

Detailed Phase 2 Contamination Investigation

2A Gregory Place Harris Park NSW

3 MARCH 2022

Prepared for:

2A Gregory Place Pty Ltd

2A Gregory Place
Harris Park NSW 2150

Project No. SES_617

Prepared/Approved by:

Mr Adam Sullivan

Site Contamination Specialist (SC)
Certified Environmental Practitioner (CEnvP)
Certification No. 40944

Document Control

Rev	Date	Prepared By	Reviewed By	Approved By	Remarks
--	3 March 2022	S. Guenther	A. Sullivan	A. Sullivan	Draft for issue

Sullivan Environmental Sciences Pty Ltd

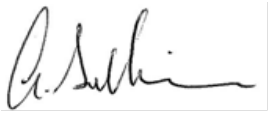
PO Box 5248
Turramurra NSW 2074
Australia
E: enquiries@sullivan-es.com.au

Author:



.....
Sean Guenther
Senior Associate

Peer Reviewer/
Approval:



.....
Adam Sullivan
Principal Scientist
CEnvP-SC (#40944)

Date: **3 March 2022**
Reference: **SES_617**
Status: **Draft**

© Document copyright of Sullivan Environmental Sciences Pty Ltd

No use of the contents, concepts, designs, drawings, specifications, plans etc. included in this report is permitted unless and until they are the subject of a written contract between Sullivan Environmental Sciences Pty Ltd and the addressee of this report. Sullivan Environmental Sciences Pty Ltd accepts no liability of any kind for any unauthorised use of the contents of this report and Sullivan Environmental Sciences Pty Ltd reserves the right to seek compensation for any such unauthorised use.

Document delivery

Sullivan Environmental Sciences Pty Ltd provides this document in either printed format, electronic format or both. Sullivan Environmental Sciences Pty Ltd considers the printed version to be binding. The electronic format is provided for the client's convenience and Sullivan Environmental Sciences Pty Ltd requests that the client ensures the integrity of this electronic information is maintained. Storage of this electronic information should at a minimum comply with the requirements of the Commonwealth Electronic Transactions Act (ETA) 2000.

Where an electronic only version is provided to the client, a signed hard copy of this document is held on file by Sullivan Environmental Sciences Pty Ltd and a copy will be provided if requested.

Executive Summary

Sullivan-ES was engaged by 2A Gregory Place Pty Ltd (the landowner) to conduct a detailed Phase 2 contamination investigation on the property at 2A Gregory Place, Harris Park NSW, henceforth referred to as 'the site'. The site is currently occupied by the site owner and a small part of the main building is used as office space and equipment storage, while the remaining site buildings are vacant and unused. The site is earmarked for future redevelopment understood to include predominantly high-rise residential with landscaped gardens overlying two layers of basement car parking.

Sullivan-ES completed a Preliminary Site Investigation in 2015 as part of the proposed re-development planning works. Sullivan-ES concluded that the historic activities at the site may have caused potential site contamination and may pose a potential health risk to future human and environmental receptors. The key items/activities identified as warranting further investigation included:

- Underground Storage Tanks (UST)
- Storage of bulk chemicals
- Boiler room with potential fuel and other associated chemicals storage.
- Manufacture of pharmaceutical products during Wyeth Australia Pty Ltd site ownership
- Oil and fuel leaks associated with vehicle parking
- Potential leaks from 11kV Transformer
- Former Effluent Treatment Plant (ETP)
- Groundwater condition.

The PSI recommended carrying out a Phase 2 Detailed Site Investigation (DSI) to assess whether the identified issues have caused impacts to soils and groundwater such that health risks to onsite and offsite receptors can be quantified in consideration of State Environmental Planning Policy 55 – Remediation of Land 1998 (SEPP55).

Our objectives for the Phase 2 were to investigate for the presence of soil and groundwater contamination, to assess potential health risks for future use of the land under a high-density residential land use setting, and provide recommendations for additional investigations or remediation, if required.

