRT_CBH004	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH004_1.9_2.0	SRT_CBH004	1.9-2	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH004_2.9_3.0	SRT_CBH004	2.9-3	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_3.9_4.0	SRT_CBH004	3.9-4	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH005_0.12-0.5	SRT_CBH005	0.12-0.5	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH005_0.45_0.55	SRT_CBH005	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH005_0.9_1.0	SRT_CBH005	0.9-1	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH005_2.0_2.1	SRT_CBH005	2-2.1	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH005_2.9-3.0	SRT_CBH005	2.9-3	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_210917	SRT_CBH005	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH006_0.1-0.2	SRT_CBH006	0.1-0.2	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH006_0.9-1.0	SRT_CBH006	0.9-1	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH006_2.0-2.1	SRT_CBH006	2-2.1	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH006_4.0-4.1	SRT_CBH006	4-4.1	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH006_5.0-5.1	SRT_CBH006	5-5.1	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH007_0.30-0.35	SRT_CBH007	0.3-0.35	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34	0.2	<0.05	<0.05	<0.05	0.14	<0.05	0.2	-	-	<0.05	<0.05	<0.05	<0.05	0.14	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH007_0.9-1.0	SRT_CBH007	0.9-1	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

				SVOCs																						OC Pesticides																					
				Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl) ether	Carbazole	Chlorobenzilate	Diphenylamine	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Isophorone	Isosafrole	Methapyrilene	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Pentachlorobenzene	Phenacetin	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	4,4 DDD	4,4 DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR																								0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NSW EPA (2014) General Solid Waste CT1 (No Leaching)																																						60									
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)																																						240									
NSW EPA (2014) Special Waste (Asbestos)																																														
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																												
SRT_CBH007_4.9_5.0	SRT_CBH007	4.9-5	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH007_5.9_6.0	SRT_CBH007	5.9-6	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_FD01_220917	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH008_0.15-0.2	SRT_CBH008	0.15-0.2	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_CBH008_0.9-1.0	SRT_CBH008	0.9-1	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH008_1.6-1.7	SRT_CBH008	1.6-1.7	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH008_2.1-2.2	SRT_CBH008	2.1-2.2	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH009_0.15-0.25	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.05	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_CBH009_0.4-0.5	SRT_CBH009	0.4-0.5	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH009_0.9_1.0	SRT_CBH009	0.9-1	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH009_1.9_2.0	SRT_CBH009	0.9-2	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH009_2.9_3.0	SRT_CBH009	2.9-3	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_18092017	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_0.2-0.25	SRT_CBH010	0.2-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.05	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_CBH010_0.9-1.0	SRT_CBH010	0.9-1	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH010_1.6_1.7	SRT_CBH010	1.6-1.7	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_2.9_3.0	SRT_CBH010	2.9-3	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_3.9_4.0	SRT_CBH010	3.9-4	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_BD01_231017	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_0.2_0.3	SRT_CBH011	0.2-0.3	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_1.0_1.1	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH011_2.1_2.2	SRT_CBH011	2.1-2.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_3.1_3.2	SRT_CBH011	3.1-3.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_4.1_4.2	SRT_CBH011	4.1-4.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_0.4_0.5	SRT_CBH012	0.4-0.5	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_1.0-1.1	SRT_CBH012	1-1.1	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH012_1.6-1.7	SRT_CBH012	1.6-1.7	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_2.8_3.0	SRT_CBH012	2.8-3	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_0.2_0.3	SRT_CBH013	0.2-0.3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_0.8_0.9	SRT_CBH013	0.8-0.9	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH013_2.1_2.2	SRT_CBH013	2.1-2.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_4.1_4.2	SRT_CBH013	4.1-4.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_5.9_6.0	SRT_CBH013	5.9-6	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BD01_251017	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_0.4_0.5	SRT_CBH014	0.4-0.5	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH014_1.1_1.2	SRT_CBH014	1.1-1.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_2.9_3.0	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_NDD030	0.15	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	0.35	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	0.65	4/04/2017	<10	<10	<10	-	<10	<20	<5	<5	<10	<10	<10	-	<10	<10	-	<10	<10	-	<5	<10	-	-	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<5	<1	<1
	SRT_NDD030	0.65-0.75	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	0.75	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	0.9	4/04/2017	<1	<1	2	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	1.65	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	1.8	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	1.8	4/04/2017	<0.5	-	<0.5	<0.5	-	<2.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	SRT_NDD030	1.8	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	1.9	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	SRT_NDD030	2.2	4/04/2017	<1	<1	<1	-	<1	<2	<0.5	<0.5	<1	<1	<1	-	<1	<1	-	<1	<1	-	<0.5	<1	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1
	ST01	0	2/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST02	0	2/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST02	0.5	2/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST03		4/08/2017	<0.5	-	<0.5	<0.5	-	<2.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	0	<0.5	-	-	-	<0.5	<0.5	<1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
	ST03	0	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST03	0	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST03	0.7	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST04	0.1	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST04	0.5	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST05	0.3	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST05	1.2	4/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST06	0.2	9/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST06	1.5	9/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST07	0	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST07	1.5	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST08	0.1	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST08	0.6	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST09	0	14/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST09	0.9	14/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST10	1.5	17/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
	ST11	0.6	17/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	-	<1	<1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis performed, see table B7 for waste classification.

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

| | | |

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Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

Sydney Metro
Metro Station Box
Central Station Main Works

| | | |

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Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

| | | |

				enated Hydroca		PCBs								Herbicides		Biological	Chlorinated Hydrocarbons																														
			Total MAH	Bromomethane	Dichlorodifluoromethane	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Dinoseb	Pronamide	Sulphite Reducing Clostridia Spores	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,4-trichlorobenzene	1,2-dibromo-3-chloropropane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chloronaphthalene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,2-dichloroethene	Dichloromethane	Hexachlorobutadiene	Vinyl chloride
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	20			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)													50						200	600	26	24	14					86	10			150							10	2000	120			172		4
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)													50						800	2400	104	96	56					344	40			600							40	8000	480			688		16
NSW EPA (2014) Special Waste (Asbestos)																																													
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																										
SRT_CBH007_4.9_5.0	SRT_CBH007	4.9-5	22/09/2017	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH007_5.9_6.0	SRT_CBH007	5.9-6	22/09/2017	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_FD01_220917	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH008_0.15-0.2	SRT_CBH008	0.15-0.2	19/09/2017	<0.5	<2.5	<2.5	<1	<1	<1	<1	<1	<1	<1	<1	<500	-	-	<0.5	<0.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	-	-	-	<2.5	<2.5	<2.5	<2.5	<2.5	-	-	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	-	<2.5
SRT_CBH008_0.9-1.0	SRT_CBH008	0.9-1	19/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH008_1.6-1.7	SRT_CBH008	1.6-1.7	20/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH008_2.1-2.2	SRT_CBH008	2.1-2.2	20/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH009_0.15-0.25	SRT_CBH009	0.15-0.25	18/09/2017	<0.5	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<500	-	-	<0.5	<0.5	<5	<5	<5	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
SRT_CBH009_0.4-0.5	SRT_CBH009	0.4-0.5	18/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH009_0.9_1.0	SRT_CBH009	0.9-1	25/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	-	<0.5
SRT_CBH009_1.9_2.0	SRT_CBH009	0.9-2	25/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	-	<0.5
SRT_CBH009_2.9_3.0	SRT_CBH009	2.9-3	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_18092017	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_0.2-0.25	SRT_CBH010	0.2-0.25	18/09/2017	30.3	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<500	-	-	<0.5	<0.5	<5	<5	<5	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
SRT_CBH010_0.9-1.0	SRT_CBH010	0.9-1	18/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH010_1.6_1.7	SRT_CBH010	1.6-1.7	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_2.9_3.0	SRT_CBH010	2.9-3	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_3.9_4.0	SRT_CBH010	3.9-4	25/09/2017	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	-	<0.5
SRT_BD01_231017	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_0.2_0.3	SRT_CBH011	0.2-0.3	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_1.0_1.1	SRT_CBH011	1-1.1	23/10/2017	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH011_2.1_2.2	SRT_CBH011	2.1-2.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_3.1_3.2	SRT_CBH011	3.1-3.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_4.1_4.2	SRT_CBH011	4.1-4.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_0.4_0.5	SRT_CBH012	0.4-0.5	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_1.0-1.1	SRT_CBH012	1-1.1	24/10/2017	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH012_1.6-1.7	SRT_CBH012	1.6-1.7	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_2.8_3.0	SRT_CBH012	2.8-3	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_0.2_0.3	SRT_CBH013	0.2-0.3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_0.8_0.9	SRT_CBH013	0.8-0.9	25/10/2017	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH013_2.1_2.2	SRT_CBH013	2.1-2.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_4.1_4.2	SRT_CBH013	4.1-4.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_5.9_6.0	SRT_CBH013	5.9-6	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BD01_251017	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_0.4_0.5	SRT_CBH014	0.4-0.5	25/10/2017	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH014_1.1_1.2	SRT_CBH014	1.1-1.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_2.9_3.0	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_NDD030	0.15	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	0.35	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	0.65	4/04/2017	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	SRT_NDD030	0.65-0.75	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	0.75	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	0.9	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	1.65	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	1.8	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	1.8	4/04/2017	-	<5	<5	-	-	-	-	-	-	<0.1	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<5	<0.5	-	<0.5	<5
	SRT_NDD030	1.8	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	1.9	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	SRT_NDD030	2.2	4/04/2017	-	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5	<1
	ST01	0	2/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST02	0	2/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST02	0.5	2/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST03		4/08/2017	-	<5	<5	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<5	<0.5	-	<0.5	<5
	ST03	0	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST03	0	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST03	0.7	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST04	0.1	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST04	0.5	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST05	0.3	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST05	1.2	4/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST06	0.2	9/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST06	1.5	9/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST07	0	11/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST07	1.5	11/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST08	0.1	11/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST08	0.6	11/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST09	0	14/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST09	0.9	14/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST10	1.5	17/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
	ST11	0.6	17/08/2017	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis performed, see table B7 for waste classification.

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

				Dioxins & Furans	Explosives					Nitroaromatics			Phthalates						Nitrosoamines
				Dibenzofuran	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	2-Pitoline	4-aminobiphenyl	Pentachloronitrobenzene	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	N-Nitrosodiphenyl & Diphenylamine
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR																			
NSW EPA (2014) General Solid Waste CT1 (No Leaching)							2.6		40										
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)							10.4		160										
NSW EPA (2014) Special Waste (Asbestos)																			
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																
	SRT_BH039	0.95-1.4	5/07/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH039	1.9-2	5/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048		23/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	1.1-1.2	11/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	2-2.1	11/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	4-4.1	11/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH049	1.5	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH049	4	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH049	4.5	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053		23/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	2	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	3	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	12.6-12.7	7/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	5.5-5.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8-8.04	6/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.2	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	0.4	29/05/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH082	2	30/05/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH082	2	30/05/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH082	3.2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH082	0.2	30/05/2017	<0.5	<0.5	-	<1	<1	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
QC200	SRT_BH082	0.2	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH083	0.4	31/05/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH083	1.4	31/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH083	2	1/06/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH084	0.2	29/05/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH084	0.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH084	1.4	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH084	3	1/06/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH084	7.6	1/06/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH085	0.2	29/05/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_BH085	0.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH085	3	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH085	4	30/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_0.3	SRT_BH086	0.3-0.3	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_2.4	SRT_BH086	2.4-2.4	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_2.6	SRT_BH086	2.6-2.6	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH085_3.9	SRT_BH086	3.9-3.9	9/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_10.5_10.6	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_28.85_28.95	SRT_BH086	28.85-28.95	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_151117	SRT_BH086	10.5-10.6	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_0.4_0.5	SRT_BH087	0.4-0.5	22/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_0.7_0.8	SRT_BH087	0.7-0.8	22/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH086_2.0_2.1	SRT_BH087	2-2.1	22/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_12.2_12.3	SRT_BH087	12.2-12.3	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_15.2_15.3	SRT_BH087	15.2-15.3	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_18.1_18.2	SRT_BH087	18.1-18.2	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH087_27.8_27.9	SRT_BH087	27.8-27.9	15/11/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_0.12-0.2	SRT_CBH001	0.12-0.2	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_0.45_0.55	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_0.9_1.0	SRT_CBH001	0.9-1	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_1.6-2.2	SRT_CBH001	1.6-2.2	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_2.35-2.5	SRT_CBH001	2.35-2.5	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001_3.7-3.9	SRT_CBH001	3.7-3.9	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD03_210917	SRT_CBH001	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH002_0.12-0.3	SRT_CBH002	0.12-0.3	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH002_0.45_0.55	SRT_CBH002	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH002_0.9_1.0	SRT_CBH002	0.9-1	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH002_1.3-1.5	SRT_CBH002	1.3-1.5	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH002_30.-3.1	SRT_CBH002	30-3.1	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH003_0.45_0.55	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH003_0.95-1.2	SRT_CBH003	0.95-1.2	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH003_1.7-1.85	SRT_CBH003	1.7-1.85	5/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD02_210917	SRT_CBH003	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_0.12-0.4	SRT_CBH004	0.12-0.4	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_0.45_0.55	SRT_CBH004	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_1.9_2.0	SRT_CBH004	1.9-2	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_2.9_3.0	SRT_CBH004	2.9-3	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH004_3.9_4.0	SRT_CBH004	3.9-4	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH005_0.12-0.5	SRT_CBH005	0.12-0.5	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH005_0.45_0.55	SRT_CBH005	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH005_0.9_1.0	SRT_CBH005	0.9-1	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH005_2.0_2.1	SRT_CBH005	2-2.1	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH005_2.9-3.0	SRT_CBH005	2.9-3	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_210917	SRT_CBH005	0.45-0.55	21/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH006_0.1-0.2	SRT_CBH006	0.1-0.2	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH006_0.9-1.0	SRT_CBH006	0.9-1	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH006_2.0-2.1	SRT_CBH006	2-2.1	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH006_4.0-4.1	SRT_CBH006	4-4.1	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH006_5.0-5.1	SRT_CBH006	5-5.1	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH007_0.30-0.35	SRT_CBH007	0.3-0.35	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH007_0.9-1.0	SRT_CBH007	0.9-1	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH007_1.5_1.6	SRT_CBH007	1.5-1.6	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH007_2.1_2.2	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH007_3.9_4.0	SRT_CBH007	3.9-4	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B4
Metro Station Box - Waste Classification, Soil Analytical Data

				Dioxins & Furans	Explosives					Nitroaromatics			Phthalates						Nitrosoamines
				Dibenzofuran	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	2-Pitoline	4-aminobiphenyl	Pentachloronitrobenzene	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	N-Nitrosodiphenyl & Diphenylamine
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR																			
NSW EPA (2014) General Solid Waste CT1 (No Leaching)							2.6		40										
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)							10.4		160										
NSW EPA (2014) Special Waste (Asbestos)																			
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																
SRT_CBH007_4.9_5.0	SRT_CBH007	4.9-5	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH007_5.9_6.0	SRT_CBH007	5.9-6	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_220917	SRT_CBH007	2.1-2.2	22/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH008_0.15-0.2	SRT_CBH008	0.15-0.2	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH008_0.9-1.0	SRT_CBH008	0.9-1	19/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH008_1.6-1.7	SRT_CBH008	1.6-1.7	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH008_2.1-2.2	SRT_CBH008	2.1-2.2	20/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH009_0.15-0.25	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH009_0.4-0.5	SRT_CBH009	0.4-0.5	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH009_0.9_1.0	SRT_CBH009	0.9-1	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH009_1.9_2.0	SRT_CBH009	0.9-2	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH009_2.9_3.0	SRT_CBH009	2.9-3	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_18092017	SRT_CBH009	0.15-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_0.2-0.25	SRT_CBH010	0.2-0.25	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_0.9-1.0	SRT_CBH010	0.9-1	18/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_1.6_1.7	SRT_CBH010	1.6-1.7	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_2.9_3.0	SRT_CBH010	2.9-3	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH010_3.9_4.0	SRT_CBH010	3.9-4	25/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BD01_231017	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_0.2_0.3	SRT_CBH011	0.2-0.3	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_1.0_1.1	SRT_CBH011	1-1.1	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_2.1_2.2	SRT_CBH011	2.1-2.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_3.1_3.2	SRT_CBH011	3.1-3.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH011_4.1_4.2	SRT_CBH011	4.1-4.2	23/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_0.4_0.5	SRT_CBH012	0.4-0.5	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_1.0-1.1	SRT_CBH012	1-1.1	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_1.6-1.7	SRT_CBH012	1.6-1.7	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH012_2.8_3.0	SRT_CBH012	2.8-3	24/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_0.2_0.3	SRT_CBH013	0.2-0.3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_0.8_0.9	SRT_CBH013	0.8-0.9	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_2.1_2.2	SRT_CBH013	2.1-2.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_4.1_4.2	SRT_CBH013	4.1-4.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH013_5.9_6.0	SRT_CBH013	5.9-6	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BD01_251017	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_0.4_0.5	SRT_CBH014	0.4-0.5	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_1.1_1.2	SRT_CBH014	1.1-1.2	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH014_2.9_3.0	SRT_CBH014	2.9-3	25/10/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_NDD030	0.15	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	0.35	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	0.65	4/04/2017	<10	-	<10	-	<10	<10	-	-	<10	<10	<10	<10	<10	<10	<10	-
	SRT_NDD030	0.65-0.75	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	0.75	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	0.9	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	1.65	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	1.8	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	1.8	4/04/2017	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
	SRT_NDD030	1.8	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	1.9	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	SRT_NDD030	2.2	4/04/2017	<1	-	<1	-	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-
	ST01	0	2/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST02	0	2/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST02	0.5	2/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST03		4/08/2017	<0.5	<0.5	-	<1	<1	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
	ST03	0	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST03	0	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST03	0.7	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST04	0.1	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST04	0.5	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST05	0.3	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST05	1.2	4/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST06	0.2	9/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST06	1.5	9/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST07	0	11/08/2017	-	-	-	-	-	<0.1	-	-	-	3	<1	<1	<1	<2	<1	-
	ST07	1.5	11/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST08	0.1	11/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST08	0.6	11/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST09	0	14/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST09	0.9	14/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST10	1.5	17/08/2017	-	-	-	-	-	<0.1	-	-	-	<2	<1	<1	<1	<2	<1	-
	ST11	0.6	17/08/2017	-	-	-	-	-	<0.2	-	-	-	<2	<1	<1	<1	<2	<1	-

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis performed, see table B7 for waste classification.

Appendix B
Table B5
Central Walk East - Waste Classification, Analytical Results

Sydney Metro
Central Walk East
Central Station Main Works

				Asbestos	BTEXN													TRH - NEPM 2013							TRH - NEPM 1999											
				Asbestos	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo[b+j]fluoranthene	Benzo[b+j+k]fluoranthene	Benzo(k)fluoranthene
				Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					2	0.4	5	5	5	0.1	5	5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)					100	20	100		100	4	40		10	288	600			1000									650				10000						0.8			
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)					400	80	400		400	16	160		40	1152	2400			4000									2600				40000						3.2			
NSW EPA (2014) Special Waste (Asbestos)																																							
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																				
	SRT_BH040	0.1-0.15	4/09/2017	-	<4	2	55	190	320	<0.1	12	290	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	71	71	820	380	-	<25	170	450	510	1130	0.5	<0.1	0.1	0.2	0.2	0.2	-	0.5	-
QC100	SRT_BH040	0.1-0.15	4/09/2017	-	<4	4.2	180	470	990	0.1	28	730	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	53	53	570	320	-	<25	110	290	420	820	0.7	<0.1	0.1	0.2	0.4	0.3	-	0.7	-
QC200	SRT_BH040	0.1-0.15	4/09/2017	-	5	11	140	594	950	0.2	26	987	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<10	<10	60	60	440	170	-	<10	110	280	250	640	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<1	-
	SRT_BH040	0.5-0.55	4/09/2016	-	5	0.8	9	260	200	0.5	12	120	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	160	<100	-	<25	<50	<100	140	140	2.1	<0.1	<0.1	0.1	1.1	1.2	-	2	-
	SRT_BH051	0.2-0.25	20/09/2016	-	4	<0.4	5	35	72	0.2	5	30	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	160	<100	-	<25	<50	140	<100	140	1.9	0.3	<0.1	0.6	0.9	0.83	-	1	-
	SRT_BH051	0.9-1	20/09/2016	-	<4	<0.4	8	25	17	0.1	8	40	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	7	0.6	<0.1	3	3	2.3	-	3.6	-
	SRT_BH051	2.4-2.5	20/09/2016	-	8	<0.4	6	42	86	0.1	4	49	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	2.6	<0.1	0.3	0.7	1.1	1.1	-	2	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	-	5	<0.4	7	39	45	<0.1	4	26	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.4	<0.1	<0.1	<0.1	0.2	0.1	-	0.3	-
	SRT_BH054	2.5-2.55	26/10/2016	-	8	<0.4	8	36	26	<0.1	13	64	<0.2	<0.5	<1	<1	<2	-	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.3	<0.1	<0.1	0.1	<0.1	0.06	-	<0.2	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	Not Detected	<2	0.6	8.9	85	140	0.2	7.1	250	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	320	320	11,000	1800	-	<20	98	6900	3300	10,298	340	12	3.5	75	190	190	93	-	84
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	3	<0.4	9.4	82	81	0.3	11	220	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	73	73	1500	210	-	<20	41	900	450	1391	33	0.6	4.2	8.2	19	15	7.6	-	11
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	Not Detected	3.7	<0.4	8	140	140	0.4	13	150	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	130	130	3700	430	-	<20	39	2300	1100	3439	86	2.1	9.7	16	55	50	30	-	38
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	-	3.4	<0.4	<5	130	120	0.2	<5	120	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	51	51	480	120	-	<20	<20	400	170	570	12	<0.5	2.3	3	5.7	5	3.2	-	4.5
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	Not Detected	9.7	<0.4	8.1	86	160	0.3	9.5	71	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	560	200	-	<20	<20	400	300	700	12	<0.5	1.2	1.3	6.2	7.4	4.8	-	6.5
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	-	8.1	<0.4	10	37	29	<0.1	21	67	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	67	<50	67	1.4	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	-	<0.5
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	-	7.7	<0.4	10	40	37	<0.1	21	77	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	120	<100	-	<20	<20	120	<50	120	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	Not Detected	2.8	<0.4	6.9	77	31	<0.1	14	31	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	430	440	3800	560	-	<20	220	2600	900	3720	110	18	<2	59	51	40	25	-	23
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	-	6	<1	6	159	80	<0.1	12	64	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	330	340	3520	880	4740	<10	140	2950	1310	4400	82.5	9.7	1.2	32.3	29.2	21.1	28	-	10.8
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	Not Detected	14	<0.4	7.2	29	68	0.2	<5	31	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	3.3	<0.4	5.6	31	210	0.3	<5	45	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	1	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	-	<0.5
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	4.8	<0.4	8.7	51	130	0.4	<5	76	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	260	<100	-	<20	<20	230	72	302	8.7	<0.5	1	1.4	5.1	4.2	2.8	-	3.2
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	Not Detected	40	<0.4	7.7	28	40	<0.1	<5	21	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	250	<100	-	<20	<20	220	76	296	11	2.1	<0.5	7.1	4.8	3.9	2.9	-	3.4
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	Not Detected	3.7	<0.4	7	26	120	0.3	<5	24	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	Not Detected	<2	<0.4	<5	38	33	<0.1	10	85	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	<20	69	<50	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	-	6.1	<0.4	18	31	37	<0.1	17	67	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	84	84	240	<100	-	<20	47	230	82	359	1.7	<0.5	<0.5	1	0.7	0.5	0.5	-	<0.5
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	72	<1	7	24	12	<0.1	3	16	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	1040	170	1210	<10	<50	880	320	1200	65.1	6.2	0.9	30.1	27.7	20	24.8	-	11.3
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	Not Detected	2.6	<0.4	9.8	34	95	<0.1	5.2	28	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	370	370	3900	560	-	<20	130	2800	820	3750	210	46	<2	130	96	73	51	-	45
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	Not Detected	2.9	<0.4	21	16	40	<0.1	9.1	25	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	180	<100	-	<20	<20	140	80	220	4.7	<0.5	0.6	1.5	2.3	2.1	1.7	-	1.7
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	Not Detected	3.7	<0.4	8.4	15	84	0.2	<5	34	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	52	52	200	<100	-	<20	51	150	110	311	2.7	<0.5	<0.5	0.7	1.3	1.5	1.5	-	1.3
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	Not Detected	23	<0.4	11	13	34	<0.1	<5	22	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	96	96	1000	<100	-	<20	<20	1100	140	1240	52	11	<0.5	27	40	22	14	-	19
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	-	7.7	<0.5	9.3	81	29	<0.1	47	150	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	-	<20	28	92	<50	120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP analysis performed, refer to Table B7 for Waste Classification

Appendix B
Table B5
Central Walk East - Waste Classification, Analytical Results

| | | | | PAHs | | | | | | | | | | | | Phenols | | | | | | | | | | | |

Appendix B
Table B5
Central Walk East - Waste Classification, Analytical Results

Sydney Metro
Central Walk East
Central Station Main Works

				VOCs															OC Pesticides																							
				Allyl chloride	Bromodichloromethane	Bromoform	Carbon disulfide	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	Dibromomethane	Iodomethane	TCE	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	4,6-Dinitro-2-methylphenol	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	4,4 DDD	4,4 DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NSW EPA (2014) General Solid Waste CT1 (No Leaching)													10	14																			60								
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)													40	56																			240								
NSW EPA (2014) Special Waste (Asbestos)																																									
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																							
	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-999999	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
QC100	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-999999	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
QC200	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	SRT_BH040	0.5-0.55	4/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	SRT_BH051	0.2-0.25	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	SRT_BH051	0.9-1	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	SRT_BH051	2.4-2.5	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-999999	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	SRT_BH054	2.5-2.55	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP analysis performed, refer to Table B7 for Waste Classification

Appendix B
Table B5
Central Walk East - Waste Classification, Analytical Results

							OP Pesticides																																	
				Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Tokuthion	Azinphos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.05	0.05	0.05	0.05	1	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NSW EPA (2014) General Solid Waste CT1 (No Leaching)													4																										
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)													16																										
NSW EPA (2014) Special Waste (Asbestos)																																							
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																					
	SRT_BH040	0.1-0.15	4/09/2017	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC100	SRT_BH040	0.1-0.15	4/09/2017	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH040	0.1-0.15	4/09/2017	<0.05	<0.05	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH040	0.5-0.55	4/09/2016	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.9-1	20/09/2016	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	2.4-2.5	20/09/2016	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<0.2	<5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<1
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	<0.25	<0.25	<0.25	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	<0.05	<0.05	<0.05	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	<0.05	<0.05	<0.05	<0.05	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP analysis performed, refer to Table B7 for Waste Classification

Appendix B
Table B5
Central Walk East - Waste Classification, Analytical Results

				MAH					enated Hydroca		PCBs								erbicide	Chlorinated Hydrocarbons																					
				1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Bromomethane	Dichlorodifluoromethane	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Dinoseb	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,2-dichloroethene	Dichloromethane	Vinyl chloride
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)							60											50				200	600	26	24	14	86	10			150				10	2000	120			172	4
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)							240											50				800	2400	104	96	56	344	40			600				40	8000	480			688	16
NSW EPA (2014) Special Waste (Asbestos)																																								
Field ID	**Location Code**	**Sample Depth**	**Sampled Date**																																					
	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC100	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC200	SRT_BH040	0.1-0.15	4/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH040	0.5-0.55	4/09/2016	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.2-0.25	20/09/2016	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	0.9-1	20/09/2016	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	2.4-2.5	20/09/2016	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH051	3.9-4	20/09/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	0.6-0.67	26/10/2016	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH054	2.5-2.55	26/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.15_0.20	SRT_CBH015	0.15-0.2	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH015_0.40_0.50	SRT_CBH015	0.4-0.5	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015_0.9_1.0	SRT_CBH015	0.9-1	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH015_2.0_2.1	SRT_CBH015	2-2.1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_2.8_2.9	SRT_CBH015	2.8-2.9	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_3.4_3.5	SRT_CBH015	3.4-3.5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH015_4.9_5.0	SRT_CBH015	4.9-5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH016_0.15_0.20	SRT_CBH016	0.15-0.2	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_FD01_260917	SRT_CBH016	0.15-0.2	26/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_0.40_0.50	SRT_CBH016	0.4-0.5	26/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH016_1.9_2.0	SRT_CBH016	1.9-2	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH016_2.5_2.6	SRT_CBH016	2.5-2.6	27/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017_0.45_0.55	SRT_CBH017	0.45-0.55	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_0.9_1.0	SRT_CBH017	0.9-1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_2.8_2.9	SRT_CBH017	2.8-2.9	29/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH017_3.9_4.0	SRT_CBH017	3.9-4	29/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_FD01_28092017	SRT_CBH017	0.45-0.55	28/09/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH018_0.15_0.25	SRT_CBH018	0.15-0.25	27/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
SRT_CBH018_0.4_0.5	SRT_CBH018	0.4-0.5	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_0.9_1.0	SRT_CBH018	0.9-1	28/09/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_1.5-1.65	SRT_CBH018	1.5-1.65	5/10/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SRT_CBH018_2.0-2.2	SRT_CBH018	2-2.2	5/10/2017	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP analysis performed, refer to Table B7 for Waste Classification

Appendix B
Table B6
Sydney Yard - Project Access/Works Area - Waste Classification, Soil Analytical Data

			Metals															BTEXN						TRH - NEPM 2013							TRH - NEPM 1999						
			Aluminium	Antimony	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Pyrene	Acenaphthene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					2		0.4	5	5	5		0.1	5				5	0.1	0.1	0.1	0.1	0.2	0.3	20	20	50	50	100	100	50	20	20	50	50	50	0.5	0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)					100		20	100		100		4	40	20	100			10	288	600			1000								650				10000		
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)					400		80	400		400		16	160	80	400			40	1152	2400			4000								2600				40000		
Location Code	**Sample Depth**	**Sampled Date**																																			
SRT_BH042	1.5-1.6	15/07/2016	-	-	4	-	<0.4	8	1	16	-	-	<1	-	-	-	8	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1
SRT_BH045	0.9-1	8/07/2016	-	-	<4	-	<0.4	8	4	7	-	-	3	-	-	-	7	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1
SRT_BH045	1.5-1.6	8/07/2016	-	-	<4	-	<0.4	6	5	10	-	-	2	-	-	-	7	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	110	110	-	<25	<50	<100	<100	120	<0.1	<0.1
SRT_BH045	2.4-2.5	8/07/2016	-	-	<4	-	<0.4	4	1	3	-	-	<1	-	-	-	2	<0.2	<0.5	<1	<1	<2	-	<25	<25	<25	<25	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1
SRT_BH067	0.9-1	15/07/2016	-	-	11	-	<0.4	30	64	-	-	0.4	5	-	-	-	59	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.9	<0.1
SRT_BH067	1.7-1.8	15/07/2016	-	-	14	-	<0.4	23	40	-	-	0.2	3	-	-	-	42	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	0.9	<0.1
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	-	-	28	-	1	16	150	700	-	0.7	13	-	-	-	580	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	140	<100	-	<25	<50	<100	<100	-	1.7	<0.1
SRT_BH068	3.3-3.4	15/07/2016	-	-	10	-	<0.4	10	25	68	-	<0.1	2	-	-	-	44	<0.2	<0.5	<1	<1	<2	-	<25	<25	<50	<50	<100	<100	-	<25	<50	<100	<100	-	<0.1	<0.1
SRT_BH081	0.2	29/05/2017	5400	<7	9	210	<0.4	9	210	740	260	1.8	12	<2	<1	27	230	<0.2	<0.5	<1	<1	<2	<1	<25	<25	<50	<50	240	<100	240	<25	<50	110	160	-	1.8	<0.1
SRT_BH081	0.5	29/05/2017	14,000	<7	8	47	<0.4	23	16	120	23	0.3	2	<2	<1	78	33	<0.2	<0.5	<1	<1	<2	<1	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	0.4	<0.1
SRT_BH081	1.9	29/05/2017	4100	<7	9	40	<0.4	12	6	24	2	<0.1	<1	<2	<1	53	2	<0.2	<0.5	<1	<1	<2	<1	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	-	<0.1	<0.1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis Performed, refer to table B7 for waste Classification

Appendix B
Table B6
Sydney Yard - Project Access/Works Area - Waste Classification, Soil Analytical Data

			PAHs																	Phenols																			
			Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(half LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2-chlorophenol	2-methylnaphthalene	2-methylphenol	2-nitrophenol	3-methylcholanthrene	4-chloro-3-methylphenol	4-nitrophenol	Acetophenone	Pentachlorophenol
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4		1	1	0.5	0.5	5	0.5	0.5		0.2	1		1	5		1
NSW EPA (2014) General Solid Waste CT1 (No Leaching)						0.8										200						8000	40							4000							
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)						3.2										800						32000	160							16000							
Location Code	**Sample Depth**	**Sampled Date**																																				
SRT_BH042	1.5-1.6	15/07/2016	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	1.5-1.6	8/07/2016	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	2.4-2.5	8/07/2016	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	<0.1	<0.1	0.5	0.52	0.8	0.2	0.5	<0.1	0.9	<0.1	0.2	<0.1	0.3	5	0.7	0.7	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	1.7-1.8	15/07/2016	<0.1	<0.1	0.7	0.54	0.9	0.2	0.6	<0.1	0.8	<0.1	0.2	<0.1	0.1	4.9	0.7	0.8	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	0.1	0.6	1	1.1	1	0.7	0.9	0.2	1.7	<0.1	0.9	<0.1	0.7	11	1.6	1.6	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	3.3-3.4	15/07/2016	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	0.1	0.1	1	0.9	3.2	<0.5	1	<0.1	1.7	<0.1	0.7	<0.1	<0.5	11	1.3	1.3	1.3	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<0.2	<0.2	<0.5	<0.2	<0.2	<0.5	<1	<4	<1	<1
SRT_BH081	0.5	29/05/2017	<0.1	<0.1	0.2	0.2	0.3	0.1	0.2	<0.1	0.4	<0.1	<0.1	<0.1	0.4	2.2	<0.5	<0.5	<0.5	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<0.2	<0.2	-	<0.2	<0.2	-	<1	<4	-	<1
SRT_BH081	1.9	29/05/2017	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<0.2	<0.2	-	<0.2	<0.2	-	<1	<4	-	<1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis Performed, refer to table B7 for waste Cla

Appendix B
Table B6
Sydney Yard - Project Access/Works Area - Waste Classification, Soil Analytical Data

			VOCs																																				
			Phenol	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	Cyclohexane	Dibromomethane	n-butylbenzene	n-propylbenzene	Pentachloroethane	p-isopropyltoluene	sec-butylbenzene	TCE	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	1,2,4,5-tetrachlorobenzene	2-(acetylamino) fluorene	2-nitroaniline	3-nitroaniline	4-(dimethylamino) azobenzene	4,6-Dinitro-2-methylphenol	4-bromophenyl phenyl ether	4-chloroaniline	4-chlorophenyl phenyl ether	4-nitroaniline	5-nitro-o-toluidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5						0.5		0.5	0.5	0.5	0.5						5						
NSW EPA (2014) General Solid Waste CT1 (No Leaching)																					10		14																
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)																					40		56																
Location Code	**Sample Depth**	**Sampled Date**																																					
SRT_BH042	1.5-1.6	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	1.5-1.6	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	2.4-2.5	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	1.7-1.8	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	3.3-3.4	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	<0.2	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
SRT_BH081	0.5	29/05/2017	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-

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- = not analysed
Red Text = TCLP Analysis Performed, refer to table B7 for waste Cla

			SVOCs																																
			7,12-dimethylbenz(a)anthracene	Aniline	Azobenzene	Benzyl alcohol	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl) ether	Carbazole	Diphenylamine	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Isophorone	Isosafrole	Methapyrilene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosomorpholine	N-nitrosopiperidine	Pentachlorobenzene	Phenacetin	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	4,4 DDD	4,4 DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR																								0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NSW EPA (2014) General Solid Waste CT1 (No Leaching)																																				
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)																																				
Location Code	**Sample Depth**	**Sampled Date**																																		
SRT_BH042	1.5-1.6	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH045	1.5-1.6	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH045	2.4-2.5	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
SRT_BH067	1.7-1.8	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
SRT_BH068	3.3-3.4	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SRT_BH081	0.5	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Appendix B
Table B6
Sydney Yard - Project Access/Works Area - Waste Classification, Soil Analytical Data

												MAH				enated Hydroca		PCBs																			
			Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Ethyl methanesulfonate	Safrole	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Bromomethane	Dichlorodifluoromethane	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,4-trichlorobenzene	1,2-dibromo-3-chloropropane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5
NSW EPA (2014) General Solid Waste CT1 (No Leaching)																60										50	200	600	26	24	14				86	10	
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)																240										50	800	2400	104	96	56				344	40	
Location Code	**Sample Depth**	**Sampled Date**																																			
SRT_BH042	1.5-1.6	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	1.5-1.6	8/07/2016	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	2.4-2.5	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	1.7-1.8	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	3.3-3.4	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1
SRT_BH081	0.5	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis Performed, refer to table B7 for waste Cla

Appendix B
Table B6
Sydney Yard - Project Access/Works Area - Waste Classification, Soil Analytical Data

																			Dioxins & Furans					Phthalates						
			1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chloronaphthalene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,2-dichloroethene	Hexachlorobutadiene	Vinyl chloride	Dibenzofuran	1,3-Dinitrobenzene	2,6-dinitrotoluene	Nitrobenzene	Pentachloronitrobenzene	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5													
NSW EPA (2014) General Solid Waste CT1 (No Leaching)				150							10	2000	120				4				40									
NSW EPA (2014) Restricted Solid Waste CT2 (No Leaching)				600							40	8000	480				16				160									
Location Code	**Sample Depth**	**Sampled Date**																												
SRT_BH042	1.5-1.6	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	0.9-1	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	1.5-1.6	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH045	2.4-2.5	8/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	0.9-1	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	1.7-1.8	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH067	2.5-2.95	24/06/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	0.7	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH068	3.3-3.4	15/07/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	0.2	29/05/2017	<1	<0.5	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SRT_BH081	0.5	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH081	1.9	29/05/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
- = not analysed
Red Text = TCLP Analysis Performed, refer to table B7 for waste Cla