The following conclusions are made based on the findings of this Phase 2, and subject to the limitations presented in Section 10:

- Asbestos containing fibre cement fragments were observed in gravelly ash fill at sample locations BH13, BH14, BH25 and HA01 clustered together and sealed under concrete slabs beneath the former manufacturing and offices area of the main building. While there are no health risks to current site users as the area is sealed under concrete, there is a potential risk to future site users by the asbestos impacted fill that requires remediation prior to or during site development.
- The gravelly sandy fill soils represented by results for sampling locations HA04 and BH06, are impacted by carcinogenic PAHs in concentrations that exceed the human health criterion. While there are no health risks to current site users as the areas are sealed under concrete slabs, there is a potential risk to future site users by contaminated soils at HA04 and BH06 that requires remediation prior to or during site development.
- Volatile and semi-volatile compounds were detected in fill soils beneath the former manufacturing/offices/laboratory area of the building, adjacent to the ETP tank and near the former chemical store. Concentrations were below adopted health screening levels and considered relatively low level in soils and were not detectable in groundwater. However these chemicals are not naturally occurring which indicates either there are residues of these chemicals causing low

level concentrations in soils or there is a potential unknown contamination source (hotspot) underneath the structures which may present a potential health risk for the proposed development.
- Preliminary assessment shows that potential acid sulfate soils exist onsite and will require management if disturbed. PASS results indicate potential acid generation of soils deeper than 1.5 m may not require treatment, however shallower soils at boreholes BH05 and BH19 recorded results that were up to 89% of the action criteria which is considered significant in the context of the planned development. An Acid Sulfate Soils Management Plan (ASSMP) is to be prepared that documents verification sampling and management of potential acid generation during soil disturbance.
- The exact position of the suspected UST near the loading dock could not be verified during the investigation and may not exist, however there is likely to be a UST under the Boiler Room floor. No soil or groundwater impacts were detected at either location. In accordance with current legislation, if not used in a two-year period or temporarily abandoned, all USTs present onsite must be decommissioned in accordance with POEO (Underground Petroleum Storage Systems) Regulation 2019.
- Groundwater onsite is of relatively good quality with no exceedances of the adopted human health screening levels for vapour intrusion or the adopted GILs for ecological receptors except for PFAS.
- PFAS compounds in groundwater were not significant to warrant any further consideration. Site history shows there is no current or historical credible onsite source of PFAS, and the concentrations of PFAS detected in groundwater are most likely ambient background concentrations in the area.
- The liquid contained within the ETP tank was not found to be contaminated from a human health perspective. The liquid was found to have some heavy metal and PFAS detections above the ecological criterion. Liquid contained within the tank is a waste and requires disposal offsite to a licenced liquid waste treatment facility during decommissioning of the ETP.

Sullivan-ES conclude that the site can be made suitable for the proposed high density residential use subject to closing out data gaps, decommissioning of USTs and the ETP onsite and performing remediation works in localised areas of the site to remove any unacceptable health risks.

We recommend that a Remedial Action Plan (RAP) is prepared. The RAP should be prepared or reviewed and approved by a Certified Environmental Practitioner specialising in Site Contamination (CEnvP-SC) as certified by one of the two schemes recognised by the NSW Environment Protection Authority. The RAP is to include all items required as listed in the contaminated land consultants reporting guidelines (NSW EPA 2020), as well as consideration of the following items as a minimum:

- Decommissioning of USTs in accordance with *POEO (Underground Petroleum Storage Systems) Regulation 2019*.
- Remediation of impacted fill materials for bonded asbestos fragments in and around BH13, BH14, BH25 and HA01 including any additional delineation sampling to refine localised remediation extent(s).
- Remediation of impacted fill materials for carcinogenic PAHs at HA04 and BH06 including any additional delineation sampling to refine localised remediation extents.
- Data gap closure including additional sampling to characterise contamination status associated with:
    - former manufacturing/offices/laboratory areas of the building, adjacent to the EFT and former chemical store for volatile and semi volatile organic compounds.

Executive Summary

    - beneath current office and storage building footprints which were not accessible during the Phase 2 investigation.
- Disposal of the remnant liquids in the ETP and subsequent decommissioning of the ETP and all associated pipes and pits.
- Materials management, classification, handling requirements and disposal.
- Unexpected finds protocol - paying particular attention to potential contamination issues relating to the network of pipes and pits associated with the ETP, ashy fill materials under various locations of the main building, fill quality in the vicinity of locations HA02 and HA03, and the underground water tank and pumphouse outside the Boiler Room along the north entrance driveway.

Table of Contents

Executive Summary iii

1 Introduction 1

1.1 Objective 1

1.2 Scope of Work 1

1.3 Regulatory Framework 2

1.4 Consultant's Competency and Certification 2

2 Background Site Information 4

2.1 Site Description 4

2.1.1 Existing and Proposed Use and Surrounding Land Use 4

2.2 Site History 5

2.2.1 Aerial Photography 5

2.2.2 Section 10.7 Certificates and GIPA Records 6

2.2.3 Land Titles Information 7

2.2.4 NSW EPA Records 8

2.2.5 SafeWork NSW Storage of Hazardous Chemicals Records 8

2.3 Site Owner Records 9

2.4 Regulated Development 10

2.5 Site Inspection and Condition 10

2.6 Previous Contamination Reports 11

2.6.1 Contamination Report (Dames and Moore 2000) 11

2.6.2 Preliminary Site Investigation (Sullivan-ES, 2015) 11

3 Environmental Setting 13

3.1 Regional Soil and Geology 13

3.2 Topography and Drainage 13

3.3 Hydrogeology 13

3.4 Acid Sulfate Soils 14

3.5 Heritage 14

3.6 Integrity Evaluation of Information 14

4 Assessment Methodology 15

4.1 Data Quality Objectives 15

4.2 Basis to Sampling 17

4.3 Field Sampling Program 18
4.3.1 Sample Analyses 21
4.4 Quality Assurance and Quality Control 22
5 Assessment Criteria 24
5.1 Soil Investigation Levels 24
5.1.1 Notes on Adopted Soil Criteria 24
5.2 Groundwater Investigation Levels 26
5.2.1 Notes on Adopted Groundwater levels 27
5.3 Potential Acid Sulfate Soils (PASS) Action Criteria 28
6 Results and Discussion 29
6.1 Field Inspection and Observations 29
6.2 Soil Results 30
6.2.1 Comparisons to US EPA Regional Screening Levels 30
6.3 PASS/ASS Results 32
6.4 Groundwater 32
6.4.1 Field Observations and Quality Parameters 32
6.4.2 Inferred Groundwater Flow Gradient 33
6.4.3 Groundwater Results 33
6.5 Former Effluent Treatment Plant Liquid Results 34
6.6 Conceptual Site Model 34
6.6.1 Contamination Sources, Media and Contaminants of Concern 35
6.6.2 Receptors and Exposure Pathway 35
6.6.3 Source-Pathway-Receptor Linkages 35
6.6.4 Data Gaps and Delineation of Impacted Areas 36
7 Quality of Analytical Data 37
8 Conclusions and Recommendations 40
8.1 Recommendations 41
9 References 42
10 Limitations 43

Tables

Table 2-1 Site Identification 4
Table 3-1 Historical Aerial Imagery 5

Table 3-2 Summary of Land Title Information 7
Table 3-1 Registered Groundwater Bores Information 14
Table 4-1 Sampling Locations and Rationale 18
Table 4-2 Soil Sampling Works Summary 18
Table 4-3 Groundwater Sampling Works Summary 20
Table 4-4 Sample Analysis Schedule 22
Table 6-1 USEPA Regional Screening Levels Summary Results 31
Table 6-2 PASS/ASS Summary Results 32
Table 6-3 Groundwater Field Parameters Summary 33
Table 7-1 Data Quality 37

Appendices

Appendix A Figures
Appendix B Results Tables
Appendix C Borehole and Groundwater Logs
Appendix D Site Photos
Appendix E Field Sheets and Calibration Certificates
Appendix F Proposed Development Plans
Appendix G Laboratory Analytical Certificates

1

Introduction

Sullivan Environmental Sciences Pty Ltd (Sullivan-ES) was engaged by 2A Gregory Place Pty Ltd (the site Owner) to conduct a detailed Phase 2 contamination investigation (the Phase 2) on the property at 2A Gregory Place, Harris Park NSW, henceforth referred to as 'the site'. The site location is shown on Figure 1 and the general site layout is shown on Figure 2 (**Appendix A**).

The site is currently occupied by the site Owner and a small part of the main building is used as office space and storage, while the remaining site buildings are vacant and unused. The site is earmarked for future redevelopment understood to include predominantly high-rise residential buildings and landscaped ground surfaces overlying two layers of basement carparking.