Appendix B
Table B7
Waste Classification - Soil TCLP Analytical Results

Sydney Metro
Central Station Main Works

						Inorganics				Metals																	
						pH (Initial) (filtered)	pH of Leaching Fluid (filtered)	pH (Final) (filtered)	pH (after HCL) (filtered)	Chromium (III+VI)		Lead		Mercury		Nickel		Pyrene		Acenaphthene		Acenaphthylene		Anthracene		Benz(a)anthracene		Benzo(a) pyrene	
						pH Units	pH Units	pH Units	pH Units	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L
LOR						0.1	0.1	0.1	0.1	2		5	0.01	0.1		2	0.01	0.5		0.5		0.5		0.5		0.5		0.5	
NSW EPA (2014) General Solid Waste SCC1										1900		1500		50		1050												10	
NSW EPA (2014) Restricted Solid Waste SCC2										7600		6000		200		4200												23	
NSW EPA (2014) General Solid Waste TCLP1											5		5		0.2		2												40
NSW EPA (2014) Restricted Solid Waste TCLP2											20		20		0.8		8												160
Location Code	**Date**	**Field ID**	**Depth**	**Sample Type**	**Matrix Type**																								
SRT_BH040	4/09/2017		0.1 - 0.15	Normal	soil	-	-	-	-	55	-	320	0.68	<0.1	-	12	-	0.5	-	<0.1	-	0.1	-	0.2	-	0.2	-	0.2	-
SRT_BH040	4/09/2017	QC100	0.1 - 0.15	Field_D	soil	-	-	-	-	180	0.02	990	1.5	0.1	-	28	-	0.7	-	<0.1	-	0.1	-	0.2	-	0.4	-	0.3	-
SRT_BH040	4/09/2016		0.5 - 0.55	Normal	soil	-	-	-	-	9	-	200	0.05	0.5	-	12	-	2.1	-	<0.1	-	<0.1	-	0.1	-	1.1	-	1.2	<1
SRT_BH048	11/07/2016		1.1 - 1.2	Normal	soil	-	-	-	-	10	-	24	-	<0.1	-	<1	-	11	-	0.6	-	3.3	-	4.3	-	4.6	-	3.5	<1
SRT_BH048	11/07/2016		2 - 2.1	Normal	soil	-	-	-	-	9	-	23	-	<0.1	-	1	-	6.3	-	0.7	-	1.7	-	2.6	-	2.7	-	1.9	<1
SRT_BH067	15/07/2016		0.9 - 1	Normal	soil	-	-	-	-	30	-	360	0.2	0.4	-	5	-	0.9	-	<0.1	-	<0.1	-	<0.1	-	0.5	-	0.52	-
SRT_BH067	15/07/2016		1.7 - 1.8	Normal	soil	-	-	-	-	23	-	290	0.09	0.2	-	3	-	0.9	-	<0.1	-	<0.1	-	<0.1	-	0.7	-	0.54	-
SRT_BH068	15/07/2016		0.7	Normal	soil	-	-	-	-	16	-	700	<0.03	0.7	-	13	-	1.7	-	<0.1	-	0.1	-	0.6	-	1	-	1.1	<1
SRT_BH081	29/05/2017		0.2	Normal	soil	-	-	-	-	9	-	740	0.2	1.8	-	12	-	1.8	-	<0.1	-	0.1	-	0.1	-	1	-	0.9	-
SRT_BH081	29/05/2017		0.5	Normal	soil	-	-	-	-	23	-	120	0.2	0.3	-	2	-	0.4	<1	<0.1	<1	<0.1	<1	<0.1	<1	0.2	<1	0.2	<1
SRT_BH082	29/05/2017		0.4	Normal	soil	-	-	-	-	4	-	200	0.07	0.2	-	7	-	0.6	-	<0.1	-	<0.1	-	<0.1	-	0.3	-	0.3	-
SRT_BH083	31/05/2017		0.4	Normal	soil	-	-	-	-	8	-	230	0.09	0.3	-	9	-	0.6	-	<0.1	-	<0.1	-	<0.1	-	0.4	-	0.4	-
SRT_BH084	29/05/2017		0.2	Normal	soil	-	-	-	-	34	-	360	0.1	0.3	-	26	-	0.5	-	<0.1	-	<0.1	-	<0.1	-	0.3	-	0.4	-
SRT_BH085	29/05/2017		0.2	Normal	soil	-	-	-	-	37	-	450	0.05	0.4	-	29	-	3	-	<0.1	-	<0.1	-	0.1	-	1	-	0.7	-
SRT_BH086	9/10/2017	SRT_BH085_0.3	0.3 - 0.3	Normal	soil	6.4	5.1	5.3	1.8	19	-	400	0.04	0.5	-	37	-	2.7	<1	<0.5	<1	<0.5	<1	<0.5	<1	1.4	<1	1.6	<1
SRT_BH086	9/10/2017	SRT_BH085_2.4	2.4 - 2.4	Normal	soil	-	-	-	-	15	-	63	-	0.4	-	5.4	-	2.2	<1	<0.5	<1	<0.5	<1	<0.5	<1	1.3	<1	1.5	<1
SRT_CBH002	21/09/2017	SRT_CBH002_0.9_1.0	0.9 - 1	Normal	soil	5.5	5.0	6.9	1.9	9.1	-	140	<0.01	<0.1	-	<5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH004	26/09/2017	SRT_CBH004_3.9_4.0	3.9 - 4	Normal	soil	6.8	5.1	5.1	1.8	56	-	<5	-	0.1	-	89	0.05	<0.5	-	<0.5	-	<0.5	-	<0.5	-	0.6	-	<0.5	-
SRT_CBH006	19/09/2017	SRT_CBH006_0.9-1.0	0.9 - 1	Normal	soil	5.2	5.1	5.6	1.9	12	-	51	-	<0.1	-	6.5	<0.01	9.1	-	<0.5	-	0.6	-	1.1	-	2.8	-	2.4	-
SRT_CBH006	20/09/2017	SRT_CBH006_2.0-2.1	2 - 2.1	Normal	soil	6.9	5.1	5.2	1.9	13	-	430	0.15	0.3	-	9.6	-	0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH007	19/09/2017	SRT_CBH007_0.30-0.35	0.3 - 0.35	Normal	soil	6.0	5.1	6.2	1.8	12	-	88	-	0.3	-	14	-	50	<1	<20	<1	<20	<1	<20	<1	14	<1	11	<1
SRT_CBH013	25/10/2017	SRT_CBH013_0.2_0.3	0.2 - 0.3	Normal	soil	7.9	-	5.2	1.8	8.2	-	200	0.02	0.2	-	8.4	-	0.9	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	0.5	-
SRT_CBH013	25/10/2017	SRT_CBH013_0.8_0.9	0.8 - 0.9	Normal	soil	7.8	-	5.2	1.8	5.5	-	240	0.15	<0.1	-	<5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH014	25/10/2017	SRT_BD01_251017	2.9 - 3	Field_D	soil	7.8	-	5.2	1.7	6.6	-	130	0.28	<0.1	-	<5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH014	25/10/2017	SRT_CBH014_0.4_0.5	0.4 - 0.5	Normal	soil	8.5	-	5.3	1.8	10	-	88	-	0.5	-	15	-	2.0	<1	<0.5	<1	<0.5	<1	<0.5	<1	0.9	<1	1.1	<1
SRT_CBH015	26/09/2017	SRT_CBH015_0.40_0.50	0.4 - 0.5	Normal	soil	5.2	5.1	5.2	1.9	9.4	-	81	-	0.3	-	11	-	33	<1	0.6	1	4.2	<1	8.2	<1	19	<1	15	<1
SRT_CBH015	28/09/2017	SRT_CBH015_2.0_2.1	2 - 2.1	Normal	soil	7.5	5.0	9.6	1.9	<5	-	120	<0.01	0.2	-	<5	-	12	6	<0.5	<2	2.3	<2	3.0	<2	5.7	4	5.0	4
SRT_CBH015	28/09/2017	SRT_CBH015_2.8_2.9	2.8 - 2.9	Normal	soil	6.8	5.0	9.4	1.9	8.1	-	160	<0.01	0.3	-	9.5	-	12	<2	<0.5	<2	1.2	<2	1.3	<2	6.2	<2	7.4	<2
SRT_CBH016	27/09/2017	SRT_CBH016_1.9_2.0	1.9 - 2	Normal	soil	5.4	5.1	5.4	1.9	5.6	-	210	0.12	0.3	-	<5	-	1.0	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	0.6	-
SRT_CBH016	27/09/2017	SRT_CBH016_2.5_2.6	2.5 - 2.6	Normal	soil	6.5	5.1	5.7	1.8	8.7	-	130	0.04	0.4	-	<5	-	8.7	<1	<0.5	<1	1.0	<1	1.4	<1	5.1	<1	4.2	<1
SRT_CBH017	28/09/2017	SRT_CBH017_0.45_0.55	0.45 - 0.55	Normal	soil	7.0	5.0	9.5	1.9	7.7	-	40	-	<0.1	-	<5	-	11	6	2.1	<1	<0.5	<1	7.1	2	4.8	3	3.9	2
SRT_CBH017	28/09/2017	SRT_CBH017_0.9_1.0	0.9 - 1	Normal	soil	6.8	5.0	11	1.9	7.0	-	120	<0.01	0.3	-	<5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH018	28/09/2017	SRT_CBH018_0.4_0.5	0.4 - 0.5	Normal	soil	8.8	5.0	10	1.9	21	-	40	-	<0.1	-	9.1	-	4.7	<1	<0.5	<1	0.6	<1	1.5	<1	2.3	<1	2.1	<1
SRT_CBH018	28/09/2017	SRT_CBH018_0.9_1.0	0.9 - 1	Normal	soil	8.9	5.0	11	1.9	8.4	-	84	-	0.2	-	<5	-	2.7	3	<0.5	<2	<0.5	<2	0.7	<2	1.3	3	1.5	2
SRT_NDD030	4/04/2017		0.15	Normal	soil	-	-	-	-	8	-	170	<0.03	0.2	<0.0005	10	-	0.4	<1	<0.1	<1	<0.1	<1	<0.1	<1	0.3	<1	0.2	<1
SRT_NDD030	4/04/2017		0.35	Normal	soil	-	-	-	-	5	-	120	<0.03	0.2	<0.0005	16	-	1.1	<1	<0.1	<1	<0.1	<1	0.1	<1	0.6	<1	0.67	<1
SRT_NDD030	4/04/2017		0.65	Normal	soil	-	-	-	-	<1	-	330	0.2	<0.1	<0.0005	2	-	110	<1	20	<1	1.6	<1	130	3	93	<1	34	2
SRT_NDD030	4/04/2017		0.65 - 0.75	Normal	soil	-	-	-	-	6	-	150	<0.03	1.1	<0.0005	11	-	4	<1	0.1	<1	0.7	<1	0.6	<1	2.3	<1	1.9	<1
SRT_NDD030	4/04/2017		0.75	Normal	soil	-	-	-	-	6	-	170	0.06	6.7	<0.0005	8	-	12	<1	0.1	<1	2.4	<1	2.7	<1	7.3	<1	5.7	<1
SRT_NDD030	4/04/2017		0.9	Normal	soil	-	-	-	-	14	-	240	0.1	1.7	<0.0005	16	-	17	<1	0.2	<1	3.2	<1	5.7	<1	10	<1	7.5	<1
SRT_NDD030	4/04/2017		1.65	Normal	soil	-	-	-	-	11	-	220	0.46	3.3	<0.0005	13	-	11	<1	0.2	<1	3.1	<1	3.3	<1	8.5	<1	6	<1
SRT_NDD030	4/04/2017		1.8	Field_D	soil	-	-	-	-	9	-	170	1.6	2.4	<0.0005	10	-	11	<1	0.2	<1	1.8	<1	3.4	<1	6.7	<1	4.4	<1
SRT_NDD030	4/04/2017		1.8	Interlab_D	soil	-	-	-	-	9	-	176	0.6	1.9	<0.001	10	-	3.4	-	<0.5	-	<0.5	-	0.6	-	2.1	-	2.2	<0.5
SRT_NDD030	4/04/2017		1.8	Normal	soil	-	-	-	-	10	-	180	1.2	2.7	<0.0005	14	-	3	<1	<0.1	<1	0.5	<1	0.7	<1	2.1	<1	1.8	<1
SRT_NDD030	4/04/2017		1.9	Normal	soil	-	-	-	-	10	-	430	0.1	6.9	<0.0005	13	-	5	<1	0.2	<1	0.8	<1	1.2	<1	2.8	<1	2.3	<1
SRT_NDD030	4/04/2017		2.2	Normal	soil	-	-	-	-	2	-	71	0.6	0.1	<0.0005	1	-	<0.1	<1	<0.1	<1	<0.1	<1	<0.1	<1	<0.1	<1	<0.05	<1
ST03	4/08/2017		0	Field_D	soil	-	-	-	-	<1	-	110	<0.03	0.1	-	13	-	0.4	<1	<0.1	<1	<0.1	<1	<0.1	<1	0.2	<1	0.2	<1
ST03	4/08/2017		0	Normal	soil	-	-	-	-	<1	-	240	0.03	0.3	-	14	-	0.5	-	<0.1	-	<0.1	-	<0.1	-	0.3	-	0.3	-
ST04	4/08/2017		0.1	Normal	soil	-	-	-	-	<1	-	250	0.08	0.3	-	9	-	0.8	-	<0.1	-	<0.1	-	0.1	-	0.4	-	0.52	-
ST04	4/08/2017		0.5	Normal	soil	-	-	-	-	<1	-	260	0.1	0.4	-	8	-	1.2	-	<0.1	-	0.1	-	0.2	-	0.6	-	0.77	-
ST05	4/08/2017		0.3	Normal	soil	-	-	-	-	<1	-	750	0.98	0.5	-	10	-	1	<1	<0.1	<1	0.1	<1	0.2	<1	0.6	<1	0.8	<1
ST05	4/08/2017		1.2	Normal	soil	-	-	-	-	<1	-	440	0.94	0.5	-	33	-	0.4	-	<0.1	-	<0.1	-	<0.1	-	0.3	-	0.3	-
ST07	11/08/2017		1.5	Normal	soil	-	-	-	-	<1	-	280	1.1	0.7	-	5	-	0.4	-	<0.1	-	<0.1	-	<0.1	-	0.2	-	0.61	-
ST08	11/08/2017		0.6	Normal	soil	-	-	-	-	<1	-	130	<0.03	0.2	-	22	-	4	-	0.1	-	0.3	-	1.4	-	2	-	1.5	-
ST09	14/08/2017		0.9	Normal	soil	-	-	-	-	<1	-	76	-	1	-	13	-	2.3	<1	<0.1	<1	0.2	<1	0.6	<1	1.4	<1	1.1	<1
ST11	17/08/2017		0.6	Normal	soil	-	-	-	-	<1	-	42	-	<0.1	-	24	-	150	<1	7.6	<1	29	<1	61	<1	73	<1	59	<1

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µg/L = micrograms per litre
mg/L = milligrams per litre
- = not analysed
NL = no limit

Appendix B
Table B7
Waste Classification - Soil TCLP Analytical Results

Sydney Metro
Central Station Main Works

						PAHs																							
						Benzo[b+j]fluoranthene		Benzo[b+j+k]fluoranthene		Benzo(k)fluoranthene		Benzo(g,h,i)perylene		Chrysene		Dibenz(a,h)anthracene		Fluoranthene		Fluorene		Indeno(1,2,3-c,d)pyrene		Naphthalene		Phenanthrene		PAHs (Sum of total) - Lab calc	
						mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L	mg/kg	µg/L
LOR						0.5	1			0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5	
NSW EPA (2014) General Solid Waste SCC1																												200	
NSW EPA (2014) Restricted Solid Waste SCC2																												800	
NSW EPA (2014) General Solid Waste TCLP1																													
NSW EPA (2014) Restricted Solid Waste TCLP2																													
Location Code	**Date**	**Field ID**	**Depth**	**Sample Type**	**Matrix Type**																								
SRT_BH040	4/09/2017		0.1 - 0.15	Normal	soil	-	-	0.5	-	-	-	0.2	-	0.3	-	<0.1	-	0.4	-	<0.1	-	0.2	-	<0.1	-	0.2	-	3	-
SRT_BH040	4/09/2017	QC100	0.1 - 0.15	Field_D	soil	-	-	0.7	-	-	-	0.3	-	0.4	-	<0.1	-	0.6	-	<0.1	-	0.2	-	<0.1	-	0.2	-	4.3	-
SRT_BH040	4/09/2016		0.5 - 0.55	Normal	soil	-	-	2	-	-	-	0.7	-	1	-	<0.1	-	2.1	-	<0.1	-	1	-	<0.1	-	0.8	-	12	-
SRT_BH048	11/07/2016		1.1 - 1.2	Normal	soil	-	-	5	-	-	-	1.6	-	3.9	-	0.5	-	12	-	2.4	-	1.4	-	1.7	-	20	-	75	-
SRT_BH048	11/07/2016		2 - 2.1	Normal	soil	-	-	2.8	-	-	-	1	-	2.2	-	0.3	-	6.5	-	1.7	-	0.8	-	4.4	-	11	-	47	-
SRT_BH067	15/07/2016		0.9 - 1	Normal	soil	-	-	0.8	-	-	-	0.2	-	0.5	-	<0.1	-	0.9	-	<0.1	-	0.2	-	<0.1	-	0.3	-	5	-
SRT_BH067	15/07/2016		1.7 - 1.8	Normal	soil	-	-	0.9	-	-	-	0.2	-	0.6	-	<0.1	-	0.8	-	<0.1	-	0.2	-	<0.1	-	0.1	-	4.9	-
SRT_BH068	15/07/2016		0.7	Normal	soil	-	-	1	-	-	-	0.7	-	0.9	-	0.2	-	1.7	-	<0.1	-	0.9	-	<0.1	-	0.7	-	11	-
SRT_BH081	29/05/2017		0.2	Normal	soil	-	-	3.2	-	-	-	<0.5	-	1	-	<0.1	-	1.7	-	<0.1	-	0.7	-	<0.1	-	<0.5	-	11	-
SRT_BH081	29/05/2017		0.5	Normal	soil	-	-	0.3	<2	-	-	0.1	<1	0.2	<1	<0.1	<1	0.4	<1	<0.1	<1	<0.1	<1	<0.1	<1	0.4	<1	2.2	-
SRT_BH082	29/05/2017		0.4	Normal	soil	-	-	0.8	-	-	-	<0.5	-	<0.5	-	<0.1	-	0.5	-	<0.1	-	<0.5	-	<0.1	-	<0.5	-	4.1	-
SRT_BH083	31/05/2017		0.4	Normal	soil	-	-	0.5	-	-	-	<0.5	-	<0.5	-	<0.1	-	<0.5	-	<0.1	-	<0.5	-	<1	-	<1	-	3.3	-
SRT_BH084	29/05/2017		0.2	Normal	soil	-	-	0.6	-	-	-	<0.5	-	<0.5	-	<0.1	-	<0.5	-	<0.1	-	<0.5	-	<0.1	-	<0.5	-	3.5	-
SRT_BH085	29/05/2017		0.2	Normal	soil	-	-	2.1	-	-	-	<0.5	-	1	-	<0.1	-	3	-	<0.1	-	0.6	-	<0.1	-	2	-	8.6	-
SRT_BH086	9/10/2017	SRT_BH085_0.3	0.3 - 0.3	Normal	soil	1.2	<1	-	-	1.0	<1	1.0	<1	1.5	<1	<0.5	<1	2.6	<1	<0.5	<1	0.9	<1	<0.5	<1	1.0	<1	14.9	<1
SRT_BH086	9/10/2017	SRT_BH085_2.4	2.4 - 2.4	Normal	soil	1.1	<1	-	-	0.9	<1	1.0	<1	1.3	<1	<0.5	<1	2.1	<1	<0.5	<1	0.9	<1	<0.5	<1	0.7	<1	13	<1
SRT_CBH002	21/09/2017	SRT_CBH002_0.9_1.0	0.9 - 1	Normal	soil	<0.5	-	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH004	26/09/2017	SRT_CBH004_3.9_4.0	3.9 - 4	Normal	soil	<0.5	-	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	0.6	-
SRT_CBH006	19/09/2017	SRT_CBH006_0.9-1.0	0.9 - 1	Normal	soil	1.4	-	-	-	1.7	-	1.5	-	3.5	-	<0.5	-	8.5	-	<0.5	-	1.2	-	<0.5	-	6.0	-	39.8	-
SRT_CBH006	20/09/2017	SRT_CBH006_2.0-2.1	2 - 2.1	Normal	soil	0.5	-	-	-	0.6	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	1.6	-
SRT_CBH007	19/09/2017	SRT_CBH007_0.30-0.35	0.3 - 0.35	Normal	soil	7.8	<1	-	-	9.5	<1	8.3	<1	29	<1	<20	<1	48	<1	<20	<1	6.1	<1	<0.5	<1	40	<1	223.7	<1
SRT_CBH013	25/10/2017	SRT_CBH013_0.2_0.3	0.2 - 0.3	Normal	soil	0.6	-	-	-	<0.5	-	<0.5	-	0.5	-	<0.5	-	0.8	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	3.3	-
SRT_CBH013	25/10/2017	SRT_CBH013_0.8_0.9	0.8 - 0.9	Normal	soil	<0.5	-	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH014	25/10/2017	SRT_BD01_251017	2.9 - 3	Field_D	soil	<0.5	-	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-
SRT_CBH014	25/10/2017	SRT_CBH014_0.4_0.5	0.4 - 0.5	Normal	soil	0.7	<1	-	-	0.8	<1	0.7	<1	1.0	<1	<0.5	<1	1.8	<1	<0.5	<1	0.5	<1	<0.5	<1	0.7	<1	10.2	<1
SRT_CBH015	26/09/2017	SRT_CBH015_0.40_0.50	0.4 - 0.5	Normal	soil	7.6	<1	-	-	11	<1	9.0	<1	17	<1	5.2	<1	30	<1	<2	<1	9.4	<1	<0.5	<1	22	3	191.2	4
SRT_CBH015	28/09/2017	SRT_CBH015_2.0_2.1	2 - 2.1	Normal	soil	3.2	4	-	-	4.5	2	2.7	4	5.7	4	1.1	<2	12	6	1.4	<2	2.3	3	<0.5	<2	17	3	77.9	40
SRT_CBH015	28/09/2017	SRT_CBH015_2.8_2.9	2.8 - 2.9	Normal	soil	4.8	<2	-	-	6.5	<2	4.9	<2	6.7	<2	1.7	<2	10	<2	<0.5	<2	4.1	<2	<0.5	<2	5.7	<2	72.5	<2
SRT_CBH016	27/09/2017	SRT_CBH016_1.9_2.0	1.9 - 2	Normal	soil	<0.5	-	-	-	<0.5	-	<0.5	-	0.6	-	<0.5	-	1.0	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	3.2	-
SRT_CBH016	27/09/2017	SRT_CBH016_2.5_2.6	2.5 - 2.6	Normal	soil	2.8	<1	-	-	3.2	<1	2.3	<1	4.0	<1	1.3	<1	8.4	<1	<0.5	<1	2.2	<1	<0.5	<1	6.1	<1	50.7	<1
SRT_CBH017	28/09/2017	SRT_CBH017_0.45_0.55	0.45 - 0.55	Normal	soil	2.9	2	-	-	3.4	1	2.2	2	4.4	2	0.8	<1	14	7	2.7	<1	2.0	1	1.6	<1	22	6	83.3	34
SRT_CBH017	28/09/2017	SRT_CBH017_0.9_1.0	0.9 - 1	Normal	soil	<0.5	-	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	0.5	-	0.5	-
SRT_CBH018	28/09/2017	SRT_CBH018_0.4_0.5	0.4 - 0.5	Normal	soil	1.7	<1	-	-	1.7	<1	0.8	<1	2.1	<1	<0.5	<1	5.2	<1	<0.5	<1	0.8	<1	<0.5	<1	4.9	<1	28.4	<1
SRT_CBH018	28/09/2017	SRT_CBH018_0.9_1.0	0.9 - 1	Normal	soil	1.5	3	-	-	1.3	<2	0.7	2	1.4	3	<0.5	<2	2.8	3	<0.5	<2	0.6	<2	<0.5	<2	2.5	<2	17	19
SRT_NDD030	4/04/2017		0.15	Normal	soil	-	-	0.4	<2	-	-	<0.5	<1	<0.5	<1	<0.1	<1	<0.5	<1	<0.1	<1	<0.5	<1	<0.5	<1	<0.5	<1	2.8	-
SRT_NDD030	4/04/2017		0.35	Normal	soil	-	-	1	<2	-	-	<0.5	<1	0.7	<1	<0.1	<1	1.1	<1	<0.1	<1	<0.5	<1	<0.5	<1	<0.5	<1	6.8	-
SRT_NDD030	4/04/2017		0.65	Normal	soil	-	-	50	<2	-	-	23	<1	60	<1	2	<1	100	<1	54	4	9.4	<1	7	3	230	6	920	19
SRT_NDD030	4/04/2017		0.65 - 0.75	Normal	soil	-	-	3.1	<2	-	-	1.1	<1	1.9	<1	<0.5	<1	4	<1	<0.5	<1	1	<1	<0.5	<1	1.7	<1	22	-
SRT_NDD030	4/04/2017		0.75	Normal	soil	-	-	9.1	<2	-	-	2.3	<1	5.1	<1	<0.6	<1	14	<1	<0.5	<1	3	<1	<0.5	<1	7.4	<1	70	-
SRT_NDD030	4/04/2017		0.9	Normal	soil	-	-	12	<2	-	-	2.8	<1	7.2	<1	<0.8	<1	21	<1	1	<1	2.5	<1	<0.5	<1	15	<1	100	-
SRT_NDD030	4/04/2017		1.65	Normal	soil	-	-	9.1	<2	-	-	2.3	<1	4.9	<1	<0.6	<1	12	<1	0.6	<1	1.9	<1	<0.5	<1	5.9	1	71	1
SRT_NDD030	4/04/2017		1.8	Field_D	soil	-	-	7.1	<2	-	-	1.6	<1	4.4	<1	<0.5	<1	13	<1	0.6	<1	1.4	<1	<0.5	<1	9.9	1	65	1
SRT_NDD030	4/04/2017		1.8	Interlab_D	soil	-	-	-	-	1	-	1	-	1.8	-	<0.5	-	3.6	-	<0.5	-	0.8	-	<0.5	-	1.5	-	20.2	-
SRT_NDD030	4/04/2017		1.8	Normal	soil	-	-	2.6	<2	-	-	0.8	<1	1.3	<1	<0.5	<1	3	<1	<0.5	<1	0.6	<1	<0.5	<1	1.1	<1	18	-
SRT_NDD030	4/04/2017		1.9	Normal	soil	-	-	3.4	<2	-	-	1.1	<1	1.9	<1	<0.5	<1	5	<1	<0.5	<1	0.8	<1	<0.5	<1	3.1	<1	28	<1
SRT_NDD030	4/04/2017		2.2	Normal	soil	-	-	<0.2	<2	-	-	<0.1	<1	<0.1	<1	<0.1	<1	<0.1	<1	<0.1	<1	<0.1	<1	<0.5	<1	<0.1	<1	0.4	1
ST03	4/08/2017		0	Field_D	soil	-	-	0.4	<2	-	-	0.2	<1	0.2	<1	<0.1	<1	0.4	<1	<0.1	<1	0.1	<1	<0.1	<1	0.2	<1	2.4	0
ST03	4/08/2017		0	Normal	soil	-	-	0.6	-	-	-	0.2	-	0.3	-	<0.1	-	0.5	-	<0.1	-	0.2	-	<0.1	-	0.2	-	2.9	-
ST04	4/08/2017		0.1	Normal	soil	-	-	0.8	-	-	-	0.3	-	0.4	-	<0.1	-	0.8	-	<0.1	-	0.2	-	<0.1	-	0.4	-	4.8	-
ST04	4/08/2017		0.5	Normal	soil	-	-	1	-	-	-	0.5	-	0.7	-	0.1	-	1.2	-	<0.1	-	0.4	-	<0.1	-	0.5	-	7.5	-
ST05	4/08/2017		0.3	Normal	soil	-	-	1	<2	-	-	0.6	<1	0.6	<1	0.1	<1	0.8	<1	<0.1	<1	0.4	<1	<0.1	<1	0.4	1	6.5	1
ST05	4/08/2017		1.2	Normal	soil	-	-	0.5	-	-	-	0.2	-	0.3	-	<0.1	-	0.4	-	<0.1	-	0.1	-	<0.1	-	0.1	-	2.5	-
ST07	11/08/2017		1.5	Normal	soil	-	-	0.7	-	-	-	0.6	-	0.3	-	<0.1	-	0.3	-	<0.1	-	0.3	-	<0.1	-	0.1	-	3.6	-
ST08	11/08/2017		0.6	Normal	soil	-	-	2.4	-	-	-	0.9	-	1.5	-	0.2	-	4.3	-	0.7	-	0.7	-	<1.2	-	5.3	-	27	-
ST09	14/08/2017		0.9	Normal	soil	-	-	2	<2	-	-	0.7	<1	1.1	<1	0.2	<1	2.5	<1	0.3	<1	0.5	<1	<1	<1	1.9	<1	15	0
ST11	17/08/2017		0.6	Normal	soil	-	-	77	<2	-	-	28	<1	51	<1	11	<1	160	<1	48	<1	24	<1	74	3	220	<1	1,100	3

Notes:
LOR = Limit of reporting
mg/kg = milligrams per kilogram
µg/L = micrograms per litre
mg/L = milligrams per litre
- = not analysed
NL = no limit

Appendix B
Table B8
Groundwater Analytical Results

							Metals														BTEXN							TRH - NEPM 2013							TRH - NEPM 2013 - SG Cleanup					TRH - NEPM 1999			
							Cyanide (Total)	Sulfate	Sulfate (Filtered)	Nitrogen (Total)	Ammonia	Aluminium (Filtered)	Antimony (Filtered)	Arsenic (Filtered)	Barium (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup	F2 (>C10-C16 minus Naphthalene) SG Cleanup	>C10-C40 (sum) SG Cleanup	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR							0.005	2	1		0.01			0.001		0.0002	0.001	0.001		0.001		0.0001	0.001	0.005	1	1	1	1	2	3	1	20	20	50	50	100	100	100	50	100	100	100	100	20	50	100	100
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																												
2-4m																									5000	NL	NL			NL		6000		NL											
4-8m																									5000	NL	NL			NL		6000		NL											
>8m																									5000	NL	NL			NL		7000		NL											
NEPM 2013 Table 1C GILs, Marine Waters							0.004				0.91					0.0007	0.0044	0.0013		0.0044		0.0001	0.007	0.015	500																			
NHMRC Recreational Guidelines 2008							**0.8**	**5000**	**5000**				**scs**	**0.1**	**20**	**0.02**		**20**		**0.1**	**5**	**0.01**	**0.2**		**10**	**8000**	**3000**			**6000**															
Sydney Water Trade Waste Acceptance Standard (superseeded)								2000	2000	150		100		1		1	3	5		2		0.03	3	5	100	500	1000		1000															
Field_ID	**Location Code**	**Sampled Date**	**Sample Type**																																									
	SRT_BH006	8/06/2017	Normal	<0.004	38	-	-	0.042	0.02	<0.001	<0.001	0.13	<0.0001	<0.001	<0.001	0.88	<0.001	0.32	<0.00005	0.001	0.017	<1	<1	<1	<1	<2	-	-	<10	<10	<50	<50	<100	<100	-	-	-	-	-	-	-	-	-	-
SRT_BH006	SRT_BH006	14/11/2017	Normal	<0.005	38	-	-	<0.01	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.004	0.012	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH006A	8/06/2017	Normal	<0.004	81	-	-	0.076	0.02	<0.001	<0.001	0.047	<0.0001	<0.001	<0.001	0.35	<0.001	0.22	<0.00005	0.003	0.017	<1	<1	<1	<1	<2	-	-	<10	<10	<50	<50	<100	<100	-	-	-	-	-	-	-	-	-	-
SRT_BH006A	SRT_BH006A	14/11/2017	Normal	<0.005	63	-	-	0.13	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	<0.001	<0.005	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH039	22/09/2016	Normal	<0.05	39	-	7.9	5.1	-	-	<0.001	-	<0.0001	0.004	0.001	0.29	<0.001	0.34	<0.00005	0.002	0.018	<1	1	<1	<1	<2	<3	-	<10	<10	<50	<50	<100	<100	-	-	-	-	-	-	<10	<100	<100	-
SRT_BH039	SRT_BH039	3/11/2017	Normal	<0.005	450	-	-	5.2	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.002	<0.005	2	2	<1	<1	<2	<3	-	<20	<20	<50	<50	500	<100	-	<50	<100	<100	-	-	<20	<50	600	<100
SRT_FD01_171103	SRT_BH039	3/11/2017	Interlab_D	<0.004	-	424	-	5.45	-	-	<0.001	-	<0.0001	<0.001	<0.001	-	<0.001	-	<0.0001	0.003	<0.005	2	2	<2	<2	<2	<2	4	<20	<20	<100	<100	670	<100	670	<100	<100	<100	<100	<100	<20	60	660	<50
	SRT_BH047	23/09/2016	Normal	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	3/11/2017	Normal	<0.005	18	-	-	<0.01	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.002	<0.005	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH048	23/09/2016	Normal	<0.05	72	-	0.5	0.056	-	-	<0.001	-	<0.0001	<0.001	0.002	<0.01	<0.001	0.22	<0.00005	<0.001	0.009	<1	<1	<1	<1	<2	<3	-	<10	<10	<50	<50	130	<100	130	-	-	-	-	-	-	<10	130	<100	130
SRT BH048	SRT_BH048	2/11/2017	Normal	<0.005	44	-	-	0.03	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.008	0.011	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH050	23/09/2016	Normal	-	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH052	23/09/2016	Normal	<0.05	42	-	7.5	0.29	-	-	0.002	-	<0.0001	0.006	0.003	<0.01	<0.001	<0.005	<0.00005	<0.001	0.007	<1	11	<1	<1	<2	<3	-	<10	15	<50	<50	150	<100	150	-	-	-	-	-	-	14	150	<100	150
SRT_BH052	SRT_BH052	3/11/2017	Normal	<0.005	43	-	-	<0.01	-	-	<0.001	-	<0.0002	0.002	0.012	-	<0.001	-	<0.0001	0.007	<0.005	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH053	23/09/2016	Normal	<0.05	16	-	1	0.018	-	-	<0.001	-	<0.0001	<0.0001	<0.0001	1.6	<0.001	1.4	<0.00005	0.019	0.013	<1	<1	<1	<1	<2	<3	-	<10	<10	<50	<50	130	<100	130	-	-	-	-	-	-	<10	120	<100	120
SRT_BH053	SRT_BH053	2/11/2017	Normal	<0.005	22	-	-	<0.01	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.014	<0.005	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH055	15/11/2016	Normal	-	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH055	SRT_BH055	2/11/2017	Normal	-	120	-	-	-	-	-	0.001	-	<0.0002	0.006	<0.001	-	<0.001	-	0.0003	<0.001	<0.005	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_BH055	SRT_BH055	14/11/2017	Normal	<0.005	78	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH059	21/10/2016	Normal	-	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	3/11/2017	Normal	<0.005	22	-	-	0.01	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	<0.001	<0.005	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_BH060	SRT_BH060	3/11/2017	Normal	-	180	-	-	-	-	-	<0.001	-	<0.0002	0.01	0.001	-	<0.001	-	<0.0001	<0.001	<0.005	-	-	-	-	-	-	-	-	-	-	<50	<100	<100	-	<50	<100	<100	-	-	-	<50	<100	<100
SRT_BH060	SRT_BH060	14/11/2017	Normal	<0.005	87	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<2	<3	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	-
	SRT_BH063	21/09/2016	Normal	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	2/11/2017	Normal	<0.005	43	-	-	<0.01	-	-	<0.001	-	<0.0002	<0.001	0.003	-	<0.001	-	<0.0001	0.009	0.25	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
	SRT_BH064	22/09/2016	Normal	0.036	39	-	2.9	1.9	-	-	0.015	-	<0.0001	<0.001	<0.001	0.15	<0.001	0.058	<0.00005	0.007	0.003	**36**	3	<1	<1	<2	<3	-	28	67	<50	<50	<100	<100	-	-	-	-	-	-	66	<100	<100	-
	SRT_BH064	8/06/2017	Normal	0.023	66	-	-	4.3	0.61	0.003	0.024	0.021	<0.0001	<0.001	0.004	0.12	0.002	<0.005	0.0002	0.009	0.004	**15**	1	<1	<1	<2	-	-	<10	16	110	110	220	<100	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Field_D	0.023	68	-	-	4.3	0.62	0.003	0.024	0.021	<0.0001	<0.001	0.004	0.11	0.002	<0.005	0.0002	0.01	0.006	**16**	2	<1	<1	<2	-	-	16	34	85	85	110	<100	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Interlab_D	0.02	-	72	-	4.9	0.5	0.003	0.023	0.021	<0.0001	<0.001	0.002	0.07	0.004	0.001	0.0001	0.011	<0.005	**16**	<2	<2	<2	<2	<2	<2	<20	30	<100	<100	<100	<100	<100	-	-	-	-	-	-	-	-	-	-
	SRT_BH081	8/06/2017	Normal	<0.004	94	-	-	0.09	<0.01	<0.001	0.001	0.005	<0.0001	<0.001	<0.001	3.4	<0.001	0.14	<0.00005	<0.001	0.016	<1	<1	<1	<1	<2	-	-	<10	<10	<50	<50	<100	<100	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	8/06/2017	Normal	<0.004	35	-	-	0.062	0.04	<0.001	<0.001	0.049	<0.0001	<0.001	<0.001	0.8	<0.001	0.82	<0.00005	0.002	0.01	<1	<1	<1	<1	<2	-	-	<10	<10	<50	<50	<100	<100	-	-	-	-	-	-	-	-	-	-
	SRT_BH084	8/06/2017	Normal	<0.004	45	-	-	0.009	0.06	<0.001	<0.001	0.05	<0.0001	<0.001	<0.001	2.5	<0.001	0.14	<0.00005	0.005	0.031	<1	<1	<1	<1	<2	-	-	<10	<10	260	260	460	<100	-	-	-	-	-	-	-	-	-	-
SRT_BH084	SRT_BH084	3/11/2017	Normal	<0.005	35	-	-	0.01	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.002	0.008	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_CBH001	SRT_CBH001	2/11/2017	Normal	<0.005	34	-	-	0.06	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.006	0.013	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_FD01_171102	SRT_CBH001	2/11/2017	Field_D	<0.005	34	-	-	0.07	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.006	0.011	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_CBH007	SRT_CBH007	2/11/2017	Normal	<0.005	60	-	-	0.04	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.008	0.024	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_CBH015	SRT_CBH015	3/11/2017	Normal	<0.005	220	-	-	<0.01	-	-	<0.001	-	<0.0002	<0.001	<0.001	-	<0.001	-	<0.0001	0.014	0.026	<1	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100
SRT_CBH017	SRT_CBH017	2/11/2017	Normal	<0.005	<5	-	-	0.12	-	-	0.003	-	<0.0002	0.001	<0.001	-	<0.001	-	<0.0001	0.005	0.007	2	<1	<1	<1	<2	<3	-	<20	<20	<50	<50	<100	<100	-	<50	<100	<100	-	-	<20	<50	<100	<100

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
- = not analysed
NL = no limit

Appendix B
Table B8
Groundwater Analytical Results

| | | | | H - NEPM 1999 - SG Clean | | | | PAHs | | | | | | | | | | | | | | | | | Phenols | | | | | | | | | | | | | | | | |

Appendix B
Table B8
Groundwater Analytical Results

| | VOCs | | |

Appendix B
Table B8
Groundwater Analytical Results

| | | | | | | | | | | | OC Pesticides | | | | | | | | | | |

Appendix B
Table B8
Groundwater Analytical Results

	OP Pesticides																											MAH					ated Hydro		PCBs								Herbicides					
	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Ethyl methanesulfonate	Fenamiphos	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pirimiphos-ethyl	Prothiofos	Pyrazophos	Ronnel	Safrole	Terbufos	Trichloronate	Tetrachlorvinphos	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Bromomethane	Dichlorodifluoromethane	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Dinoseb	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	2	2	2	2	2	2		0.5	2	2	2	2	2	2	2	2	2	2	2	2	20	0.5	0.5	2	2		2	2	2	1	1	1	1	3	1	1	1	1	1	1	1	1	1	100	5	5	1	1	1
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																																
2-4m																																																
4-8m																																																
>8m																																																
NEPM 2013 Table 1C GILs, Marine Waters																																																
NHMRC Recreational Guidelines 2008	**50**	**70**	**40**		**40**	**10**		**5**	**70**	**100**	**70**	**700**		**7**	**50**	**20**		**10**	**200**		**900**	**5**		**200**			**9**		**1000**				**300**		**10**														
Sydney Water Trade Waste Acceptance Standard (superseeded)																																																

Field_ID	Location Code	Sampled Date	Sample Type																																															
	SRT_BH006	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH006	SRT_BH006	14/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<100	<5	<5	<1	<1	<1
	SRT_BH006A	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH006A	SRT_BH006A	14/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<100	<5	<5	<1	<1	<1
	SRT_BH039	22/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH039	SRT_BH039	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_171103	SRT_BH039	3/11/2017	Interlab_D	<0.5	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-	<2	-	<2	-	<2	-	-	<0.5	<0.5	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<50	<50	-	-	-	-	-	-	-	-	<1	-	-	-	-	-
	SRT_BH047	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH048	SRT_BH048	2/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH050	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH052	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH053	SRT_BH053	2/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH055	15/11/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH055	SRT_BH055	2/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<100	<5	<5	<1	<1	<1
SRT_BH055	SRT_BH055	14/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH059	21/10/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	3/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<10	<10	<10	<10	<10	<10	<10	<10	<100	<5	<5	<1	<1	<1
SRT_BH060	SRT_BH060	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	14/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<5	<5	<5	<1	<1	<1
	SRT_BH063	21/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	2/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	22/09/2016	Normal	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Interlab_D	<2000	<2000	-	-	<2000	-	-	-	-	-	<2000	<2000	-	-	-	-	-	-	-	<2000	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH081	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH082	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH084	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH084	SRT_BH084	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001	SRT_CBH001	2/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<100	<5	<5	<1	<1	<1
SRT_FD01_171102	SRT_CBH001	2/11/2017	Field_D	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<100	<5	<5	<1	<1	<1
SRT_CBH007	SRT_CBH007	2/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<100	<5	<5	<1	<1	<1
SRT_CBH015	SRT_CBH015	3/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<10	<10	<10	<10	<10	<10	<10	<10	<100	<5	<5	<1	<1	<1
SRT_CBH017	SRT_CBH017	2/11/2017	Normal	<2	<2	<2	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	-	-	<2	<2	-	<2	<2	<2	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<100	<5	<5	<1	<1	<1

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
- = not analysed
NL = no limit

Appendix B
Table B8
Groundwater Analytical Results

	Chlorinated Hydrocarbons																								Dioxins & Furans	Explosives			Nitroaromatics	Phthalates					
	1,1,2-trichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,4-trichlorobenzene	1,2-dibromo-3-chloropropane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chloronaphthalene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,2-dichloroethene	Dichloromethane	Hexachlorobutadiene	Vinyl chloride	Dibenzofuran	1,3-Dinitrobenzene	2,6-dinitrotoluene	Nitrobenzene	Pentachloronitrobenzene	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	1	1	5	5	5	1	1	1	1	1	5		5	1	1	1	1	1	5	1	1	1	5	1											
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
2-4m																																			
4-8m																																			
>8m																																			
NEPM 2013 Table 1C GILs, Marine Waters	1900			20																															
NHMRC Recreational Guidelines 2008		**300**				**15000**	**30**			**400**												**40**	**7**	**3**					**300**	**100**					
Sydney Water Trade Waste Acceptance Standard (superseeded)																																			
Field_ID	**Location Code**	**Sampled Date**	**Sample Type**																																	
	SRT_BH006	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH006	SRT_BH006	14/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
	SRT_BH006A	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH006A	SRT_BH006A	14/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
	SRT_BH039	22/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH039	SRT_BH039	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_FD01_171103	SRT_BH039	3/11/2017	Interlab_D	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<50	<5	-	<5	<5	<50	-	-	-	-	-	-	-	-	-	-
	SRT_BH047	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH048	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH048	SRT_BH048	2/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH050	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH052	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH053	23/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH053	SRT_BH053	2/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH055	15/11/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH055	SRT_BH055	2/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
SRT_BH055	SRT_BH055	14/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH059	21/10/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	3/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	14/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
	SRT_BH063	21/09/2016	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	2/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	22/09/2016	Normal	<1	1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<10	<1	-	<2	<10	<5	<5	<5	<5	<5	<10	<10	<10	<10	<10	<10
	SRT_BH064	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-
	SRT_BH064	8/06/2017	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-
	SRT_BH081	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-
	SRT_BH082	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-
	SRT_BH084	8/06/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-
SRT_BH084	SRT_BH084	3/11/2017	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001	SRT_CBH001	2/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
SRT_FD01_171102	SRT_CBH001	2/11/2017	Field_D	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
SRT_CBH007	SRT_CBH007	2/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	3/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	2/11/2017	Normal	<1	<1	-	-	-	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
- = not analysed
NL = no limit

Appendix B
Table B9
Groundwater Results - Inorganics, Major Ions, Nutrients, Acidity and Alkalinity

	Inorganics									Acidity & Alkalinity				Major ions														Nutrients					
	pH (Lab)	Electrical conductivity (lab)	Total Dissolved Solids (Filtered)	Cyanide (Free)	Cyanide (WAD)	Cyanide (Total)	Bicarbonate	Sulfate	Sulfate (Filtered)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Sulfide	Calcium	Calcium (Filtered)	Magnesium	Magnesium (Filtered)	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Chloride	Cations Total	Anions Total	Ionic Balance	Nitrate (as N)	Nitrite (as N)	Nitrogen (Total Oxidised) (as N)	Nitrogen (Total)	Ammonia	Phosphate
	pH Units	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
LOR	0.1	1		0.005	0.005	0.005		2	1	10	20	1	1		0.5	1	0.5	1	0.5	1	0.5	1	1	0.01	0.01	0.01	0.02				0.01	
ANZECC 2000 Table 3.3.2. SE Australia, Marine Waters Guidelines for Slightly Disturbed Ecosystems	8.0 - 8.4																												0.005		0.015	0.01
NEPM 2013 Table 1C GILs, Marine Waters						0.004																									0.91	
NHMRC Recreational Guidelines 2008						**0.8**		**5000**	**5000**																							
Sydney Water Trade Waste Acceptance Standard (superseeded)	7-10		10000					2000	2000																					150		
Field_ID	**Location Code**	**Sampled Date**	**Sample Type**																														
	SRT_BH006	8/06/2017	Normal	6.37	-	-	<0.004	-	<0.004	-	38	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	0.03	-	-	-	0.042	-
SRT_BH006	SRT_BH006	14/11/2017	Normal	6.24	820	-	-	-	<0.005	-	38	-	<10	210	-	-	-	30	-	30	-	4	-	110	-	130	-	-	-	0.02	-	-	-	<0.01	-
	SRT_BH006A	8/06/2017	Normal	5.72	-	-	<0.004	-	<0.004	-	81	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.33	-	-	-	0.076	-
SRT_BH006A	SRT_BH006A	14/11/2017	Normal	6.5	470	-	-	-	<0.005	-	63	-	<10	130	-	-	-	22	-	14	-	5.2	-	83	-	38	-	-	-	0.06	-	-	-	0.13	-
	SRT_BH039	22/09/2016	Normal	12.2	7890	2200	-	-	<0.05	<5	39	-	490	-	1.8	2300	-	620	-	<0.5	-	140	-	250	-	37	-	-	-2.2	-	-	-	7.9	5.1	<5
SRT_BH039	SRT_BH039	3/11/2017	Normal	6.9	2000	-	-	-	<0.005	-	450	-	<10	470	-	-	-	37	-	<0.5	-	130	-	160	-	53	-	-	-	0.03	-	-	-	5.2	-
SRT_FD01_171103	SRT_BH039	3/11/2017	Interlab_D	-	-	-	-	-	<0.004	-	-	424	<1	409	<1	409	-	-	42	-	<1	-	144	-	166	41	13.4	18.2	15.1	-	-	-	-	5.45	-
	SRT_BH047	23/09/2016	Normal	7.82	776	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	3/11/2017	Normal	7.38	680	-	-	-	<0.005	-	18	-	<10	750	-	-	-	70	-	9.4	-	1.2	-	38	-	35	-	-	-	16	-	-	-	<0.01	-
	SRT_BH048	23/09/2016	Normal	7.82	452	270	-	-	<0.05	110	72	-	<5	-	<5	110	-	29	-	4.3	-	5.4	-	62	-	24	-	-	3.5	-	-	-	0.5	0.056	85
SRT BH048	SRT_BH048	2/11/2017	Normal	7.38	570	-	-	-	<0.005	-	44	-	<10	160	-	-	-	22	-	9.6	-	3.2	-	61	-	43	-	-	-	0.02	-	-	-	0.03	-
	SRT_BH050	23/09/2016	Normal	9.13	346	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-
	SRT_BH052	23/09/2016	Normal	10.8	740	1200	-	-	<0.05	<5	42	-	490	-	420	900	-	58	-	<5	-	5	-	53	-	32	-	-	-58	-	-	-	7.5	0.29	43
SRT_BH052	SRT_BH052	3/11/2017	Normal	8.63	550	-	-	-	<0.005	-	43	-	310	390	-	-	-	68	-	<0.5	-	1.9	-	38	-	57	-	-	-	9.6	-	-	-	<0.01	-
	SRT_BH053	23/09/2016	Normal	7.7	341	200	-	-	<0.05	120	16	-	<5	-	<5	120	-	11	-	7	-	3	-	53	-	25	-	-	0.84	-	-	-	1	0.018	33
SRT_BH053	SRT_BH053	2/11/2017	Normal	6.36	400	-	-	-	<0.005	-	22	-	<10	110	-	-	-	8.6	-	8.3	-	2.5	-	46	-	36	-	-	-	<0.02	-	-	-	<0.01	-
	SRT_BH055	15/11/2016	Normal	12.6	-	-	-	-	-	-	350	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
SRT_BH055	SRT_BH055	2/11/2017	Normal	-	-	-	-	-	-	-	120	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-
SRT_BH055	SRT_BH055	14/11/2017	Normal	8	430	-	-	-	<0.005	-	78	-	<10	390	-	-	-	58	-	4.7	-	4.4	-	23	-	10	-	-	-	6.6	-	-	-	<0.01	-
	SRT_BH059	21/10/2016	Normal	5.7	-	-	-	-	-	-	82	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	3/11/2017	Normal	7	570	-	-	-	<0.005	-	22	-	<10	220	-	-	-	70	-	9.6	-	7	-	15	-	11	-	-	-	4.9	-	-	-	0.01	-
SRT_BH060	SRT_BH060	3/11/2017	Normal	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	14/11/2017	Normal	-	450	-	-	-	<0.005	-	87	-	<10	160	-	-	-	40	-	2.4	-	9.2	-	60	-	13	-	-	-	5.6	-	-	-	<0.01	-
	SRT_BH063	21/09/2016	Normal	6.83	821	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	2/11/2017	Normal	6.56	1000	-	-	-	<0.005	-	43	-	<10	360	-	-	-	66	-	37	-	5.6	-	66	-	73	-	-	-	0.1	-	-	-	<0.01	-
	SRT_BH064	22/09/2016	Normal	8.33	436	260	-	-	0.036	180	39	-	<5	-	<5	180	-	22	-	2.2	-	6	-	79	-	12	-	-	1.1	-	-	-	2.9	1.9	200
	SRT_BH064	8/06/2017	Normal	11.26	-	-	<0.004	-	0.023	-	66	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.098	-	-	-	4.3	-
	SRT_BH064	8/06/2017	Field_D	-	-	-	<0.004	-	0.023	-	68	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.097	-	-	-	4.3	-
	SRT_BH064	8/06/2017	Interlab_D	-	-	-	<0.004	-	0.02	-	-	72	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	0.24	0.16	-	4.9	-
	SRT_BH081	8/06/2017	Normal	6.15	-	-	<0.004	-	<0.004	-	94	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	0.09	-
	SRT_BH082	8/06/2017	Normal	5.73	-	-	<0.004	-	<0.004	-	35	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.29	-	-	-	0.062	-
	SRT_BH084	8/06/2017	Normal	5.98	-	-	<0.004	-	<0.004	-	45	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	0.009	-
SRT_BH084	SRT_BH084	3/11/2017	Normal	6.35	300	-	-	-	<0.005	-	35	-	<10	36	-	-	-	3.6	-	4.8	-	1.7	-	38	-	45	-	-	-	0.04	-	-	-	0.01	-
SRT_CBH001	SRT_CBH001	2/11/2017	Normal	5.51	310	-	-	-	<0.005	-	34	-	<10	31	-	-	-	11	-	6.9	-	2.4	-	26	-	24	-	-	-	9	-	-	-	0.06	-
SRT_FD01_171102	SRT_CBH001	2/11/2017	Field_D	-	-	-	-	-	<0.005	-	34	-	<10	27	-	-	-	11	-	6.9	-	2.4	-	25	-	25	-	-	-	8.9	-	-	-	0.07	-
SRT_CBH007	SRT_CBH007	2/11/2017	Normal	5.2	280	-	-	-	<0.005	-	60	-	<10	30	-	-	-	10	-	4.3	-	3.6	-	28	-	22	-	-	-	1.6	-	-	-	0.04	-
SRT_CBH015	SRT_CBH015	3/11/2017	Normal	5.91	820	-	-	-	<0.005	-	220	-	<10	85	-	-	-	14	-	11	-	5	-	110	-	38	-	-	-	2.6	-	-	-	<0.01	-
SRT_CBH017	SRT_CBH017	2/11/2017	Normal	5.97	520	-	-	-	<0.005	-	<5	-	<10	200	-	-	-	41	-	23	-	7.6	-	36	-	22	-	-	-	1	-	-	-	0.12	-

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
µS/cm = microsemen per centremetre
- = not analysed

Appendix B
Table B9
Seepage Water Analytical Results

				Inorganics				Metals																BTEXN						TRH - NEPM 2013				
				pH (Lab)	Electrical conductivity (lab)	Cyanide (Free)	Cyanide (WAD)	Cyanide (Total)	Sulfate	Arsenic	Arsenic (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Copper	Copper (Filtered)	Lead	Lead (Filtered)	Mercury	Mercury (Filtered)	Nickel	Nickel (Filtered)	Zinc	Zinc (Filtered)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	F1 (C6-C10 minus BTEXN)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)
				pH Units	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR				0.1	1	0.005	0.005	0.005	2	0.001	0.001	0.0002	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.0001	0.0001	0.001	0.001	0.005	0.005	1	1	1	1	2	3	20	20	50	50	100
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																				
2-4m																										5000	NL	NL			NL	6000		NL		
4-8m																										5000	NL	NL			NL	6000		NL		
>8m																										5000	NL	NL			NL	7000		NL		
NEPM 2013 Table 1C GILs, Marine Waters								0.004				0.0007	0.0007	0.0044	0.0044	0.0013	0.0013	0.0044	0.0044	0.0001	0.0001	0.007	0.007	0.015	0.015	500										
NHMRC Recreational Guidelines 2008								**0.8**	**5000**	**0.1**	**0.1**	**0.02**	**0.02**			**20**	**20**	**0.1**	**0.1**	**0.01**	**0.01**	**0.2**	**0.2**			**10**	**8000**	**3000**			**6000**					
Sydney Water Trade Waste Acceptance Standard (superseeded)				7-10					2000	1	1	1	1	3	3	5	5	2	2	0.03	0.03	3	3	5	5	100	500	1000		1000						
Field ID	**Location Code**	**Sampled Date**	**Sample Type**																																	
SEEP WATER QD1	SITE 1_PUMP 14	22/11/2017	Field Duplicate	-	-	-	-	-	-	-	0.002	-	<0.0002	-	0.001	-	0.014	-	<0.001	-	<0.0001	-	0.002	-	<0.005	-	-	-	-	-	-	-	-	-	-	-
Seep water QT1	SITE 1_PUMP 14	22/11/2017	Interlab Duplicate	-	-	-	-	-	-	-	0.002	-	0.0002	-	0.001	-	0.013	-	<0.001	-	<0.0001	-	0.002	-	0.007	-	-	-	-	-	-	-	-	-	-	-
SITE 1_PUMP 14_WATER	SITE 1_PUMP 14	22/11/2017	Normal	8.2	1100	<0.005	<0.005	<0.005	120	0.005	0.002	0.0005	<0.0002	0.023	0.001	0.24	0.014	0.065	<0.001	0.0003	<0.0001	0.01	0.002	0.65	<0.005	<1	<1	<1	<1	<2	<3	50	50	<50	<50	<100
SITE 2_NBT_WATER	SITE 2_NBT	22/11/2017	Normal	7.4	120	<0.005	<0.005	<0.005	7.4	<0.001	<0.001	<0.0002	<0.0002	<0.001	<0.001	0.001	0.001	0.001	<0.001	<0.0001	<0.0001	<0.001	<0.001	0.026	<0.005	<1	<1	<1	<1	<2	<3	20	20	<50	<50	<100
SITE 3_PUMP 13_WATER	SITE 3_PUMP 13	22/11/2017	Normal	6.5	150	<0.005	<0.005	<0.005	23	0.002	<0.001	**0.043**	0.0002	0.047	<0.001	2	0.004	**1.2**	<0.001	<0.0001	<0.0001	**0.26**	<0.001	15	0.036	<1	<1	<1	<1	<2	<3	30	30	<50	<50	<100

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B9
Seepage Water Analytical Results

				TRH - NEPM 2013 - SG Cleanup			TRH - NEPM 1999					TRH - NEPM 1999 - SG Cleanup				PAHs																							
				F4 (>C34-C40 Fraction)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	C10-C14 SG Cleanup	C15-C28 SG Cleanup	C29-C36 SG Cleanup	C10-C36 (sum) SG Cleanup	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo(a) pyrene	Benzo[b+j]fluoranthene	Benzo[k]fluoranthene	Benzo[g,h,i]perylene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Perfluorodecanesulfonic acid (PFDS)	N-Methyl perfluorooctane sulfonamidoethanol	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	Perfluoroheptane sulfonic acid (PFHpS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Perfluorobutane sulfonic acid (PFBS)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	Perfluorohexane sulfonic acid (PFHxS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR				100	50	100	100	20	50	100	100	100	50	100	100	100	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.01	0.05	0.05	0.01	0.01	0.01	0.01	0.05	0.01
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																									
2-4m																														NL											
4-8m																														NL											
>8m																														NL											
NEPM 2013 Table 1C GILs, Marine Waters																														50											
NHMRC Recreational Guidelines 2008																						**0.1**																			
Sydney Water Trade Waste Acceptance Standard (superseeded)																																50000										
Field ID	**Location Code**	**Sampled Date**	**Sample Type**																																						
SEEP WATER QD1	SITE 1_PUMP 14	22/11/2017	Field Duplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<1	<10	<10	-	-	-	-	-	-	-	-	-
Seep water QT1	SITE 1_PUMP 14	22/11/2017	Interlab Duplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	-	-	-	-	-	-	-	-
SITE 1_PUMP 14_WATER	SITE 1_PUMP 14	22/11/2017	Normal	<100	<50	<100	<100	40	<50	<100	<100	<100	<50	<100	<100	<100	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	-	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01
SITE 2_NBT_WATER	SITE 2_NBT	22/11/2017	Normal	<100	<50	<100	<100	<20	<50	<100	<100	<100	<50	<100	<100	<100	<2	<1	<1	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	<2	<1	<1	<2	-	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01
SITE 3_PUMP 13_WATER	SITE 3_PUMP 13	22/11/2017	Normal	<100	<50	<100	<100	20	<50	<100	<100	<100	<50	<100	<100	<100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Appendix B
Table B9
Seepage Water Analytical Results

				PFAS																								Acidity & Alkalinity		Anions & Cations					Nutrients	
				Perfluoropentanoic acid (PFPeA)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol	N-Methyl perfluorooctane sulfonamide (MeFOSA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorooctane sulfonamide (FOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	PFAS (Sum of Total)	PFAS (Sum of Total)(WA DER List)	Sum of PFHxS and PFOS	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Calcium	Magnesium	Potassium	Sodium	Chloride	Nitrate (as N)	Ammonia
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR				0.01	0.01	0.05	0.05	0.05	0.05	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.1	0.05	0.01	10	20	0.5	0.5	0.5	0.5	1	0.02	0.01
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																				
2-4m																																				
4-8m																																				
>8m																																				
NEPM 2013 Table 1C GILs, Marine Waters																																				0.91
NHMRC Recreational Guidelines 2008																																				
Sydney Water Trade Waste Acceptance Standard (superseeded)																																				
Field ID	**Location Code**	**Sampled Date**	**Sample Type**																																	
SEEP WATER QD1	SITE 1_PUMP 14	22/11/2017	Field Duplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seep water QT1	SITE 1_PUMP 14	22/11/2017	Interlab Duplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SITE 1_PUMP 14_WATER	SITE 1_PUMP 14	22/11/2017	Normal	0.02	<0.01	<0.05	<0.05	<0.05	<0.05	0.01	<0.01	<0.05	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.05	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<10	120	57	3.4	54	180	180	9.6	<0.01
SITE 2_NBT_WATER	SITE 2_NBT	22/11/2017	Normal	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.05	<0.01	<0.01	<0.01	<0.1	<0.05	0.01	<10	27	11	1.9	1.6	12	12	2	<0.01
SITE 3_PUMP 13_WATER	SITE 3_PUMP 13	22/11/2017	Normal	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.05	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	0.02	<10	21	79	19	5.6	19	11	2.5	0.01

Notes:
LOR = Limit of reporting
mg/L = milligrams per litre
µg/L = micrograms per litre
µS/cm = microsemen per centremetre
- = not analysed
NL = no limit

Table B11
Summary of ASS Screening, Chromium Reducible Sulfur and SPOCAS Testing

Site	Report	Borehole	Date	Depth (m)	Material Description	pH_F	pH_{FOX}	pH_F - pH_{FOX}	Reac-tion Rate [6]	Chromium Reducible Sulfur			SPOCAS					S_{KCl}
										SCr		Liming rate	S_{POS}	TPA	TSA	TAA	Liming rate	
						pH units	pH units	pH units		%w/w	mole H+/t	kg $CaCO_3$/t	%w/w S	mole H+/t	mole H+/t	mole H+/t	kg $CaCO_3$/t	%w/w
Sydney Yard	Golder-Douglas (2016)	SRT_BH044	22/06/2016	4-4.45	Residual (Clay)	-	-	-	-	-	-	3.9	<0.005	45	<5	49	3.9	0.008
Sydney Yard	Golder-Douglas (2016)	SRT_BH046	24/06/2016	4-4.45	Residual (Clay)	-	-	-	-	-	-	7.6	<0.005	100	<5	99	7.6	0.05
Central Walk East	Golder-Douglas (2017a)	SRT_BH054	26/10/2016	0.6-0.67	Fill (Clayey SAND)	8.5	8.1	0.4	3	<0.005	<3	<0.75	<0.005	<5	<5	<5	<0.75	<0.005
Central Walk East	Golder-Douglas (2017a)	SRT_BH058	21/10/2016	2.5	Fill (Silty SAND)	5.7	4.5	*1.2*	1	<0.005	<3	1.2	<0.005	<5	<5	14	1	<0.005
Sydney Yard	Golder-Douglas (2017a)	SRT_BH063	11/08/2016	1.3-1.5	Residual (Silty CLAY)	*4.6*	3.1	*1.5*	1	<0.005	<3	1.3	<0.005	52	9	44	3	0.006
Metro Station Box	Golder-Douglas (2017b)	SRT_BH082	30/05/2018	2	Fill (SAND)	6.9	5.8	*1.1*	1	-	-	-	-	-	-	-	-	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH083	31/05/2018	0.9	Fill (Sandy GRAVEL)	6.9	5.7	*1.2*	1	-	-	-	-	-	-	-	-	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH083	31/05/2018	1.4	Fill (SAND)	6.8	6	0.8	1	-	-	-	-	-	-	-	-	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH083	31/05/2018	2	CLAY	*4.7*	4.7	*1.2*	1	-	-	-	-	-	-	-	-	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH083	1/06/2017	4	CLAY	**3.6**	3.6	0.7	1	-	-	8.7	0.006	110	<5	110	8.7	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH083	1/06/2017	5	CLAY	*4.4*	3.6	0.8	1	-	-	-	-	-	-	-	-	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH083	1/06/2017	7.7	SHALE	5.5	4	*1.5*	2	-	-	0.88	0.005	5	<5	9	0.88	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH084	1/06/2017	2	Fill (Sandy CLAY)	6.8	5.8	*1.2*	1	-	-	-	-	-	-	-	-	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH084	1/06/2017	6	CLAY	*5*	3.7	*1.3*	1	-	-	1.5	<0.005	19	<5	16	1.5	-
Metro Station Box	Golder-Douglas (2017b)	SRT_BH084	1/06/2017	7.6	CLAY	5.7	5.5	0.2	2	-	-	<0.75	<0.005	<5	<5	<5	<0.75	-
Metro Station Box	Golder-Douglas (2017b)	SRT_NDD030	4/04/2017	2.2	N/A	7.2	-	-	-	-	-	<0.75	0.01	<5	<5	<5	<0.75	-
Guideline Values																		
ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value						4 - 5.5 [1]	< 3 [3]	1 [4]	-	-	-	-	-	-	-	-	-	-
ASSMAC (1998) Actual Acid Sulfate Soil Indicator Value						≤ 4 [2]	-	-	-	-	-	-	-	-	-	-	-	-
ASSMAC (1998) Action Criteria - Fine soils (1 - 1000 tonnes) [5]						-	-	-	-	0.10	62	-	0.10	62	62	-	-	-
ASSMAC (1998) Action Criteria - Fine soils (>1000 tonnes) [5]						-	-	-	-	0.03	18	-	0.03	18	18	-	-	-

Notes to Table:

1 - pH values >4 and <5.5 are acid and may be the result of some previous or limited oxidation of sulfides, but is not confirmatory of actual acid sulfate soils

2 - pH readings of pH≤4, indicates that actual acid sulfate soils are present with the sulfides having been oxidized in the past, resulting in acid soils (and soil pore water)

3 - The lower the final pH_{FOX} value is, the better the indication of a positive result.
» If the pH_{FOX} < 3 and there was a strong reaction to the peroxide, there is a high level of certainty of a potential acid sulfate soils. The more the pH_{FOX} drops below 3, the more positive the presence of sulfides.
» A pH_{FOX} 3-4 is less positive and laboratory analyses are needed to confirm if sulfides are present.
» For pH_{FOX} 4-5 the test is neither positive nor negative. Sulfides may be present either in small quantities and be poorly reactive under quick test field conditions.
» For pH_{FOX} >5 and little or no drop in pH from the field value, little net acid generating ability is indicated.

4 - If the pH_F value is at least one unit below field pH_{FOX}, it may indicate potential acid sulfate soils. The greater the difference between the two measurements, the more indicative the value is of a potential acid sulfate soils.

5 Fine soils comprise medium to heavy clays and silty clays - Approximate clay content (% < 0.002mm) ≥ 40%

6 - Reaction Rate: 1 = no reaction to slight; 2 = moderate reaction; 3 = strong reation with persistent froth; and, 4 = extrement reaction.

Acid Sulfate Soil Trigger Values

Bold	Indicates the laboratory result is within the specified range of the ASSMAC (1998) Actual Acid Sulfate Soil Indicator Values
Italics	Indicates the laboratory result either exceeds or is within the specified range of the ASSMAC (1998) Potential Acid Sulfate Soil Indicator Values
	Indicates exceedance of the ASSMAC (1998) Action Criteria triggering the need to prepare a ASS Management Plan
	Indicates the requirement for localised lime treatment of the material, that is, when the laboratory results for SCr (%w/w) > 0.03 and the SCr (mole H=/t) > 18

Appendix C
Borehole logs

BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL SRT_CBH001

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 20/09/2017 - 06/10/2017

Drill Co. Terratest
Driller Chris Brest
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 8.1
Diameter (mm) 100

Easting, Northing 334081.53, 6249192.48
Grid Ref GDA94_MGA_zone_56
Elevation 21.5
Collar RL 21.4
Logged By MW / CC
Checked By HM

B.C.L No. N/A **Casing** PVC (Class 18) **Screen** 0.5mm Slotted PVC (Class 18) **Surface Completion** Gatic

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	1	SRT_CBH001_0.12_0.2				PAVERS				21.5
							CONCRETE	D	VD	strong hydrocarbon odour, hydrocarbon staining,	
0.5		<0.1	SRT_CBH001_0.45_0.55 (FD03_200917)				GRAVEL, coarse, angular, black (FILL)	SM	MD	Solidified bituminous material, some coal	21
							Gravelly SAND, medium, pale brown, some medium to coarse ironstone gravel (FILL)	VM	MD	no odour, no staining	
1		<0.1	SRT_CBH001_0.9_1				Clayey SAND, medium, pale brown, some low plasticity clay (ALLUVIUM)			no odour, no staining	20.5
1.5	PT	1.5	SRT_CBH001_1.6_2.2		Grout		Gravelly SAND, fine to medium, subangular, brown- yellow (ALLUVIUM)	SM	L	no odour, no staining	20
2											19.5
2.5		1.5	SRT_CBH001_2.35_2.5				SAND, fine to medium, subrounded, yellow (ALLUVIUM)	SM	MD	no odour, no staining	19
3											18.5
3.5											18
		2.6	SRT_CBH001_3.7_3.9								
4					Bentonite		Gravelly CLAY, medium plasticity, red and grey, some fine to medium ironstone gravel (RESIDUAL)	SM	VST	no odour, no staining	17.5
4.5											17
5											16.5
5.5	SFA										16
6											15.5
6.5					Sand						15
7				▽							14.5
7.5											14
8											13.5
8.5							Termination Depth at: 8.10 m. Target depth achieved.				13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH002

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 20/09/2017 - 05/10/2017

Drill Co. Terratest
Driller Chris Brest
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 3.1
Diameter (mm) 100

Easting 334107.46
Northing 6249230.04
Grid Ref GDA94_MGA_zone_56
Elevation 21.56
Logged By MW / CC
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	1	SRT_CBH002_0.12_0.2			PAVERS				21.5
						CONCRETE	D	VD	strong hydrocarbon odour, hydrocarbon staining,	
0.5		0.5	SRT_CBH002_0.45_0.55			GRAVEL, coarse, angular, black (FILL)	SM	F	Solidified bituminous material, some coal	21
						CLAY, medium plasticity, brown mottled grey (RESIDUAL)				
1		0.4	SRT_CBH002_0.9_1						no odour, no staining	20.5
1.5		0.7	SRT_CBH002_1.3_1.5			CLAY, low plasticity, brown and grey (RESDIUAL)	SM	VST	no odour, no staining	20
	PT									
2										19.5
2.5										19
3		1.3	SRT_CBH002_3.0_3.1							18.5
						Termination Depth at: 3.10 m. Refusal on bedrock.				
3.5										18
4										17.5
4.5										17
5										16.5
5.5										16
6										15.5
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

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Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH003

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 20/09/2017 - 06/10/2017

Drill Co. Terratest
Driller Chris Brest
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 1.95
Diameter (mm) 100

Easting 334121.04
Northing 6249251.55
Grid Ref GDA94_MGA_zone_56
Elevation 21.56
Logged By MW / CC
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD					PAVERS				21.5
						CONCRETE	D	VD	strong hydrocarbon odour, hydrocarbon staining, Solidified bituminous material, some coal	
0.5		1.2	SRT_CBH003_0.45_0.55 (FD02_21092017)			GRAVEL, coarse, angular, black (FILL)	SM	S		21
						Sandy CLAY, low plasticity, brown (FILL)			no odour, no staining	
1	PT	1.4	SRT_CBH003_0.95_1.2			Gravelly CLAY, low plasticity, brown and dark grey, some fine to coarse gravel (FILL)	SM	VST	no odour, no staining	20.5
1.5										20
		0.9	SRT_CBH003_1.7_1.88			Gravelly CLAY, low plasticity, dark grey, fine to coarse shale and ironstone gravels (RESIDUAL)	D	H	no odour, no staining	
2						Termination Depth at: 1.95 m. Refusal on bedrock.				19.5
2.5										19
3										18.5
3.5										18
4										17.5
4.5										17
5										16.5
5.5										16
6										15.5
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

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Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH004

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 20/09/2017 - 26/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 4
Diameter (mm) 100

Easting 334143.68
Northing 6249282.25
Grid Ref GDA94_MGA_zone_56
Elevation 21.58
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	2	SRT_CBH004_0.12_0.2			PAVERS				21.5
						CONCRETE	D	VD	strong hydrocarbon odour, hydrocarbon staining,	
0.5		1	SRT_CBH004_0.45_0.55			GRAVEL, coarse, angular, black (FILL)	SM	S	Solidified bituminous material, some coal	21
						Sandy CLAY, low plasticity, brown and grey (FILL)	SM	F	no odour, no staining	
1	PT	0.6	SRT_CBH004_0.9_1			Sandy CLAY, low to medium plasticity, brown mottled grey, with sandstone cobbles to boulders (FILL)	SM	F	no odour, no staining	20.5
1.5						Sandy CLAY, low plasticity, orange and pale grey (RESIDUAL)			no odour, no staining	20
2		0.5	SRT_CBH004_1.9_2							19.5
2.5										19
3		0.4	SRT_CBH004_2.9_3							18.5
3.5										18
4		0.2	SRT_CBH004_3.9_4							17.5
						Termination Depth at: 4.00 m. Target depth achieved.				
4.5										17
5										16.5
5.5										16
6										15.5
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH005

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 20/09/2017 - 26/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 3
Diameter (mm) 100

Easting 334155.23
Northing 6249300.14
Grid Ref GDA94_MGA_zone_56
Elevation 21.57
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	2.7	SRT_CBH005_0.12_0.2			PAVERS				21.5
			SRT_CBH005_0.45_0.55 (FD01_21092017)			CONCRETE	D	VD	strong hydrocarbon odour, hydrocarbon staining, Solidified bituminous material, some coal	
0.5		1.8				GRAVEL, coarse, angular, black (FILL)	SM	F		21
						CLAY, low to medium plasticity, orange- brown (FILL)				
1		1	SRT_CBH005_0.9_1			CLAY, low plasticity, brown and grey (RESIDUAL)	SM	VST	no odour, no staining	20.5
1.5	PT								no odour, no staining	20
2		1.1	SRT_CBH005_2.0_2.1							19.5
	SFA					SHALE, brown and grey, to highly weathered (WEATHERED SHALE)	D	H	no odour, no staining	
2.5										19
3			SRT_CBH005_2.9_3			Termination Depth at: 3.00 m. Target depth achieved.				18.5
3.5										18
4										17.5
4.5										17
5										16.5
5.5										16
6										15.5
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH006

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 22/09/2017 - 20/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 6
Diameter (mm) 100

Easting 334085.23
Northing 6249172.6
Grid Ref GDA94_MGA_zone_56
Elevation 21.52
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	1.8	SRT_CBH006_0.1_0.2			PAVERS				21.5
						CONCRETE				
0.5		1	SRT_CBH006_0.4_0.5			Gravelly CLAY, low plasticity, brown to, some sand (FILL)	SM	S	no odour, no staining	21
1		1	SRT_CBH006_0.9_1			Clayey SAND, medium, pale brown, some low plasticity clay (ALLUVIUM)	SM	MD	no odour, no staining	20.5
1.5	PT	0.9	SRT_CBH006_1.5_1.6							20
2		0.9	SRT_CBH006_2.0_2.1							19.5
2.5										19
3		0.5	SRT_CBH006_3.0_3.1							18.5
3.5						SAND, fine, pale brown mottled (ALLUVIUM)	SM	MD	no odour, no staining	18
4		0.4	SRT_CBH006_4.0_4.1							17.5
4.5						CLAY, low plasticity, orange- brown mottled grey (RESIDUAL)	SM	ST	no odour, no staining	17
5		0.4	SRT_CBH006_5.0_5.1							16.5
5.5										16
6		0.4	SRT_CBH006_5.9_6							15.5
						Termination Depth at: 6.00 m. Target depth achieved.				
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL SRT_CBH007

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 22/09/2017 - 22/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 7
Diameter (mm) 100

Easting, Northing 334103.33, 6249192.38
Grid Ref GDA94_MGA_zone_56
Elevation 21.56
Collar RL 21.47
Logged By MW / TN
Checked By HM

B.C.L No. N/A **Casing** PVC (Class 18) **Screen** 0.5mm Slotted PVC (Class 18) **Surface Completion** Gatic

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	2	SRT_CBH007_0.3_0.35		Cement		PAVERS				21.5
		<0.1	SRT_CBH007_0.4_0.5				CONCRETE	D		hydrocarbon odour,	
0.5							GRAVEL, medium to coarse, angular, dark grey to black (FILL)	SM		hydrocarbon staining, Solidified bituminous material, some coal	21
1		<0.1	SRT_CBH007_0.9_1				SAND, medium, pale brown, trace fine to medium gravel (FILL)			no odour, no staining	20.5
1.5	PT	3	SRT_CBH007_1.5_1.6		Grout		Silty SAND, medium, pale brown (ALLUVIUM)	SM		no odour, no staining	20
2		2.2	SRT_CBH007_2.1_2.2 (FD01_22092017)				CLAY, low plasticity, orange- brown mottled grey (RESIDUAL)	SM	VST	no odour, no staining	19.5
2.5											19
3		<0.1	SRT_CBH007_3.1_3.2		Bentonite						18.5
3.5											18
4		<0.1	SRT_CBH007_3.9_4								17.5
4.5	SFA										17
5		<0.1	SRT_CBH007_4.9_5		Gravel						16.5
5.5											16
6		<0.1	SRT_CBH007_5.9_6	▽			SHALE, pale grey, moderately to highly weathered (WEATHERED SHALE)	D	H	no odour, no staining	15.5
6.5											15
7		<0.1	SRT_CBH007_6.9_7				Termination Depth at: 7.00 m. Refusal on bedrock.				14.5
7.5											14
8											13.5
8.5											13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH008

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 19/09/2017 - 20/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 2.2
Diameter (mm) 100

Easting 334133.83
Northing 6249231.26
Grid Ref GDA94_MGA_zone_56
Elevation 21.68
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	2	SRT_CBH008_0.15_0.2			PAVERS	D	MD	hydrocarbon odour, hydrocarbon staining, some coal	21.5
		0.2	SRT_CBH008_0.4_0.5			CONCRETE	D	MD		
0.5						Sandy GRAVEL, coarse, angular, black (FILL)				21
		<0.1	SRT_CBH008_0.9_1			Clayey GRAVEL, fine and coarse, brown and grey (FILL)			no odour, no staining	
1		0.5	SRT_CBH008_1.1_1.2							
	PT					CLAY, low plasticity, orange- brown and grey (RESIDUAL)	SM	VST	no odour, no staining	20.5
1.5		0.5	SRT_CBH008_1.6_1.7							20
	SFA					SHALE, dark grey, highly weathered (WEATHERED SHALE)	D	H	no odour, no staining	
2		0.6	SRT_CBH008_2.1_2.2							19.5
						Termination Depth at: 2.20 m. Refusal on bedrock.				
2.5										19
3										18.5
3.5										18
4										17.5
4.5										17
5										16.5
5.5										16
6										15.5
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH009

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 19/09/2017 - 24/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 3
Diameter (mm) 100

Easting 334148.16
Northing 6249254.06
Grid Ref GDA94_MGA_zone_56
Elevation 21.67
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	0.9	SRT_CBH009_0.15_0.25 (FD01_180917)			PAVERS				21.5
						CONCRETE	D	MD	hydrocarbon odour,	
0.5		0.4	SRT_CBH009_0.4_0.5			Sandy GRAVEL, coarse, angular, black (FILL)	SM	ST	hydrocarbon staining, some coal	21
						Gravelly CLAY, low to medium plasticity, brown and grey (FILL)			no odour, no staining	
1		0.5	SRT_CBH009_0.9_1							
	PT					CLAY, low plasticity, orange- brown and grey (RESIDUAL)	SM	VST	no odour, no staining	20.5
1.5										20
2		0.6	SRT_CBH009_1.9_2			SHALE, dark grey, highly weathered (WEATHERED SHALE)	D	H	no odour, no staining	
	SFA									19.5
2.5										19
3		0.4	SRT_CBH009_2.9_3							
						Termination Depth at: 3.00 m. Target depth achieved.				18.5
3.5										18
4										17.5
4.5										17
5										16.5
5.5										16
6										15.5
6.5										15
7										14.5
7.5										14
8										13.5
8.5										13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL SRT_CBH010

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 24/09/2017 - 25/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 4.8
Diameter (mm) 100

Easting, Northing 334172.46, 6249292.79
Grid Ref GDA94_MGA_zone_56
Elevation 21.65
Collar RL 21.55
Logged By MW / TN
Checked By HM

B.C.L No. N/A **Casing** PVC (Class 18) **Screen** 0.5mm Slotted PVC (Class 18) **Surface Completion** Gatic

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	9.3	SRT_CBH010_0.2_0.25		Cement		PAVERS				21.5
							CONCRETE	D	MD	strong hydrocarbon odour,	
0.5		1.7	SRT_CBH010_0.45_0.5		Grout		Sandy GRAVEL, medium to coarse, angular, black (FILL)	SM	F	hydrocarbon staining, some coal, with coal refuse	21
1		0.9	SRT_CBH010_0.9_1		Bentonite		Gravelly CLAY, low to medium plasticity, orange- brown (FILL)	SM	VST	no odour, no staining	
1.5	PT	<0.1	SRT_CBH010_1.6_1.7				Gravelly CLAY, low plasticity, brown and pale grey (RESIDUAL)			no odour, no staining	20.5
2	SFA						SHALE, brown to pale grey, moderately to highly weathered (WEATHERED SHALE)	D	VST	no odour, no staining	20
2.5											19.5
3			SRT_CBH010_2.9_3		Gravel						19
3.5											18.5
4		2.9	SRT_CBH010_3.9_4								18
4.5											17.5
5							Termination Depth at: 4.80 m. Refusal on bedrock.				17
5.5											16.5
6											16
6.5											15.5
7											15
7.5											14.5
8											14
8.5											13.5
											13

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH011

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 24/10/2017 - 24/10/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Geoprobe
Drill Method PT / SFA
Total Depth (m) 4.2
Diameter (mm) 125

Easting 334097
Northing 6249198
Grid Ref GDA94_MGA_zone_56
Elevation
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	0.3	SRT_CBH011_0.2_0.3			Gravelly COBBLES, angular, grey, ballast cobbles and gravels (FILL)	D	MD	no odour, hydrocarbon staining, ballast	0
0.5										-0.5
1		0	SRT_CBH011_1.0_1.1 (SRT_BD01_231017)			Sandy CLAY, low to medium plasticity, orange and brown (RESIDUAL)	M	F	no odour, no staining	-1
1.5	PT									-1.5
2		0	SRT_CBH011_2.1_2.2							-2
2.5						CLAY, medium plasticity, pale grey (RESIDUAL)	M	VST	no odour, no staining	-2.5
3		0	SRT_CBH011_3.1_3.2							-3
3.5										-3.5
4		0	SRT_CBH011_4.1_4.2			CLAY, medium plasticity, pale grey (WEATHERED SHALE)	M	H	no odour, no staining	-4
4.5						Termination Depth at: 4.20 m. Target depth achieved.				-4.5
5										-5
5.5										-5.5
6										-6
6.5										-6.5
7										-7
7.5										-7.5
8										-8
8.5										-8.5

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH012

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 24/10/2017 - 24/10/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Geoprobe
Drill Method PT / SFA
Total Depth (m) 3
Diameter (mm) 125

Easting 334156
Northing 6249287
Grid Ref GDA94_MGA_zone_56
Elevation
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD									0
0.5		0	SRT_CBH012_0.4_0.5			Gravelly COBBLES, well graded, angular, grey, ballast cobbles and gravels (FILL)	D	MD	no odour, hydrocarbon staining, ballast	-0.5
1	PT	0	SRT_CBH012_1.0_1.1			CLAY, low plasticity, grey mottled brown (RESIDUAL)	SM	ST	no odour, no staining	-1
1.5		0	SRT_CBH012_1.6_1.7							-1.5
2	SFA					SHALE, pale grey and brown, moderate to highly weathered (WEATHERED SHALE)	D	H	no odour, iron oxide staining	-2
2.5		0	SRT_CBH012_2.8_3							-2.5
3						Termination Depth at: 3.00 m. Target depth achieved.				-3
3.5										-3.5
4										-4
4.5										-4.5
5										-5
5.5										-5.5
6										-6
6.5										-6.5
7										-7
7.5										-7.5
8										-8
8.5										-8.5

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH013

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 25/10/2017 - 24/10/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Geoprobe
Drill Method PT / SFA
Total Depth (m) 6
Diameter (mm) 125

Easting 334097.33
Northing 6249171.46
Grid Ref GDA94_MGA_zone_56
Elevation 20.35
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	0	SRT_CBH013_0.2_0.3			ASPHALT				20
0.5						Sandy GRAVEL, medium, angular, grey, ballast gravels (FILL)	D	MD	no odour, no staining, ballast	
						SAND, medium, pale brown (FILL)	VM	MD	no odour, no staining, whole bricks and fragments	
		0	SRT_CBH013_0.8_0.9 (SRT_BD01_251017)			Clayey SAND, fine to medium, pale brown, some low plasticity clay (ALLUVIUM)	M	MD	no odour, no staining	19.5
1										
1.5	PT									19
2		0	SRT_CBH013_2.1_2.2			Sandy CLAY, low plasticity, orange mottled brown (RESIDUAL)	M	S	no odour, no staining	18.5
2.5										18
3		0	SRT_CBH013_3.1_3.2			Gravelly CLAY, low plasticity, orange mottled brown, some fine to medium ironstone gravels (RESIDUAL)	M	S	no odour, no staining	17.5
3.5										17
4		0	SRT_CBH013_4.1_4.2							16.5
4.5										16
5		0	SRT_CBH013_5.1_5.2							15.5
5.5										15
6		0	SRT_CBH013_5.9_6			SHALE, grey, completely to highly weathered (WEATHERED SHALE)	SM	VST	no odour, no staining	14.5
						Termination Depth at: 6.00 m. Target depth achieved.				14
6.5										13.5
7										13
7.5										12.5
8										12
8.5										11.5

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH014

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 24/10/2017 - 24/10/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Geoprobe
Drill Method PT / SFA
Total Depth (m) 3
Diameter (mm) 125

Easting 334141.12
Northing 6249232.57
Grid Ref GDA94_MGA_zone_56
Elevation 20.21
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD					ASPHALT				20
						COBBLES, dark grey, ballast cobbles and gravels (FILL)	M	MD	no odour, no staining, ballast	
0.5		0	SRT_CBH014_0.4_0.5			Sandy GRAVEL, coarse, angular, dark grey (FILL)	SM	MD	no odour, no staining	19.5
	PT					SHALE, grey and brown, moderately to highly weathered (WEATHERED SHALE)	D	VST	no odour, iron oxide staining	
1		0	SRT_CBH014_1.1_1.2							19
	SFA									
1.5										18.5
2		0	SRT_CBH014_1.9_2							18
2.5										17.5
3		0	SRT_CBH014_2.9_3			Termination Depth at: 3.00 m. Target depth achieved.				17
3.5										16.5
4										16
4.5										15.5
5										15
5.5										14.5
6										14
6.5										13.5
7										13
7.5										12.5
8										12
8.5										11.5

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

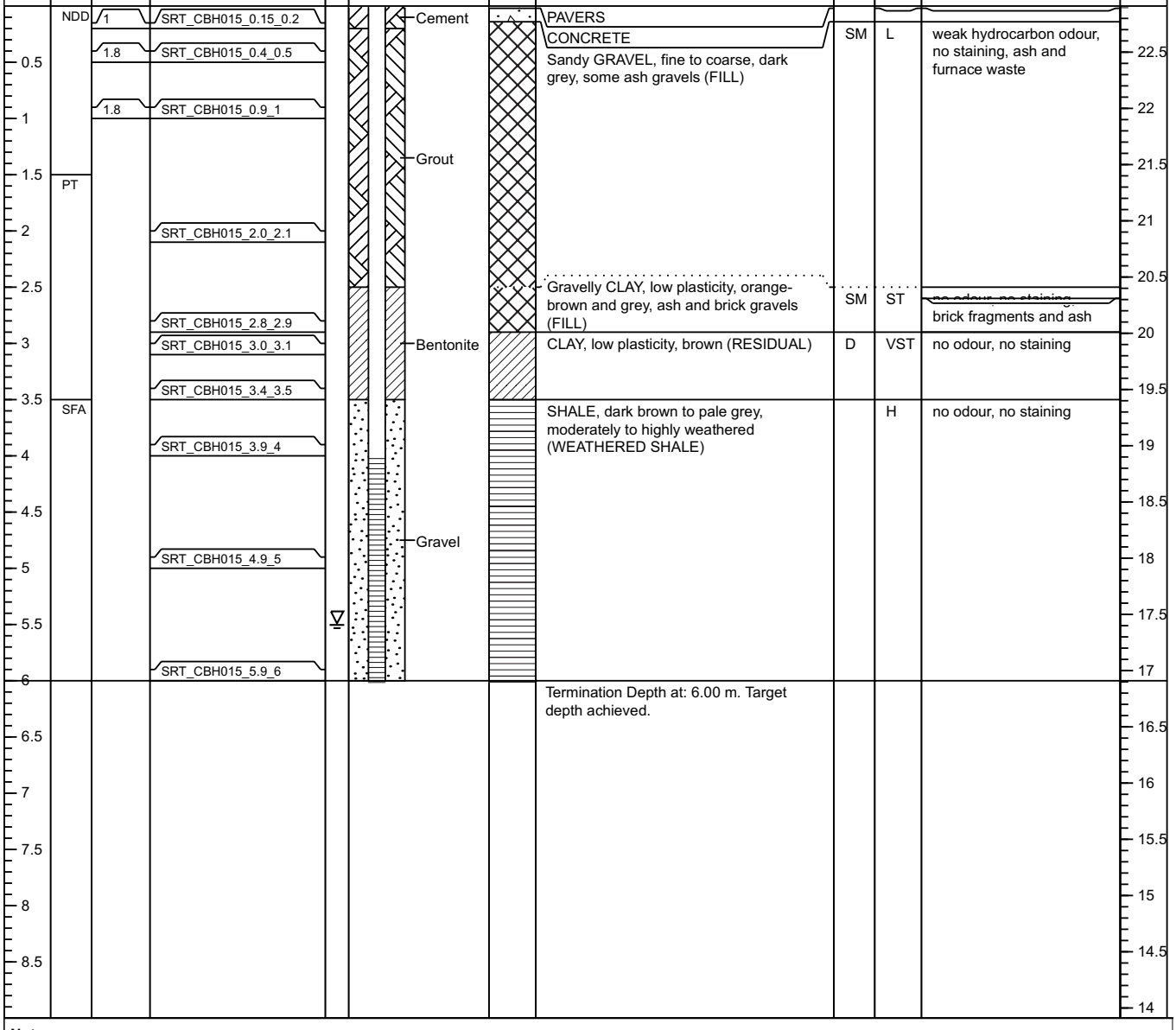
MONITORING WELL SRT_CBH015

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 26/09/2017 - 27/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 6
Diameter (mm) 100

Easting, Northing 334156.85, 6249234.23
Grid Ref GDA94_MGA_zone_56
Elevation 22.91
Collar RL 22.81
Logged By MW / TN
Checked By HM

B.C.L No. N/A **Casing** PVC (Class 18) **Screen** 0.5mm Slotted PVC (Class 18) **Surface Completion** Gatic



Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH016

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 27/09/2017 - 27/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 2.6
Diameter (mm) 100

Easting 334173.76
Northing 6249222.62
Grid Ref GDA94_MGA_zone_56
Elevation 22.83
Logged By MW / TN
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	1.8	SRT_CBH016_0.15_0.2 (FD01_26092017)			PAVERS				22.83
						CONCRETE	SM	MD	no odour, no staining	
0.5		0.8	SRT_CBH016_0.4_0.5			Clayey COBBLES, Angular, brown, sandstone cobbles and gravels (FILL)				22.5
1										22
1.5	PT					Gravelly CLAY, low plasticity, Fine to coarse, dark grey (FILL)	SM	F	no odour, no staining, some ash, slag and fragments of brick, concrete, metal and terracota	21.5
2		<0.1	SRT_CBH016_1.9_2							21
2.5		<0.1	SRT_CBH016_2.5_2.6							20.5
						Termination Depth at: 2.60 m. Refusal on unindentified surface.				
3										20
3.5										19.5
4										19
4.5										18.5
5										18
5.5										17.5
6										17
6.5										16.5
7										16
7.5										15.5
8										15
8.5										14.5
										14

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL SRT_CBH017

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 26/09/2017 - 29/09/2017

Drill Co. Terratest
Driller Pat Tapper
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 5.1
Diameter (mm) 100

Easting, Northing 334185.29, 6249214.42
Grid Ref GDA94_MGA_zone_56
Elevation 22.92
Collar RL 22.82
Logged By MW / TN
Checked By HM

B.C.L No. N/A **Casing** PVC (Class 18) **Screen** 0.5mm Slotted PVC (Class 18) **Surface Completion** Gatic

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD				Cement		PAVERS	D			22.92
0.5		1.7	SRT_CBH017_0.45_0.55 (FD01_28092017)				CONCRETE	SM	MD	weak hydrocarbon odour, no staining, some coal refuse	22.5
1		1.2	SRT_CBH017_0.9_1		Grout		GRAVEL, medium to coarse, angular, black, some fine to medium sandstone gravels (FILL)	SM	MD	no odour, no staining	22
1.5	PT						Clayey SAND, medium to coarse, pale brown, some coarse sandstone gravel and cobbles (FILL)		F	no odour, no staining	21.5
2		1	SRT_CBH017_1.9_2		Bentonite		Sandy CLAY, low plasticity, brown mottled grey, some coarse sandstone gravel and cobbles (FILL)				21
2.5		0.9	SRT_CBH017_2.8_2.9				Clayey SAND, medium to coarse, dark grey to brown (FILL)	SM	MD	no odour, no staining, some ash	20.5
3	SFA						SHALE, dark grey, moderately to highly weathered (WEATHERED SHALE)	SM	VST	no odour, no staining	20
3.5											19.5
4		0.7	SRT_CBH017_3.9_4		Gravel						19
4.5											18.5
5				▽							18
5.5							Termination Depth at: 5.10 m. Target depth achieved.				17.5
6											17
6.5											16.5
7											16
7.5											15.5
8											15
8.5											14.5
											14

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG

ENVIRONMENTAL-SOIL BORE

SOIL BORE SRT_CBH018

Client Transport for NSW
Project City to Southwest Metro - Central
Project No. 212549156
Site Central Station
Location Central Station
Date Drilled 27/09/2017 - 27/09/2017

Drill Co. Terratest
Driller Chris Brest
Rig Type Miniprobe
Drill Method PT / SFA
Total Depth (m) 2.2
Diameter (mm) 100

Easting 334200.96
Northing 6249205.3
Grid Ref GDA94_MGA_zone_56
Elevation 22.9
Logged By MW / CC
Checked By HM

Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials,separate phase liquids, imported fill, ash.	Elevation (m)
0	NDD	1	SRT_CBH018_0.15_0.25			PAVERS				22.9
						CONCRETE	SM	MD	no odour, no staining	
0.5		0.7	SRT_CBH018_0.4_0.5			Clayey COBBLES, brown, some sandstone cobbles and gravels (FILL)				22.5
1		0.8	SRT_CBH018_0.9_1							22
1.5	PT	1.3	SRT_CBH018_1.5_1.65			Gravelly SAND, medium, brown, some clay and sandstone cobbles (FILL)	SM	MD	no odour, no staining	21.5
		1.9	SRT_CBH018_1.65_1.8			Gravelly CLAY, low plasticity, dark grey (RESIDUAL)	D	VST	no odour, no staining	
2		1.2	SRT_CBH018_2.0_2.2							21
2.2						Termination Depth at: 2.20 m. Equipment failure.				20.7
2.5										20.5
3										20
3.5										19.5
4										19
4.5										18.5
5										18
5.5										17.5
6										17
6.5										16.5
7										16
7.5										15.5
8										15
8.5										14.5
										14

Notes

GHD Soil Classifications The GHD Soil Classification is based on Australian Standards AS 1726-1993. This log is not intended for geotechnical purposes.