Sullivan-ES completed a Preliminary Site Investigation (PSI), (Sullivan-ES, Aug 2015[1]) as part of the proposed re-development works. Sullivan-ES concluded that the historic activities at the site may have caused potential site contamination and may pose a potential health risk to future human and environmental receptors. The key items/activities identified in the PSI as warranting further investigation included:

- Underground Storage Tanks (USTs)
- Storage of bulk chemicals
- Boiler room potential fuel and other associated chemicals storage
- Manufacture of pharmaceutical products during former landowners (Wyeth Australia Pty Ltd) occupation of the site
- Oil and fuel leaks associated with vehicle parking
- Potential leaks from the 11kV Transformer
- Former Effluent Treatment Plant (ETP) – currently not operational
- Groundwater condition.

The PSI recommended carrying out a Phase 2 - Detailed Site Investigation (DSI) to assess whether the identified issues have caused impacts to soils and groundwater such that health risks to onsite and offsite receptors can be quantified in consideration of State Environmental Planning Policy 55 – Remediation of Land 1998 (SEPP55).

1.1 Objective

Our objectives were to investigate for the presence of soil and groundwater contamination, to assess potential health risks for future use of the land under a high-density residential land use setting, and provide recommendations for additional investigations or remediation, if required.

1.2 Scope of Work

Our scope of work to complete the Phase 2 is presented below:

Document Review

- Conducting a review of background information and available reports.

[1] Preliminary Site Investigation, 2A Gregory Place, Harris Park NSW, Sullivan Environmental Sciences Pty Ltd, August 2015.

Field Work Sampling

- Preparing a safety and sampling work plan for all field-based work on the site.
- Conducting clearance of underground utilities using Dial Before You Dig plans and a Telstra accredited pipe locating subcontractor, to clear and confirm soil/groundwater sampling locations.
- Conducting a detailed inspection of the site.
- Conducting concrete coring, bore drilling 26 locations/hand augering 8 locations and soil sampling inside and outside buildings at nominated locations.
- Conducting water sampling of contained water/remnant liquids within the former effluent treatment plant (ETP)
- Installing/constructing three (3) groundwater monitoring wells by extending selected soil bores to the required depth using solid stem drilling methods.
- Gauging and purging each groundwater well and collect a sample of groundwater from each, measuring field parameters during the process.
- Dispatching collected samples of soil and groundwater (including QA/QC duplicates and blank samples) to a NATA accredited laboratory for analysis of a suite of contaminants.
- Dispatching selected soil samples for a preliminary assessment of Potential/Actual Acid Sulfate Soils.

Reporting

- Preparing a Phase 2 contamination investigation report in consideration of the Reporting Guidelines (EPA, 2020) and Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure 2013 (ASC NEPM 2013).

Note that preparation of an Acid Sulfate Soil Management Plan (ASSMP) in consideration of ASSMAC (1998) and NSW Acid Sulfate Soils Planning Guidelines, 1998 will be reported separately to this report.

1.3 Regulatory Framework

The Phase 2 was conducted in consideration of the following regulatory framework and guideline documents. A full list of reference documents is presented in **Section 9**.

- Acid Sulfate Soils Assessment Guidelines (ASSMAC 1998).
- Contaminated Land Management Act 1997 (CLM Act).
- Contaminated Land Guidelines: Consultants Reporting on Contaminated Land, 2020 (NSW EPA 2020).
- Guidelines for the NSW Site Auditor Scheme (3rd Edition), 2017 (NSW EPA 2017).
- Guidelines for the Assessment and Management of Groundwater Contamination, 2007 (NSW DEC 2007).
- National Acid Sulfate Soil Guidance (Australian Government 2018).
- National Environment Protection (Assessment of Site Contamination) Measure 2013 (ASC NEPM 2013).
- Parramatta Local Environmental Plan 2011.
- Sampling Design Guidelines, 1995 (NSW EPA 1995).
- State Environmental Planning Policy No.55 – Remediation of Land 1998 (SEPP55).