Drilling Abbreviations	Moisture Abbreviations	Consistency Abbreviations	
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, NDD-Non Destructive Drilling, PT-Pushtube, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler	D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	**Granular Soils** VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense,VD - Very Dense	**Cohesive Soils** VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

BOREHOLE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 1 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH / RL (m)	GRAPHIC LOG	USC SYMBOL	Description: SOIL TYPE, colour, structure, minor components (origin), and ROCK TYPE, colour, grain size, structure, weathering, strength	MOISTURE CONDITION	CONSISTENCY / DENSITY INDEX	COMMENTS / OBSERVATIONS
NDD	N/A		Groundwater Not Observed		0.0			Clayey COBBLES, grey, angular cobbles, orange clay, very stiff, medium plasticity (fill)			FILL
								0.40m			
					1.0			Clayey SAND with cobbles, dark brown, fine to coarse grained, sub-rounded sand, medium to low plasticity clay, numerous bricks and cobbles. Bottle encountered in NDD pit			
					2.0						
CASING								2.40m, SAND, pale grey, fine to medium grained, rare black inclusions, occasional orange patches.	-	-	
					3.0						
Wash boring											3.40m NDD trench backfilled with stabilised sand on 13/10/2017.
					4.0						
					5.0						

See Standard Sheets for details of abbreviations & basis of descriptions

GHD GEOTECHNICS
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CONSULTING GEOTECHNICAL ENGINEERING AND GEOTECHNICS
www.GHD.com

AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD NON-CORE DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 09:56 10.0.000

BOREHOLE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 2 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH / RL (m)	GRAPHIC LOG	USC SYMBOL	Description: SOIL TYPE, colour, structure, minor components (origin), and ROCK TYPE, colour, grain size, structure, weathering, strength	MOISTURE CONDITION	CONSISTENCY / DENSITY INDEX	COMMENTS / OBSERVATIONS
Advance Casing (Ø115mm)	N/A		Groundwater Not Observed		5.0			Clayey SAND with cobbles, dark brown, fine to coarse grained, sub-rounded sand, medium to low plasticity clay, numerous bricks and cobbles. Bottle encountered in NDD pit *(continued)*	-	-	
CASING					6.0						
					7.0						
					7.70m			CLAY Inferred (residual)			RESIDUAL 7.70m More difficulty advancing casing.
					8.0						
Flush boring with roller core bit					8.90m			CLAY Inferred, reddish brown			8.90m Bit encountering resistance.
					9.0			9.3m, becoming yellowish brown.			
					9.57m			Continued as Cored Drill Hole			
					10.0						

See Standard Sheets for details of abbreviations & basis of descriptions

GHD GEOTECHNICS
Lvl 2 29 Christie Street, St Leonards NSW 2065 Australia
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CONSULTING GEOTECHNICAL ENGINEERING AND GEOTECHNICS
www.GHD.com

AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD NON-CORE DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 09:56 10.0.000

CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 3 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL				NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral EL .03 VL .1 L .3 M 1 H 3 VH 10 EH	SPACING (mm) 20 40 100 300 1000	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
				5.0							
				5.5							
				6.0							
				6.5							
				7.0							
				7.5							
				8.0							
				8.5							
				9.0							
				9.5		9.57m START CORING AT 9.57m					
HQ3 CASING		0% LOSS		10.0		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced	Fr				9.70, JT, 60°, CN, PLN, SO 9.87, BP, 70°, CN, PLN, SO-RF

See Standard Sheets for details of abbreviations & basis of descriptions

GHD GEOTECHNICS
Lvl 2 29 Christie Street, St Leonards NSW 2065 Australia
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CONSULTING GEOTECHNICAL ENGINEERING AND GEOTECHNICS
www.GHD.com

AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD CORED DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 10:01 10.0.000

CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 4 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL			NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION (ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin))	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral	SPACING (mm)	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ3 CASING		0% LOSS		10.0		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr	EL .03 VL .01 L .03 M .1 H .3 VH 1 EH 10	20 40 100 300 1000		10.14, BP, 80°, CLAY VE (1mm), PLN, SO
				10.5							10.50, BP, 80°, CLAY VE, IR, RF
											10.70, JT, 80°, CLAY, PLN, RF
				11.0							11.00, JT, 90°, CN, UN, SO
		12.10									
		0% LOSS									
			13.74m d=1.53 a=1.9	13.5							
				15.0							

See Standard Sheets for details of abbreviations & basis of descriptions

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AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD CORED DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 10:01 10.0.000

CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 5 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL			NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS / RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	SPACING (mm) 20, 40, 100, 300, 1000	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ3 CASING		15.10 0% LOSS		15.0		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr				15.05, JT, 80°, CN, IR, RF 15.10, BP, 80°, CLAY VE, PLN, SO
				15.5							
				16.0							
				16.5							
				17.0							
				17.5							
		18.10 0% LOSS		18.0							
				18.5							18.48, BP, 60°, CN, PLN, SO
				19.0							
				19.5							19.90, BP, 60°, VE, PLN, RF, <1 mm
				20.0							

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 6 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL				NATURAL FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral EL .03 VL .1 L .3 M 1 H 3 VH 10 EH	SPACING (mm) 20 40 100 300 1000	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
		0% LOSS	20.10m PK-01	20.0		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr				
						20.29m, becoming fine grained.					20.29, BP, 60°, CN, PLN, SO
				20.5							
						20.58m, becoming coarse grained, thin grey and brown laminations, generally thinly to medium spaced (60-300mm).					20.58, BP, 60°, VE, PLN, SO, <1 mm
			21.00m d=1.27 a=1.52	21.0							
		21.10 0% LOSS									
				21.5							
				22.0							
HQ3 CASING				22.5							22.46, BP, 60°, VE, PLN, SO, 1 mm
				23.0							
				23.5							
		24.10 0% LOSS		24.0							
				24.5							24.62, BP, 65°, CN, PLN, SO
				25.0							

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 7 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING; WATER
(CORE LOSS RUN %) / DRILL DEPTH
SAMPLES & FIELD TESTS
DEPTH/RL (m)
GRAPHIC LOG
DESCRIPTION
ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)
WEATHERING
ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral: EL .03, VL .1, L .3, M 1, H 3, VH 10, EH
SPACING (mm): 20, 40, 100, 300, 1000
VISUAL
ADDITIONAL DATA (joints, partings, seams, zones & veins)
Fracture Type, orientation, infilling or coating, shape, roughness, other

DEPTH/RL (m)	(CORE LOSS RUN %) / DRILL DEPTH	SAMPLES & FIELD TESTS	DESCRIPTION	WEATHERING	ADDITIONAL DATA
25.0	0% LOSS		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr	
25.5					
26.0					
			26.25-26.3m, SILTSTONE clast, 75mm thick (inclined) dark grey.		26.25, CONTACT, 40°, UN, RF, possible striations 26.30, CONTACT, 60°, closed
26.5		26.60m PK-02			
27.0		27.00m d=1.47			
	27.10	27.10m			27.10: Finish drilling 13/10/2017.
	0% LOSS				
27.5					
28.0					28.20, BP, 40°, VE, PLN, SO
28.5					28.73, SM, 60°, very low strength siltstone, contacts, are PLN, SO, silt VE (<1mm)
29.0	29.09				
	0% LOSS				29.28, BP, 80°, CN, PLN, SO
29.5					
30.0					

HQ3 CASING

See Standard Sheets for details of abbreviations & basis of descriptions

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 8 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL			NATURAL FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS / RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	DESCRIPTION: ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness, alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral	SPACING (mm)	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
		0% LOSS		30.0	SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr	EL / VL / L / M / H / VH / EH (-0.03 / -0.1 / -0.3 / -1 / -3 / -10)	20 / 40 / 100 / 300 / 1000	31.28, JT, 80°, CN, PLN, SO-RF
				30.5					
				31.0					
				31.5					
		32.10		32.0					
		0% LOSS							
HQ3 CASING			32.60m PK-03	32.5					
				33.0					
		33.10	33.10m						
		0% LOSS		33.5					
			34.00m d=1.31 a=0.99	34.0					34.20, BP, 55°, CN, PLN, RF
				34.5					
				35.0					

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 9 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL			NATURAL FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS / RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION (ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin))	WEATHERING	SPACING (mm) / VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
		0% LOSS		35.0		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr		
				35.5					35.54, BP, 70°, CN, PLN, SO
		36.10		36.0					
		0% LOSS							36.13, SM, 60°, PLN, weathered siltstone, 1-3 mm, ???
				36.5					
				37.0					37.00, JT, 70°, SILT VE (1mm), PLN, SO
				37.5					
				38.0					
				38.5		38.6m, occasional gravel sized siltstone clasts, angular, low to very low strength.			
			39.00m d=1.3 A1449	39.0					38.87, JT, 80°, CN, IR, RF, possibly open 38.87: Driller reports complete water loss. 38.95, JT, 80°, CN, IR, RF, possibly open 39.08, JT, 75°, CN, PLN, RF 39.10: Finish drilling 14/10/2017. 39.21, JT, 60°, SILT VE (<1mm), PLN, RF
		39.10 0% LOSS	39.10m PK-04						
				39.5		39.53m, gravel sized (20-30mm) siltstone clasts, very low to low strength, adjacent incipient/non-persistent joint.			39.53, Non-persistent/incipient JT, 60°, PLN, RF 39.57, JT, 50°, CN, CU, RF 39.77, BP, 60°, SILT VE (<1mm), PLN, SO-RF 39.81, BP, 60°, SILT VE (<1mm), PLN, SO-RF
				40.0					

HQ3 CASING

See Standard Sheets for details of abbreviations & basis of descriptions

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 10 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL			NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS / RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral EL .03 VL .1 L .3 M 1 H 3 VH 10 EH	SPACING (mm) 20 40 100 300 1000	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ3 CASING		0% LOSS		40.0		SANDSTONE, pale grey with thin dark grey laminations, fine to coarse grained, laminations are typically extremely to very closely spaced *(continued)*	Fr				
				40.5							
				41.0							
				41.5							41.18, SM, 60-80°, Sandy CLAY (10-20mm), low plasticity, sides irregular, RF
		42.10		42.0							
		0% LOSS		42.5							
				43.0							
				43.5							43.30, BP, 60°, CN, IR, RF, walls are dark grey
				44.0							44.00, BP, 60°, CN, PLN, RF
				44.5							
				45.0							

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Road 15 Central Station

HOLE NO : SRT BH086B
FILE / JOB NO : 21-25491-55
SHEET : 11 OF 11

POSITION : E: 334067, N: 6249144 (MGA94 / 56) SURFACE RL : 20.50 (AHD) ANGLE FROM HORIZONTAL: 60° TO 010°

RIG TYPE : Hydrop Scout T026 MOUNTING : Wheeled CONTRACTOR : Terratest DRILLER : Trevor Higgs

DATE STARTED : 12/10/17 DATE COMPLETED : 16/10/17 DATE LOGGED : 13/10/17 LOGGED BY : AN CHECKED BY : JH

DRILLING					MATERIAL				NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION (ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin))	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral (EL <0.03, VL 0.03-0.1, L 0.1-0.3, M 0.3-1, H 1-3, VH 3-10, EH >10)	SPACING (mm) (20, 40, 100, 300, 1000)	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ3 ▼		45.10	45.10m	45.0		45.10m	Fr				45.10, 45.10m: Drilling finished 15/10/2017. televiewer and bore finishing done 16/10/2017.
						BOREHOLE SRT BH086B TERMINATED AT 45.10 m Target depth Bore grouted, top caved in with sand. VWP installed at 38.9m.					
				45.5							
				46.0							
				46.5							
				47.0							
				47.5							
				48.0							
				48.5							
				49.0							
				49.5							
				50.0							

See Standard Sheets for details of abbreviations & basis of descriptions

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BOREHOLE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 1 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH / RL (m)	GRAPHIC LOG	USC SYMBOL	Description: SOIL TYPE, colour, structure,minor components (origin), and ROCK TYPE, colour, grain size, structure, weathering, strength	MOISTURE CONDITION	CONSISTENCY/ DENSITY INDEX	COMMENTS / OBSERVATIONS
Pothole CASING	N/A				0.0			GRAVEL, grey, black, sub-angular to sub-rounded gravel, with cobbles to 80mm sub-angular (fill)			FILL 0.00m Ballast 120mm below Top of Rail.
				0.40m D 0.50m				0.40m			0.40m Contamination sample, PID= ppm
								Sandy GRAVEL, brown-grey, sub-angular gravel, fine to coarse grained sand			
				0.70m D 0.80m				0.60m Sandy CLAY, pink-grey, high plasticity clay, fine to medium grained sand, with gravel, red-brown, sub-rounded (residual)			RESIDUAL 0.60m 2.4; Layer of geofabric. 0.70m Contamination sample, PID= ppm
SOLID FLIGHT AUGER HQ Casing					1.0		CH				
					2.0			2.1m, becoming gravelly sandy CLAY.			
			Groundwater Not Observed					2.40m Continued as Cored Drill Hole			2.39m Augered to 2.4m, cased bore.
					3.0						
					4.0						
					5.0						

See Standard Sheets for details of abbreviations & basis of descriptions

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AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD NON-CORE DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 11:02 10.0.000

CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 2 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

DRILLING & CASING	WATER	(CORE LOSS RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION (ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin))	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	SPACING (mm) 20 40 100 300 1000	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ	Water	33% LOSS		0.0							
				0.5							
				1.0							
				1.5							
				2.0							
						2.40m START CORING AT 2.40m					
				2.5		CORE LOSS 0.30m (2.40-2.70)					2.42: Note: Defects are measured relative to core axis.
			2.70m UCS-CS			2.70m					
			2.85m			CLAY (CH), greyish brown, high plasticity clay, trace gravels, fine grained, angular, (completely weathered siltstone); firm to very stiff					
						2.86m SILTSTONE, reddish brown, recovered as coarse grained gravel/cobbles, angular, clay seams, remouldable to clay, low plasticity	EW - HW				2.86-3.00, FZ, coarse to medium gravel, medium to high plasticity clay
		3.30 0% LOSS	3.30m d=0.22	3.0		3.30m SILTSTONE, grey with orange, red and grey bands	MW				3.00-3.06, SM, 45°, gravelly CLAY, H-St 3.15, JT, 75°, FE, PLN, SO
			a=0.4	3.5							3.48, BP, 70°, silty clay VE (1mm), PLN, RF 3.57, BP, 80°, FE, PLN, RF
							HW				3.70, SM, 80-90°, CLAY 10-20mm, St-VSt 3.77, JT, 50°, CN, PLN, SO 3.83, SM, 80°, CLAY, 130 mm
						3.91m SANDSTONE, grey with red brown bands and striations, fine to medium grained					
			4.20m d=0.13 a=0.43	4.0							4.07, JT, 70°, FE, PLN, SO 4.13, JT, 90°, FE, IR, RF 4.19, JT, 70°, FE, IR, RF
							MW				4.29, JT, 90°, FE, IR, RF
				4.5							4.44, SM, 70°, silt 10mm, PLN 4.55, JT, 30°, FE, PLN, RF
							HW				4.63-4.70, SM, 80°, silty gravel
		4.80 10% LOSS				4.80m 4.7m, dark red, black, orange.					
				5.0		CORE LOSS 0.31m (4.80-5.11)					

See Standard Sheets for details of abbreviations & basis of descriptions

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AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD CORED DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 11:18 10.0.000

CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 3 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING					MATERIAL				NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION (ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin))	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	SPACING (mm) (20, 40, 100, 300, 1000)	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ	Water	10% LOSS		5.0		5.11m CORE LOSS 0.31m (4.80-5.11) *(continued)*					
						SANDSTONE as above 5.11m, orange brown.	MW				5.12, BP, 80°, CLAY, PLN, RF 5.16, BP, 80°, CLAY, PLN, RF 5.18, BP, 80°, CLAY, PLN, RF 5.23, SM, 80°, CLAY, 10 mm, soft 5.32, JT, 90°, CN, PLN, RF
				5.5		5.6m, grey with pale orange bands.	SW				
				6.0							6.40, JT, 90°, FE, PLN, RF 6.50, JT, 90°, FE, PLN, RF
				6.5							
				7.0							7.00, JT, 40°, FE, PLN, RF
											7.25, BP, 75°, silt VE (<1mm), PLN, RF 7.30, SM, 75°, CLAY 10mm, S-F 7.35, BP, 75°, sandy silt, IR, RF
		7.80		7.5							7.60, JT, 20°, FE, UN, RF
		0% LOSS				7.8m, pale grey, with dark grey laminations.	SW - Fr				
				8.0							
				8.5							
				9.0							
				9.5							9.78, SM, 60°, sandy silt (soft), 15 mm
				10.0							

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 4 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING: HQ; WATER: Water
(CORE LOSS RUN %) DRILL DEPTH: 0% LOSS; 10.80; 10% LOSS; 13.60; 18% LOSS
SAMPLES & FIELD TESTS: 10.10m d=0.18; a=2.84
DEPTH/RL (m)
GRAPHIC LOG
DESCRIPTION (ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin))
WEATHERING
ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral: EL .03, VL .03-.1, L .1-.3, M .3-1, H 1-3, VH 3-10, EH 10
SPACING (mm): 20, 40, 100, 300, 1000
VISUAL
ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other

Depth	Description	Weathering	Additional Data
10.0	SANDSTONE as above *(continued)*	SW - Fr	10.20, JT, 10°, CN, IR, RF, non-persistent
10.5			
11.0			11.09, JT, 60°, CN, PLN, RF
11.5	11.5m, grading grey.		11.65, JT, 45°, not persistent, TI
12.0			12.20, JT, 70°, silt VE, PLN, RF, 1 mm
	12.3m, fine grained carbonaceous sandstone band, 250mm.		12.40, JT, 20°, IR, RF, CO
12.5	12.45m, with quartz ? veining.		
	12.93m		12.84, QZ vein, 60-80°, healed, <1mm thick
	13.00m CORE LOSS 0.07m (12.93-13.00)		
13.0	DOLERITE, pale grey to grey, coarse grained sand sized particles (dark grey) in pale grey matrix, massive	HW - MW	13.06, JT, 20°, CN, PLN, RF; 13.07, JT, 30°, CN, PLN, RF; 13.15-13.22, JTx3, 30-50°, CN, PLN, RF; 13.30, JT, 70°, silt VE (1mm), non-persistent
	13.40m		
13.5	CORE LOSS 0.51m (13.40-13.91)		
	13.91m		
14.0	DOLERITE as above	HW - MW	14.00, JT, 45°, CN, PLN, RF; 14.25, JT, 60°, CN, IR, RF; 14.31, JT, 60°, PLN, closed
14.5			14.50, SM, 60°, EW rock 10mm, IR, RF; 14.40-14.65, non-persistent joints, irregular 0-90°
15.0			14.82-14.93, SM, extremely weathered, extremely low strength rock, quartz inclusion

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 5 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING; WATER
(CORE LOSS RUN %) / DRILL DEPTH
SAMPLES & FIELD TESTS
DEPTH/RL (m)
GRAPHIC LOG
DESCRIPTION
ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)
WEATHERING
ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral
SPACING (mm)
VISUAL
ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other

DEPTH/RL (m)	(CORE LOSS RUN %) / DRILL DEPTH	SAMPLES & FIELD TESTS	DESCRIPTION	WEATHERING	ADDITIONAL DATA
15.0	18% LOSS	15.05m UCS-CS 15.20m	DOLERITE as above *(continued)* 15.05m, core shows signs of slight washout.	HW - MW	
15.30	0% LOSS		15.30m QUARTZITE, pale grey, massive, trace bedding	Fr	15.30, JTx2, 60°, silt coating (5mm), PLN, SO
15.5					15.47-15.60, FZ, silty gravel
					15.70-15.77, JTx3, 80-90°, PLN-UN, F
					15.87, JT, 90°, CN, PLN, SO
16.0					15.90, JT, 45°, CN, PLN, RF
					16.15, JT, 60°, QZ, PLN, RF
16.45	0% LOSS				16.30-16.45, FZ, silty gravel
16.5					16.45-16.60, FZ, gravel
					16.63, JT, 45°, IR, RF
					16.64, JT, 60°, PLN, SO-RF
16.80	0% LOSS				16.68, JT, 60°, PLN, RF
17.0					16.88, JT, 25°, CN, UN, RF
					17.18, JT, 40°, CN, UN, RF
					17.34, JT, 70°, CN, IR, RF
					17.42, JT, 90°, CN, IR, RF
17.5					17.50, JT, 10°, CN, IR, RF
18.0					18.00-18.45, FZ, along multiple ~60° defects
18.30	0% LOSS				
18.5					18.50, JT, 70°, CN, IR, RF
					18.57, JT, 70°, CN, IR, RF
					18.80, JT, 80°, CN, IR, RF
					18.85, JT, 30°, CN, ST, RF
					18.90, JTx2, 80-90°, CN, IR, RF
19.0			19.00m DOLERITE, pale grey, recovered as high plasticity clay and fine to medium grained quartz gravel, sub-rounded	EW	19.05, SM, 90°, silty gravel
					19.05-19.10, SMx2, sandy silt, 5-10mm (45°)
					19.15, JT, 45°, CN, PLN, SO-RF
19.30	0% LOSS	19.30m UCS			19.20-19.26, SM, gravelly/sandy silt
					19.32, SM, CLAY, fine grained gravels, 140mm
19.5		19.58m			19.40, SM, CLAY, coarse grained sand., 40mm
			19.58m QUARTZITE, pale grey, massive where altered adjacent to dyke, fine to coarse grained sandstone, indistinctly bedded where fresh	Fr	19.46, JT, 20°, CN, IR, RF
					19.74, JT, 80°, CN, IR, RF
					19.78, JT, 80°, CN, IR, RF
20.0					19.94, JT, 50°, CN, IR, RF

HQ
Water

See Standard Sheets for details of abbreviations & basis of descriptions

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 6 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING: HQ; WATER: Water

(CORE LOSS RUN %) / DRILL DEPTH: 0% LOSS; 20.30; 0% LOSS; 21.30; 0% LOSS; 24.14; 0% LOSS

SAMPLES & FIELD TESTS: 21.10m d=4.83 a=4.18

DEPTH/RL (m): 20.0, 20.5, 21.0, 21.5, 22.0, 22.5, 23.0, 23.5, 24.0, 24.5, 25.0

GRAPHIC LOG: 20.70m

DESCRIPTION
ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)

QUARTZITE, pale grey, massive where altered adjacent to dyke, fine to coarse grained sandstone, indistinctly bedded where fresh *(continued)*

SANDSTONE, pale grey, fine to medium grained, indistinctly bedded at 60° to massive

21.45m, becoming indistinctly bedded, with trace carbonaceous flecks and laminations.

21.7m, carbonaceous sandstone bed, 180mm.

22.0m, with increasing carbonaceous laminations.

22.65m, becoming medium to coarse grained.

23.0m, carbonaceous laminations becoming less frequent.

WEATHERING: Fr; MW; Fr

ESTIMATED STRENGTH
Is(50)MPa ● - Axial ○ - Diametral
EL .03, VL .1, L .3, M 1, H 3, VH 10, EH

SPACING (mm): 20, 40, 100, 300, 1000

VISUAL

ADDITIONAL DATA
(joints, partings, seams, zones & veins)
Fracture Type, orientation, infilling or coating, shape, roughness, other

- 20.11, JT, 40°, CN, IR, RF
- 20.30-20.54, JT, 0-10°, CLAY, IR, SO
- 20.62-20.89, JT, 0-15°, CLAY, IR, RF
- 20.80, JT, 30°, CN, UN, RF
- 21.07, JT, 50°, CN, UN, RF
- 21.60, BP, 70°, CLAY, UN, RF
- 21.71, SM, CLAY, 20 mm
- 21.77, BP, 70°, CLAY, UN, SO
- 21.83, BP, 70°, CLAY, UN, SO
- 21.86, SM, CLAY, 80 mm
- 21.94, SM, Sandy CLAY, VS-S, 60mm
- 22.04, JT, 75°, CN, UN, RF
- 22.05, JT, 45°, CN, UN, RF
- 22.07, JT, 45°, CN, UN, RF
- 22.11, JT, 45°, CN, UN, RF
- 22.66, JT, 60°, CLAY, UN, RF
- 22.77, JT, 60°, CN, UN, RF
- 22.96, JT, 60°, CN, UN, RF
- 23.09, JT, 55°, CN, UN, RF
- 23.24, JT, 60°, CN, UN, RF
- 23.54, JT, 55°, CN, UN, RF
- 23.56, JT, 80°, CN, IR, RF
- 23.57, JT, 80°, CN, IR, RF
- 23.76, JT, 50°, CN, IR, RF
- 23.79, JT, 50°, CN, IR, RF
- 23.85, JT, 40°, CN, IR, RF
- 23.94, JT, 20°, CN, UN, RF
- 24.08, JT, 20°, CN, UN, RF
- 24.75, JT, 40°, CN, IR, RF

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 7 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING; WATER; (CORE LOSS RUN %) DRILL DEPTH
SAMPLES & FIELD TESTS
DEPTH/RL (m)
GRAPHIC LOG
DESCRIPTION
ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)
WEATHERING
ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral: EL .03; VL .03-.1; L .1-.3; M .3-1; H 1-3; VH 3-10; EH 10
SPACING (mm): 20; 40; 100; 300; 1000
VISUAL
ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other

DEPTH/RL (m)	DESCRIPTION	WEATHERING	ADDITIONAL DATA
25.0	SANDSTONE, pale grey, fine to medium grained, indistinctly bedded at 60° to massive *(continued)*	Fr	
			25.26, JT, 80°, CN, IR, RF
			25.26, JT, 20°, CN, UN, RF
			25.34, JT, 25°, CN, IR, RF
25.5			25.55, JT, 30°, CN, IR, RF
			25.63, JT, 50°, CN, UN, RF
			25.64, JT, 50°, CN, UN, RF
			25.66, JT, 50°, CN, UN, RF
25.80	0% LOSS		
26.0			26.10, JT, 90°, CN, IR, RF
			26.12, SM, CLAY, 10 mm, VSt-H
			26.18, JT, 45°, CN, IR, RF
			26.24, JT, 70°, CN, IR, RF
			26.35, JT, 20°, CN, IR, RF
			26.44, SM, Sandy CLAY, 60 mm
26.5	26.55m		26.54, BP, 65°, CN, IR, RF
	SANDSTONE, pale grey, fine to medium grained, distinctly bedded at 50-60°, with carbonaceous laminations		
27.0			
27.30m	PK-01		
27.5			27.66, JT, 60°
			27.72, CB, 65°, CN, PLN, RF
			27.83, BP, 70°, CN, PLN, RF
			27.89, JT, 35°, CLAY, IR, RF
			27.92, BP, 70°, CLAY, PLN, RF
28.0	27.95m, bedding becoming indistinct.		
28.5			
28.77	0% LOSS		28.74, BP, 60°, X, UN, RF
29.0			
			29.35, JT, 50°, CN, PLN, RF
29.5			
			29.86, BP, 70°, CLAY CO, PLN, SO
30.0			

HQ; Water

See Standard Sheets for details of abbreviations & basis of descriptions

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 8 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING; WATER
(CORE LOSS RUN %) DRILL DEPTH
SAMPLES & FIELD TESTS
DEPTH/RL (m)
GRAPHIC LOG
DESCRIPTION
ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)
WEATHERING
ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral
SPACING (mm)
VISUAL
ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other

DEPTH/RL (m)	DESCRIPTION	WEATHERING	ADDITIONAL DATA
30.0	SANDSTONE, pale grey, fine to medium grained, distinctly bedded at 50-60°, with carbonaceous laminations *(continued)*	Fr	30.07, BP, 70°, X CO, PLN, RF
30.5	30.5m, becoming fine to coarse grained.		
	30.75m, becoming fine to medium grained.		
31.0			
			31.39, BP, 60°, CLAY CO, PLN, RF
			31.41, BP, 60°, CLAY CO, PLN, RF
31.5	31.5m, fine grained silty sandstone band, 80mm thickness.		31.55, BP, 60°, CN, PR, RF
			31.62, BP, 70°, CLAY CO, PLN, RF
	32.00m		
32.0	SANDSTONE, pale brown to pale grey, fine to medium grained, massive		
32.5			32.77, JT, 55°, CN, PLN, RF
	33.00m PK-02		
33.0			33.11, BP, 50°, CN, PLN, RF
			33.20, JT, 45°, CN, UN, RF
	33.30m		
	33.37 0% LOSS		
33.5			33.67, BP, 60°, CO CLAY, PLN, SO
			33.82, BP, 60°, CO CLAY, PLN, SO
34.0			34.22, JT, 25°, CN, PR, RF
	34.45m		34.42, JT, 20°, CN, DIS, RF
			34.44, BP, 70°, X CO, PLN, SO
34.5	SANDSTONE, pale grey to pale brown, fine to medium grained, indistinctly to distinctly laminated bedded at 40-50°, with coarse grained beds up to 300mm thickness		34.50, SM, CLAY, 5 mm
			34.93, BP, 70°, CN, PLN, RF
35.0			

0% LOSS

HQ

Water

See Standard Sheets for details of abbreviations & basis of descriptions

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CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 9 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING | MATERIAL | NATURAL FRACTURES

PROGRESS: DRILLING & CASING; WATER
(CORE LOSS RUN %) / DRILL DEPTH
SAMPLES & FIELD TESTS
DEPTH/RL (m)
GRAPHIC LOG
DESCRIPTION
ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)
WEATHERING
ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral (EL, VL, L, M, H, VH, EH)
SPACING (mm)
VISUAL
ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other

DEPTH/RL (m)	DESCRIPTION	WEATHERING	ADDITIONAL DATA
35.0	SANDSTONE, pale grey to pale brown, fine to medium grained, indistinctly to distinctly laminated bedded at 40-50°, with coarse grained beds up to 300mm thickness *(continued)*	Fr	35.08, BP, 60°, CN, IR, RF
	35.24m, extremely weathered siltstone breccia horizon, 80mm thickness.		35.22, BP, 50°, CN, IR, RF 35.24-35.31, SM, 70°, EW Siltstone breccia band
35.5			35.74, JT, 60°, CN, PLN, RF
36.0			35.93, BP, 50°, CO CLAY, PLN, SO 35.98, BP, 50°, CO CLAY, PLN, SO
			36.28, BP, 50°, X CO, PLN, SO
36.37	0% LOSS		
36.5	36.4m, becoming distinctly bedded with some carbonaceous laminations.		
37.0			
	37.15m, becoming distinctly cross-bedded at 30-50°.		
37.5			
38.0			
38.5			38.77, BP, 70°, CLAY CO, UN, RF
			38.91, JT, 0°, CLAY CO, PLN-IR, RF 38.94, BP, 70°, CLAY CO, PLN, RF
39.0			39.11, BP, 70°, CLAY CO, PLN, RF 39.16, BP, 70°, CLAY CO, PLN, RF
39.37	0% LOSS		
39.5			
40.0			

HQ — Water

See Standard Sheets for details of abbreviations & basis of descriptions

GHD GEOTECHNICS
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AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD CORED DRILL HOLE 212549155_CENTRAL STATION.GPJ 13/Dec/2017 11:19 10.0.000

CORE LOG SHEET

CLIENT : Transport for New South Wales
PROJECT : Sydney Metro - Central Station
LOCATION : Tracks 11 & 12 Central Station

HOLE NO : SRT BH087
FILE / JOB NO : 21-25491-55
SHEET : 10 OF 10

POSITION : E: 334127, N: 6249278 (MGA94 / 56) SURFACE RL : 20.00 (AHD) ANGLE FROM HORIZONTAL: 60° TO 017°

RIG TYPE : COMM GEO 205 MOUNTING : Track CONTRACTOR : TERRATEST DRILLER : Anthony Zummo/Bill Mitchell

DATE STARTED : 21/10/17 DATE COMPLETED : 22/10/17 DATE LOGGED : 21/10/17 LOGGED BY : AN/CT/IJ CHECKED BY : JH

DRILLING					MATERIAL				NATURAL FRACTURES		
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) DRILL DEPTH	SAMPLES & FIELD TESTS	DEPTH/RL (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness,alteration, cementation, etc. as applicable) and SOIL TYPE, moisture, colour, consistency, structure, minor components (origin)	WEATHERING	ESTIMATED STRENGTH Is(50)MPa ● - Axial ○ - Diametral EL .03 VL .1 L .3 M 1 H 3 VH 10 EH	SPACING (mm) 20 40 100 300 1000	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones & veins) Fracture Type, orientation, infilling or coating, shape, roughness, other
HQ	Water	0% LOSS 40.40	40.30m	40.0		SANDSTONE, pale grey to pale brown, fine to medium grained, indistinctly to distinctly laminated bedded at 40-50°, with coarse grained beds up to 300mm thickness *(continued)* 40.40m	Fr				
				40.5		BOREHOLE SRT BH087 TERMINATED AT 40.40 m Target depth					
				41.0							
				41.5							
				42.0							
				42.5							
				43.0							
				43.5							
				44.0							
				44.5							
				45.0							

See Standard Sheets for details of abbreviations & basis of descriptions

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AGS 3_1 RTA 1_1 LIB 06.1 GHD 2.02.GLB Log GHD CORED DRILL HOLE 21254915S_CENTRAL STATION.GPJ 13/Dec/2017 11:19 10.0.000

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BOREHOLE: SRT BH039

SHEET: 1 OF 5 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 15 Road
PROJECT No PCS 00013/10701

COORDS: 334174.8 m E 6249282.5 m N MGA94 56
SURFACE RL: 20.17 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 35.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 5/7/16
CHECKED: HB DATE: 20/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD		GWNO	0	0.10 20.07					ASPHALT			ROAD SURFACE
				0.80 0.95					FILL: Sandy GRAVEL medium to coarse grained, angular igneous gravel with medium to coarse grained sand 0.8m : with some clay			FILL
ADT	L-M		1	19.22	S14936 Rec = 450/450 mm SPT 0.95-1.40 m 6, 12, 14 N=26				FILL: CLAY grey and orange brown, with some extremely low shale fragments (20-50mm), with some fine gravel	M - W	VSt	
				1.70 18.47				SC	Gravelly Sandy CLAY medium plasticity, dark grey brown, fine gravel	M	St	RESIDUAL SOIL
			2	2.40	DS 1.90-2.00 m Rec = 100/100 mm							
SHT					Rec = 40/40 mm SPT 2.50-2.54 m 25/40mm N=R				SANDSTONE grey to dark grey, minor iron staining extremely weathered, extremely low to very low strength			BEDROCK
			3						For Continuation Refer to Sheet 2			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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BOREHOLE: SRT BH039

SHEET: 2 OF 5 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 15 Road
PROJECT No PCS 00013/10701

COORDS: 334174.8 m E 6249282.5 m N MGA94 56
SURFACE RL: 20.17 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 35.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 5/7/16
CHECKED: HB DATE: 20/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ei 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, Ex)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
					2.54		Continuation of Sheet 1				
HQ3	No Water Loss	100	0 (100)	3	17.63 3.15		SANDSTONE fine grained, grey, horizontally bedded to disturbed bedding	HW		2.76 m: Bx3, 0°, Pl, Ro, iron Sn 2.89 m: B, 0°, Pl, Ro, iron Sn 2.90 m: B, 0°, Pl, Ro, iron Sn 3.07 m: J, 45°, St, Ro, clay Vr	
					3.31		CORELOSS (SHEAR ZONE)				
					16.86 3.94		INFERRED SANDSTONE medium to coarse grained, purple red brown, cross-bedded at 0-10°, iron stained	SW			
		95	85 (90)	4	16.23		SANDSTONE medium grained, pale grey with grey bands, cross-bedded at 0-20°	FR		3.93 m: B, 10°, St, Ro, iron Sn 4.05 m: J, 70°, Un, Ro, Sn, healed 4.11 m: B, 5°, Pl, Ro, iron Sn 4.35 m: B, 0°, clay Ct, 3 mm, and J, 85°, tight 4.36 m: J, 85°, healed 4.52 m: B, 0-5°, St, Ro, Cn 4.55-4.56 m: SS, 0°, clay with rock fragments, 10 mm 4.58 m: SS, 3 mm	
				5						5.33 m: B, 5°, clay Ct, 3 mm 5.45 m: J, 70°, tight, healed	
				6						5.74 m: J, 30-70°, Un, Ro, iron Sn 5.80 m: J, 30-70°, Un, Ro, iron Sn 5.93 m: J, 40°, Un, Ro, iron Sn	
					6.33 13.81		CORE LOSS	FR			
				7			SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°				
		100	100 (100)	8						7.36 m: J, 20°, Pl, Ro, Cn	
				9	9.07 11.10		from 9.07 to 11.23 m: fine and medium grained with some wavy, carbonaceous laminations				
		100	100 (100)	10							

REVISION C

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BOREHOLE: SRT BH039

CLIENT:	Transport for NSW	COORDS: 334174.8 m E 6249282.5 m N MGA94 56	SHEET: 3 OF 5 REV: C
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.17 m DATUM: AHD	DRILL RIG: Explora
LOCATION:	Central Station - Platform 15 Road	INCLINATION: -90°	CONTRACTOR: Groundtest
PROJECT No	PCS 00013/10701	HOLE DEPTH: 35.00 m	LOGGED: AP DATE: 5/7/16
			CHECKED: HB DATE: 20/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	No Water Loss	100	100 (100)	10			SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°	FR			
				11							
		100	98 (100)	12							
				13							
				14						14.52-14.54 m: SS, 0°, clay with rock fragments, 20 mm 14.60 m: DS, 10°, clay, 5 mm	
				15						14.90 m: J, 40°, Un, Ro, Cn	
		100	100 (100)	16						S14934; 15.95 m 16.08 m: B, 0°, Pl, Ro, clay Ct, =1 mm	
					16.87					16.63 m: J, 25°, Un, Ro, Cn	
	0% Water RETURN			17	3.27		CORE LOSS	FR		16.95 m: J, 60°, Un, Ro, Sn 17.09 m: J, 5°, Pl, Ro, iron Sn	
							SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°				
		100	100 (100)	18						17.86 m: J, 10°, Un, Ro, Cn 17.95 m: Stress test attempt	
		100	100 (100)	19						18.95 m: Stress test attempt	
										19.47-19.52 m: SS, 0-5°, clay with rock fragments, 50 mm	
				20							

REVISION C

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BOREHOLE: SRT BH039

SHEET: 4 OF 5 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 15 Road
PROJECT No PCS 00013/10701

COORDS: 334174.8 m E 6249282.5 m N MGA94 56
SURFACE RL: 20.17 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 35.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 5/7/16
CHECKED: HB DATE: 20/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	0% Water RETURN	100		20			SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°	FR		19.95 m: stress test attempt	
		100	100 (100)								
				21						20.95 m: Stress test attempt 21.20 m: B, 20°, clay Ct, 5 mm 21.32 m: J, 35°, Un, Ro, clay Cn-Vr 21.33 m: J, 20°, Un, Ro, clay Ct, 1 mm	
		100	100 (100)								
				22						21.95 m: stress test attempt	
		100	100 (100)								
				23						22.95 m: Stress test attempt	
		100	100 (100)								
				24						23.95 m: Stress test attempt	
		100	100 (100)								
				25							
		100	100 (100)	26						26.20 m: J, 45°, Un, Ro, clay Vr 26.22 m: J, 35°, Un, Ro, clay Vr	
				27							
				28						27.78 m: CS, 0-5°, 20 mm, VL strength 27.88 m: SS, 0°, 10 mm, sandstone fragments in sandy clay matrix	
		100	99 (100)	29							
				30							

REVISION C

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BOREHOLE: SRT BH039

SHEET: 5 OF 5 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 15 Road
PROJECT No PCS 00013/10701

COORDS: 334174.8 m E 6249282.5 m N MGA94 56
SURFACE RL: 20.17 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 35.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 5/7/16
CHECKED: HB DATE: 20/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	0% Water RETURN	100	100 (100)	30			SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°	FR			
				31						30.83-30.85 m: SS, 0°, 30 mm, sandstone fragments in sandy clay matrix	
										31.41 m: J, 55°, Pl-Un, Ro, Cn	
				32						31.72-31.74 m: SS, 0-10°, 20mm sandstone fragments in sandy clay matrix	
				33						32.84 m: SS, 0-5°, =7 mm, sandy clay	
		100	100 (100)							33.40 m: J, 20°, Pl, Ro, Cn	
				34						34.35 m: B, 0°, Pl, Ro, Cn	
				35	35.00 -14.83		END OF BOREHOLE @ 35.00 m TARGET DEPTH PIEZOMETER INSTALLED ATV/OTV IMAGING COMPLETED				
				36							
				37							
				38							
				39							
				40							

REVISION C

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BOREHOLE: SRT BH040

SHEET: 1 OF 2 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 16 Cess
PROJECT NoPCS 00013/10701

COORDS: 334155.1 m E 6249236.9 m N MGA94 56
SURFACE RL: 21.59 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 7.20 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JRL DATE: 3/9/16
CHECKED: HB DATE: 20/9/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	21.59	DS 0.10-0.15 m Rec = 50/50 mm				FILL: GRAVEL coarse grained, uniform, angular, basalt, dark grey			BALLAST
				0.50								
				21.09					FILL: Silty Sandy GRAVEL fine to coarse grained, poorly graded, angular, grey			FILL
			1									
WB	M H	GWNO		1.70 19.89				CI	CLAY medium plasticity, dark grey	M	St	RESIDUAL SOIL Inferred soil description from material recovered on washbore tip
									For Continuation Refer to Sheet 2			
			2									
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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BOREHOLE: SRT BH040

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SHEET: 2 OF 2 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 16 Cess
PROJECT No PCS 00013/10701

COORDS: 334155.1 m E 6249236.9 m N MGA94 56
SURFACE RL: 21.59 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 7.20 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JRL DATE: 3/9/16
CHECKED: HB DATE: 20/9/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
					1.90		Continuation of Sheet 1				
NMLC	No water loss	100	0 (80)	2	19.69		SHALE brown grey, some iron staining along bedding and joints	HW		1.90-2.20 m: highly fractured 2.19 m: J, 40°, Pl, Sm, Cn 2.21 m: B, 5°, Pl, Sm, Cn 2.25 m: B, 0°, Pl, Sm, Cn 2.35 m: B, 5°, Pl, Sm, Cn 2.43 m: B, 10°, Pl, Sm, Cn 2.49 m: B, 5°, Pl, Sm, Cn 2.52 m: B, 5°, Pl, Sm, Cn 2.57 m: J, 40°, Pl, Sm, Cn 2.61 m: B, 10°, Pl, Sm, clay Vr 2.70-2.75 m: CZ, 0°, some clay infill 2.80-2.90 m: DS, clay/gravel 2.98 m: J, 75°, Pl, clay Ct, 150mm length 3.05-3.10 m: B(x4), 0-5°, Pl, Sm, Cn 3.17-3.20 m: J, 40°, clay Ct, 5m thick, truncated by end of run 3.20-3.20 m: fragmented rock 3.20 m: J, 40°, clay Ct, 5m 3.20-3.20 m: fragmented rock 3.20 m: J, 40°, clay Ct, 5m 3.70-4.00 m: CZ, 0°, clay infill 4.00-4.15 m: B(x4), 0-5°, Pl, Sm, Cn	
		100	14 (85)	3				EW			
				4	4.20			HW			
					17.39		SILTSTONE dark grey	SW			
		100	100 (100)	5						DS 5.50-5.55 m; Rec = 50/50 mm 5.55 m: J, 70°, Pl, Sm, Cn	
					5.70						
				6	15.89		SANDSTONE medium to coarse grained, pale grey, cross bedding at 20°	FR		6.15 m: B, 0°, Pl, Ro, sand Ct	
		100	100 (100)	7						6.90 m: B, 15°, Pl, Sm, clay Ct	
					7.20						
					14.39		END OF BOREHOLE @ 7.20 m TARGET DEPTH GROUTED				
				8							
				9							
				10							

REVISION C

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BOREHOLE: SRT BH043

SHEET: 1 OF 2 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Platform 18 Cess
PROJECT No PCS 00013/10701

COORDS: 334169.1 m E 6249230.1 m N MGA94 56
SURFACE RL: 21.37 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 4.00 m

DRILL RIG: XC
CONTRACTOR: Terratest
LOGGED: LJH DATE: 4/9/16
CHECKED: HB DATE: 20/9/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD	H	GWNO	0	21.37					FILL: GRAVEL coarse grained, angular, basalt, grey	D		BALLAST
				0.50								
				0.70					at 0.5m: geotextile fabric at base of basalt			FILL
ADT	H			20.67	DS 0.70-0.90 m Rec = 200/200 mm				FILL: Sandy GRAVEL fine to coarse grained, angular, grey, with bricks and concrete			
			1	1.00								
WB	L-M			20.37				CI	FILL: Gravelly SAND medium to coarse grained, angular, grey, with some clay	M	St	RESIDUAL SOIL
				1.40					CLAY medium plasticity, brown			
	H			19.97					SHALE brown, low strength, highly weathered			WEATHERED BEDROCK
									For Continuation Refer to Sheet 2			
			2									
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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BOREHOLE: SRT BH043

SHEET: 2 OF 2 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Platform 18 Cess
PROJECT No PCS 00013/10701

COORDS: 334169.1 m E 6249230.1 m N MGA94 56
SURFACE RL: 21.37 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 4.00 m

DRILL RIG: XC
CONTRACTOR: Terratest
LOGGED: LJH DATE: 4/9/16
CHECKED: HB DATE: 20/9/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex 0.03, Vl 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
					1.60		Continuation of Sheet 1				
NMLC	No Water Loss	90	35 (60)	2	1.70 19.67		CORE LOSS SHALE grey and brown-grey, iron staining on bedding and joints	MW HW		1.86 m: J, 40°, Pl, Ro, iron Sn, healed 2.03 m: J, 30°, Pl, Ro, iron Sn 2.06 m: J, 20°, Pl, Ro, iron Sn 2.12 m: J, 40°, Pl, Ro, iron Sn 2.15-2.36 m: J, 70-90°, Un, Ro, iron Sn	
		90	15 (85)	3	2.45 2.60 18.77		CORE LOSS SILTSTONE grey, iron staining on bedding and joints	MW		2.63 m: J, 20°, Pl, Ro, iron Sn 2.67 m: J, 20°, Pl, Ro, iron Sn 2.77 m: B, 5°, Pl, Ro, iron Sn 2.81 m: B, 0°, Pl, Ro, iron Sn 2.88 m: B, 10°, Pl, Ro, iron Sn 2.90 m: J, 70°, Pl, Ro, Cn, discontinuous 2.96 m: J, 10-30°, Un, Sl, Cn 3.00 m: B, 10°, Pl, Ro, iron Sn 3.04 m: J, 20°, Pl, Ro, iron Sn 3.06 m: J, 30°, Pl, Ro, Cn 3.08-3.10 m: Jx2, 20°, sp = 20 mm, Pl, iron Sn, healed 3.12 m: J, 60°, Pl, iron, healed 3.16-3.17 m: Bx3, 15°, sp = 5 mm, Pl, iron Sn, healed 3.17 m: J, 30°, Pl, healed 3.20 m: J, 20-40°, Un, Ro, iron Sn 3.23 m: J, 20°, Pl, Ro, iron Sn 3.27 m: B, 10°, Pl, Sl, clay Vr 3.32 m: J, 20°, Pl, Ro, iron Sn 3.36 m: J, 30°, Pl, Ro, iron Sn 3.38 m: B, 10°, Pl, Sl, clay Vr 3.42 m: J, 20°, Pl, Ro, iron Sn 3.45 m: J, 40°, Pl, Ro, Cn 3.49 m: B, 5°, Pl, Ro, iron Sn 3.51 m: J, 10-20°, Un, iron, healed 3.54 m: J, 20°, Pl, Ro, iron Sn 3.58 m: B, 5°, Pl, Ro, iron Sn 3.65 m: J, 70°, St, healed 3.74 m: J, 40°, Pl, Sl, clay Vr 3.76 m: J, 20°, Pl, Ro, iron Sn	
				4	3.77 17.60 4.00 17.37		SILTSTONE pale grey END OF BOREHOLE @ 4.00 m GROUTED BOREHOLE TERMINATED DUE TO TIME CONSTRAINTS	FR			
				5							
				6							
				7							
				8							
				9							
				10							

REVISION C

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Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

BOREHOLE: SRT BH048

SHEET: 1 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No: PCS 00013/10701

COORDS: 334109.7 m E 6249234.6 m N MGA94 56
SURFACE RL: 21.52 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.13 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 15/7/16
CHECKED: HB DATE: 31/8/16

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	0.10 21.42					CERAMIC TILES OVER CONCRETE SLAB			PLATFORM SURFACE
				0.37					FILL: GRAVEL medium to coarse grained, angular, basalt, dark grey			SUB-BASECOURSE
NDD				21.15					FILL: Gravelly CLAY high plasticity, pale grey, orange to red brown, fine to coarse grained, angular to sub-angular, ironstone gravel, and cobbles			RESIDUAL SOIL
			1		DS 1.10-1.20 m Rec = 100/100 mm							
				1.50 20.02	S16623 Rec = 450/450 mm SPT 1.50-1.95 m 7, 11, 15 N=26			CI	Silty CLAY medium plasticity, pale grey, orange to red brown, with some fine to medium grained, sub-angular, ironstone gravel			
	L		2		DS 1.90-2.00 m Rec = 100/100 mm DS 2.00-2.10 m Rec = 100/100 mm S16621 BDS 2.00-3.00 m Rec = 1000/1000 mm							
ADV		GWNO	3		Rec = 250/370 mm SPT 3.00-3.37 m 11, 15, 4/70mm HB					M	VSt - H	
				3.35 18.17	N>19			CL	Silty CLAY low plasticity, brown to red brown with some dark grey, fine to medium grained, angular to sub-angular, ironstone gravel gravel, gravel easily broken down			
	M		4		DS 4.00-4.10 m Rec = 100/100 mm							
	H			4.60	S16622 Rec = 120/230 mm SPT 4.50-4.73 m 12, 15/80mm HB N>15				LAMINITE dark grey and orange brown, extremely weathered, extremely low strength			WEATHERED BEDROCK
			5						For Continuation Refer to Sheet 2			
			6									
			7									
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH048

SHEET: 2 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334109.7 m E 6249234.6 m N MGA94 56
SURFACE RL: 21.52 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.13 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 15/7/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4	4.73		Continuation of Sheet 1				
NMLC	90% RETURN	100	0 (64)	5	16.79		LAMINITE dark grey, siltstone (75%) interlaminated with orange brown, fine grained sandstone (25%) at 0°	HW		4.84 m: J, 37°, Un, Ro, silty clayey gravel Ct 4.89 m: B, 0°, Pl, Sm, iron Sn, clayey gravel Vn 5.02-5.19 m: DS, 6°, clay and rock fragments 5.21-5.43 m: DZ, 0°, gravelly clay	
								EW			
								HW		5.49 m: B, 0°, Pl, Sm-Ro, iron Sn 5.56 m: B, 0°, Un-St, Sm, clayey gravel Ct, iron Sn 5.60-5.63 m: DZ, 0°, gravelly clay 5.63 m: B, 14°, Un, Sm, iron Sn 5.74 m: B, 5°, Un, Sm, iron Sn 5.79 m: B, 6°, Un, Ro, iron Sn	
					5.85						
				6	15.67		SILTSTONE dark grey	SW		6.20 m: B, 8°, Un, Sm, Cn	
					6.29						
		100	75 (90)		15.23		SANDSTONE fine to medium grained, pale grey with some interbeds of grey siltstone, disturbed bedding			6.45 m: B, 0°, Pl, Sm, Cn	
					6.68			EW		6.61 m: CS, 0°, rock fragments	
					14.84 6.86		SANDSTONE fine to medium grained, pale grey and grey, indistinctly bedded	FR		6.64 m: J, 45°, Pl, Ro, Cn 6.71 m: CS, 0°, rock fragments	
	No Water Loss				14.66 7.09		from 6.85 to 6.94 m: cross-bedded at 21°				
				7	14.43		SANDSTONE medium to medium grained, pale grey, cross-bedded at 0-30°				
		100	100 (100)								
				8							
				9							
		100	100 (100)								
				10							

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH048

SHEET: 3 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334109.7 m E 6249234.6 m N MGA94 56
SURFACE RL: 21.52 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.13 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 15/7/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No Water Loss	100		10			SANDSTONE medium to medium grained, pale grey, cross-bedded at 0-30°	FR			
		100	100 (100)	11							
					11.77 9.75		below 11.77 m: fine to medium grained				
		100	100 (100)	12							
		100	100 (100)	13							
		100	100 (100)	14							
		100	100 (100)	15							
		100	100 (100)	16							
		100	100 (100)	17							
		100	100 (100)	18							
		100	100 (100)	19							
				20							

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH048

SHEET: 4 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334109.7 m E 6249234.6 m N MGA94 56
SURFACE RL: 21.52 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.13 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 15/7/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex 0.03, V 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 200, 1000, 2000)
		100		20	20.13						
					1.39		END OF BOREHOLE @ 20.13 m TARGET DEPTH PIEZOMETER INSTALLED				
				21							
				22							
				23							
				24							
				25							
				26							
				27							
				28							
				29							
				30							

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH049

SHEET: 1 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334163.8 m E 6249319.7 m N MGA94 56
SURFACE RL: 21.40 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.28 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 6/7/16
CHECKED: HB DATE: 13/7/16

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	0.10 21.30					CERAMIC TILES OVER CONCRETE SLAB			PLATFORM SURFACE
NDD				0.60 20.80					FILL: CLAY high plasticity, pale grey, brown and orange, with some fine to medium grained, angular gravel			FILL
			1	1.50					FILL: Silty CLAY high plasticity, pale grey, brown and orange			
ADV		GWNO	2	19.90 2.00 19.40	Rec = 450/450 mm S14941 DS 1.50-2.00 m Rec = 500/500 mm SPT 1.50-1.95 m 4, 6, 11 N=17			CH	CLAY high plasticity, pale grey, red brown and orange, trace fine to medium grained gravel	M	VSt	RESIDUAL SOIL
	M		3		Rec = 450/450 mm S14940 BDS 3.00 m S14942 BDS 3.00-4.00 m Rec = 1000/1000 mm SPT 3.00-3.45 m 2, 1, 2 N=3			CL	Silty Gravelly CLAY low plasticity, pale brown, fine grained gravel	M	S	
			4	4.50 16.90								
	H				Rec = 300/300 mm S14943 DS 4.50-4.60 m Rec = 100/100 mm SPT 4.50-4.80 m 5, 18/150mm HB N=R DS 4.80-4.90 m Rec = 100/100 mm			SP	SAND fine grained, pale grey	M	VD	
			5						For Continuation Refer to Sheet 2			
			6									
			7									
			8									
			9									
			10									

REVISION C

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BOREHOLE: SRT BH049

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

SHEET: 2 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No: PCS 00013/10701

COORDS: 334163.8 m E 6249319.7 m N MGA94 56
SURFACE RL: 21.40 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.28 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 6/7/16
CHECKED: HB DATE: 13/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
					4.90		Continuation of Sheet 1				
				5	16.50		CORE LOSS - 250 mm				
					5.15						
					16.25		SANDSTONE	HW			
					5.33		fine to medium grained, dark red, cross bedded at 0-20°, heavily iron stained				
					16.07		from 5.15-5.33m: heavily iron stained	MW			
		100	100 (100)		16.04		from 5.33-6.00m: iron stained			5.61 m: DS, 13°, clayey sand, 12 mm	
					6.00		from 5.36 to 6.0 m: pale orange				
				6	15.40		SANDSTONE	SW		5.93 m: B, 3°, Pl, Ro, limonite Sn, clayey sand Vn	
					6.33		fine to medium grained, pale grey, disturbed bedding			5.97 m: B, 5°, Un, Ro, limonite Sn, clayey sand Vn	
HQ3					15.07		SANDSTONE	MW			
							fine to medium grained, pale grey, cross bedding at 0-20°			6.41 m: B, 5°, Un, Ro, limonite Sn	
								SW		6.70 m: B, 20°, Un, Ro, limonite Sn	
		100	100 (100)	7						6.86 m: DS, 0°, clayey sand, =5 mm S14938; 6.96 m	
										7.56 m: B, 20°, Un, Ro, limonite Sn	
	No Water Loss			8				FR			
NMLC		100	100 (100)	9							
				10	10.00						

REVISION C

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BOREHOLE: SRT BH049

SHEET: 3 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334163.8 m E 6249319.7 m N MGA94 56
SURFACE RL: 21.40 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.28 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 6/7/16
CHECKED: HB DATE: 13/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No Water Loss	100		10	11.40		SANDSTONE fine to medium grained, dark red, cross bedding at 0-20°, heavily iron stained from 10.35-13.37m: bedding indistinct	FR			
					10.35						
					11.05						
		100	100 (100)	11							
				12							
					12.76						
					8.64		from 12.76 to 13.66 m: fine to medium grained				
		100	100 (100)	13							
				14							
				15							
				16						15.83 m: B, 9°, Pl, Ro, sand Vr	
					16.36						
					5.04		from 16.36 to 17.11 m: massive				
		100	100 (100)	17							
				18							
				19							
		100	100 (100)	20							

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH049

SHEET: 4 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334163.8 m E 6249319.7 m N MGA94 56
SURFACE RL: 21.40 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.28 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 6/7/16
CHECKED: HB DATE: 13/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
		100	100 (100)	20	20.28			FR			
					1.12		END OF BOREHOLE @ 20.28 m TARGET DEPTH GROUTED				
				21							
				22							
				23							
				24							
				25							
				26							
				27							
				28							
				29							
				30							

REVISION C

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BOREHOLE: SRT BH051

SHEET: 1 OF 3 REV: C

CLIENT:	Transport for NSW	COORDS: 334166.2 m E 6249211.6 m N MGA94 56	DRILL RIG: XC2
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 22.82 m DATUM: AHD	CONTRACTOR: Nealings Drilling
LOCATION:	Central Station - Platform 19	INCLINATION: -90°	LOGGED: JRL DATE: 23/9/16
PROJECT No:	PCS 00013/10701	HOLE DEPTH: 14.64 m	CHECKED: HB DATE: 26/9/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HAND DT C			0	0.10 22.72	DS 0.20-0.25 m Rec = 50/50 mm				CERAMIC TILES OVER CONCRETE SLAB FILL: Gravelly Clayey COBBLES red brown, elongated and blocky	D		PLATFORM SURFACE FILL
ADT	H	GWNO	1	0.90 21.92	DS 0.90-1.00 m Rec = 100/100 mm Rec = 450/450 mm SPT 1.00-1.45 m 1, 6, 9 N=15 S18531 BDS 1.50-2.50 m Rec = 1000/1000 mm DS 1.90-2.00 m Rec = 100/100 mm				FILL: Gravelly Clayey SAND medium to coarse grained, well graded, dark grey and brown, pockets of low plasticity clay	M	MD	0.9-2.9m - tar odour
	M		2		DS 2.40-2.50 m Rec = 100/100 mm Rec = 450/450 mm SPT 2.50-2.95 m						L	
	L			2.90								
	H		3	19.92	2, 3, 3 N=6 S18532 BDS 3.00-4.00 m Rec = 1000/1000 mm			ML	Clayey SILT dark grey	D		WEATHERED BEDROCK
WB			4						For Continuation Refer to Sheet 2			
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH051

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 19
PROJECT No PCS 00013/10701

COORDS: 334166.2 m E 6249211.6 m N MGA94 56
SURFACE RL: 22.82 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 14.64 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 23/9/16
CHECKED: HB DATE: 26/9/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4	4.15		Continuation of Sheet 1				
NMLC	No Water Loss 100% RETURN GWNO	100	0 (100)		18.67		SHALE dark brown grey	HW		4.15-4.35 m: J, 80°, Pl, Ro, iron Sn 4.15-4.94 m: J(x12), Pl, Ro, iron Sn, typically 40 and 15-20 degrees	
		100	0 (100)	5							
		100	61 (100)		5.70			SW		5.00 m: J, 15°, Pl, Sm, iron Sn 5.10 m: B, 0°, Pl, Sm, Cn 5.12 m: B, 0°, Pl, Sm, Cn 5.17 m: J, 15°, Pl, Sm, iron Sn 5.20 m: B, 5°, Pl, Sm, Cn-Sn 5.30 m: J, 30°, Pl, Sm, clay 2mm Ct 5.30-5.35 m: SZ, 20°, rock fragments with clay Ct 5.49 m: B, 0°, Pl, Sm, Cn	
					17.12		SILTSTONE dark grey	SW - MW		6.10 m: J, 40-90°, Un, healed 6.28 m: J, 20°, Un-St, Ro, iron Sn	
		100	93 (100)	6	6.94			MW		6.76 m: J, 80-90°, Un, iron Sn, discontinuous, 160mm length 6.80 m: J, partially healed, stained, 120mm length, sub vertical 6.87 m: J, 70-80°, Un, iron Sn, partially healed, stained, 120mm length, sub-vertical 6.94 m: DS, 0°, Pl, clay, 5mm	
					15.88		SANDSTONE fine to medium grained, pale grey, cross-bedded at 20-30°	SW			
				7				FR			
		100	100 (100)	8							
				9							
		100	100 (100)	10							

REVISION C

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BOREHOLE: SRT BH051

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 19
PROJECT NoPCS 00013/10701

COORDS: 334166.2 m E 6249211.6 m N MGA94 56
SURFACE RL: 22.82 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 14.64 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 23/9/16
CHECKED: HB DATE: 26/9/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
	No Water Loss	100	100 (100)	10			SANDSTONE fine to medium grained, pale grey, cross-bedded at 20-30°	FR			
		100	100 (100)	11							
					11.75 11.07		from 11.75-14.30m: indistinct cross-bedding				
		100	100 (100)	12						12.46 m: J, 60°, Pl, Ro, clayey sand Ct	
		100	100 (100)	13							
		100	100 (100)	14						13.99 m: J, 80°, Pl, Ro, Cn, healed, 290m length 14.13 m: B, 10°, Pl, Ro, clay Ct, 10 mm	
					14.64 8.18		END OF BOREHOLE @ 14.64 m TARGET DEPTH GROUTED ATV/OTV IMAGING COMPLETED				
				15							
				16							
				17							
				18							
				19							
				20							

REVISION C

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BOREHOLE: SRT BH053

SHEET: 1 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334139.1 m E 6249281.0 m N MGA94 56
SURFACE RL: 21.53 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.15 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN/SI DATE: 9/7/16
CHECKED: HB DATE: 12/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	21.45					CERAMIC TILES OVER CONCRETE SLAB			PLATFORM SURAFCE
				0.40					FILL: GRAVEL medium to coarse grained, angular, basalt, dark grey			BASECOURSE
NDD				21.08					FILL: Gravelly Silty CLAY high plasticity, pale grey, orange and brown, fine to medium grained, sub-angular to sub-rounded gravel			FILL
			1						FILL: Silty CLAY high plasticity, pale grey and red brown, trace fine grained gravel			
				1.50								
ADV	M	GWNO	2	20.03 2.10	Rec = 450/450 mm S14890 BDS 1.50-2.50 m Rec = /1000 mm S14892			CL-CI	Silty CLAY low to medium plasticity, grey mottled red and orange and dark grey, with some fine to coarse grained, ironstone gravel			RESIDUAL SOIL
	H			19.43	BDS 1.50-2.50 m Rec = /1000 mm S14893 BDS 1.50-2.50 m Rec = /1000 mm SPT 1.50-1.95 m 8, 13, 17 N=30 DS 2.00-2.10 m Rec = 100/100 mm DS 2.50-2.60 m Rec = 100/100 mm DS 2.90-3.00 m Rec = 100/100 mm			CH	Gravelly Sandy CLAY high plasticity, brown to dark brown and orange to red, fine sand, fine to coarse grained, angular, ironstone gravel	M	VSt	
			3						For Continuation Refer to Sheet 2			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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BOREHOLE: SRT BH053

SHEET: 2 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No: PCS 00013/10701

COORDS: 334139.1 m E 6249281.0 m N MGA94 56
SURFACE RL: 21.53 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.15 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN/SI DATE: 9/7/16
CHECKED: HB DATE: 12/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 200, 1000, 3000)
				0							
				1							
				2							
				3	3.00		Continuation of Sheet 1				
NMLC	No Water Loss	0	0 (0)		18.53		CORE LOSS			S14894; Rec = /350 mm SPT 3.00-3.35 m; 9, 0 N=R	
					3.61						
		93	0 (31)	4	17.92		MUDSTONE dark grey, carbonaceous	EW		3.85 m: J, 35°, Pl, Sm, Cn	
					4.10						
					17.43		SILTSTONE pale grey mottled brown				
					4.30						
					4.41						
					17.12		CORE LOSS	EW			
				5			SILTSTONE pale grey mottled brown, with some iron-cemented bands	HW		4.70 m: J, 60°, Pl, Sm, Cn	
					5.19						
					16.34		CORE LOSS				
				6							
					6.49						
					15.04		CLAY pale grey brown, high plasticity, residual soil, inferred weathered dolerite dyke)				
		64	0 (0)	7	7.10						
					14.43		CORE LOSS				
					7.54						
					13.99		BASALT fine to medium grained, pale grey	EW		7.65 m: J, 70°, Un, Ro, clay	
	08/07/16 21:00			8				HW - MW			
		100	50 (80)							8.48 m: J, 80°, Pl, Ro, Cn 8.55-8.80 m: DS, clay and gravel	
								EW			
								HW			
				9						9.15-9.25 m: DS, gravel 9.25 m: J, 60-70°, Pl, Ro, Cn	
		100	0 (55)							9.50 m: J, 60-70°, Pl, Ro, Cn 9.60 m: J, 60-70°, Pl, Ro, Cn	
				10							

REVISION C

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BOREHOLE: SRT BH053

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SHEET: 3 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No: PCS 00013/10701

COORDS: 334139.1 m E 6249281.0 m N MGA94 56
SURFACE RL: 21.53 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.15 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN/SI DATE: 9/7/16
CHECKED: HB DATE: 12/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No Water Loss	100		10			BASALT fine to medium grained, pale grey	HW			
		100	0 (98)	11						10.60 m: J, 45-85°, Pl, Ro, Cn, 200 mm length 10.72 m: J, 45°, Pl, Ro, Cn 10.80 m: J, 70°, Pl, Ro, tight	
				12	12.10 9.43		medium grained, massive	SW		11.70 m: J, 60°, tight	
		98	50 (85)	13						12.40 m: J, 30-85°, St, Ro, Cn 12.65 m: J, 60-80°, St, Ro, Cn 13.00 m: J, 75°, Pl, Sm, Cn 13.35 m: J, 75°, Pl, Ro, Cn	
		100	29 (86)	14				EW SW		14.30 m: J, 45°, Pl, Sm, Cn, tight 14.55 m: J, 45°, Pl, Ro, clay Ct	
				15	15.00 6.53		fine to medium grained, grey, with siltstone inclusions up to 300 mm in size	HW SW		15.08 m: J, 45-90°, St, Ro, clay Ct 15.25-15.30 m: SZ, 0°, clay matrix with rock fragments	
								HW		15.50-15.55 m: SZ, 0°, clay matrix with rock fragments	
		100	0 (94)	16				SW		15.95-16.30 m: CZ, 0-75°, clay matrix with angular rock fragments 16.40-16.47 m: CZ, 10-75°, clay matrix with angular rock fragments 16.62 m: J, 80°, Un, Ro, clay matrix with angular rock fragments Ct, 230 mm length	
				17				HW		16.82 m: CZ, 0-50°, clay matrix with angular rock fragments 17.17-17.47 m: CZ?, 15°, clay matrix with angular rock fragments 17.50-17.65 m: DS, clay with angular rock fragments	
		100	0 (84)	18				SW		17.80 m: J, 80°, Pl, Ro, Cn, with slikenslides, 200 mm length 18.20-18.75 m: CZ, 45°, clay matrix with angular rock fragments	
		98	50 (80)	19						18.75 m: J, 45-70°, Un, Ro, clay 18.90 m: J, 75°, Un, Ro, Cn	
								HW		19.25 m: J, 53°, healed/tight 19.30-19.70 m: CZ, clay matrix with angular rock fragments, 450 mm 19.70-19.90 m: DS, clay	
				20				SW		19.90 m: J, 60°, Pl, Ro, Cn	

REVISION C

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BOREHOLE: SRT BH053

SHEET: 4 OF 4 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334139.1 m E 6249281.0 m N MGA94 56
SURFACE RL: 21.53 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.15 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN/SI DATE: 9/7/16
CHECKED: HB DATE: 12/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
		98		20	20.15						
					1.38		END OF BOREHOLE @ 20.15 m TARGET DEPTH PIEZOMETER INSTALLED				
				21							
				22							
				23							
				24							
				25							
				26							
				27							
				28							
				29							
				30							

REVISION C

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BOREHOLE: SRT BH054

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 21
PROJECT No PCS 00013/10701

COORDS: 334188.1 m E 6249214.5 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.10 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 26/10/16
CHECKED: HB DATE: 2/11/16

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	22.86 0.20					CERAMIC TILES OVER CONCRETE SLAB			PLATFORM SURFACE
NDD				22.66	DS 0.60-0.61 m Rec = 10/10 mm				FILL: Gravelly Clayey SAND fine to coarse grained, yellow brown, fine to coarse angular gravel with some clay and cobbles			FILL Hydrocarbon odour
ADT	H	GW/NO	1		S19070 DS 1.00-1.10 m Rec = 100/100 mm BDS 1.30-1.50 m Rec = 200/200 mm DS 1.50-1.51 m Rec = 10/10 mm Rec = 450/450 mm SPT 1.50-1.95 m 4, 11, 9 N=20					M - D D M - D		
			2	2.50 20.36	S16218 DS 2.50-3.00 m Rec = 500/500 mm S19071 DS 2.50-3.00 m Rec = 500/500 mm Rec = 150/150 mm SPT 3.00-3.15 m 30/150mm HB N=R			CL	SHALE grey, extremely weathered, extremely low strength (recovered as silty gravelly sand with clay)		MD - D	EXTREMELY WEATHERED BEDROCK No hydrocarbon odour
			3						For Continuation Refer to Sheet 2			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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BOREHOLE: SRT BH054

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 21
PROJECT No: PCS 00013/10701

COORDS: 334188.1 m E 6249214.5 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.10 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 26/10/16
CHECKED: HB DATE: 2/11/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL, 0.03, VL, 0.1, L, 0.3, M, 1, H, 3, VH, 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3	3.15		Continuation of Sheet 1				
NMLC	No water loss	100	0 (100)	4	19.71		SHALE dark grey, with iron stained bedding planes	HW - MW		3.20 m: J, 70°, Pl, Sm, clay Ct, truncated 3.27 m: B, 0°, Pl, Sm, clay Ct, 10mm thick 3.33 m: J, 60°, Pl, Sm, iron stained Vr 3.39 m: B, 0°, Pl, Sm, Cn 3.51 m: B, 0°, Pl, Sm, iron stained Ct 3.60 m: B, 0°, Pl, Sm, Cl, 4 3.63 m: B, 0°, Pl, Sm, clay Ct 3.66 m: B, 0°, Pl, Sm, clay Ct 3.70 m: B, 0°, Pl, Sm, clay Ct 3.78-3.84 m: desication cracks, irregular 3.87 m: J, 15°, Pl, Sm, Cn 4.00 m: J, 10°, Pl, Sm, Cn 4.05 m: B, 3°, Pl, Sm, Cn 4.30 m: J, 80°, Pl, Ro, iron stained Vr, length 300mm 4.80-5.05 m: desication cracks, irregular	
		100	40 (100)	5	5.25			MW - SW			
		100	67 (100)	6	17.61		SANDSTONE fine grained, dark grey to pale grey, massive	SW		5.80 m: V, 10°, Un, Ro, Cn 5.84 m: J, 10°, Un, Ro, clay Ct 5.92 m: J, 35°, Pl, Sl, Cn 5.99 m: B, 25°, Pl, Ro, Cn	
		100	100 (100)	7	6.39 16.47		SANDSTONE medium to coarse grained, pale grey, cross bedding typically 20°	FR		6.37 m: B, 4°, Pl, Ro, clay Ct	
		100	100 (100)	8						8.64 m: B, 0°, Pl, Ro, Cn, siltstone laminations	
		100	100 (100)	9							
				10							

REVISION C

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BOREHOLE: SRT BH054

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 21
PROJECT No PCS 00013/10701

COORDS: 334188.1 m E 6249214.5 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.10 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 26/10/16
CHECKED: HB DATE: 2/11/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No water loss	100	100 (100)	10			SANDSTONE medium to coarse grained, pale grey, cross bedding typically 20°	FR			
		100	100 (100)	11							
		100	100 (100)	12							
		100	100 (100)	13						13.80 m: B, 0°, Pl, Sm, clay Ct, 10mm thick	
		100	100 (100)	14							
				15	15.10 7.76		END OF BOREHOLE @ 15.10 m TARGET DEPTH BACKFILLED				
				16							
				17							
				18							
				19							
				20							

REVISION C

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BOREHOLE: SRT BH056

SHEET: 1 OF 6 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Corner Elizabeth St - Eddy Ave near Central
PROJECT No PCS 00013/10701

COORDS: 334279.3 m E 6249340.5 m N MGA94 56
SURFACE RL: 17.49 m DATUM: AHD
INCLINATION: -58° DIRECTION: 332°
HOLE DEPTH: 40.10 m

DRILL RIG: Comachio
CONTRACTOR: Terratest
LOGGED: PGH DATE: 22/8/16
CHECKED: HB DATE: 31/8/16

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0	17.49	DS 0.30-0.40 m Rec = 100/100 mm				FILL: SAND medium grained, brown, with some clay and shale gravel	M		FILL No SPTs - inclined borehole
				1.00								
			1	16.64	DS 1.00-1.10 m Rec = 100/100 mm DS 1.40-1.50 m Rec = 100/100 mm				FILL: SAND medium grained, brown			
			2		DS 1.90-2.00 m Rec = 100/100 mm							
				2.40								
				15.45	DS 2.40-2.50 m Rec = 100/100 mm				FILL: Clayey SAND medium grained, medium plasticity, brown			
			3		DS 2.90-3.00 m Rec = 100/100 mm							
				3.20								
AST	F	GWNO		14.78	DS 3.40-3.50 m Rec = 100/100 mm				SAND medium grained, pale grey and white	D		AEOLIAN DEPOSITS
			4		DS 3.90-4.00 m Rec = 100/100 mm DS 4.40-4.50 m Rec = 100/100 mm							
				5.00								
			5	13.25	DS 4.90-5.00 m Rec = 100/100 mm DS 5.00-5.50 m Rec = 500/500 mm				Sandy CLAY pale grey and white, with some red ironstone gravel, medium sand			RESIDUAL SOIL
			6		DS 5.90-6.00 m Rec = 100/100 mm DS 6.40-6.50 m Rec = 100/100 mm							
			7						For Continuation Refer to Sheet 2			
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

BOREHOLE: SRT BH056

SHEET: 2 OF 6 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Corner Elizabeth St - Eddy Ave near Central
PROJECT No PCS 00013/10701

COORDS: 334279.3 m E 6249340.5 m N MGA94 56
SURFACE RL: 17.49 m DATUM: AHD
INCLINATION: -58° DIRECTION: 332°
HOLE DEPTH: 40.10 m

DRILL RIG: Comachio
CONTRACTOR: Terratest
LOGGED: PGH DATE: 22/8/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
				5							
				6							
				7	7.00		Continuation of Sheet 1				
HQ3	No Water Loss	100	50 (100)	8	11.55		SANDSTONE medium grained, orange-brown, with pale grey clay zones	HW - EW		7.15-7.50 m: DZ, 0°, clay 7.73 m: B, 30°, Pl, Ro, Sn 7.90-8.22 m: DZ, 0°, clay 8.32 m: B, 30°, Pl, Ro, Sn-Ct 8.42 m: B, 30°, Pl, Ro, Sn 8.66 m: J, 85°, Pl, Ro, clay Ct, 120mm long 8.74 m: B, 30°, Pl, Ro, Sn-Ct 8.82 m: J, 40°, Pl, Ro, clay Ct 8.95-9.50 m: DZ, 0°, sandy silty clay bed, 550mm thick	
		100	65 (100)	9	9.60 9.35		SANDSTONE medium to coarse grained, red brown, with indistinct cross beds (typically 30°)	MW		9.40 m: B, 25°, Pl, Ro, Cn 9.70 m: B, 25°, Pl, Ro, clay Ct 9.88 m: B, 25°, Pl, Ro, clay, 8 mm	
				10							

REVISION C

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BOREHOLE: SRT BH056

SHEET: 3 OF 6 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Corner Elizabeth St - Eddy Ave near Central
PROJECT No PCS 00013/10701

COORDS: 334279.3 m E 6249340.5 m N MGA94 56
SURFACE RL: 17.49 m DATUM: AHD
INCLINATION: -58° DIRECTION: 332°
HOLE DEPTH: 40.10 m

DRILL RIG: Comachio
CONTRACTOR: Terratest
LOGGED: PGH DATE: 22/8/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	No Water Loss	100	65 (100)	11	11.15		SANDSTONE medium to coarse grained, red brown, with indistinct cross beds (typically 30°)	MW MW - SW		10.24 m: SS, 40°, clay and sub-angular sandstone gravel, possible shearing along cross bed 10.26 m: B, 40°, Pl, Ro, Ct 10.40 m: SS, 40°, ironstone sandstone elongate gravel, 4 mm 10.46 m: B, 40°, Pl, Ro, Sn 10.51 m: SS, 40°, Pl, ironstone elongate gravel and some clay 10.72 m: SS, 30°, elongate ironstone gravel 10.81 m: DS, 30°, Pl, clay, 8mm thick 10.86 m: B, 30°, Pl, Ro, Ct 10.90 m: B, 30°, Pl, Ro, Sn 11.08-11.12 m: SZ, 30°, sub-angular ironstone sandstone gravel and sand 11.76-11.80 m: SS, 30°, clayey sand 11.85 m: J, 75°, Pl, Ro, Sn, 100mm length	
				12						12.09 m: B, 30°, Pl, Ro, Sn 12.30 m: J, 75°, Pl, Ro, clay Sn-Ct, 3 mm, 370mm length	
	30-40% RETURN	100	95 (90)	13	8.03		SANDSTONE medium to coarse grained, pale grey, massive and thickly bedded with distinct cross-bedding between 30 and 45°	EW FR		12.58-12.59 m: DS, 45°, Pl, Ro, Sn-Ct 12.66-12.67 m: DS, 30°, Pl, Ro, clayey sand Ct, 5 mm 12.82-12.83 m: DS, 30°, Pl, Ro, clayey sand Ct, 10 mm 13.15 m: J, 70°, Pl, Ro, Sn, 160mm length	
		100	100 (100)	14						14.05 m: B, 30°, Pl, Ro, Cn 14.15 m: B, 30°, Pl, Ro, Cn	
		100	95 (100)	15						15.31 m: B, 45°, Pl, Ro, Sn 15.44 m: B, 35°, Pl, Ro, Cn 15.60 m: B, 20°, Pl, Ro, Ct	
				16							
				17						16.68 m: B, 45°, Pl, Ro, Ct	
					17.30						
					2.82		SANDSTONE fine grained, grey and black, with distinct black cross-beds at 20°			17.28 m: J, 45°, Pl, Ro, Ct 17.44-17.86 m: Bx 4, 30°, sp = 100-200 mm, Pl, Ro, Cn 17.60 m: J, 80°, Pl, Ro, Cn, 150mm long, discontinuous	
				18	18.05						
					2.18		SANDSTONE medium to coarse grained, pale grey, with distinct cross-beds between 30 and 45°			18.50 m: B, 40°, Pl, Ro, Cn 18.58 m: B, 50°, Pl, Ro, sand, 2 mm	
		100	95 (100)	19						18.81 m: J, 45°, Pl, Ro, Cn 19.06 m: J, 75°, Pl-St, Ro, Cn, 100mm length 19.22 m: B, 45°, Pl, Ro, Cn	
										19.56 m: J, 70°, Pl, Ro, Cn 19.57 m: J, 55°, Pl, Ro, Cn	
				20	20.00						

REVISION C

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BOREHOLE: SRT BH056

SHEET: 4 OF 6 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Corner Elizabeth St - Eddy Ave near Central
PROJECT No PCS 00013/10701

COORDS: 334279.3 m E 6249340.5 m N MGA94 56
SURFACE RL: 17.49 m DATUM: AHD
INCLINATION: -58° DIRECTION: 332°
HOLE DEPTH: 40.10 m

DRILL RIG: Comachio
CONTRACTOR: Terratest
LOGGED: PGH DATE: 22/8/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	20% RETURN	100	95 (100)	20	0.53			FR		20.54 m: J, 20°, Pl, Ro, Cn 20.80 m: J, 30°, Pl, Ro, Cn	
				21	21.35					21.13 m: J, 70°, Pl, Ro, Cn, 110mm long, discontinuous	
					-0.62		BASALT medium grained, massive, pale blue grey, chlorite and sericite altered.			21.30 m: B, 30°, Pl, Ro, Cn 21.36 m: C, 75°, clay Ct, <=10 mm 21.50 m: J, 65°, Pl, Ro, Vr 21.60 m: J, 10°, Pl, Ro, Cn	
		100	92 (100)	22						21.90 m: J, 80°, Pl-St, Ro, clay Ct, =1 mm, 280mm length 22.10 m: J, 30°, Ro, Cn, curved 22.13 m: J, 20°, Ro, Cn, curved	
				23						22.50 m: J, 70°, Ro, Cn, 200mm length, curved 22.51 m: J, 40°, Pl, Ro, Cn 22.57 m: J, 20°, Pl, Ro, Cn 22.77 m: J, 15°, St, Ro, clay Ct, <4 mm 23.05 m: J, 70°, Pl, Ro, Cn 23.13 m: J, 70°, Pl, Ro, Cn, 90mm length 23.18 m: J, 60°, Pl, Ro, Cn, 65mm length	
				24						23.60 m: J, 20°, Pl, Ro, Cn 23.74 m: J, 50°, Pl, Ro, Cn 24.15 m: J, 90°, Pl-Un, Ro, Cn, 270mm length 24.27 m: J, 20°, Pl-St, Ro, healed	
		100	90 (100)	25						24.52 m: J, 70°, Pl, Ro, clay Ct, <8 mm, 130mm length 24.57 m: J, 60°, Pl-St, Ro, Cn 24.90 m: J, 50°, Pl-St, Ro, Cn 25.06 m: J, 60°, Pl-St, Ro, Cn 25.30 m: J, 80°, St, Ro, clay Ct, 6 mm, 180mm length 25.43 m: J, 80°, St, Ro, clay Ct, 3 mm, 180mm length	
				26						25.68 m: J, 70°, Pl, Ro, Cn 26.06 m: J, 30°, Pl, Ro, Cn 26.17 m: J, 60°, Pl, Ro, Cn	
					26.80 -5.24		26.8m to 27.5m = some bands of open elongate vesicles (<1mm diameter)			26.58 m: J, 75°, Pl-Un, Ro, Cn, 100mm length	
				27	27.55 -5.87		SANDSTONE fine to medium grained, pale grey, with indistinct and distinct cross beds dipping at between 30 and 45 degrees			27.51 m: J, 15°, St, Ro, Cn 27.55 m: C, 60°, Pl, Cn, 8 mm, high strength quartz vein along contact margin. Note - the contact between the dyke and the country rock is tight and clean 27.74 m: B, 40°, Pl, Ro, Cn 27.93 m: B, 40°, Pl, Ro, Cn 28.16 m: B, 35°, Pl, Ro, Cn 28.32 m: B, 30°, Pl, Ro, Cn 28.42 m: B, 25°, Pl, Ro, Cn	
		100	100 (100)	28							
				29						29.15 m: B, 30°, Pl, Ro, Cn 29.50 m: B, 35°, St, Ro, Cn 29.87 m: B, 25°, Pl, Ro, Vr	
				30							

PREVISION

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BOREHOLE: SRT BH056

SHEET: 5 OF 6 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Corner Elizabeth St - Eddy Ave near Central
PROJECT No PCS 00013/10701

COORDS: 334279.3 m E 6249340.5 m N MGA94 56
SURFACE RL: 17.49 m DATUM: AHD
INCLINATION: -58° DIRECTION: 332°
HOLE DEPTH: 40.10 m

DRILL RIG: Comachio
CONTRACTOR: Terratest
LOGGED: PGH DATE: 22/8/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	20% RETURN	100	100 (100)	30			SANDSTONE fine to medium grained, pale grey, with indistinct and distinct cross beds dipping at between 30 and 45 degrees	FR		30.47 m: B, 45°, Pl, Ro, Cn	
				31						S16715; 31.40 m 31.43 m: J, 60°, Pl, Ro, Cn	
				32	32.30 -9.90		At 32.3 m: shale clast, 40mm				
					32.75 -10.28		At 32.75 m: sub-rounded shale clast, 45mm			32.75 m: B, 50°, Pl, Ro, Cn 32.90 m: J, 70°, Pl, Ro, Cn, 180mm length	
		100	100 (100)	33						33.20 m: J, 45°, Pl, Ro, Cn 33.32 m: J, 68°, Pl, Ro, Cn, 170mm length	
										33.55 m: B, 20°, Pl, Ro, Cn	
				34						34.19 m: B, 10°, Pl, Ro, Sn	
				35							
				36						35.87 m: B, 12°, Pl, Ro, Ct	
										36.22 m: Jx 2, 60°, Pl, Ro, Cn, 90mm length 36.23 m: J, 50°, Pl, Ro, Cn, 85mm length	
										36.70 m: J, 75°, Pl, Ro, healed Sn, 160mm length	
		100	100 (100)	37							
				38						38.36 m: B, 30°, Pl, Ro, clayey sand Ct	
										38.64 m: B, 30°, Pl, Ro, Cn 38.80 m: B, 30°, Pl, Ro, Cn	
				39						39.06 m: B, 10°, Pl, Ro, Cn	
		100	100 (100)	40							

REVISION C

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BOREHOLE: SRT BH056

SHEET: 6 OF 6 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Corner Elizabeth St - Eddy Ave near Central
PROJECT No PCS 00013/10701

COORDS: 334279.3 m E 6249340.5 m N MGA94 56
SURFACE RL: 17.49 m DATUM: AHD
INCLINATION: -58° DIRECTION: 332°
HOLE DEPTH: 40.10 m

DRILL RIG: Comachio
CONTRACTOR: Terratest
LOGGED: PGH DATE: 22/8/16
CHECKED: HB DATE: 31/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex 0.03, Vx 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				40	40.10 -16.52		END OF BOREHOLE @ 40.10 m GROUTED			40.06 m: J, 50°, Pl, Ro, Cn	
				41							
				42							
				43							
				44							
				45							
				46							
				47							
				48							
				49							
				50							

REVISION C

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REVISION C BOREHOLE: SRT BH058

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 23
PROJECT No PCS 00013/10701

COORDS: 334187.7 m E 6249184.1 m N MGA94 56
SURFACE RL: 22.85 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.25 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 21/10/16
CHECKED: GS DATE: 21/11/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	0.12					CERAMIC TILES OVER CONCRETE SLAB			PLATFORM SURFACE
				0.25					FILL: GRAVEL fine to coarse grained, angular, basalt, dark grey			BALLAST
NDD				22.60	DS 0.50-0.60 m Rec = 100/100 mm				FILL: Gravelly Clayey SAND fine to coarse grained, pale grey to grey brown, low plasticity clay, fine to coarse grained sub-angular to sub-rounded to 60mm gravel, with some sub-angular cobbles	M		
			1									
					DS 1.40-1.50 m Rec = 100/100 mm							
				1.75	Rec = 450/450 mm							
ADT	L	GWNO		21.10	SPT 1.50-1.95 m 1, 1, 1 N=2				FILL: Silty SAND fine to coarse grained, brown, with some clay		L	
			2									
				2.60	DS 2.50-2.60 m							
	H			20.25	Rec = 100/100 mm DS 2.60-2.90 m Rec = 300/300 mm				SHALE grey brown, extremely to highly weathered, low strength			WEATHERED BEDROCK
			3						For Continuation Refer to Sheet 2			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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REVISION C BOREHOLE: SRT BH058

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 23
PROJECT No PCS 00013/10701