1.4 Consultant's Competency and Certification

All contamination assessment work and reporting were conducted by the professionally trained team at Sullivan-ES. The Project Team consisted of the following members:

Introduction

1. Adam Sullivan who has over 23 years of experience in contaminated land assessment and remediation. Adam is a certified Site Contamination Specialist (CEnvP-SC) under the Certified Environmental Practitioner Scheme (www.cenvp.org) and has reviewed and approved this report in the capacity as a CEnvP-SC and Principal Scientist.
2. Sean Guenther who has over 20 years of experience in contaminated land assessment and remediation and has prepared this report in his capacity as Senior Associate.

2

Background Site Information

The information provided in this section is summarised from the following:

- Information provided by 2A Gregory Place Pty Ltd.
- Previous contamination assessment reports:
  - Sullivan Environmental Sciences Pty Ltd, Preliminary Site Investigation, August 2015.
- Fieldwork observations and sampling undertaken by Sullivan-ES.

2.1 Site Description

The site location and site layout are shown on Figures 1 to 3, respectively (**Appendix A**). The following information identifies the site.

Table 2-1 Site Identification

Attribute	Details
Address	2A Gregory Place, Harris Park NSW 2150
Title Identification	Lot 2 in DP 802801
Property Area	Approximately 19,480m^2 (1.95 hectares)
Owner/operator	2A Gregory Place Pty Ltd
Local Government	City of Parramatta Council
Land use zone	IN1 – General Industrial (Parramatta LEP 2011)
Land uses	Past: manufacture baby food products and prior to that presumably pharmaceutical products. Current: Main building is used as office space and storage for the site owner while the remaining site buildings are vacant and unused. Future: high density residential apartments with surrounding landscaping and underlying basement level parking. Refer to **Appendix F**.
Geographic Coordinates	-33.819496, 151.014809 (site centre)

2.1.1 Existing and Proposed Use and Surrounding Land Use

The site is currently zoned IN1 – General Industrial (Parramatta LEP 2011) and currently used by the owner as their central office base and equipment storage site. The site is proposed for high density residential apartments with basement level parking as shown in the attached design drawings (**Appendix F**). The southwest portion of the site across Clay Cliff Creek canal is not proposed for future development and will remain vegetated englobo land. Land surrounding the site consists of:

North: Hambledon Cottage Reserve (RE1), Hassall Road then R3 medium density residential.

South: Clay Cliff Creek stormwater channel enters the site from the western boundary then exits the site off the southern boundary. Public recreation (RE1) then R2 - Low Density and R4 High Density residential properties of Harris Park.

East: Gregory Place then low to high density residential properties and Elizabeth Farm Reserve (RE1).

West: Experiment Farm Reserve (open space land use and listed as a heritage item by the Parramatta local government).

2.2 Site History

The following information is sourced from the Preliminary Site Investigation[2] (Sullivan-ES 2015). Site history information is accurate up to the time of Sullivan-ES 2015. In summary, the site has been utilised for commercial/industrial activities since the early 1940s, prior to this time it was part of farming or agricultural lots. Between the early 1940 and 2001 the site was utilised for the manufacture of various pharmaceutical products. In 2001 the current site owner, 2A Gregory Place Pty Ltd purchased the site from Wyeth Pharmaceuticals Pty Ltd where it has been largely vacant with only a small portion of the main building being used for office space and storage of small-scale equipment.

2.2.1 Aerial Photography

The table below presents the details of observations made from each aerial photograph reviewed as part of the PSI in 2015. Additional images from the years 2015 to present (2022) were viewed to confirm any site conditions changes since the PSI.

Table 3-2 Historical Aerial Imagery

Year	Details
1943 (black & white)	The site is a grassed vacant block of land with no building structures. The stormwater channel is present cutting through the southwest portion of the site and appears to be concrete lined running east-west. This channel is currently named Clay Cliff Creek. Gregory Place appears to be an unsealed track extending off Hassall Street. The immediate area surrounding the site is grassed paddocks with an adjoining residential home to the north. The wider immediate area has been developed into residential lots. Scouring of the ground is shown offsite to the north on the adjoining property.
1956 (black & white)	A large building has now been constructed onsite that covers approximately half of the area on the north side of the stormwater channel. Access to the site is off Gregory Place. An unsealed track skirts the southern wall of the building to an open area at the west of the building. This area shows storage of drums or large containers. The western portion remains grassed and vacant, while a track enters off Hassall Street into the western portion of the site. The surrounding land is unchanged from 1943, although the earth scouring to the north appears to be larger in area.
1961 (black & white)	The large building has not changed since 1956. The western yard shows more storage of containers and smaller shed structures. There appears to be two large trucks present on the rear yard. Car parking is along the southern boundary

[2] Preliminary Site Investigation, 2A Gregory Place Harris Park NSW, Sullivan Environmental Sciences Pty Ltd, August 2015.