COORDS: 334187.7 m E 6249184.1 m N MGA94 56
SURFACE RL: 22.85 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.25 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 21/10/16
CHECKED: GS DATE: 21/11/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No water loss			0							
				1							
				2							
				3	3.00		Continuation of Sheet 1				
		100	0 (100)		19.85		SHALE dark grey with orange brown, distinctly bedded from 0 to 30°, iron stained discontinuities	HW		3.01 m: B, 0°, Pl, Sm, silty clay Vr, limonite Sn 3.05 m: B, 0°, Pl, Sm, silty clay Vr 3.06 m: B, 0°, Pl, Sm, silty clay Vr 3.08 m: B, 6°, Pl, Ro, silty clay Vr, limonite Sn 3.11 m: B, 8°, Un, Sm, silty clay Vr 3.16 m: J, 21°, Pl, Sm, silty clay Vr, limonite Sn 3.22 m: B, 0°, Pl, Sm, silty gravel Ct, limonite Sn 3.24 m: B, 0°, Pl, Sm, silty gravel Ct, limonite Sn 3.27-3.41 m: Bx8, frequent intact iron stained bedding partings from 0 to 18 degrees 3.34 m: B, 0°, Pl, Sm, silty clay Ct, =5 mm 3.39 m: B, 10°, Pl, Sm, silty clay Vr 3.49 m: J, 30°, Un, Ro, limonite Sn 3.51-3.85 m: Bx15, frequent intact iron stained bedding partings from 0 to 25 degrees 3.56 m: J, 19°, Un, Ro, limonite Sn 4.41-4.45 m: CS, 11°, fine to coarse grained ironstone gravel 4.52 m: J, 53°, Un, Ro, Cn 4.67 m: B, 13°, Pl, Ro, sandy clayey Ct, limonite Sn 4.76 m: B, 20°, Pl, Ro, sandy clay Vr, limonite Sn 4.90 m: J, 37°, Pl, Ro, sandy clayey Ct, limonite Sn 5.62 m: B, 6°, Un, Ro, clayey sand Vr, limonite Sn 5.67 m: J, 25°, Un, Ro, clayey sand Ct	
				4	3.85 4.00		CORE LOSS, 150mm				
		87	0 (15)		18.85 4.24		SHALE dark grey with orange brown, distinctly bedded from 0 to 20°, highly iron stained discontinuities	HW MW			
					18.61		SILTSTONE dark grey with orange brown, distinctly bedded from 0 to 20°	FR			
		100	75 (97)	5	5.85						
		100	100 (100)	6	17.00 6.85		SANDSTONE fine grained, massive, grey				
				7	16.00 7.34		SANDSTONE fine grained, pale grey to grey, distinctly bedded from 0 to 20°				
		100	100 (100)		15.51		SANDSTONE medium to coarse grained, pale grey and grey, distinctly and indistinctly cross-bedded from 0 to 28°				
				8							
		100	100 (100)	9	9.30 13.55		from 9.30-9.43m: wavy bedding				
				10							

REVISION C

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REVISION C BOREHOLE: SRT BH058

Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 23
PROJECT No PCS 00013/10701

COORDS: 334187.7 m E 6249184.1 m N MGA94 56
SURFACE RL: 22.85 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.25 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 21/10/16
CHECKED: GS DATE: 21/11/16

Drilling						Field Material Description			Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No water loss	100	100 (100)	10	10.35			FR			
					12.50		SANDSTONE medium to coarse grained, pale grey, cross-bedded at 0 to 20°			10.60 m: J, 64°, Un, Ro, Cn	
		100	100 (100)	11						11.33 m: J, 39°, Un, Ro, silty sand Vr	
					12.00						
		100	100 (100)	12	10.85		below 12.0m: indistinctly bedded sub-horizontally				
					12.92						
				13	9.93		SANDSTONE fine to medium grained, grey and dark grey, indistinctly bedded sub-horizontally			13.80-13.88 m: J, 51°, Pl, Ro, Cn	
		100	100 (100)	14						14.14 m: DS, 0°, silty clay, =16 mm	
		100	100 (100)	15	15.25						
					7.60		END OF BOREHOLE @ 15.25 m TARGET DEPTH GROUTED				
				16							
				17							
				18							
				19							
				20							

REVISION C

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REVISION C BOREHOLE: SRT BH060

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 16-17
PROJECT No PCS 00013/10701

COORDS: 334138.1 m E 6249201.4 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.25 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 8/11/16
CHECKED: HB DATE: 14/11/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	22.86 0.20					CERAMIC TILES OVER CONCRETE SLAB			PLATFORM SURFACE 0-0.2 strong hydrocarbon odour, no staining
NDD				22.66					FILL: Silty Gravelly SAND medium to coarse grained, poorly graded, sub-rounded, pale grey yellow, trace low plasticity clay			faint hydrocarbon odour, no staining
ADT	L	GWNO	1		DS 0.90-1.00 m Rec = 100/100 mm BDS 1.00-1.50 m Rec = 500/500 mm DS 1.40-1.50 m Rec = 100/100 mm							
				1.60 21.26	Rec = 300/450 mm SPT 1.50-1.95 m 9, 4, 3				black sand, 100mm layer			very strong hydrocarbon odour
			2	2.00 20.86	N=7 BDS 2.00-3.00 m Rec = 1000/1000 mm				FILL: Silty Gravelly SAND fine to coarse grained, sub-rounded to sub-angular, dark grey, some low plastic clay	D		strong hydrocarbon odour
			3	3.00 19.86	Rec = 450/450 mm SPT 3.00-3.45 m 5, 5, 12 N=17			CI	Silty CLAY medium plasticity, dark and pale grey		VSt	RESIDUAL SOIL
	M								For Continuation Refer to Sheet 2			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

REVISION C BOREHOLE: SRT BH060

SHEET: 2 OF 3 REV: C

CLIENT:	Transport for NSW	COORDS: 334138.1 m E 6249201.4 m N MGA94 56	DRILL RIG: XC2
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 22.86 m DATUM: AHD	CONTRACTOR: Nealings Drilling
LOCATION:	Central Station - Platform 16-17	INCLINATION: -90°	LOGGED: JRL DATE: 8/11/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 15.25 m	CHECKED: HB DATE: 14/11/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03 VL 0.1 L 0.3 M 1 H 3 VH 10 EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10 30 100 300 1000 3000)
				0							
				1							
				2							
				3							
					3.50		Continuation of Sheet 1				
NMLC	GWNO No water loss	100	0 (90)	4	19.36		SHALE dark grey, bedding, heavy iron staining	EW HW		3.55-4.00 m: B(x10), 0-15°, Pl, Sm-Ro, iron stained Sn-Ct 3.68-3.69 m: DS, 0°, clay 3.80 m: DS, 0°, clay	
		100	0 (100)	5						4.10 m: B, 15°, Pl-St, Ro, iron Sn 4.12-4.14 m: DS, 0-15°, clay 4.19 m: B, 0°, Pl, Sm, clay Ct 4.27-4.29 m: DS, 0°, clay filled 4.36 m: B, 20°, Pl, Sm, iron Sn 4.42 m: B, 15°, Pl, Sm, iron Sn 4.46 m: DS, 5°, clay filled, 3mm 4.49 m: B, 5°, Pl, Ro, iron Sn 4.54 m: DS, 0°, clay filled, 3mm 4.57 m: J, 10°, Pl, Sm, Cn 4.59 m: J, 15°, Pl, Sm, Cn 4.69 m: B, 10°, Pl, Sm-Ro, iron Sn 4.76 m: DS, 0°, clay Ct, 10mm 4.80-5.30 m: frequent healed joints 30-40°, iron Sn 4.81 m: J, 25°, Pl, Sm, clay Vr 4.90 m: J, 80°, Pl, Sm, clay Ct, 150mm length 5.10 m: J, 10°, Pl, Sm, Cn 5.14 m: J, 10-15°, Un, Sm, Cn 5.26 m: J, 20°, Pl, Sm, Cn 5.30 m: J, 30°, Pl, Sm, Cn 5.35 m: DS, 0°, clay Ct, 5mm 5.40 m: B, 0°, Pl, Ro 5.51 m: J, 20°, Pl, Sm, Cn 5.58 m: J, 30°, Pl, Sm, clay Ct 5.65 m: J, 30°, Pl-St, Ro, Cn 5.75-5.85 m: CZ, 0-10°, fragmented shale and clay 5.92 m: B, 0°, Pl, Sm, clay Ct, 2mm 6.15 m: B, 0°, Pl, Ro, Cn 6.32 m: B, 0°, Pl, Ro, iron Sn 6.41 m: J, 10°, Pl, Sm, Cn 6.43 m: B, 5°, Pl, Ro, iron Sn 6.60 m: CZ, 0°, shale fragments 6.74 m: J, 25°, Pl, Ro, iron Sn 6.90 m: J, 15°, Pl, Sm, Cn 7.11 m: B, 10°, Pl, Sm-Ro, iron Sn 7.20 m: B, 0°, iron Sn 7.21 m: J, 25°, iron Sn 7.25 m: J, 10°, St, iron Sn 7.38 m: B, 0°, Pl, Sm, Cn 7.60 m: CS, 0°, rock fragements	
		100	0 (100)	6							
		100	0 (100)	7							
		100	70 (100)	8	6.15 16.71		SANDSTONE fine to medium grained, dark and pale grey, quartz grains, with some siltstone interlaminations, some iron staining	MW MW - SW			
		100	80 (100)	9	7.60 15.26		SANDSTONE medium to coarse grained, pale grey, cross bedding at 0-10°	SW - FR FR			
		100	100 (100)	10						9.30 m: B, 10°, Pl, Ro, Cn	

REVISION C

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REVISION C BOREHOLE: SRT BH060

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 16-17
PROJECT No PCS 00013/10701

COORDS: 334138.1 m E 6249201.4 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.25 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 8/11/16
CHECKED: HB DATE: 14/11/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex 0.03, Vl 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	GWNO No water loss	100	100 (100)	10			SANDSTONE medium to coarse grained, pale grey, cross bedding at 0-10°	FR			
		100	100 (100)	11							
		100	100 (100)	12							
		100	100 (100)	13							
		100	100 (100)	14							
		100	100 (100)	15	15.25						
					7.61		END OF BOREHOLE @ 15.25 m TARGET DEPTH PIEZOMETER INSTALLED				
				16							
				17							
				18							
				19							
				20							

REVISION C

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BOREHOLE: SRT BH063

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Randle Lane - Surry Hills
PROJECT No PCS 00013/10701

COORDS: 334242.3 m E 6249152.6 m N MGA94 56
SURFACE RL: 25.41 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.09 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL/PGH DATE: 11/8/16
CHECKED: HB/SI DATE: 25/8/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	0.13 0.26 25.15	DS 0.30-0.50 m Rec = 200/200 mm			CI-CH	CONCRETE (Gutter) FILL: GRAVEL angular, basalt with underlying layer of sand, 50mm thick Silty CLAY medium to high plasticity, pale brown and dark grey	M	VSt - H	FILL RESIDUAL SOIL
ADT	L	GWNO	1 2	1.60 23.81	DS 1.30-1.50 m Rec = 200/200 mm S16610 Rec = 270/270 mm SPT 1.50-1.95 m 15, 25 (120mm) N>25 DS 1.70-1.71 m Rec = 100/10 mm				LAMINITE dark grey siltstone (65%) interlaminated with pale grey fine grained sandstone (35%) at 15°			WEATHERED ROCK
			3 4 5 6 7 8 9 10						For Continuation Refer to Sheet 2			

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH063

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Randle Lane - Surry Hills
PROJECT No PCS 00013/10701

COORDS: 334242.3 m E 6249152.6 m N MGA94 56
SURFACE RL: 25.41 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.09 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL/PGH DATE: 11/8/16
CHECKED: HB/SI DATE: 25/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	No water loss			0							
				1							
				2	2.20		Continuation of Sheet 1				
		70	0 (70)		23.11		CORE LOSS	HW			
					2.71		LAMINITE dark grey shale (65%) interlaminated with fine grained sandstone (35%) at 15°, iron stained bedding partings			2.31 m: B, 15°, Pl, Sm-Ro, silt Cn-Ct 2.35 m: J, 85°, healed 1000m length 2.40 m: J, 45°, Pl, Ro, Sn 2.44 m: J, 5°, Pl, Ro, Vr, iron stained	
		100	60 (100)		22.70		SILTSTONE dark grey / black, bedded	SW		2.54 m: B, Un, Cn-Ct, curved 2.58 m: B, 15°, Pl, Sm, Cn 2.65 m: B, 5°, Pl, Sm, clay Ct 2.70 m: B, 0°, Pl, Sm, clay Ct 2.93 m: J, 20°, Pl, Sm, Vr, iron stained 3.02-3.03 m: DZ, 5°, Pl, weathered rock fragments 3.04 m: B, 5°, St, Sm, Vr 3.40 m: J, 65°, Pl, Sm, Cn	
				3				FR			
		100	35 (100)	4						3.71 m: J, 65°, Pl, Sm, Cn 3.78 m: J, 15°, Pl, Sm, Cn 4.07 m: J, 60°, Pl, Sm, Cn 4.30 m: J, 65°, Pl, Sm, Cn 4.42 m: J, 45°, Pl, Sm, Cn 4.57 m: B, 7°, St, Ro, Cn-Ct 4.70 m: J, 65°, Pl, Sm, Cn	
		100	75 (100)	5						4.90 m: J, 65°, Pl, Sm, Cn, truncated 5.19 m: B, 5°, Pl, Sm, Cn 5.21 m: J, 85°, Pl-St, Sm, Cn, truncated, 50m length 5.24 m: B, 5°, Pl, Sm, Cn 5.30 m: J, 85°, healed joint, 560m length	
		100	40 (100)	6						6.51 m: J, 45°, Pl, Sm, Cn 6.55 m: J, 85°, Pl, Sm, Cn, 300m length 6.73 m: J, 22°, Pl, Sm, Cn 6.77 m: J, 45°, Pl, Sm, Cn 6.84 m: J, 35°, Pl, Sm, Cn 6.89 m: J, 35°, Pl, Sm, Cn 7.00 m: J, 65°, Pl, Sm, Cn 7.16 m: B, 15°, Pl, Sm, Cn 7.24 m: J, 35°, Pl, Sm, Cn 7.32 m: B, 0°, Pl, Sm, Cn	
		100	100 (100)	7							
				8	8.30						
					8.44		SANDSTONE fine grained, grey, thinly bedded			8.30 m: B, 0°, Pl, Sm, Vr 8.44 m: B, 2°, Pl, Ro, Ct	
					16.97		SANDSTONE medium to coarse grained, pale grey, with indistinct and distinct cross beds dipping between 0-10°				
		100	100 (100)	9						9.05 m: J, 70°, Pl, Ro, Cn, 180mm in length 9.34 m: B, 10°, Pl, Ro, Cn	
				10	10.00						

REVISION C

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH063

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Randle Lane - Surry Hills
PROJECT No PCS 00013/10701

COORDS: 334242.3 m E 6249152.6 m N MGA94 56
SURFACE RL: 25.41 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.09 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL/PGH DATE: 11/8/16
CHECKED: HB/SI DATE: 25/8/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	No water loss	100	100 (100)	10	15.41		SANDSTONE medium to coarse grained, pale grey, with indistinct and distinct cross beds dipping between 0-10° and some cross bedding at 15-25°	FR		10.64 m: B, 2°, Pl, Ro, Ct	
				11							
		100	100 (100)	12						11.91 m: B, 10°, Pl, Ro, Vr	
				13						13.24 m: J, 70°, Pl, Ro, Cn, 120mm long 13.37 m: J, 70°, Pl, Ro, Cn, 120mm long 13.54 m: J, 70°, Pl, Ro, Cn, 120mm long	
		100	100 (100)	14	14.10		at 14.10 m: medium grained with carbonaceous lamination			14.16 m: B, 10°, Pl, Ro, Cn	
		100	100 (100)	15	11.31 15.09						
					10.32		END OF BOREHOLE @ 15.09 m				
				16							
				17							
				18							
				19							
				20							

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH064

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334040.0 m E 6249121.0 m N MGA94 56
SURFACE RL: 20.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.24 m

DRILL RIG: Hanjin DB8
CONTRACTOR: Terratest
LOGGED: PGH DATE: 27/6/16
CHECKED: HB DATE: 5/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	20.39					FILL: GRAVEL Angular and sub-angular blue metal (ballast) gravel and cobbles with some gravelly sand			BALLAST
			1		DS 1.60-1.60 m Rec = /0 mm S14901 DS 1.60 m							
			2	2.20 18.19	S14901 DS 2.20-2.30 m Rec = 100/100 mm S14902 Rec = 450/450 mm SPT 2.50-2.95 m 5, 11, 13 N=24 U 3.00-3.40 m Rec = 300/400 mm S14903 U 3.00 m DS 3.50-3.60 m Rec = 100/100 mm			CI	Silty CLAY high plasticity, red and grey, trace sand			RESIDUAL SOIL
			3									
			4		Rec = 450/450 mm S14904 BDS 4.00-5.00 m Rec = 1000/1000 mm S14905 BDS 4.00-5.00 m					M (<LL)	VSt	
ADH			5		Rec = 1000/1000 mm SPT 4.00-4.45 m 7, 15, 14 N=29 S14906 U 5.00-5.45 m Rec = 450/450 mm Rec = 450/450 mm SPT 5.50-5.95 m 4, 9, 14 N=23							
			6									
			7	7.00 13.39	Rec = 450/450 mm SPT 7.00-7.45 m 9, 30, 32 N=62				SANDSTONE fine to medium grained, dark grey, thinly bedded, very low strength, highly weathered			WEATHERED ROCK
			8						For Continuation Refer to Sheet 2			
			9									
			10									

possible perched water at base of fill

REVISION C

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BOREHOLE: SRT BH064

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334040.0 m E 6249121.0 m N MGA94 56
SURFACE RL: 20.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.24 m

DRILL RIG: Hanjin DB8
CONTRACTOR: Terratest
LOGGED: PGH DATE: 27/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
				5							
				6							
				7							
					7.50		Continuation of Sheet 1				
					12.89		CORE LOSS				
					7.94						
HQ3	No Water Loss	78	78 (78)	8	12.45		SANDSTONE fine to medium grained, pale grey, with indistinct and distinct cross beds dipping between 5 and 15°	FR		8.31 m: B, 0°, Pl, Ro, Cn 8.50 m: B, 0°, Pl, Ro, Cn	
		100	100 (100)	9						9.22 m: B, 20°, Pl, Ro, Cn 9.33 m: B, 0°, Pl, Ro, Cn 9.62 m: B, 50°, Pl, Ro, Cn	
				10							

REVISION C

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BOREHOLE: SRT BH064

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334040.0 m E 6249121.0 m N MGA94 56
SURFACE RL: 20.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.24 m

DRILL RIG: Hanjin DB8
CONTRACTOR: Terratest
LOGGED: PGH DATE: 27/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3		100	100 (100)	10				FR		10.10 m: B, 5°, Pl, Ro, clay Vr	
					10.24 10.15		END OF BOREHOLE @ 10.24 m GROUNDWATER WELL INSTALLED				
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

REVISION C

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BOREHOLE: SRT BH067

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334048.0 m E 6249100.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.11 m

DRILL RIG: Hanjin D&B
CONTRACTOR: Terratest
LOGGED: PGH DATE: 24/6/16
CHECKED: HB DATE: 29/6/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	0.10 20.54 0.30 20.34					TOPSOIL dark brown, silty clay			TOPSOIL
									FILL: CLAY sandy clay with some gravel			FILL
			1						Silty CLAY red brown, with some ironstone gravel			RESIDUAL SOIL
				1.40 19.24								
ADT	M	GWNO	2		S14927 Rec = 450/450 mm SPT 2.50-2.95 m 14,8,6 N=14			CI	Silty CLAY medium plasticity, red and grey, with some ironstone gravel	M (<PL)	St	
				3.00 17.64	C 3.00-4.10 m Rec = 1100/1100 mm				Silty CLAY medium plasticity, grey, with some iron cemented bands			
HQ3		100% water loss	3						For Continuation Refer to Sheet 2			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH067

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334048.0 m E 6249100.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.11 m

DRILL RIG: Hanjin D&B
CONTRACTOR: Terratest
LOGGED: PGH DATE: 24/6/16
CHECKED: HB DATE: 29/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
					3.65		Continuation of Sheet 1				
				4	16.99		SHALE red and dark grey iron cemented bands interbedded with pale grey 50mm thick clay bands	EW - HW		4.06 m: B, 0°, Pl, Sm-Ro, Sn 4.22 m: B, 0°, Pl, Sm-Ro, Sn 4.30 m: B, 0°, Pl, Sm-Ro, Sn	
					4.80					4.53 m: B, 0°, Pl, Sm-Ro, Sn 4.56 m: B, 0°, Pl, Sm-Ro, Sn 4.58 m: B, 0°, Pl, Sm-Ro, Sn 4.75 m: B, 0°, Pl, Sm-Ro, Sn	
		75	0 (75)	5	15.84		CORE LOSS				
					5.30						
					15.34		SHALE red and dark grey iron cemented bands interbedded with pale grey 50mm to 150mm thick clay bands	EW - HW		5.70 m: J, 45°, Pl, Sm-Ro, Sn	
				6	6.20						
					14.44		SHALE dark grey, with ironstone seams and fine grained sandstone, 0°	HW		6.26-6.46 m: B, 0°, Pl, Sm, Sn, (x14)	
								SW		6.80 m: B, 1°, Pl, Sm, Sn S14928; 6.96 m	
				7						7.36 m: J, 80°, Pl, Sm, Sn, 320 mm length	
					7.56						
		100	50 (82)		13.08 13.04		SANDSTONE pale grey, fine grained, with indistinct cross beds dipping between 5 and 15° from 7.56 to 7.84 m: some dark grey siltstone interbeds			7.72 m: B, 0°, Pl, Ro, Cn	
				8	8.00 12.64		SANDSTONE medium to coarse grained, pale grey, indistinct cross-beds aat 5-15°			S14929; 7.96 m 8.10 m: B, 0°, Pl, Ro, Cn 8.14 m: B, 0°, Pl, Ro, Cn 8.21 m: B, 0°, Pl, Ro, Cn	
								FR			
				9							
		100	95 (100)							9.70 m: B, 10°, Pl, Ro, carbonaceous Vr 9.79 m: B, 5°, Pl-St, Ro, Sn	
				10							

REVISION C

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

BOREHOLE: SRT BH067

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334048.0 m E 6249100.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.11 m

DRILL RIG: Hanjin D&B
CONTRACTOR: Terratest
LOGGED: PGH DATE: 24/6/16
CHECKED: HB DATE: 29/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				10	10.11						
					10.53		END OF BOREHOLE @ 10.11 m				
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

REVISION C

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BOREHOLE: SRT BH068

Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334035.0 m E 6249107.0 m N MGA94 56
SURFACE RL: 20.66 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 3.40 m

DRILL RIG:
CONTRACTOR: Golder - Douglas
LOGGED: JN DATE: 29/6/16
CHECKED: HB DATE: 11/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA	L		0	20.66					FILL: Gravelly SAND fine to medium grained, dark brown, with fine to medium grained, angular to sub-angular gravel, trace glass fragments, and some rootlets	M		FILL
	M			0.65								
				19.91	DS 0.70-0.75 m Rec = 50/50 mm				FILL: Sandy CLAY medium plasticity, pale grey, orange to red brown, fine to medium sand	M M		
	M-H		1	1.00 19.66					FILL: SAND medium to coarse grained, uniform, pale orange, trace clay	M		
				1.65 19.01					FILL: Clayey SAND medium to coarse grained, orange with some red brown, with some clay and some fine to medium graned, angular to sub-angular, igneous			RESIDUAL SOIL
			2	2.00 18.66	DS 1.80-1.85 m Rec = 50/50 mm			CI-CH	FILL: CLAY medium plasticity, orange to red brown, trace sand, trace fine grained gravel			
	H								CLAY high plasticity, pale grey and red brown with some fine to medum grained, sub-angular ironstone gravel	M	VSt	
		29/06/16 15:00	3							M		
				17.26					END OF BOREHOLE @ 3.40 m REFUSAL BACKFILLED			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

BOREHOLE: SRT BH069

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334007.8 m E 6249073.7 m N MGA94 56
SURFACE RL: 20.75 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.32 m

DRILL RIG:
CONTRACTOR:
LOGGED: PGH DATE: 21/6/16
CHECKED: HB DATE: 5/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD		GWNO	0	20.75					FILL: Sandy GRAVEL grey, basalt, with cobbles and medium sand and some brick fragments			BALLAST
			1						For Continuation Refer to Sheet 2			
			2									
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION C

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Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

BOREHOLE: SRT BH069

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No: PCS 00013/10701

COORDS: 334007.8 m E 6249073.7 m N MGA94 56
SURFACE RL: 20.75 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.32 m

DRILL RIG:
CONTRACTOR:
LOGGED: PGH DATE: 21/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1	1.00		Continuation of Sheet 1				
HQ3	No Water Loss				19.70		SHALE layered, brown	MW			
					1.50		CORE LOSS				
					19.25		SHALE orange brown and grey, laminated, some iron staining	EW HW MW		1.50-1.55 m: DS, clay 1.55-1.74 m: B, 0°, Pl, Sm, Sn, (<10mm spacing) 1.75 m: B, 10°, Pl, Sm, Sn 1.77-2.00 m: B, 1°, Pl, Sm, Sn, (x4) 2.00-2.05 m: J, 52°, Pl, Sm, Sn 2.05-2.17 m: B, 0°, Pl, Sm, Sn, (x5) 2.20-2.21 m: IS, 0°, Pl, Sm, Sn 2.30-2.35 m: B, 10°, Pl, Sm, Sn 2.51 m: possible fault 2.51-2.80 m: B, 1-10°, Pl, Sm, Sn, (x9) 2.51 m: possible fault 2.51-2.80 m: B, 1-10°, Pl, Sm, Sn, (x9) 2.80-2.90 m: J, 80°, Pl, Sm, Sn 2.91 m: B, 1°, Pl, Sm, Cn 3.00-3.16 m: B, 0°, Pl, Sm, Sn, (x5) 3.20 m: B, 5°, Pl, Sm, Cn 3.35-3.60 m: B, 5°, Pl, Sm, Cn 3.70-3.77 m: CZ, 60°, angular fragments 3.90-3.94 m: B, 2°, Pl, Sm, Sn 4.17-4.38 m: J, 68°, Pl, Sm, Sn 4.40 m: possible fault 4.63 m: B, 0°, Pl, Sm, Cn S14896; 4.90 m 5.38-5.41 m: J, 28°, Pl, Sm, Cn 5.45-5.52 m: J, 45-55°, Un, Sm, Cn 5.65-5.80 m: J, 80°, Pl, Sm, Cn 5.82 m: B, 0°, Pl, Sm, Cn 6.06 m: B, 0°, Pl, Sm, Cn	
		50	0 (50)	2							
				3				MW			
		100	65 (95)	4							
				5							
				6							
		100	95 (95)	7				EW FR		6.70-6.74 m: SS, 30°, crushed rock (angular) and clay matrix 6.78-6.82 m: J, 55°, Pl, Sm, Cn, angular 7.11-7.27 m: J, 70°, Pl, Sm, Cn 7.27-7.31 m: DS, 0°, clay, 40 mm	
					7.60			EW FR			
				8	13.15		LAMINITE layered, pale grey/black, sandstone:shale 50:50	SW		7.82 m: B, 0°, Pl, Sm, Cn 7.94 m: B, 2°, Pl, Sm, Cn	
					8.45						
					12.30		SANDSTONE fine to medium grained, massive, pale grey	FR		8.40-8.42 m: SS, angular gravel	
		100	100 (100)	9							
				10							

REVISION

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BOREHOLE: SRT BH069

SHEET: 3 OF 3 REV: C

CLIENT:	Transport for NSW	COORDS: 334007.8 m E 6249073.7 m N MGA94 56	DRILL RIG:
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.75 m DATUM: AHD	CONTRACTOR:
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 21/6/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 10.32 m	CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3		100	100 (100)	10	10.32		SANDSTONE fine to medium grained, massive, pale grey	SW			
					10.43		END OF BOREHOLE @ 10.32 m				
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

REVISION C

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ION C STANDPIPE INSTALLATION: SRT BH039

CLIENT:	Transport for NSW	COORDS: 334174.8 m E 6249282.5 m N MGA94 56	SHEET: 1 OF 1 REV: C
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.17 m DATUM: AHD	DRILL RIG: Explora
LOCATION:	Central Station - Platform 15 Road	INCLINATION: -90°	CONTRACTOR: Groundtest
PROJECT No	PCS 00013/10701	HOLE DEPTH: 35.00 m	LOGGED: AP DATE: 5/7/16
			CHECKED: HB DATE: 20/7/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD	GWNO	0	20.07		ASPHALT	Gatic
			0.80			
			19.22		SANDY GRAVEL	
			1.70		CLAY	
SPT ADT			2.40		GRAVELLY SANDY CLAY	
			2.54		SANDSTONE	
			3.15		SANDSTONE	
			3.94		CORELOSS (SHEAR ZONE)	
			16.23		INFERRED SANDSTONE	
		5			SANDSTONE	
			6.33			
			13.81		CORE LOSS	
					SANDSTONE	
	No Water Loss		9.07			Grout
		10	11.10			
		15				
			16.87			
HQ3			3.27		CORE LOSS	
					SANDSTONE	
						19.50, RL0.67
		20				Bentonite
						21.00, RL-0.83
						22.00, RL-1.83
						Sand
						Screen
	0% Water RETURN	25				25.00, RL-4.83
						End Cap
						27.00, RL-6.83
		30				
		35	35.00			35.00, RL-14.83
			-14.83		END OF BOREHOLE @ 35.00 m	
					TARGET DEPTH	
					PIEZOMETER INSTALLED	
					STANDPIPE INSTALLATION COMPLETED	

REVISION C

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ION C STANDPIPE INSTALLATION: SRT BH047

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 7
PROJECT No PCS 00013/10701

COORDS: 334067.0 m E 6249270.0 m N MGA94 56
SURFACE RL: 21.31 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.00 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 8/8/16
CHECKED: HB DATE: 31/8/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0	0.20 21.11		CERAMIC TILES OVER CONCRETE SLAB CLAYEY SAND	
			1.00 20.31		SANDY CLAY	
			1.60 19.71		SILTY CLAY	
		2				Cement bentonite grout
			3.20 18.11		CLAYEY SILT	
ADT	GWNO	4				4.40, RL16.91
						Bentonite
						5.40, RL15.91
		6				5.90, RL15.41
			6.85 7.13		LAMINITE	
			14.18		SANDSTONE	Sand
		8				Screen
						9.40, RL11.91
						End Cap
NMLC	No Water Loss	10				10.00, RL11.31
			11.00 10.31			
		12				Grout
			12.88 8.43			
		14	14.00 7.31			
			15.00			15.00, RL6.31
			6.31		END OF BOREHOLE @ 15.00 m TARGET DEPTH PIEZOMETER INSTALLED	
		16				

REVISION C

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GAP gINT FN. F17 RL1

ION C STANDPIPE INSTALLATION: SRT BH048

Golder Associates | Douglas Partners Geotechnics | Environment | Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT No PCS 00013/10701

COORDS: 334109.7 m E 6249234.6 m N MGA94 56
SURFACE RL: 21.52 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.13 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN DATE: 15/7/16
CHECKED: HB DATE: 31/8/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD/DTC		0	0.37		CERAMIC TILES OVER CONCRETE SLAB	
			21.15		GRAVEL	
					GRAVELLY CLAY	
			1.50			
ADV	GWNO	2	20.02		SILTY CLAY	
			3.35			
			18.17		SILTY CLAY	
		4	4.60			
			16.75		LAMINITE	
	90% RETURN				LAMINITE	
			5.85			
		6	15.67		SILTSTONE	
			6.29			
			6.68		SANDSTONE	
			7.09		SANDSTONE	
			14.43		SANDSTONE	
		8				
		10				
NMLC	No Water Loss		11.77			
		12	9.75			
		14				
		16				
		18				
		20	20.13			
			1.39		END OF BOREHOLE @ 20.13 m TARGET DEPTH PIEZOMETER INSTALLED	

1.00, RL20.52 — Grout
1.90, RL19.62 — Bentonite
2.50, RL19.02 — Sand
Screen
6.50, RL15.02 — End Cap
6.50, RL14.92
Grout
20.13, RL1.39

REVISION C

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ION C STANDPIPE INSTALLATION: SRT BH050

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 5
PROJECT NoPCS 00013/10701

COORDS: 334058.0 m E 6249299.1 m N MGA94 56
SURFACE RL: 21.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.23 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL/SI DATE: 23/7/16
CHECKED: HB DATE: 1/8/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
DTC		0	0.20 21.19		CERAMIC TILES OVER CONCRETE SLAB	
NDD					GRAVEL	0.50, RL20.89 Grout; Bentonite; 1.00, RL20.39; 1.20, RL20.19 Sand
		2	2.20 19.19		SILTY CLAY	Screen; 2.98, RL18.41 End cap
ADT	GW/NO	4				4.00, RL17.39
		6	6.00 15.39		LAMINITE	
			6.65 14.74		SANDSTONE	
		8	8.00 13.39			
			9.00 12.39		SANDSTONE	
		10	10.00 11.39		SANDSTONE	Grout
NMLC	No Water Loss		11.70 9.69		SANDSTONE	
		12	12.68 8.71		SANDSTONE	
			13.25 8.14		SANDSTONE	
			13.65 7.74			
		14	14.33 7.06			
			14.90 6.49			
			15.23 6.16		END OF BOREHOLE @ 15.23 m TARGET DEPTH PIEZOMETER INSTALLED	15.23, RL6.16
		16				

REVISION C

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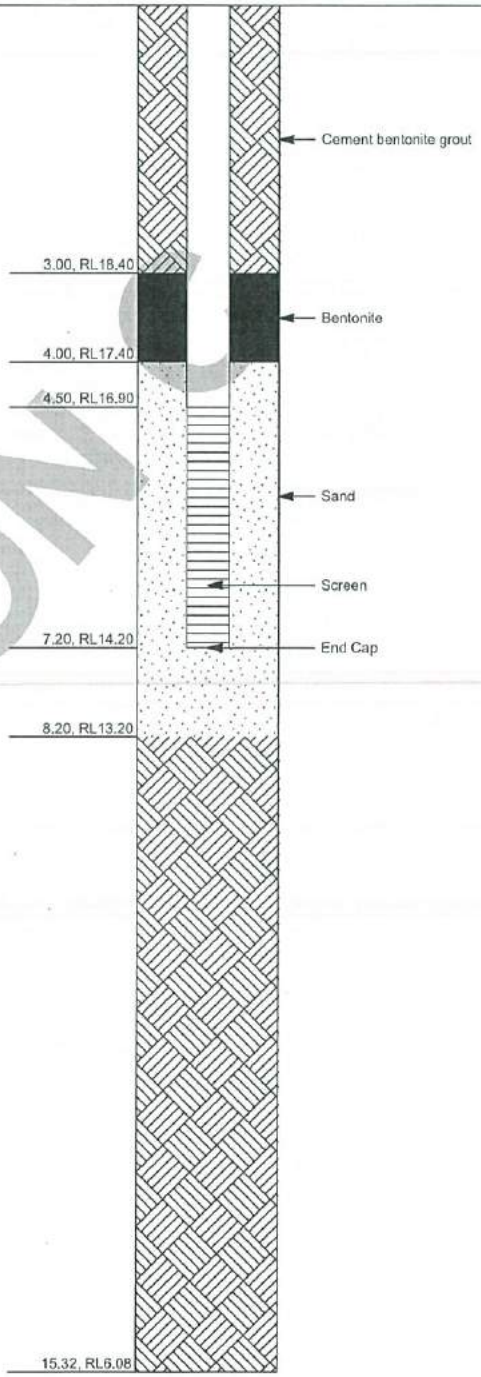
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ION C STANDPIPE INSTALLATION: SRT BH052

SHEET: 1 OF 1 REV: C

CLIENT:	Transport for NSW	COORDS: 334094.9 m E 6249320.3 m N MGA94 56	DRILL RIG: XC1
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 21.40 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station - Platform 6	INCLINATION: -90°	LOGGED: JN DATE: 21/7/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 15.32 m	CHECKED: HB DATE: 27/7/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD DTC		0			CERAMIC TILES OVER CONCRETE SLAB	
			0.50		GRAVEL	
			20.90		SAND	
					CLAY	
			1.85			
ADT	GWNO	2	19.55		CLAY	
			3.20			
			3.50		GRAVELLY CLAY	
			17.90		CLAY	
		4	4.20			
			17.20		SILTY CLAY	
			4.80			
			5.00		CORE LOSS	
			16.40		SANDSTONE	
			5.72			
			15.68			
		6	5.95		SANDSTONE	
			15.45			
			7.62			
			13.78			
		8				
NMLC	No water loss					
		10	10.38			
			11.02			
			10.66			
			10.74			
			11.53			
			9.87			
			11.85			
		12	9.55			
			12.32			
			9.08			
		14				
			15.32			
			6.08		END OF BOREHOLE @ 15.32 m TARGET DEPTH PIEZOMETER INSTALLED ~~ATV/OTV IMAGING COMPLETED~~	
		16				



REVISION C

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GAP gINT FN. F17 RL1

ION C STANDPIPE INSTALLATION: SRT BH053

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 12
PROJECT NoPCS 00013/10701

COORDS: 334139.1 m E 6249281.0 m N MGA94 56
SURFACE RL: 21.53 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.15 m

DRILL RIG: XC1
CONTRACTOR: Terratest
LOGGED: JN/SI DATE: 9/7/16
CHECKED: HB DATE: 12/7/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD DTC	GW:NO	0	0.40		CERAMIC TILES OVER CONCRETE SLAB	Gatic
			21.08		GRAVEL	
					GRAVELLY SILTY CLAY	Grout
			1.50		SILTY CLAY	
ADV			20.03		SILTY CLAY	
		2	2.10			
			19.43		GRAVELLY SANDY CLAY	2.50, RL19.03
			3.00			
			18.53		CORE LOSS	Bentonite
			3.61			
			17.92		MUDSTONE	
		4	4.10			4.50, RL17.03
					SILTSTONE	
			17.12		CORE LOSS	
			5.19		SILTSTONE	
			16.34		CORE LOSS	5.50, RL16.03
		6				
			6.49			
			15.04		CLAY	Sand
			7.10			
			14.43		CORE LOSS	
			7.54			Screen
			13.99		BASALT	
		8				
	08/07/16 21:00					
		10				10.50, RL11.03
						11.50, RL10.03
NMLC	No Water Loss	12	12.10			Bentonite
			9.43			13.00, RL8.53
		14				
			15.00			
			6.53			
		16				
						Sand
		18				
		20	20.15			20.15, RL1.38
			1.38		END OF BOREHOLE @ 20.15 m TARGET DEPTH PIEZOMETER INSTALLED	

REVISION C

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GAP gINT FN. F17 RL1

ION C STANDPIPE INSTALLATION: SRT BH055

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 20/21
PROJECT No PCS 00013/10701

COORDS: 334177.2 m E 6249206.3 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.15 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 20/10/16
CHECKED: HB DATE: 2/11/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
DTC		0	0.20		CERAMIC TILES OVER CONCRETE SLAB	
NDD	GWNO		22.66		CLAYEY GRAVEL	Bentonite Grout Mix
			1.50			1.00, RL21.86
ADT			1.80		CLAYEY SAND	
	50% RETURN	2	2.00		GRAVEL AND COBBLES	
			20.86		CORE LOSS	
			2.75			
			19.96		GRAVELLY CLAY	Sand
					SHALE	Screen
		4	4.40			4.50, RL18.36
			18.46			
			5.45			
			17.41		SANDSTONE	
		6	6.10			
			16.76		SANDSTONE	
			6.60			
			16.26		SANDSTONE	
NMLC		8				Grout Backfill
	100% RETURN					
		10				
			11.50			
			11.36			
		12				
		14				
			15.15			15.00, RL7.86
			7.71		END OF BOREHOLE @ 15.15 m TARGET DEPTH PIEZOMETER INSTALLED ATV/OTV IMAGING COMPLETED	
		16				

REVISION C

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ION C STANDPIPE INSTALLATION: SRT BH059

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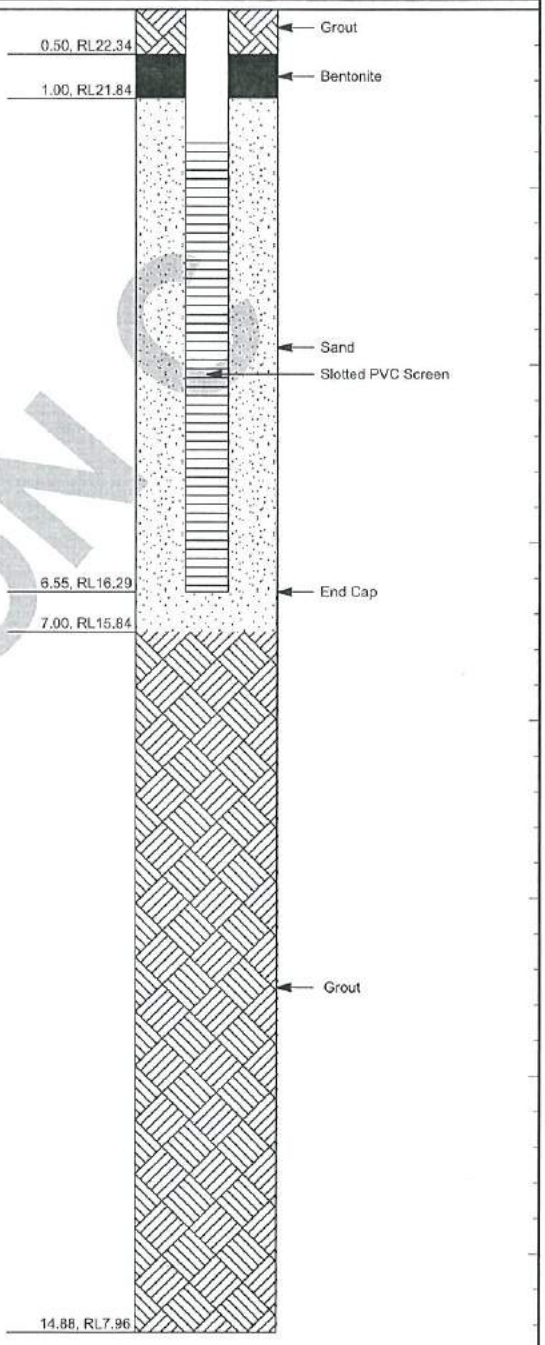
SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 19
PROJECT No PCS 00013/10701

COORDS: 334155.7 m E 6249195.0 m N MGA94 56
SURFACE RL: 22.84 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 14.88 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 30/9/16
CHECKED: HB DATE: 11/10/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NMLC	GW/NO	0	0.20 22.64		CERAMIC TILES OVER CONCRETE SLAB	
			0.55 22.29		SAND	
			1.23		SAND	
			1.50 21.34		CORE LOSS	
		2	2.00 20.84		SANDY GRAVEL	
			2.60		CORE LOSS	
	50% RETURN		20.04		SANDY GRAVEL	
					SHALE	
		4			SHALE	
NMLC	No water loss	6	6.55 16.29		SANDSTONE	
			7.15 15.69		SANDSTONE	
		8				
		10				
		12				
		14	14.88 7.96		END OF BOREHOLE @ 14.88 m TARGET DEPTH PIEZOMETER INSTALLED	
		16				



REVISION C

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GAP gINT FN. F17 RL1

STANDPIPE INSTALLATION: SRT BH060

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SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 16-17
PROJECT No PCS 00013/10701

COORDS: 334138.1 m E 6249201.4 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.25 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 8/11/16
CHECKED: HB DATE: 14/11/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD DTC		0	0.20 22.66		CERAMIC TILES OVER CONCRETE SLAB SILTY GRAVELLY SAND	0.25, RL22.61 Gatic Bentonite 1.00, RL21.86
ADT	GWNO		1.60 21.26			
		2	2.00 20.86		SILTY GRAVELLY SAND	
			3.00 19.86		SILTY CLAY	Slotted PVC screen Sand
			3.50 19.36		SHALE	
		4				4.50, RL18.36 End Cap
		6	6.15 16.71		SANDSTONE	
			7.60 15.26		SANDSTONE	
NMLC	GWNO No water loss	8				
		10				Grout
		12				
		14				
			15.25 7.61		END OF BOREHOLE @ 15.25 m	15.25, RL7.61
		16				

REVISION

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GAP gINT FN. F17 RL1

ION C STANDPIPE INSTALLATION: SRT BH061

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 1
PROJECT No PCS 00013/10701

COORDS: 334037.9 m E 6249335.7 m N MGA94 56
SURFACE RL: 21.36 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 7.50 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 18/7/16
CHECKED: HB DATE: 31/8/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
DTC		0	21.36		CONCRETE	
			0.20			
			21.16		SILTY SANDY CLAY	
			0.50			
NDD			20.86		CLAYEY SAND	
		1				
			1.60			
			19.76			
		2				
		3				
		4				
			4.30			
			17.06		SANDY CLAY	
			4.70			
			16.66		SAND	
			5.00			
ADT	GWNO	5	16.36		SILTY CLAY	
		6				
			6.50			
			14.86		SILTY SANDY CLAY	
		7				
			7.50			
			13.86		END OF BOREHOLE @ 7.50 m OBSTRUCTION IN THE HOLE PIEZOMETER INSTALLED	
		8				

0.30, RL21.06 — Grout
Bentonite
1.00, RL20.36
4.10, RL17.26 — Sand
Screen
7.10, RL14.26 — End Cap
7.30, RL14.06 — Benotnite
7.50, RL13.86 — Soil Collapse

REVISION C

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ION C STANDPIPE INSTALLATION: SRT BH063

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SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Randle Lane - Surry Hills
PROJECT No PCS 00013/10701

COORDS: 334242.3 m E 6249152.6 m N MGA94 56
SURFACE RL: 25.41 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.09 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL/PGH DATE: 11/8/16
CHECKED: HB/SI DATE: 25/8/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0	25.15		CONCRETE (GUTTER)	0.20, RL25.21 Quick Set
					GRAVEL	
					SILTY CLAY	
ADT	GWNO		1.60 23.81		LAMINITE	
		2	2.20 23.11		CORE LOSS	
			2.71 22.70		LAMINITE	
					SILTSTONE	Grout
		4				
		6				6.00, RL19.41 Bentonite
						7.00, RL18.41
HQ3	No water loss	8	8.30 16.97		SANDSTONE	
					SANDSTONE	Screen
		10	10.00 15.41		SANDSTONE	
		12				
		14	14.10 11.31			14.00, RL11.41 End Cap
						Sand
						14.50, RL10.91
			15.09 10.32		END OF BOREHOLE @ 15.09 m	15.09, RL10.32 Cement benonite grout
		16				

REVISION C

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GAP gINT FN. F17 RL1

ION C STANDPIPE INSTALLATION: SRT BH064

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SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334040.0 m E 6249121.0 m N MGA94 56
SURFACE RL: 20.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.24 m

DRILL RIG: Hanjin DB8
CONTRACTOR: Terratest
LOGGED: PGH DATE: 27/6/16
CHECKED: HB DATE: 5/7/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0	20.39		GRAVEL	
		1				1.00, RL19.39
						1.50, RL18.89
		2	2.20			
ADH	possible perched water at base of fill		18.19		SILTY CLAY	
		3				
		4				
		5				4.50, RL15.89
						5.00, RL15.39
		6				
			7.00			
		7	13.39		SANDSTONE	
			7.50			
HQ3	No Water Loss		12.89		CORE LOSS	
			7.94			
		8	12.45		SANDSTONE	
		9				
		10				10.00, RL10.39
			10.24			
			10.15		END OF BOREHOLE @ 10.24 m GROUNDWATER WELL INSTALLED	
		11				

Bentonite
Sand
Screen
End cap
Bentonite

REVISION C

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GAP gINT FN. F17
RL1

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REVISION C BOREHOLE: SRT BH006

SHEET: 1 OF 5 REV: C

CLIENT: Transport for New South Wales
PROJECT: SRT Geotechnical Investigation Services
LOCATION: South of Platform 15, Central Station
PROJECT No PSC No.00013/10464

COORDS: 334063.6 m E 6249133.1 m N MGA94 56
SURFACE RL: 20.60 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 33.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: LJH/JS START: 1/8/15
CHECKED: HB FINISH: 2/8/15

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT NDD			0	20.60					GRAVEL fine to coarse grained, angular, grey, ballast	D		FILL
				0.50 0.60 20.00					CONCRETE FILL: SAND fine to medium grained, grey, with some and gravel/ silt			
NDD			1							D		
			2									
			3	3.00 17.60					medium grained, pale grey			
ADT		L	4	4.20 16.40	Rec = 450/450 mm SPT 4.00-4.45 m 6, 3, 4 N=7					M		
				4.50 16.10					CLAY medium to high plasticity, red-brown and grey with some fine to medium grained ironstone gravel		F	RESIDUAL SOIL
WB			5								St	
					Rec = 450/450 mm SPT 5.30-5.75 m 6, 11, 15 N=26					M (<PL)		
			6								VSt	
			7		Rec = 450/450 mm SPT 6.80-7.25 m 8, 13, 18 N=31							
									For Continuation Refer to Sheet 2			
			8									
			9									
			10									

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GAP gINT FN. F01a RL3

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REVISION C BOREHOLE: SRT BH006

SHEET: 2 OF 5 REV: C

CLIENT:	Transport for New South Wales	COORDS: 334063.6 m E 6249133.1 m N MGA94 56	DRILL RIG: Explora
PROJECT:	SRT Geotechnical Investigation Services	SURFACE RL: 20.60 m DATUM: AHD	CONTRACTOR: Groundtest
LOCATION:	South of Platform 15, Central Station	INCLINATION: -90°	LOGGED: LJH/JS START: 1/8/15
PROJECT No	PSC No.00013/10464	HOLE DEPTH: 33.00 m	CHECKED: HB FINISH: 2/8/15

Drilling							Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	100% RETURN	90	50 (75)	0							
				1							
				2							
				3							
				4							
				5							
				6							
				7	7.50		Continuation of Sheet 1				
					7.64		CORE LOSS - 140mm				
					12.96		SANDSTONE WITH SILTSTONE LAMINATIONS medium grained, dark brown to brown, bedding typically 10-15°	HW		7.73-7.76 m: DS, 5°, CH clay, 30 mm 7.87 m: J, 55°, Pl, Ro, Sn 7.89-7.91 m: Bx 2, 0°, sp = 20 mm, Pl, Ro, Sn	
				8	8.23			MW			
		90	50 (75)		12.37		becoming pale grey	FR		8.50 m: Bx 3, 0°, sp = 20 mm, Pl, Ro, siltstone lamination Sn	
				9						9.02-9.03 m: DS, 5°, clayey sand, 10 mm 9.19 m: J, 0°, Pl, Ro, Cn	
		100	100 (100)								
				10	10.00						

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GAP gINT FN. F02a RL3

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REVISION C BOREHOLE: SRT BH006

SHEET: 3 OF 5 REV: C

CLIENT: Transport for New South Wales
PROJECT: SRT Geotechnical Investigation Services
LOCATION: South of Platform 15, Central Station
PROJECT No PSC No.00013/10464

COORDS: 334063.6 m E 6249133.1 m N MGA94 56
SURFACE RL: 20.60 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 33.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: LJH/JS START: 1/8/15
CHECKED: HB FINISH: 2/8/15

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	100% RETURN	100	100 (100)	10	10.60		SANDSTONE WITH SILTSTONE LAMINATIONS medium grained, pale grey, bedding typically 10-15°	FR			
				11							
		100	100 (100)	12						12.29 m: Bx 2, 0°, sp = 10 mm, Pl, Ro, Cn	
				13						12.77 m: B, 5°, Pl, Ro, Cn 13.10 m: B, 5°, Pl, Ro, Cn	
		100	100 (100)	14							
				15							
		100	100 (100)	16						16.35 m: B, 10°, Pl, Ro, siltstone lamination Cn	
				17							
		100	100 (100)	18							
				19						19.57 m: B, 0°, Pl, Ro, clayey sand Vr	
		100	100 (100)	20							

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GAP gINT FN. F02a RL3

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REVISION C BOREHOLE: SRT BH006

SHEET: 4 OF 5 REV: C

CLIENT:	Transport for New South Wales	COORDS: 334063.6 m E 6249133.1 m N MGA94 56	DRILL RIG: Explora
PROJECT:	SRT Geotechnical Investigation Services	SURFACE RL: 20.60 m DATUM: AHD	CONTRACTOR: Groundtest
LOCATION:	South of Platform 15, Central Station	INCLINATION: -90°	LOGGED: LJH/JS START: 1/8/15
PROJECT No	PSC No.00013/10464	HOLE DEPTH: 33.00 m	CHECKED: HB FINISH: 2/8/15

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	100% RETURN	100	100 (100)	20			SANDSTONE WITH SILTSTONE LAMINATIONS medium grained, pale grey, bedding typically 10-15°	FR			
				21						21.17-21.18 m: Bx 2, 5°, Pl, Ro, Cn	
		100	100 (100)	22							
				23						23.16 m: J, 45°, Pl, Ro, Cn 23.53 m: B, 5°, Pl, Ro, Cn 23.89 m: B, 5°, Pl, Ro, clayey sand Vr	
		100	100 (100)	24						24.71 m: B, 5°, Pl, Ro, clayey sand Vr	
				25							
		100	100 (100)	26							
				27							
				28						27.97 m: Bx 2, 5°, sp = 10 mm, Pl, Ro, Cn	
		100	100 (100)	29							
				30							

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GAP gINT FN. F02a RL3

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REVISION C BOREHOLE: SRT BH006

SHEET: 5 OF 5 REV: C

CLIENT: Transport for New South Wales
PROJECT: SRT Geotechnical Investigation Services
LOCATION: South of Platform 15, Central Station
PROJECT No: PSC No.00013/10464

COORDS: 334063.6 m E 6249133.1 m N MGA94 56
SURFACE RL: 20.60 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 33.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: LJH/JS START: 1/8/15
CHECKED: HB FINISH: 2/8/15

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	100% RETURN	100	100 (100)	30			SANDSTONE WITH SILTSTONE LAMINATIONS medium grained, pale grey, bedding typically 10-15°	FR			
				31							
				32						32.05 m: J, 80-90°, Un, Ro, discontinuous Cn, 31.90m-32.20m 32.38 m: B, 0°, Pl, Ro, clay Vr 32.65 m: B, 5°, Pl, Ro, clay Vr	
				33	33.00 -12.40		END OF BOREHOLE @ 33.00 m TARGET DEPTH GROUTED			32.95 m: J, 80°, Pl, Ro, Cn	
				34							
				35							
				36							
				37							
				38							
				39							
				40							

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GAP gINT FN. F02a
RL3

01.15.19 Group U > 01.15.19.03 U3 NWRLSRT-GDS-SCS-GE-REP-000020.00.01.INF.pdf

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REVISION A BOREHOLE: SRT BH006A

SHEET: 1 OF 3 REV: A

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station
PROJECT No PCS 00013/10701

COORDS: 334062.8 m E 6249132.4 m N MGA94 56
SURFACE RL: 20.62 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 16.00 m

DRILL RIG: Commachio 205
CONTRACTOR: Terratest
LOGGED: AP DATE: 9/3/17
CHECKED: HB DATE: 14/3/17

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	20.62					FILL: GRAVEL medium to coarse grained, angular, grey			FILL
				0.60	0.40-0.50 m Rec = 100/100 mm PID m 0.2 ppm PID 0.40 m 0.2 ppm							
				20.02					FILL: GRAVEL fine to medium grained, angular, grey, trace sand			
			1		0.80-0.90 m Rec = 100/100 mm PID m 0.3 ppm PID 0.80 m 0.3 ppm							
				1.40								
ADT				19.22					FILL: SAND fine to medium grained, grey, with some and gravel silt			
	L		2		C 1.90-2.00 m Rec = 100/100 mm					D - M		
					Rec = 450/450 mm PID m 0.2 ppm SPT 2.50-2.95 m 6, 9, 10							
			3	3.00 17.62	N=19 PID m 0.2 ppm PID 2.50 m 0.2 ppm				medium grained, pale grey			
				4.00								
			4	16.62	C 4.00-4.45 m Rec = 450/450 mm PID m 0.3 ppm			CI-CH	CLAY medium to high plasticity, red-brown and grey, with some sand		F	RESIDUAL SOIL
		08/03/17		4.50 16.12	SPT 4.00-4.45 m 3, 2, 2 N=4 PID m 0.3 ppm PID 4.00 m 0.3 ppm				with ironstone gravel		St	
	M		5									
					Rec = 450/450 mm PID m 0.3 ppm SPT 5.50-5.95 m 6, 13, 12					M		
			6		N=25 PID m 0.3 ppm PID 5.50 m 0.3 ppm						VSt	
WB			7		Rec = 450/450 mm PID m 0.4 ppm SPT 7.00-7.45 m 7, 12, 15 N=27 PID m 0.4 ppm PID 7.00 m 0.4 ppm				For Continuation Refer to Sheet 2			
			8									
			9									
			10									

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GAP gINT FN. F01a RL3

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REVISION A BOREHOLE: SRT BH006A

SHEET: 2 OF 3 REV: A

CLIENT:	Transport for NSW	COORDS: 334062.8 m E 6249132.4 m N MGA94 56	DRILL RIG: Commachio 205
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.62 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station	INCLINATION: -90°	LOGGED: AP DATE: 9/3/17
PROJECT No	PCS 00013/10701	HOLE DEPTH: 16.00 m	CHECKED: HB DATE: 14/3/17

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
				5							
				6							
					7.50		Continuation of Sheet 1				
HQ3	100% RETURN	100	60 (100)		13.12		SANDSTONE medium grained, dark brown and brown, cross-bedding at 10° to 15°	EW MW EW MW			
				8	8.12						
					12.50		pale grey	FR		8.45 m: J, 30°, Un, Ro, fe Sn 8.52 m: J, 10°, Pl, Ro, fe Sn	
		100	100 (100)	9						9.21 m: SS, 0°, VL strength	
					9.67						
		100	95 (100)		10.95		carbonaceous band			9.69 m: B, 0-5°, Un, Ro, carbonaceous Ct 9.75 m: J, 25°, Pl, Ro, Cn	
				10	10.00						

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REVISION A BOREHOLE: SRT BH006A

SHEET: 3 OF 3 REV: A

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station
PROJECT No PCS 00013/10701

COORDS: 334062.8 m E 6249132.4 m N MGA94 56
SURFACE RL: 20.62 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 16.00 m

DRILL RIG: Commachio 205
CONTRACTOR: Terratest
LOGGED: AP DATE: 9/3/17
CHECKED: HB DATE: 14/3/17

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	100% RETURN	100	95 (100)	10	10.62		SANDSTONE medium grained, pale grey, cross-bedding at 10° to 15°	FR			
		100	100 (100)	11							
		100	100 (100)	12						12.22 m: 8-6°, Pl, Un, Ro, Cn	
		100	100 (100)	13							
		100	100 (100)	14							
		100	100 (100)	15							
		100	100 (100)	16	16.00 4.62		END OF BOREHOLE @ 16.00 m TARGET DEPTH STANDPIPE INSTALLED				
				17							
				18							
				19							
				20							

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ON A STANDPIPE INSTALLATION: SRT BH006A

SHEET: 1 OF 1 REV: A

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station
PROJECT No PCS 00013/10701

COORDS: 334062.8 m E 6249132.4 m N MGA94 56
SURFACE RL: 20.62 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 16.00 m

DRILL RIG: Commachio 205
CONTRACTOR: Terratest
LOGGED: AP DATE: 9/3/17
CHECKED: HB DATE: 14/3/17

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0	20.62		GRAVEL	
			0.60			
			20.02		GRAVEL	
			1.40			
ADT			19.22		SAND	Grout
		2				
			3.00			3.20, RL17.42
			17.62			Bentonite
			4.00			4.20, RL16.42
		4	16.62		CLAY	
	09/03/16		4.50			Sand
			16.12			
		6				Screen
						7.00, RL13.62
WB						End Cap
			7.50			7.50, RL13.12
HQ3	100% RETURN		13.12		SANDSTONE	Bentonite
		8	8.12			8.50, RL12.12
			12.50			
			9.67			
		10	10.00			
			10.62		SANDSTONE	
		12				Grout
		14				
			16.00			16.00, RL4.62
		16	4.62		END OF BOREHOLE @ 16.00 m TARGET DEPTH STANDPIPE INSTALLED	

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REVISION B BOREHOLE: SRT BH064

SHEET: 1 OF 3 REV: B

CLIENT:	Transport for New South Wales	COORDS: 334040.0 m E 6249121.0 m N MGA94 56	DRILL RIG: Hanjin DB8
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.39 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 27/6/16
PROJECT No	1650773	HOLE DEPTH: 10.24 m	CHECKED: HB DATE: 5/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	20.39					FILL: GRAVEL Angular and sub-angular blue metal (ballast) gravel and cobbles with some gravelly sand			
			2	2.20 18.19	DS 2.20-2.30 m Rec = 100/100 mm			CI	Silty CLAY high plasticity, red and grey, trace sand			
					Rec = 450/450 mm SPT 2.50-2.95 m 5, 11, 13 N=24							
			3		U 3.00-3.40 m Rec = 300/400 mm							
					DS 3.50-3.60 m Rec = 100/100 mm							
			4		BDS 4.00-5.00 m Rec = 1000/1000 mm Rec = 450/450 mm SPT 4.00-4.45 m 7, 15, 14 N=29							
ADH		possible perched water at base of fill	5		U 5.00-5.45 m Rec = 450/450 mm					M (<LL)	VSt	
					Rec = 450/450 mm SPT 5.50-5.95 m 4, 9, 14 N=23							
			6									
			7	7.00 13.39	Rec = 450/450 mm SPT 7.00-7.45 m 9, 30, 32 N=62				SANDSTONE medium grained, dark grey, thinly bedded, very low strength, highly weathered			
									For Continuation Refer to Sheet 2			
			8									
			9									
			10									

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GAP gINT FN. F01a RL3

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REVISION B BOREHOLE: SRT BH064

SHEET: 2 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No1650773

COORDS: 334040.0 m E 6249121.0 m N MGA94 56
SURFACE RL: 20.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.24 m

DRILL RIG: Hanjin DB8
CONTRACTOR: Terratest
LOGGED: PGH DATE: 27/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
				5							
				6							
				7	7.50		Continuation of Sheet 1				
					12.89		CORE LOSS				
HQ3	No Water Loss	78	78 (78)	8	7.94 12.45		SANDSTONE medium to coarse grained, pale grey, with indistinct and distinct cross beds dipping between 5 and 15°	FR		8.31 m: B, 0°, Pl, Ro, Cn 8.50 m: B, 0°, Pl, Ro, Cn	
		100	100 (100)	9						9.22 m: B, 20°, Pl, Ro, Cn 9.33 m: B, 0°, Pl, Ro, Cn 9.62 m: B, 50°, Pl, Ro, Cn	
				10							

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REVISION B BOREHOLE: SRT BH064

SHEET: 3 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No1650773

COORDS: 334040.0 m E 6249121.0 m N MGA94 56
SURFACE RL: 20.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.24 m

DRILL RIG: Hanjin DB8
CONTRACTOR: Terratest
LOGGED: PGH DATE: 27/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3		100	100 (100)	10	10.24			FR		10.10 m: B, 5°, Pl, Ro, clay Vr	
					10.15		END OF BOREHOLE @ 10.24 m GROUNDWATER WELL INSTALLED				
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

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GAP gINT FN. F02a RL3

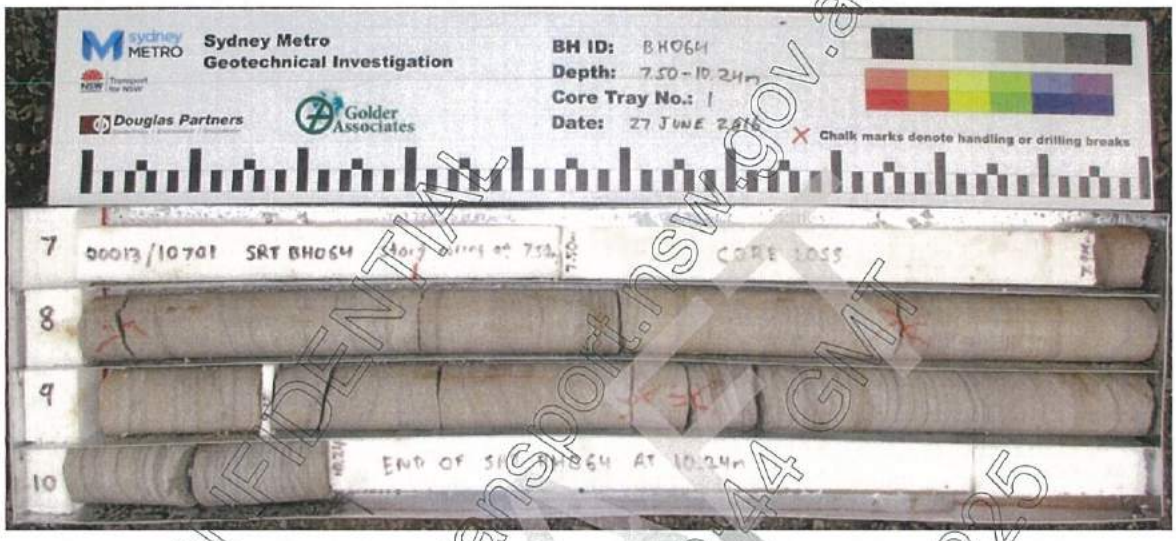
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REVISION B CORE PHOTOGRAPHS: SRT BH064

SHEET: 1 OF 1 REV: B

CLIENT:	Transport for New South Wales	COORDS: 334040.0 m E 6249121.0 m N MGA94 56	DRILL RIG: Hanjin DB8
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.39 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 27/6/16
PROJECT No	1650773	HOLE DEPTH: 10.24 m	CHECKED: HB DATE: 5/7/16



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BOREHOLE: SRT BH067

SHEET: 1 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334048.0 m E 6249100.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.11 m

DRILL RIG: Hanjin D&B
CONTRACTOR: Terratest
LOGGED: PGH DATE: 24/6/16
CHECKED: HB DATE: 29/6/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	0.10 20.54 0.30 20.34					TOPSOIL dark brown, silty clay			TOPSOIL
									FILL: CLAY sandy clay with some gravel			FILL
			1						Silty CLAY red brown, with some ironstone gravel			RESIDUAL SOIL
				1.40 19.24				CI	Silty CLAY medium plasticity, red and grey, with some ironstone gravel	M (SPL)	St	
ADT	M	GWNO	2		S14927 Rec = 450/450 mm SPT 2.50-2.95 m 14,8,6 N=14							
			3	3.00 17.64	C 3.00-4.10 m Rec = 1100/1100 mm				Silty CLAY medium plasticity, grey, with some iron cemented bands			
HQ3		100% water loss	4						For Continuation Refer to Sheet 2			
			5									
			6									
			7									
			8									
			9									
			10									

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BOREHOLE: SRT BH067

SHEET: 2 OF 3 REV: C

CLIENT:	Transport for NSW	COORDS: 334048.0 m E 6249100.0 m N MGA94 56	DRILL RIG: Hanjin D&B
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.64 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 24/6/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 10.11 m	CHECKED: HB DATE: 29/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
					3.65		Continuation of Sheet 1				
				4	16.98		SHALE red and dark grey iron cemented bands interbedded with pale grey 50mm thick clay bands	EW - HW		4.06 m: B, 0°, Pl, Sm-Ro, Sn 4.22 m: B, 0°, Pl, Sm-Ro, Sn 4.30 m: B, 0°, Pl, Sm-Ro, Sn 4.53 m: B, 0°, Pl, Sm-Ro, Sn 4.56 m: B, 0°, Pl, Sm-Ro, Sn 4.58 m: B, 0°, Pl, Sm-Ro, Sn 4.75 m: B, 0°, Pl, Sm-Ro, Sn	
					4.80						
		75	0 (75)	5	15.84 5.30		CORE LOSS				
					15.34		SHALE red and dark grey iron cemented bands interbedded with pale grey 50mm to 150mm thick clay bands	EW - HW		5.70 m: J, 45°, Pl, Sm-Ro, Sn	
				6	6.20 14.44		SHALE dark grey, with ironstone seams and fine grained sandstone, 0°	HW		6.26-6.46 m: B, 0°, Pl, Sm, Sn, (x14)	
								SW		6.80 m: B, 1°, Pl, Sm, Sn S14928; 6.96 m	
				7	7.56					7.36 m: J, 80°, Pl, Sm, Sn, 320 mm length	
		100	50 (82)		13.08 13.04		SANDSTONE pale grey, fine grained, with indistinct cross beds dipping between 5 and 15° from 7.56 to 7.84 m: some dark grey siltstone interbeds			7.72 m: B, 0°, Pl, Ro, Cn	
				8	8.00 12.64		SANDSTONE medium to coarse grained, pale grey, indistinct cross-beds aat 5-15°	FR		S14929; 7.96 m 8.10 m: B, 0°, Pl, Ro, Cn 8.14 m: B, 0°, Pl, Ro, Cn 8.21 m: B, 0°, Pl, Ro, Cn	
				9							
		100	95 (100)							9.70 m: B, 10°, Pl, Ro, carbonaceous Vr 9.79 m: B, 5°, Pl-St, Ro, Sn	
				10							

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GAP gINT FN. F02a RL3

01.15.19 Group U > 01.15.19.03 U3 NWRLSRT-GDS-SCS-GE-REP-000020.00.01.INF.pdf

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BOREHOLE: SRT BH067

SHEET: 3 OF 3 REV: C

CLIENT:	Transport for NSW	COORDS: 334048.0 m E 6249100.0 m N MGA94 56	DRILL RIG: Hanjin D&B
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.64 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 24/6/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 10.11 m	CHECKED: HB DATE: 29/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				10	10.11 10.53		END OF BOREHOLE @ 10.11 m				
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

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GAP gINT FN. F02a RL3

01.15.19 Group U > 01.15.19.03 U3 NWRLSRT-GDS-SCS-GE-REP-000020.00.01.INF.pdf

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BOREHOLE: SRT BH068

SHEET: 1 OF 1 REV: C

CLIENT:	Transport for NSW	COORDS: 334035.0 m E 6249107.0 m N MGA94 56	DRILL RIG:
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.66 m DATUM: AHD	CONTRACTOR: Golder - Douglas
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: JN DATE: 29/6/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 3.40 m	CHECKED: HB DATE: 11/7/16

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA	L		0	20.66					FILL: Gravelly SAND fine to medium grained, dark brown, with fine to medium grained, angular to sub-angular gravel, trace glass fragments, and some rootlets	M		FILL
	M			0.65								
				19.91	DS 0.70-0.75 m Rec = 50/50 mm				FILL: Sandy CLAY medium plasticity, pale grey, orange to red brown, fine to medium sand	M		
			1	1.00 19.66					FILL: SAND medium to coarse grained, uniform, pale orange, trace clay	M		
	M-H								FILL: Clayey SAND medium to coarse grained, orange with some red brown, with some clay and some fine to medium grained, angular to sub-angular, igneous			
				1.65 19.01				GC CH				RESIDUAL SOIL
			2	2.00 18.66	DS 1.80-1.85 m Rec = 50/50 mm				FILL: CLAY medium plasticity, orange to red brown, trace sand, trace fine grained gravel	M		
	H								CLAY high plasticity, pale grey and red brown with some fine to medium grained, sub-angular ironstone gravel		VSt	
		29/06/16 15:00	3							M		
				17.26					END OF BOREHOLE @ 3.40 m REFUSAL BACKFILLED			
			4									
			5									
			6									
			7									
			8									
			9									
			10									

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GAP gINT FN. F01a RL3

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BOREHOLE: SRT BH069

SHEET: 1 OF 3 REV: C

CLIENT:	Transport for NSW	COORDS: 334007.8 m E 6249073.7 m N MGA94 56	DRILL RIG:
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.75 m DATUM: AHD	CONTRACTOR:
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 21/6/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 10.32 m	CHECKED: HB DATE: 5/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD		GWNO	0	20.75					FILL: Sandy GRAVEL grey, basalt, with cobbles and medium sand and some brick fragments			BALLAST
			1						For Continuation Refer to Sheet 2			
			2									
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

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BOREHOLE: SRT BH069

SHEET: 2 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334007.8 m E 6249073.7 m N MGA94 56
SURFACE RL: 20.75 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.32 m

DRILL RIG:
CONTRACTOR:
LOGGED: PGH DATE: 21/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex, V, L, M, H, VH, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1	1.00		Continuation of Sheet 1				
HQ3	No Water Loss	50	0 (50)	2	19.70		SHALE layered, brown	MW			
					1.50		CORE LOSS				
					19.25		SHALE orange brown and grey, laminated, some iron staining	EW HW MW		1.50-1.55 m: DS, clay 1.55-1.74 m: B, 0°, Pl, Sm, Sn, (<10mm spacing) 1.75 m: B, 10°, Pl, Sm, Sn 1.77-2.00 m: B, 1°, Pl, Sm, Sn, (x4) 2.00-2.05 m: J, 52°, Pl, Sm, Sn 2.05-2.17 m: B, 0°, Pl, Sm, Sn, (x5) 2.20-2.21 m: JS, 0°, Pl, Sm, Sn 2.30-2.35 m: B, 10°, Pl, Sm, Sn 2.51 m: possible fault 2.51-2.80 m: B, 1-10°, Pl, Sm, Sn, (x9)	
				3				MW		2.51 m: possible fault 2.51-2.80 m: B, 1-10°, Pl, Sm, Sn, (x9) 2.80-2.90 m: J, 80°, Pl, Sm, Sn 2.91 m: B, 1°, Pl, Sm, Cn 3.00-3.16 m: B, 0°, Pl, Sm, Sn, (x5) 3.20 m: B, 5°, Pl, Sm, Cn 3.35-3.60 m: B, 5°, Pl, Sm, Cn	
		100	65 (95)	4						3.70-3.77 m: CZ, 60°, angular fragments 3.90-3.94 m: B, 2°, Pl, Sm, Sn 4.17-4.38 m: J, 68°, Pl, Sm, Sn 4.40 m: possible fault 4.63 m: B, 0°, Pl, Sm, Cn	
				5						S14896: 4.90 m 5.38-5.41 m: J, 28°, Pl, Sm, Cn 5.45-5.52 m: J, 45-55°, Un, Sm, Cn 5.65-5.80 m: J, 80°, Pl, Sm, Cn 5.82 m: B, 0°, Pl, Sm, Cn	
				6						6.06 m: B, 0°, Pl, Sm, Cn	
		100	95 (95)	7				EW FR		6.70-6.74 m: SS, 30°, crushed rock (angular) and clay matrix 6.78-6.82 m: J, 55°, Pl, Sm, Cn, angular 7.11-7.27 m: J, 70°, Pl, Sm, Cn 7.27-7.31 m: DS, 0°, clay, 40 mm	
					7.60			EW FR			
				8	13.15		LAMINITE layered, pale grey/black, sandstone:shale 50:50	SW		7.82 m: B, 0°, Pl, Sm, Cn 7.94 m: B, 2°, Pl, Sm, Cn	
					8.45						
					12.30		SANDSTONE fine to medium grained, massive, pale grey	FR		8.40-8.42 m: SS, angular gravel	
		100	100 (100)	9							
				10							

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BOREHOLE: SRT BH069

SHEET: 3 OF 3 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard - Guard Station Building
PROJECT No PCS 00013/10701

COORDS: 334007.8 m E 6249073.7 m N MGA94 56
SURFACE RL: 20.75 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 10.32 m

DRILL RIG:
CONTRACTOR:
LOGGED: PGH DATE: 21/6/16
CHECKED: HB DATE: 5/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3		100	100 (100)	10	10.32		SANDSTONE fine to medium grained, massive, pale grey	SW			
					10.43		END OF BOREHOLE @ 10.32 m				
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

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STANDPIPE INSTALLATION: SRT BH064

SHEET: 1 OF 1 REV: C

CLIENT:	Transport for NSW	COORDS: 334040.0 m E 6249121.0 m N MGA94 56	DRILL RIG: Hanjin DB8
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.39 m DATUM: AHD	CONTRACTOR: Terratest
LOCATION:	Central Station Yard - Guard Station Building	INCLINATION: -90°	LOGGED: PGH DATE: 27/6/16
PROJECT No	PCS 00013/10701	HOLE DEPTH: 10.24 m	CHECKED: HB DATE: 5/7/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0	20.39		GRAVEL	Bentonite
		1				1.00, RL19.39
						1.50, RL18.89
		2	2.20			
ADH	possible perched water at base of fill		18.19		SILTY CLAY	Sand
		3				Slotted PVC screen
		4				
						4.50, RL15.89
						End cap
		5				5.00, RL15.39
		6				
		7	7.00			
			13.39		SANDSTONE	
			7.50			
HQ3	No Water Loss		12.89		CORE LOSS	Bentonite
			7.94			
		8	12.45		SANDSTONE	
		9				
		10				10.00, RL10.39
			10.24			
			10.15		END OF BOREHOLE @ 10.24 m	
		11				

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REVISION A REPORT OF BOREHOLE: SRT BH081

SHEET: 1 OF 1

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Yard
JOB NO: PCS 00013/10701

COORDS: MGA94 56
SURFACE RL: DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 8.07 m

DRILL RIG: Easy access track rig
CONTRACTOR: Nealings Drilling
LOGGED: HJN DATE: 29/5/17
CHECKED: CH DATE: 16/6/17

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0		DS 0.20-0.25 m Rec = 50/50 mm R = 0A				FILL (TOPSOIL) medium grained, sandy loam, dark brown/grey, trace clay, trace organics and tree roots	D		0.2 to 0.25m: R=0A; PID=0.2
				0.50	DS 0.50-0.60 m Rec = 100/100 mm R = 0A			CL	CLAY low plasticity, orange/white mottled, trace sand	M		0.5 to 0.6m: R=0A; PID=0.2
			1	1.00	DS 1.00-1.10 m Rec = 100/100 mm R = 0A				becoming dryer			1.0 to 1.1m: R=0A; PID=0.3
				1.50	DS 1.40-1.50 m Rec = 100/100 mm R = 0A				orange/white, very dry cuttings			1.4 to 1.5m: R=0A; PID=0.2
ADV			2		Rec = 450/450 mm R = 0A SPT 1.90-2.35 m 15, 21, 9 N=30							1.9 to 2.3m: R=0A; PID=0.4
			3							D	F - S	
			4		Rec = 400/400 mm R = 0A SPT 4.00-4.40 m 1, 2, 15/100mm N>17							4.0 to 4.4mm: R=0A; PID=0.2
			5	5.50					becoming wet			
		29/05/17	6	6.00	Rec = 400/400 mm R = 0A SPT 6.00-6.40 m 12, 26/HB N>26				dark grey/brown, with some bands of very soft shale like material			6.0 to 6.4m: R=0A; PID=0.4
NQ3				6.40	6.40-8.07 m Rec = 1670/1670 mm R = 0A DS 6.60-6.80 m Rec = 200/200 mm R = 0A				SHALE MUDSTONE fine grained, dark grey, wet, with fine grained black gravel to 8.4mm low to medium strength			6.6 to 6.8m: R=0A; PID=0.2
			7	7.30					pale grey	W		
				7.80					SANDSTONE fine grained, pale grey low strength			
			8						END OF BOREHOLE @ 8.07 m TARGET DEPTH GROUNDWATER ENCOUNTERED @ 6.00 m DEPTH STANDPIPE INSTALLED			
			9									
			10									

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REVISION A REPORT OF STANDPIPE INSTALLATION: SRT BH081

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SHEET: 1 OF 1

CLIENT:	Transport for NSW	COORDS: MGA94 56	DRILL RIG: Easy access track rig
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: DATUM: AHD	CONTRACTOR: Nealings Drilling
LOCATION:	Central Yard	INCLINATION: -90°	LOGGED: HJN DATE: 29/5/17
JOB NO:	PCS 00013/10701	HOLE DEPTH: 8.07 m	CHECKED: CH DATE: 16/6/17

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0			FILL (TOPSOIL)	Gatic
			0.50		CLAY	
		1	1.00			
			1.50		CLAY	
		2				Cement Backfill
		3				
ADV		4				
						4.00
						Bentonite
			4.50			
		5				5.00
			5.50			
		6	6.00		CLAY	Gravel/Sand Pack
	29/05/17		6.40		SHALE MUDSTONE	
NQ3		7	7.30			
			7.80			Slotted PVC screen
		8	8.07		SANDSTONE	8.00
					END OF BOREHOLE @ 8.07 m TARGET DEPTH GROUNDWATER ENCOUNTERED @ 6.00 m DEPTH STANDPIPE INSTALLED	
		9				
		10				

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REVISION A REPORT OF BOREHOLE: SRT BH082

SHEET: 1 OF 1

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Yard
JOB NO: PCS 00013/10701

COORDS: MGA94 56
SURFACE RL: DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 8.00 m

DRILL RIG: Easy access track rig
CONTRACTOR: Nealings Drilling
LOGGED: HJN DATE: 1/6/17
CHECKED: CH DATE: 16/6/17

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0						FILL (TOP SOIL) sandy loam, dark brown and grey, trace roots, trace clays			0.2 - 0.3m: PID=0.1
				0.50	0.20-0.30 m Rec = 100/100 mm R = 0A							0.4 - 0.5m: PID=0.5
				0.60	0.40-0.50 m Rec = 100/100 mm R = 0A				: as above slag fragments present, light density metal, gravel size (30-50mm)			
				0.90					large void encountered, bricks, concrete and large (80-70mm) rocks encountered			
			1		0.90-1.00 m Rec = 100/100 mm R = 0A							0.9 - 1.0m: PID=0.5
				1.30					FILL (clayey SAND) medium grained, dark brown grey, trace gravel (up to 15mm), slag present			
					1.40-1.50 m Rec = 100/100 mm R = 0A				FILL (SAND) medium grained, white grey	D		1.4 - 1.5m: PID=0.1, QCD2 and QC200 taken
			2	2.00	SPT QC102 QC200 2.00-2.40 m Rec = 400/400 mm R = 1A SPT 2.00-2.45 m 7, 7, 8 N=15				becoming brown / dark grey			
			3	3.20								
ADT					Rec = 490/490 mm R = 0A SPT 3.20-3.65 m 3, 5, 7 N=12				CLAY medium plasticity, pale grey and orange mottled, firm			3.2 - 3.6m: PID=0.1
			4									
			5	5.00					becoming orange with trace sands (medium grained)	M		
				5.60					Sandy CLAY low plasticity, medium grained sands, medium stiffness			
			6									
		01/06/17	7							W		
				7.80					SANDSTONE medium grained, white / pale yellow, some fines			
			8						END OF BOREHOLE @ 8.00 m TARGET DEPTH GROUNDWATER ENCOUNTERED @ 6.80 m DEPTH STANDPIPE INSTALLED			
			9									
			10									

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REVISION A REPORT OF STANDPIPE INSTALLATION: SRT BH082

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SHEET: 1 OF 1

CLIENT:	Transport for NSW	COORDS: MGA94 56	DRILL RIG: Easy access track rig
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: DATUM: AHD	CONTRACTOR: Nealings Drilling
LOCATION:	Central Yard	INCLINATION: -90°	LOGGED: HJN DATE: 1/6/17
JOB NO:	PCS 00013/10701	HOLE DEPTH: 8.00 m	CHECKED: CH DATE: 16/6/17

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
NDD		0			FILL (TOP SOIL)	Gatic
			0.50			
			0.60		FILL	
					VOID	
			0.90			
		1			FILL (CLAYEY SAND)	
			1.30			
					FILL (SAND)	
		2	2.00			Cuttings / Aquablock
		3				
			3.20			
ADT					CLAY	
		4				
						4.00 Aquablock
						4.50
		5	5.00			5.00 2mm Special Sand
			5.60			
					SANDY CLAY	
		6				Slotted PVC screen
	01/06/17	7				
			7.80			
		8	8.00		SANDSTONE	8.00
					END OF BOREHOLE @ 8.00 m TARGET DEPTH GROUNDWATER ENCOUNTERED @ 6.80 m DEPTH STANDPIPE INSTALLED	
		9				
		10				

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GAP gINT FN. F17
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REVISION A REPORT OF BOREHOLE: SRT BH083

SHEET: 1 OF 1

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Yard
JOB NO: PCS 00013/10701

COORDS: MGA94 56
SURFACE RL: DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 7.80 m

DRILL RIG: Easy access track rig
CONTRACTOR: Nealings Drilling
LOGGED: HJN DATE:
CHECKED: CH DATE: 16/6/17

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
DTC			0	0.20					CONCRETE slab reinforced with steel cable			
NDD				0.40	0.20-0.30 m Rec = 100/100 mm R = 0A QC201 QC103 0.40-0.50 m Rec = 100/100 mm R = 0A				FILL (SAND) medium grained, dark brown, trace silts			0.2 - 0.3m: PID=0.1 0.4 - 0.5m: PID=0.1
			1	0.90	0.90-1.00 m Rec = 100/100 mm R = 0A				FILL (sandy GRAVEL) medium to coarse grained, orange / brown, sand medium grained, large cobbles (3-4mm) FILL (sandy CLAY) medium plasticity, pale orange / white, sand medium grained, soft	M		0.9 - 1.0m: PID=0.1
				1.40	1.40-1.50 m Rec = 100/100 mm R = 0A				FILL (SAND) medium grained, pale orange, trace clay			1.4 - 1.5m: PID=0.1
ADT			2	2.00	Rec = 400/450 mm R = 0A SPT 2.00-2.45 m 2, 4, 7 N=11				CLAY medium plasticity, orange white mottled, stiff, natural			2.0 - 2.4m: PID=0.1
			3	3.00	Rec = 400/450 mm R = 0A SPT 3.00-3.45 m 4, 7, 10 N=17				containing ironstone (angular, rough), very hard			3.0 - 3.4m: PID=0.1
			4	4.20	Rec = 400/450 mm R = 0A SPT 4.00-4.45 m 3, 9, 11 N=20				ironstone no longer encountered, crumbling	D		4.0 - 4.4m: PID=0.1
			5		Rec = 400/450 mm R = 0A SPT 5.00-5.45 m 7, 12, 0 N=12							5.0 - 5.4m: PID=0.1
			6	6.00	6.00-6.40 m Rec = 400/400 mm R = 0A				SHALE fine grained, pale grey, disturbed mudstone			6.0 - 6.4m: PID=0.1
					6.60-7.00 m Rec = 400/400 mm R = 0A							6.6 - 7.0m: PID=0.1
		02/06/17	7	7.70	7.70-7.80 m Rec = 100/100 mm R = 0A				SANDSTONE medium grained, pale grey / yellow	W		7.7 - 7.8m: PID=0.1
			8						END OF BOREHOLE @ 7.80 m REFUSAL GROUNDWATER ENCOUNTERED @ 7.50 m DEPTH			
			9									
			10									

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This report of borehole must be read in conjunction with accompanying notes and abbreviations.