Year	Details
	adjoining the stormwater channel where approximately 30 cars are parked on unsealed areas. Much of the land onsite further west remains vacant and grassed. The surrounding areas appear unchanged. The earth scouring to the north is now grassed.
1970 (black & white)	The main building has been extended to the west to cover much of the rear yard. A portion of the rear yard remains active for storage of container and truck movements. Car parking remains along the southern boundary. No other changes are notable onsite. The surrounding areas appear unchanged except for a large circular structure south of the stormwater channel (presently a church). The open paddock areas to the west of the site including the former scoured area are now playing fields and ovals.
1986 (colour)	The main building has been extended to the west to cover all of the former rear yard area. Car parking areas and site entry have been concrete sealed. A bitumen car park is now present covering the remaining site area to the west. The site is now almost entirely sealed on the northern side of the stormwater channel. Another site access has been created along the northern boundary, the driveway then continues along the boundary to exit in the northwest corner and continues on to Hassall Street. Large circular tanks are present along the southern wall and this area shows the current effluent treatment plant (ETP). The portion of the site on the southern side of the stormwater channel remains vacant and grassed. The area to the south of the site has undergone major construction works since 1970. Residential homes remain relatively unchanged. Hassall Street has been diverted to cut south through the playing fields to the west of the site. Gregory Place is now bitumen sealed and with kerb and gutter.
1994 (colour)	A building extension has been added to the northwest corner of the main building. No other notable changes have occurred since 1986. The western car park holds at least 50 cars. The surrounding areas appear relatively unchanged.
2005 (colour)	The site structures appear unchanged. The driveway extending from the northwest site corner to Hassall Street has been removed.
2007 – 2022 Nearmap© images (colour)	The site and immediate surrounds appear unchanged.

2.2.2 Section 10.7 Certificates and GIPA Records

As part of the PSI the Section 10.7 planning certificate (formerly referred as a section 149 certificate) was reviewed. The Certificate for the site stated that "*The land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997*", however it also stated that "*The land the subject of this certificate is potentially affected by contamination as indicated by Council's current information and records (sic). As such Council is required to take this into account when determining any development application made in respect of the land*." The Council records that are referred to in the Certificate were requested through an informal application for

information under the Government Information (Public Access) Act 2009 to obtain whatever relevant information Council was holding. The information provided by Council under the GIPA application was specific to documents relating to Development Applications for future additions to the factory buildings in the periods of 1970s, 1980s and early 1990s. The GIPA information did not cover any aspects of land contamination or previous reports.

2.2.3 Land Titles Information

As part of the PSI historical land titles were reviewed. The table below presents the details of the relevant land titles for the site.

Table 3-3 Summary of Land Title Information

Title Ref.	Title ID	Year	Details	Contamination Issues
No. of Application: 5303	Vol. 696 Fol. 242	1884-1887	Owner: Septimus Alfred Stephen (solicitor). Documented as “Elizabeth Farm”.	Farming
Lot 13 Sec A DP1249	Vol. 828 Fol. 27	1887-1888	Owner: Joseph William Simpson (Gentleman)	Farming (?)
		1888-1889	Owner: Marc Murray (?) (Gentleman)	Farming (?)
		1889-1902	Owner: James Edward Cumming (Freeholder)	Farming (?)
		1902-1923	Owner: Helena Mary Cumming (Spinster)	Farming (?)
		1923-1934	Owner: Samuel Francis Alexander (Dairyman)	Farming
		1934-1940	Owner: Joseph Ernest Alexander (Dairyman)	Farming
		1940-1945	Owner: Goodyear Tyre and Rubber Co. (Australia) Ltd	Industrial (?)
Lot 4 to Lot 14 DP8430	Vol. 2814 Fol. 223	1918-1921	Owner: George Alexander (Dairy farmer) Grant of right created for stormwater channel	Farming
		1921-1934	Owner: Samuel Francis Alexander (Dairyman)	Farming
		1934-1940	Owner: Joseph Ernest Alexander (Dairyman)	Farming
		1940-1945	Owner: Goodyear Tyre and Rubber Co. (Australia) Ltd	Industrial (?)
Lot B (transfer No. C929907) Lot 13 Sec A DP1249 Part of Lot 14 DP8430	Vol. 5188 Fol. 163	1940-1945	Owner: Goodyear Tyre and Rubber Co. (Australia) Ltd	Industrial (?)
		1945-1947	Owner: Kolynos Incorporated	Manufacturing - personal hygiene (?)
		1947-1949	Owner: Whitehall Pharmacal Company	Manufacturing - pharmaceuticals