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REVISION A REPORT OF BOREHOLE: SRT BH084

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Yard
JOB NO: PCS 00013/10701

COORDS: MGA94 56
SURFACE RL: DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 9.38 m

SHEET: 1 OF 1
DRILL RIG: Easy access track rig
CONTRACTOR: Nealings Drilling
LOGGED: HJN DATE:
CHECKED: CH DATE: 16/6/17

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT			0						FILL (SAND) medium grained, dark grey, trace rail ballast			0.2 - 0.3m: PID=0.2
				0.40	0.20-0.30 m Rec = /100 mm R = 0A							0.4 - 0.5m: PID=0.1
					0.40-0.50 m Rec = /100 mm R = 0A				trace clay			0.6m: concrete and steel encountered
			1	1.00	0.90-1.00 m Rec = /100 mm R = 0A				: as above no clay, becoming fine grained and white			0.9 - 1.0m: PID=0.1
				1.40	QC100 1.40-1.50 m Rec = /100 mm R = 0A				: as above trace clay, pale orange	M		1.4 - 1.5m: PID=0.1
			2	2.00	Rec = 200/450 mm R = 0A SPT 2.00-2.45 m 2, 2, 3 N=5				FILL (sandy CLAY) medium grained, medium plasticity, pale orange			2.0 - 2.2m: PID=0.1
				2.20					FILL (SAND) medium grained, pale orange			
				2.80					CLAY medium plasticity, orange / grey mottled, ironstone fragments			
			3		Rec = 400/450 mm R = 0A SPT 3.00-3.45 m 3, 3, 9 N=12							3.0 - 3.4m: PID=0.1
			4		Rec = 400/450 mm R = 0A SPT 4.00-4.45 m 5, 10, 14 N=24							4.0 - 4.4m: PID=0.1
			5		Rec = 400/450 mm R = 0A SPT 5.00-5.45 m 7, 13, 16 N=29					D		
			6		Rec = 400/450 mm R = 0A SPT 6.00-6.45 m 12, 12, 0 N=12							6.0 - 6.4m: PID=0.1
				6.80	6.80-7.00 m Rec = /200 mm				: as above some SHALE, grey, friable			
			7	7.80	7.60-7.90 m Rec = /300 mm							7.82m: Auger refusal, continue with NMLC
NMLC		03/06/17	8	8.00					SANDSTONE medium grained, pale orange : as above pale grey / dark grey mudstone laminations (20-30mm spacing), fine grained, increasing with depth	W		
			9									
			10						END OF BOREHOLE @ 9.38 m TARGET DEPTH GROUNDWATER ENCOUNTERED @ 7.70 m DEPTH STANDPIPE INSTALLED			

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REVISION A REPORT OF STANDPIPE INSTALLATION: SRT BH084

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CLIENT:	Transport for NSW	COORDS: MGA94 56	SHEET: 1 OF 1
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: DATUM: AHD	DRILL RIG: Easy access track rig
LOCATION:	Central Yard	INCLINATION: -90°	CONTRACTOR: Nealings Drilling
JOB NO:	PCS 00013/10701	HOLE DEPTH: 9.38 m	LOGGED: HJN DATE:
			CHECKED: CH DATE: 16/6/17

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
ADT		0			FILL (SAND)	Gatic
			0.40		FILL	
		1	1.00		FILL	
			1.40		FILL	
		2	2.00		FILL (SANDY CLAY)	Quick set concrete
			2.20		FILL (SAND)	
			2.80		CLAY	
		3				
		4				
		5				
		6				2mm Gravel
			6.80		MEDIUM PLASTICITY CLAY	
		7				
NMLC	03/06/17		7.80		SANDSTONE	3m Slotted Screen
		8	8.00		SANDSTONE	
		9				
			9.38		END OF BOREHOLE @ 9.38 m TARGET DEPTH GROUNDWATER ENCOUNTERED @ 7.70 m DEPTH STANDPIPE INSTALLED	End cap
		10				

Bentonite: 3.70 – 5.90 m; 2mm Gravel: 5.90 – 6.40 m; 3m Slotted Screen: 6.40 – 9.38 m

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REVISION A REPORT OF BOREHOLE: SRT BH085

SHEET: 1 OF 1

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Yard
JOB NO: PCS 00013/10701

COORDS: MGA94 56
SURFACE RL: DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 7.90 m

DRILL RIG: Easy access track rig
CONTRACTOR: Nealings Drilling
LOGGED: HJN DATE:
CHECKED: CH DATE: 16/6/17

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	0.10	0.20-0.30 m Rec = 100/100 mm R = 0A 0.40-0.50 m Rec = 100/100 mm R = 0A				RAIL BALLAST FILL (SAND) medium grained, dark grey / brown, trace clay / silt			0.2 - 0.3m: PID=0.2 0.2m: rail bolts encountered 0.4 - 0.5m: PID=6.1
			1		QC101 0.90-1.00 m Rec = 100/100 mm R = 0A					M		0.9 - 1.0m: PID=0.2
					1.40-1.50 m Rec = 100/100 mm R = 0A							1.4 - 1.5m: PID=0.1
			2		Rec = 400/450 mm R = 1A SPT 2.00-2.45 m 4, 2, 4 N=6							2.0 - 2.4m: PID=0.2
				2.30					: as above changing to white sand			
			3	3.00	Rec = 400/450 mm R = 0A SPT 3.00-3.45 m 3, 4, 6 N=10				: as above becoming light brown			3.0 - 3.4m: PID=0.2
				3.90					CLAY medium plasticity, grey orange mottled, stiff			
ADT			4		Rec = 400/450 mm R = 0A SPT 4.00-4.45 m 2, 4, 6 N=10							4.0 - 4.4m: PID=0.2
			5	5.10	Rec = 400/400 mm R = 0A				: as above CLAY changing to very dark red, containing large ironstone fragments, 20-30mm, very hard, black	D		5.0 - 5.4m: PID=0.2
			6	6.00					: as above CLAY becoming grey			
		03/06/17	7	7.80					wet	W		
			8						END OF BOREHOLE @ 7.90 m REFUSAL GROUNDWATER ENCOUNTERED @ 7.80 m DEPTH			
			9									
			10									

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REVISION B BOREHOLE: SRT BH042

SHEET: 1 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333748.0 m E 6248873.0 m N MGA94 56
SURFACE RL: 20.63 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 25.00 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH / SI DATE: 15/7/16
CHECKED: HB DATE: 19/7/19

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD		GWNO	0	20.63					FILL: GRAVEL coarse grained, angular, grey, (rail ballast)			FILL
				0.20 20.43					FILL: Clayey GRAVEL medium to coarse grained, angular, brown-grey, (fouled rail ballast)			
			1	0.90 19.73				CI	Silty CLAY medium to high plasticity, brown			RESIDUAL SOIL
ADT	L			1.80 18.83	DS 1.50-1.60 m Rec = 100/100 mm					M	VSt - H	
	M		2		DS 2.00-2.10 m Rec = 100/100 mm				SILTSTONE brown-grey, extremely weathered, extremely low strength	D		WEATHERED ROCK
	H				Rec = 250/250 mm SPT 2.40-2.65 m 8, 30/100mm N>30				For Continuation Refer to Sheet 2			
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH042

SHEET: 2 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333748.0 m E 6248873.0 m N MGA94 56
SURFACE RL: 20.63 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 25.00 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH / SI DATE: 15/7/16
CHECKED: HB DATE: 19/7/19

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2	2.65		Continuation of Sheet 1				
HQ3	No Water Loss	100	5 (93)	3	17.98		SILTSTONE pale grey and red-brown, with ironstone bands and iron rich bands and iron stained laminations at 0-10°	EW		2.67-2.69 m: DS, 30°, clay, 20 mm 2.72-2.74 m: DS, 30°, clay, 20 mm 3.03-3.05 m: J, 30°, Pl, clay, 20 mm 3.10-3.20 m: DS, 0°, clay, 100 mm 3.31-3.35 m: DS, 10°, clay, 40 mm 3.40-3.50 m: DS, 0°, clay, 100 mm 3.53 m: J, 50°, Pl, Ro, iron Sn 3.63-3.66 m: DS, 10°, clay, 30 mm	
				4				HW		3.85 m: J, 25°, Pl, Ro, clay Ct 4.03-4.06 m: CS, 0-10°, 30 mm 4.12 m: J, 45°, healed 4.16 m: J, 25°, healed 4.22-4.30 m: CS, 10-20°, 80 mm 4.47 m: J, 45°, Pl, Ro, iron Sn 4.52 m: J, 20°, iron Sn, healed 4.68 m: J, 25°, Un, Ro, iron Sn 4.76-4.80 m: CS, 20°, 40 mm	
					4.80						
				5	15.83		SILTSTONE grey, with occasional thin laminations of very fine grained sandstone	FR		4.88 m: J, 70°, Un, Sm, Cn 4.95 m: J, 30°, Pl, Ro, iron Sn 4.97-5.28 m: JSV, St, Ro, Cn 5.20-5.25 m: CS, 10°, 50 mm 5.30 m: J, 70°, Un, Sm, Cn 5.40-5.45 m: SS, 10°, 50 mm 5.45 m: J, 30°, Pl, Sm, clay Ct	
				6						5.94 m: B, 0°, Pl, Sm, Cn	
		100	94 (100)	7						6.62 m: B, 10°, Pl, Sm, Cn 7.18 m: J, 30°, Pl, Sm, Cn 7.30 m: J, 45°, Pl, Sm, Cn 7.52 m: B, 0°, Pl, clay Ct	
				8	8.10						
					12.53		LAMINITE pale grey and grey, interbedded siltstone (50%) and fine grained sandstone (50%)			8.10 m: B, 0°, Pl, clay Ct, 5 mm 8.33-8.43 m: SZ, 10°, 100 mm 8.43 m: B, 0°, Pl, clay, 3 mm 8.48 m: B, 0°, Pl, clay, 3 mm	
					8.45						
					12.18		SANDSTONE fine grained, pale grey, with occasional thin laminations of grey siltstone				
		100	99 (100)	9						8.93-8.97 m: SS, 10°, 40 mm	
					9.80						
					10.83						
				10							

REVISION B

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REVISION B BOREHOLE: SRT BH042

SHEET: 3 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333748.0 m E 6248873.0 m N MGA94 56
SURFACE RL: 20.63 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 25.00 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH / SI DATE: 15/7/16
CHECKED: HB DATE: 19/7/19

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	No Water Loss	100	99 (100)	10			SANDSTONE medium grained, massive, grey, bedding at 0-10°, with occasional thin laminations of fine grained sandstone at 0-20°	FR		9.92 m: B, 0°, Pl, clay Vr 10.30 m: B, 10°, Pl, clay Vr 10.92 m: B, 5°, Pl, clay, 5 mm 11.05-11.07 m: DS, 5°, clay, 20 mm	
				11							
		100	100 (100)	12						11.93 m: B, 10°, Pl, clay, 2 mm	
				13							
				14							
		100	100 (100)	15						15.05 m: B, 5°, Pl, clay, 10 mm	
				16							
				17							
				18	18.15					17.85 m: B, 5°, Pl, clay, 5 mm	
					2.48		below 18.15 m: fine grained				
					18.60						
					2.03		below 18.60 m: medium grained				
		100	100 (100)	19							
				20							

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REVISION B BOREHOLE: SRT BH042

SHEET: 4 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333748.0 m E 6248873.0 m N MGA94 56
SURFACE RL: 20.63 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 25.00 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH / SI DATE: 15/7/16
CHECKED: HB DATE: 19/7/19

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ei 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	No Water Loss	100	100 (100)	20			SANDSTONE medium grained, massive, grey, bedding at 0-10°, with occasional thin laminations of fine grained sandstone at 0-20°	FR			
				21						21.35 m: B, 5°, Pl, clay, 2 mm	
				22							
		100	100 (100)	23						22.85 m: B, 5°, Pl, clay, 2 mm	
					23.26						
					-2.63		SILTSTONE grey			23.26 m: J, 25°, Pl, Sm, clay Ct, 3 mm	
					23.53						
					-2.90		SANDSTONE medium grained, pale grey			23.55 m: B, 0°, Pl, clay, 5 mm 23.75 m: J, 75°, Un, Ro, Cn, tight	
		96	96 (96)	24							
					24.96						
				25	-4.37		CORE LOSS END OF BOREHOLE @ 25.00 m TARGET DEPTH GROUTED			24.96-25.00 m: Core left down hole	
				26							
				27							
				28							
				29							
				30							

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REVISION B BOREHOLE: SRT BH044

SHEET: 1 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333814.0 m E 6248897.0 m N MGA94 56
SURFACE RL: 20.57 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 11.80 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 23/6/16
CHECKED: HB DATE: 30/6/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	20.57					FILL: GRAVEL medium to coarse grained, grey, with some clay and sand			FILL
				0.50								
				20.07					FILL: Gravelly SAND medium to coarse grained, grey, with some clay			
			1	1.10								
				19.47				CI	CLAY medium to high plasticity, red-brown, with occasional ironstone gravel			RESIDUAL SOIL
			2		DS 1.80-2.00 m Rec = 200/200 mm							
					Rec = 450/450 mm SPT 2.50-2.95 m 5, 5, 5 N=10						St	
			3									
ADT	L	GWNO	4		Rec = 450/450 mm SPT 4.00-4.45 m 2, 2, 2 N=4					M		
			5								F	
					Rec = 450/450 mm SPT 5.50-5.95 m 8, 7, 8 N=15						St - VSt	
			6									
	M			6.50								
				14.07				CI	SILTSTONE dark grey, extremely weathered, extremely low strength			WEATHERED ROCK
	H		7									
									For Continuation Refer to Sheet 2			
			8									
			9									
			10									

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REVISION B BOREHOLE: SRT BH044

SHEET: 2 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333814.0 m E 6248897.0 m N MGA94 56
SURFACE RL: 20.57 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 11.80 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 23/6/16
CHECKED: HB DATE: 30/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	25% water loss	100	40 (95)	7	7.05		Continuation of Sheet 1				
				7	13.52		SILTSTONE dark grey, with thin sandstone laminations at 0°	FR		7.05 m: 50mm of core broken by rail ballast fall in 7.14 m: J, 40°, Pl, Sm, Cn 7.33 m: B, 0°, Pl, Sm, Cn 7.51 m: J, 90°, Pl, Sm, Cn, discontinuous (90 mm length) 7.65 m: J, 90°, Pl, Sm, Cn, discontinuous 7.70 m: B, 0°, sp = 80 mm, Pl, Sm, Cn 7.78 m: B, 0°, sp = 80 mm, Pl, Sm, Cn 7.86 m: B, 0°, sp = 80 mm, Pl, Sm, Cn 8.10 m: J, 45-90°, Sm, Cn, curved 8.17 m: J, 45°, Pl, Sm, Cn 8.18 m: J, 60°, Pl, Sm, Cn 8.24 m: J, 40°, Pl, Sm, Cn 8.30 m: J, 20°, Pl, Sm, Cn 8.49 m: J, 40°, Un, Sm, Cn 8.85 m: J, 50°, Pl, Sm, Cn, discontinuous 8.90 m: J, 70°, Pl, Sm, Cn 8.95 m: J, 50-60°, Sm, Cn, curved 9.05 m: J, 50°, Pl, Sm, Cn 9.13 m: J, 70°, Pl, Sm, Cn 9.15 m: J, 70°, Pl, Sm, Cn 9.26 m: B, 10°, Pl, Ro, Cn 9.70 m: B, 10°, Pl, clay, 10 mm	
		100	85 (95)	9	9.26 11.31		SILTY SANDSTONE fine grained, grey, bedding at 0-10°				
				10							

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH044

SHEET: 3 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333814.0 m E 6248897.0 m N MGA94 56
SURFACE RL: 20.57 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 11.80 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 23/6/16
CHECKED: HB DATE: 30/6/16

Drilling						Field Material Description			Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	25% water loss	100	85 (95)	10			SILTY SANDSTONE fine grained, grey, bedding at 0-10°	FR			
					10.68						
					9.89		SANDSTONE medium grained, grey, bedding at 0°			10.64 m: B, 0°, Pl, clay, 10 mm	
				11						11.07 m: B, 0°, Pl, clay Vr	
					11.40						
					9.17		below 11.40 m: medium to coarse grained				
					11.80					11.75 m: B, 0°, Pl, clay, 2 mm	
					8.77		END OF BOREHOLE @ 11.80 m TARGET DEPTH GROUTED				
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH045

SHEET: 1 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333827.0 m E 6248907.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.10 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 27/6/16
CHECKED: HB DATE: 30/6/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	20.64					FILL: Sandy Clayey GRAVEL fine to coarse grained, grey			FILL
			1	1.20 19.44				SW	SAND medium grained, yellow	M		AEOLIAN DEPOSITS
ADT	L	GWNO	2	2.00 18.64	DS 1.50-1.60 m Rec = 100/100 mm DS 1.60-2.00 m Rec = 400/400 mm			SM	Clayey SAND medium grained, orange	M		RESIDUAL SOIL
				2.30 18.34				CI	CLAY medium plasticity, grey and red-brown		St	
			3	3.30 17.34	DS 2.40-2.50 m Rec = 100/100 mm Rec = 450/450 mm SPT 2.50-2.95 m 3, 4, 5 N=9			CL	CLAY low to medium plasticity, red-brown, with some ironstone gravel			
	M		4		DS 3.60-3.70 m Rec = 100/100 mm Rec = 450/450 mm SPT 4.00-4.45 m 9, 11, 13 N=24					M	VSt	
WB			5	5.10 15.54					SILTSTONE grey and red-brown mottled, extremely weathered, extremely low strength			WEATHERED ROCK
	H		6						For Continuation Refer to Sheet 2			
			7									
			8									
			9									
			10									

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH045

SHEET: 2 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333827.0 m E 6248907.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.10 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 27/6/16
CHECKED: HB DATE: 30/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ex, VL, L, M, H, VH, Ex)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
				5							
				6	6.00		Continuation of Sheet 1				
HQ3	25% water loss	45	0 (0)		14.64		CORE LOSS			6.00-7.40 m: imaging indicates average defect spacing is 100 to 300 mm with some decomposed seams	
					6.80						
				7	13.84		SILTSTONE recovered as clay, grey and red-brown mottled, moist, hard	EW			
					7.40						
					13.24		SILTSTONE red-brown and dark grey, with iron staining on laminations	HW		7.50-7.65 m: Bx5, 0-10°, sp = 5-10 mm, Pl, Ro, iron Sn	
					7.65			SW		7.70-7.79 m: Jx4, 30°, sp = 2-10 mm, Pl, Ro, iron Sn	
					12.99		SILTSTONE dark grey			7.87 m: J, 60°, Pl, Ro, iron Sn 7.92-7.97 m: Jx2, 30°, sp = 50 mm, Pl, Ro, iron Sn	
		100	65 (95)	8				FR		8.28 m: J, 40°, Pl, Ro, Cn	
										8.54 m: J, 50°, Pl, Ro, Cn 8.68 m: J, 40°, Pl, Ro, Cn	
					9.05						
				9	11.59		LAMINITE dark grey siltstone (60%) laminated with grey, fine grained sandstone (40%) at 0°			9.02 m: J, 40°, Pl, tight 9.07 m: J, 20°, Pl, Ro, Cn 9.20-9.38 m: Bx5, 0-5°, Pl, Sl, clay Vr	
		100	45 (85)							9.43-9.83 m: CZ, angular laminite and siltstone fragments in clayey matrix, 10°	
					9.75						
					10.89		SANDSTONE fine grained, grey, bedding at 20°			9.88 m: J, 70°, Pl, Sl, clay Vr	
				10							

DRAFT REVISION B

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REVISION B BOREHOLE: SRT BH045

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SHEET: 3 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333827.0 m E 6248907.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.10 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 27/6/16
CHECKED: HB DATE: 30/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL, VL, L, M, H, VH, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	25% water loss	100	45 (85)	10			SANDSTONE fine grained, grey, bedding at 20°	FR		10.00 m: B, 5°, Pl, Sl, clay Vr	
										10.27 m: B, 10°, Pl, Ro, Cn 10.32 m: J, 20°, Pl, Ro, Cn 10.38 m: J, 40°, Pl, Ro, Cn 10.40 m: J, 20°, Pl, Ro, Cn 10.62 m: B, 10°, Pl, Ro, clay, 20 mm	
				11	11.05 9.59		SANDSTONE medium grained, massive, grey, cross-bedding at 20°			10.89 m: B, 10°, Pl, Ro, clay Vr 11.05 m: B, 10°, Pl, Ro, clay Vr 11.12 m: B, 20°, Pl, Ro, Cn 11.12-11.35 m: J, 70-80°, Un, Ro, Cn	
		100	100 (100)	12						12.06 m: B, 10°, Pl, Ro, clay, 20 mm	
				13						12.85 m: B, 10°, Pl, Ro, clay Ct	
				14						13.66 m: B, 10°, Pl, Ro, clay Ct 13.69 m: J, 30°, Pl, Ro, clay Vr 13.75 m: J, 40°, Pl, Ro, clay Vr 13.92 m: J, 40°, Pl, Ro, Cn	
		100	100 (100)	15						14.86 m: B, 10°, Pl, Ro, clay Vr	
				16						16.03 m: B, 20°, Pl, Ro, carbonaceous	
				17						17.11 m: B, 10°, Pl, Ro, clay Vr	
		100	100 (100)	18						17.57 m: B, 10°, Pl, Ro, clay Vr	
				19							
					19.45 1.19		fine to medium grained				
				20							

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH045

SHEET: 4 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No: 1650773

COORDS: 333827.0 m E 6248907.0 m N MGA94 56
SURFACE RL: 20.64 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 20.10 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 27/6/16
CHECKED: HB DATE: 30/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				20	20.10 0.54		END OF BOREHOLE @ 20.10 m TARGET DEPTH PIEZOMETER INSTALLED				
				21							
				22							
				23							
				24							
				25							
				26							
				27							
				28							
				29							
				30							

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH046

SHEET: 1 OF 3 REV: B

CLIENT:	Transport for New South Wales	COORDS: 333835.0 m E 6248916.0 m N MGA94 56	DRILL RIG: Scout 4
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 20.66 m DATUM: AHD	CONTRACTOR: Groundtest
LOCATION:	Central Station Yard	INCLINATION: -90°	LOGGED: LJH DATE: 24/6/16
PROJECT No	1650773	HOLE DEPTH: 14.00 m	CHECKED: HB DATE: 29/6/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD			0	20.66					FILL: GRAVEL grey, (rail ballast)			FILL
				0.30 20.36					FILL: Sandy GRAVEL grey, (rail ballast and gravelly sand)			
			1	1.50								
ADT	L	GW/NO		19.16	DS 1.80-1.90 m Rec = 100/100 mm			SW	SAND medium grained, yellow	D		AEOLIAN DEPOSITS
			2		DS 2.50-2.60 m Rec = 100/100 mm					M		
				2.80 17.86								
			3		Rec = 450/450 mm SPT 3.00-3.45 m 3, 3, 5 N=8			CI	Sandy CLAY medium to low plasticity, grey and orange-brown mottled		F	RESIDUAL SOIL
				3.50 17.16				CH	CLAY medium to high plasticity, red-brown and grey, with some ironstone gravel		St	
			4		Rec = 450/450 mm SPT 4.00-4.45 m 5, 10, 12 N=22							
WB	M		5							M (<PL)	VSt	
				5.50								
	H		6	15.16	Rec = 450/450 mm SPT 5.50-5.95 m 8, 15, 25 N=40				SILTSTONE grey and orange-brown mottled, extremely weathered, extremely low strength			WEATHERED ROCK
									For Continuation Refer to Sheet 2			
			7									
			8									
			9									
			10									

DRAFT REVISION B

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REVISION B BOREHOLE: SRT BH046

SHEET: 2 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333835.0 m E 6248916.0 m N MGA94 56
SURFACE RL: 20.66 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 14.00 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 24/6/16
CHECKED: HB DATE: 29/6/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2							
				3							
				4							
				5							
				6	6.30		Continuation of Sheet 1				
HQ3	100% water return	100	0 (0)	7	14.36		SILTSTONE recovered as silty clay, medium plasticity, grey and orange brown mottled, moist, hard	EW			
					7.45		CORE LOSS			7.31 m: 10mm ironstone band	
		94	0 (65)	8	13.11		SILTSTONE dark grey and red-grey, bedding at 5-10°	HW		7.65 m: B, 5°, Pl, Ro, iron Sn 7.83 m: J, 40°, Pl, Ro, Cn 7.85 m: J, 30°, Pl, Ro, iron Sn 7.88 m: B, 10°, Pl, Ro, iron Sn 7.98 m: J, 50°, Pl, Ro, iron Sn 8.17 m: J, 40°, Pl, Ro, iron Sn 8.22 m: J, 30°, Pl, Ro, iron Sn 8.30 m: J, 20°, Pl, Sm, Cn 8.35 m: B, 5°, Pl, Ro, iron Sn 8.35-8.78 m: J, 50°, Un, Ro, iron Sn	
	25% water loss	100	70 (100)	9	9.00 11.66		LAMINITE grey siltstone (75%) interlaminated with pale grey, fine grained sandstone (25%) at 0°, with occasional disturbed bedding	FR		8.35 m: B, 5°, Pl, Ro, iron Sn 8.35-8.78 m: J, 50°, Un, Ro, iron Sn 8.51 m: J, 50°, Pl, Ro, Cn 8.52 m: J, 40°, Pl, Ro, Cn 8.55-8.65 m: CZ, 100 mm 8.87 m: J, 40°, Pl, Ro, Cn 8.93 m: J, 40°, Pl, Ro, Cn 8.95 m: J, 50°, Pl, Ro, Cn 9.17-9.18 m: CS, clay, 0°, 10 mm 9.22 m: J, 40°, Pl, Ro, Cn	
				10	9.93			EW			

PREVISION B

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REVISION B BOREHOLE: SRT BH046

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SHEET: 3 OF 3 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station Yard
PROJECT No1650773

COORDS: 333835.0 m E 6248916.0 m N MGA94 56
SURFACE RL: 20.66 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 14.00 m

DRILL RIG: Scout 4
CONTRACTOR: Groundtest
LOGGED: LJH DATE: 24/6/16
CHECKED: HB DATE: 29/6/16

Drilling						Field Material Description			Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (Ei, 0.03, VL, 0.1, L, 0.3, M, 1, H, 3, VH, 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
HQ3	25% water loss	100	70 (100)	10	10.73		SANDSTONE fine to medium grained, grey, bedding at 0-20°, with occasional siltstone laminations 10-20°	FR		9.42 m: B, 20°, Pl, Ro, Cn 9.47 m: B, 20°, Pl, Ro, Cn 9.81 m: B, 20°, Pl, Ro, Cn 9.83-9.85 m: DS, silt, 20 mm, 0° 9.87 m: B, 20°, Pl, Ro, Cn 9.91 m: J, 50°, Pl, Ro, Cn 10.07-10.10 m: B, 20°, clay, 30 mm 10.36 m: J, 60°, Pl, Ro, Cn 10.40-10.63 m: J, 70-90°, Un, Ro, discontinuous 10.63 m: B, 0°, Pl, Ro, Cn 10.66-10.75 m: J, 90°, Pl, Ro, discontinuous 10.75-10.78 m: CS, 30 mm 10.79 m: B, 10°, Pl, Ro, clay Vr 11.50 m: B, 10°, Pl, Ro, Cn 11.52 m: B, 10°, Pl, Ro, clay Vr 11.76 m: B, 10°, Pl, Ro, clay Vr 11.78 m: B, 10°, Pl, Ro, clay Vr	
				11	11.35						
					9.31		SANDSTONE medium grained, cross-bedding at 10-20°, occasional siltstone laminations				
		100	99 (100)	12							
				13						12.71 m: B, 10°, Pl, Ro, clay Vr 12.73 m: B, 10°, Pl, Ro, clay Vr	
				14	14.00						
					6.66		END OF BOREHOLE @ 14.00 m TARGET DEPTH GROUTED				
				15							
				16							
				17							
				18							
				19							
				20							

REVISION B

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REVISION B BOREHOLE: SRT BH074

CLIENT:	Transport for New South Wales	COORDS: 333709.5 m E 6248848.8 m N MGA94 56	SHEET: 1 OF 4 REV: B
PROJECT:	Sydney Metro City and Southwest	SURFACE RL: 23.67 m DATUM: AHD	DRILL RIG: Explora
LOCATION:	Regent Street Gas Station - Contamination	INCLINATION: -90°	CONTRACTOR: Groundtest
PROJECT No	1650773	HOLE DEPTH: 27.00 m	LOGGED: AP DATE: 15/7/16
			CHECKED: HB DATE: 27/7/16

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
NDD DTC			0	0.17 23.47					CONCRETE			ROAD SURFACE
								CI	FILL: Sandy GRAVEL dark grey	M		FILL
									Silty CLAY medium plasticity, orange brown and red brown			RESIDUAL SOIL
WB	M	GWNO	1		Rec = 450/450 mm SPT 0.50-0.95 m 5, 8, 11 N=19					M (<PL)	VSt	
			2		Rec = 300/300 mm SPT 1.50-1.80 m 9, 30/150mm N>30 refusal on ironstone gravel							
									For Continuation Refer to Sheet 2			
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH074

SHEET: 2 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Regent Street Gas Station - Contamination
PROJECT No1650773

COORDS: 333709.5 m E 6248848.8 m N MGA94 56
SURFACE RL: 23.67 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 27.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 15/7/16
CHECKED: HB DATE: 27/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
				0							
				1							
				2	2.40		Continuation of Sheet 1				
NMLC	No water loss	100	0 (100)	3	21.27		Silty CLAY (CI) medium plasticity, pale grey, with some ironstone (fine) gravel, moist (less than plastic limit), very stiff			2.85-4.95 m: Core elongation within this core run (cored 2.1 m, retrieved 2.2 m). Confirmed by dipping hole after run.	
		105	0 (105)	4	4.50						
				5	19.17		SILTSTONE initially grey, becoming dark grey, thinly laminated	EW		4.95-6.90 m: Core elongation within this core run (cored 1.95m, retrieved 2.85m). Confirmed by dipping hole before and after run.	
		145	0 (145)	6						6.15 m: DS, 0°, clay, 10 mm	
				7						6.60 m: B, 0°, Sn 6.66 m: J, 30°, Pl, Sm, Cn 6.72 m: J, 30°, Un, Ro, clay Ct, 2 mm	
		100	0 (100)	8						7.38 m: J, 25°, Un, Ro, clay Sn, 1 mm	
										7.62 m: DS, 0°, clay, 15 mm 7.72 m: J, 30°, Pl, Sm, Cn	
		100	10 (10)	9				SW		9.24 m: J, 45°, Pl, Sm, Cn	
		100	50 (92)	10	10.00					9.44 m: CZ, =50 mm, medium to coarse sized siltstone fragments	

REVISION B DRAFT

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REVISION B BOREHOLE: SRT BH074

SHEET: 3 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Regent Street Gas Station - Contamination
PROJECT No1650773

COORDS: 333709.5 m E 6248848.8 m N MGA94 56
SURFACE RL: 23.67 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 27.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 15/7/16
CHECKED: HB DATE: 27/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $Is_{(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No water loss	100	50 (92)	10	13.67		SILTSTONE dark grey, thinly laminated	SW		10.10-10.27 m: CZ, coarse sized siltstone	
					10.40						
					13.27		SANDSTONE fine grained, pale grey to grey, horizontally bedded	EW			
					10.84						
				11	12.83		SANDSTONE fine to medium grained, pale grey, cross-bedded at 0-10°	FR		10.95 m: SS, =5 mm, VL strength 11.25 m: J, 15°, Pl-Un, Ro, clay Vr	
		100	95 (100)	12						11.82-11.88 m: SZ, 0°, EL strength	
				13						12.90 m: J, 20°, Pl, Ro, Cn 13.11 m: B, 0-5°, Un-St, Ro, Cn 13.20 m: J, 20°, Un, Ro, Cn 13.29 m: B, 0°, Pl-Un, Ro, Cn	
					13.50						
					10.17		SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°			13.50 m: SS, 0°, =7 mm, EL strength	
				14						14.14 m: B, 0°, Pl, Ro, clay Ct, =1 mm	
				15						15.11-15.12 m: SS, =10 mm	
		100	100 (85)	16							
				17						17.22 m: J, 80-90°, St, Ro, Cn, 200 mm length	
				18							
		100	100 (100)	19							
				20						19.77 m: J, 5°, Un, Ro, Cn	

REVISION B

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REVISION B BOREHOLE: SRT BH074

SHEET: 4 OF 4 REV: B

CLIENT: Transport for New South Wales
PROJECT: Sydney Metro City and Southwest
LOCATION: Regent Street Gas Station - Contamination
PROJECT No1650773

COORDS: 333709.5 m E 6248848.8 m N MGA94 56
SURFACE RL: 23.67 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 27.00 m

DRILL RIG: Explora
CONTRACTOR: Groundtest
LOGGED: AP DATE: 15/7/16
CHECKED: HB DATE: 27/7/16

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH $I_{S(50)}$ MPa (EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH)	DEFECT DESCRIPTION & Additional Observations	AVERAGE DEFECT SPACING (mm) (10, 30, 100, 300, 1000, 3000)
NMLC	No water loss	100	100 (100)	20			SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°	FR			
				21	21.37						
					2.30		SANDSTONE fine grained, pale grey to grey, indistinctly horizontally bedded			21.37 m: C, 0°, Pl, Ro, clay Vr	
					21.72						
		100	100 (100)		1.95		SANDSTONE medium to coarse grained, pale grey with grey bands, cross-bedded at 0-20°			21.72 m: CZ, =15 mm, fine sandstone fragments in EL matrix	
				22							
				23							
				24							
		100	100 (100)	25							
				26						26.04 m: B, 5°, Pl, Ro, clay Vr	
		100	100 (100)								
				27	27.00						
					-3.33		END OF BOREHOLE @ 27.00 m TARGET DEPTH GROUTED				
				28							
				29							
				30							

REVISION B DRAFT

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ION C STANDPIPE INSTALLATION: SRT BH050

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 5
PROJECT No PCS 00013/10701

COORDS: 334058.0 m E 6249299.1 m N MGA94 56
SURFACE RL: 21.39 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.23 m

DRILL RIG: Komatsu 05
CONTRACTOR: Nealings Drilling
LOGGED: JRL/SI DATE: 23/7/16
CHECKED: HB DATE: 1/8/16

Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
DTC / NDD		0	0.20 21.19		CERAMIC TILES OVER CONCRETE SLAB	
					GRAVEL	0.50, RL20.89 Grout
						1.00, RL20.39 Bentonite
						1.20, RL20.19 Sand
		2	2.20 19.19		SILTY CLAY	Screen
ADT	GWNO					2.98, RL18.41 End cap
		4				4.00, RL17.39
		6	6.00 15.39		LAMINITE	
			6.65 14.74		SANDSTONE	
		8	8.00 13.39			
			9.00 12.39		SANDSTONE	
		10	10.00 11.39		SANDSTONE	Grout
NMLC	No Water Loss		11.70 9.69		SANDSTONE	
		12	12.68 8.71		SANDSTONE	
			13.25 8.14		SANDSTONE	
			13.65 7.74			
		14	14.33 7.06			
			14.90 6.49			
			15.23 6.16		END OF BOREHOLE @ 15.23 m TARGET DEPTH PIEZOMETER INSTALLED	15.23, RL6.16
		16				

REVISION C

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GAP gINT FN. F17 RL1

ION C STANDPIPE INSTALLATION: SRT BH055

Golder Associates | Douglas Partners Geotechnics / Environment / Groundwater

SHEET: 1 OF 1 REV: C

CLIENT: Transport for NSW
PROJECT: Sydney Metro City and Southwest
LOCATION: Central Station - Platform 20/21
PROJECT No PCS 00013/10701

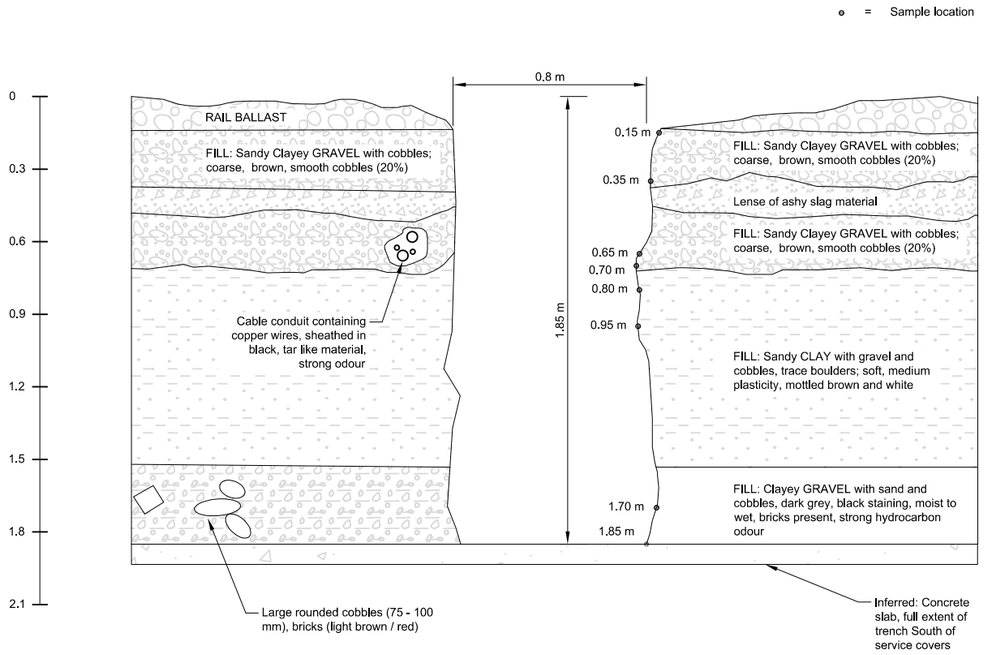
COORDS: 334177.2 m E 6249206.3 m N MGA94 56
SURFACE RL: 22.86 m DATUM: AHD
INCLINATION: -90°
HOLE DEPTH: 15.15 m

DRILL RIG: XC2
CONTRACTOR: Nealings Drilling
LOGGED: JRL DATE: 20/10/16
CHECKED: HB DATE: 2/11/16

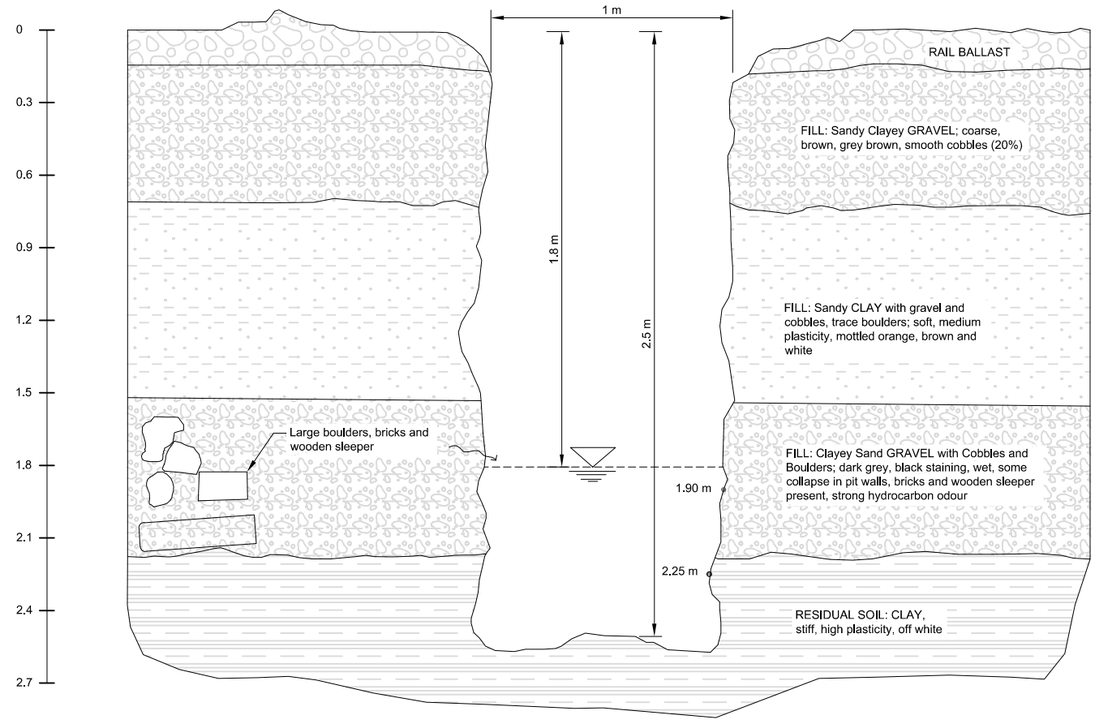
Drilling				Field Material Description		Instrumentation Details
METHOD	WATER	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	
DTC		0	0.20		CERAMIC TILES OVER CONCRETE SLAB	
NDD	GWNO		22.66		CLAYEY GRAVEL	Bentonite Grout Mix
			1.50			1.00, RL21.86
ADT			1.80		CLAYEY SAND	
	50% RETURN	2	2.00		GRAVEL AND COBBLES	
			20.86		CORE LOSS	
			2.75			
			19.96		GRAVELLY CLAY	Sand
					SHALE	Screen
		4	4.40			4.50, RL18.36
			18.46			
			5.45			
			17.41		SANDSTONE	
		6	6.10			
			16.76		SANDSTONE	
			6.60			
			16.26		SANDSTONE	
NMLC		8				Grout Backfill
	100% RETURN					
		10				
			11.50			
			11.36			
		12				
		14				
			15.15			15.00, RL7.86
			7.71		END OF BOREHOLE @ 15.15 m TARGET DEPTH PIEZOMETER INSTALLED ATV/OTV IMAGING COMPLETED	
		16				

REVISION C

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Section C - C'
SCALE: 1:25
VIEW LOOKING NORTH EAST



Section B - B'
SCALE: 1:25
VIEW LOOKING NORTH EAST

LOCATION PLAN



SITE DESCRIPTION: LOCATED ON GRAVELLY HARDSTAND SURFACE BETWEEN RAIL ROAD 15 AND ACCESS TRACK INTO CENTRAL YARD.
CO-ORDS: 334042 mE, 6249122.5 mN
SURFACE RL: 20.39 m
EXCAVATION DEPTH: 1.85 m TO 2.5 m
EXCAVATION TECHNIQUE: NDD USING VACUUM SUCKER TRUCK & EXCAVATOR
WORKS SUPERVISOR: JRL
DRAWN / LOGGED BY: HN
DATE COMPLETED: 04-APR-2017
CHECKED BY: GKS



Photo 2: View looking North West at Section C-C'



Photo 3: View looking South East at Section C-C'



Photo 4: View looking West at soil profile in Section C-C'



Photo 5: View looking South West showing full excavation

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Golder Associates

CLIENT: TRANSPORT FOR NSW

PROJECT: SYDNEY METRO CITY & SOUTH WEST

CONSULTANT

YYYY-MM-DD	2017-04-21
DESIGNED	JRL
PREPARED	MV
REVIEWED	GKS
APPROVED	GKS

TITLE: **SCHEMATIC ILLUSTRATION OF CONDITIONS EXPOSED IN EXCAVATION SRT_NDD030 CENTRAL YARD**

PROJECT NO.	CONTROL	REV.	FIGURE
00013/10701 (GA 1650773)		A	2

Path: \\golder.gds.golder\Sydney\Geomatics\TRANSPORT FOR NSW\SYDNEY METRO\99_PROJECTS\1650773 TNSW Sydney Metro\02_PRODUCTION\FIG\ | File Name: 1650773-00013_10701-SRT_NDD030.dwg
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3
25 mm
0

- Using a hand auger (for deeper trench samples). The hand auger was washed and decontaminated using phosphate free detergent between collection of each sample.

Soil samples collected for laboratory chemical analysis were stored in soil jars supplied by the laboratory and were placed on ice, in eskies whilst on-site and in transit to the laboratory, under chain of custody procedures. Samples collected for asbestos screening were double bagged and also placed on ice in eskies whilst on-site.

The collected soil samples were field head space screened for the presence of detectable VOCs with a field portable Photo Ionisation Detector (PID). The PID results are presented in **Table 1**.

A summary of the samples collected and brief description of the samples is included in the **Table 1** below.

Table 1: Sample Descriptions - Slit Trenching Works Central Station

Sample Location	Depth (m)	Depth of Trench at time of sampling	Soil description	PID reading (ppm)	Date of Sample Collection
ST01	0.0	0.4	FILL: gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.7	02/08/17
ST02	0.0	0.8	FILL: gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.6	02/08/17
ST02	0.5		FILL: gravel (ballast) dark grey, sub-angular, very compacted, poorly sorted.	1.5	02/08/17
ST03	0.0	0.7	FILL: sandy silt, dark brown, with some sub-angular sandstone gravels.	0.5	04/08/17
ST03	0.7		FILL: gravelly sand, dark brown-brown, with some sub-angular sandstone gravel and brick fragments, poorly sorted. Refusal on concrete.	0.5	04/08/17
ST04	0.1	0.7	FILL: silty sand, dark brown, fine-coarse grained with some sub-angular sandstone and ironstone gravels	0.4	04/08/17
ST04	0.5		FILL: sandy gravel, dark brown, sub-angular sandstone and ironstone gravels, fine-coarse grained sand. Refusal on terracotta.	0.5	04/08/17
ST05	0.3	1.3	FILL: silty sand, brown-dark brown, fine-coarse c grained, with some sub-angular sandstone gravels, with some brick fragments.	0.4	04/08/17
ST05	1.2		FILL: sandy gravel, brown, sub-angular sandstone and ironstone gravels, fine-coarse grained sand with some brick fragments. Refusal on concrete and bricks.	0.4	04/08/17
ST06	0.2	1.5	FILL: gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.7	09/08/17
ST06	1.5		FILL: sand, brown, fine-coarse grained, with some sub-angular ballast gravels	0.5	09/08/17
ST07	0.0	1.5	FILL: gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.6	11/08/17
ST07	1.5		FILL: gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.7	11/08/17
ST08	0.2	0.6	FILL: gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.7	11/08/17
ST08	0.6		FILL gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted.	0.9	11/08/17
ST09	0.0	0.9	FILL: clayey gravel (ballast), dark grey, sub-angular, very compacted, poorly sorted, with some coarse grained sand	0.4	14/08/17
ST09	0.9		FILL: gravelly sand, dark grey-brown, fine-coarse grained, poorly sorted.	0.5	14/08/17
ST10	1.5	1.5	FILL: gravelly sand, brown, fine-coarse grained	0.8	16/08/17
ST11	0.6	1.0	FILL: gravel, dark grey – black, sub-angular, with some fine-coarse grained sand, strong oily odour, possible traces of tar. Strong oily odour noted. A metal pipe (noted to be intact) was noted to be adjacent to the sample collection location.	1.0	16/08/17
'ASBESTOS'	0.5	0.5	Fragments of potential bonded asbestos sheeting collected at ~0.5m (refer Figure 1).	-	09/08/17