Title Ref.	Title ID	Year	Details	Contamination Issues
		1949-1958	Owner: Whitehall Pharmacal Company Incorporated in Illinois USA	Manufacturing - pharmaceuticals
Lot 1 DP391496	Vol. 7079 Fol. 22	1956-1958	Owner: Whitehall Pharmacal Company Incorporated in Illinois USA	Manufacturing - pharmaceuticals
		1958-1971	Owner: Home Products International Ltd	Manufacturing - pharmaceuticals
		1962-1971	Lessee: Wyeth Pharmaceuticals Pty Ltd	Manufacturing - pharmaceuticals
		1971-2001	Owner: Wyeth Pharmaceuticals Pty Ltd	Manufacturing - pharmaceuticals
Lot 2 DP 802801	2/802801	2001-present	2A Gregory Place Pty Ltd	Unknown

2.2.4 NSW EPA Records

A review of the NSW EPA list of sites declared under the CLM Act 1997 as well as the list of sites notified to the EPA under the duty to report requirements (section 60) was undertaken as part of the PSI, showing that the site is not registered as a significantly contaminated site and the site is not notified as a potentially contaminated site.

Similarly, a review of the NSW EPA public register of Environment Protection Licences (EPL), applications and environmental notices shows that the site does not or has not possessed an EPL nor has the site been issued with a penalty notice.

2.2.5 SafeWork NSW Storage of Hazardous Chemicals Records

As part of the PSI, Sullivan-ES carried out a request of information on the storage of hazardous chemicals to SafeWork NSW for the Site. The search found the following information:

1999 - Dangerous Goods Licence #35/015959

- Depot 1: Class 3 Maximum storage 5,000L in total
    - Acetone, acetonitrile, butyl-methyl-ether, diethyl ether, ethanol, hexanes, ethyl acetate, isopropanol, petroleum distillates, toluene, octanes, xylenes, methanol, benzene, di-isopropyl ether, cyclohexane, pentanes, extracts flavouring liquid.
- Depot 2: Aboveground Tank Class 2.2
    - Nitrogen, compressed 4,250L
- Depot 3: Aboveground Tank Class 8
    - Aluminium chloride 3,000L
- Depot 4: Class 8
    - Hydrochloric acid (600L), sodium hydroxide (2,000L), ferric chloride (2,000L)
- Depot 5: Class 8
    - Caustic alkali (800L), corrosive liquid (400L), hydrochloric acid (800L), sodium hydroxide (400L)
- Depot 6: Class 8
    - Caustic alkali (1,000L), corrosive liquid (600L), phosphoric acid (600L), sodium hydroxide (200kg), sodium hydroxide (2,200L)

- Depot 7: Class 8
    - Ammonia solution (2,000L)
- Depot 9a and 9b: Class 3
    - Extracts, flavouring, liquid (500L)

August 1995

Records of abandonment of a 5,000L UST underneath the Boiler Room floor by filling with concrete.

January 1995

Correspondence record of identification of a UST beneath the Boiler Room floor and the kerosene odour and clear liquid contents.

April 1987

Dangerous Goods Licence #35/015959.9

- Depot 1: Flammable liquids (5,000L)
- Depot 2: Aboveground tank liquid nitrogen (3,000L)

August 1986

Dangerous Goods Licence (number not clear)

- Depot 1: Underground tank, mineral spirit (13,500L)
- Depot 2: Solvents (4,500L)
- Depot 3: Aboveground tank, liquid nitrogen (3,000L)

February 1977

Dept. of Industrial Relations - Record of goods (Licence # 2840bs (?))

- Depot 1: Underground storage tank, mineral spirit (13,500L)
- Depot 2: Mineral oils (4,500L) stored in a brick, iron and concrete structure

November 1972

- Depot 1: Underground tank, mineral spirit (3,000gal)
- Depot 2: Mineral oils (1,000gal) stored in a brick, iron and concrete structure

September 1972

Explosives Dept. record of UST and pump installation location and equipment.

2.3 Site Owner Records

The site Owner provided a number of documents that had been kept on file since purchasing the site including the Contract of Sale. Provided below is a summary of relevant land contamination information within these documents:

- In August 1972 an application was made and approved to install a 3,000 gallon (13,500L) underground storage tank (UST) and bowser on the site for petrol. The UST position is shown on a sketch to be at the southern boundary under the driveway area approximately 100m from the Gregory Street entrance.
- Land transfer records show that Clay Cliff Creek intersected the site before it was presumably infilled and the stormwater drainage channel was constructed circa 1894.

2.4 Regulated Development

A review of Parramatta Council's DA Tracking system was conducted for the site to search records of regulated development that has occurred at the site (accessed 1 February 2022). The search showed the following information for regulated development at the site.

- **DA/808/1995** – Wyeth Pharmaceuticals: small plant room on top of existing concrete tank to house effluent treatment plant (Submitted: 10/11/1995).
- **DA/86/1997** – Zhinar P/L: Extend the existing rooftop plant room and erect an awning over the existing loading bay (Submitted: 26/02/1997).
- **DA/1725/2001** – Boral Resources NSW P/L: Use of part of the premises as a research laboratory (Submitted: 06/09/2001).
- **TA/151/2008** – 2A Gregory Place P/L: Pruning of 1 Tree (Submitted: 04/03/2008).

2.5 Site Inspection and Condition

Activities and operations on the site are similar to what was reported in Sullivan-ES, 2015. Specific site features are identified on Figure 2 of **Appendix A,** while site photos are presented in **Appendix D**.

The site is an irregular rectangular shape lot which is predominately sealed by either concrete or asphalt. The main features of the site comprise a main building consisting of a large office, warehouse and factory covering approximately two thirds of the site area; an asphalt sealed car park covering the western area; a concrete sealed forecourt and loading dock covering part of the southern area; and a large open stormwater channel running the length of the southern boundary then cutting through the site and dissecting a vacant undeveloped area of the site in the south west corner from the remainder of the site.

The eastern end of the main building is currently being used as office space by the site Owner while the reminder of the site is not used and running into disrepair. Previously the site was used by Wyeth Australia to manufacture baby food products and prior to that presumably pharmaceutical products. The features and uses of the main building included the following areas:

- warehousing
- manufacturing
- offices including canteen and conference rooms
- amenities and locker rooms
- laboratories
- production areas

The main areas of interest are located toward the western portion of the main building and include:

- laboratories
- former Effluent Treatment Plant (ETP) and sewerage network
- boiler room
- manufacturing, production and storage areas.

Access to the site is from two driveway entries off Gregory Place. The northern entry accesses the rear car park, while the southern entry access the forecourt and loading dock area. On the right when entering the car park driveway from Gregory Place there is a large 11kV transformer onsite. Further along the driveway is a former aboveground tank farm area. The car park comprises landscaped kerb and gutter and houses approximately 50 or more parking spaces. A large firewater tank is present to the left of the entry into the forecourt and loading dock, while further along the southern boundary there exists an

onsite ETP with a footprint of approximately 200m^2 with additional pipework and drainage pits. The ETP is not currently operational and significantly dilapidated. It appeared to be full of a liquid (possibly rainwater) at the time of the inspection. The ETP area is significantly overgrown with large shrubs and other weeds.

Outside the Boiler Room is a large underground tank positioned proximal to a pumphouse shed. The tank appeared to be 3.0m deep and of similar diameter. The contents in the tank appeared to be water with no odours or oily sheen noted.

The stormwater channel is named Clay Cliff Creek and is approximately 6m wide and 3m deep from the ground level. It drains to the east for approximately 400m then runs north for approximately 500m and empties into the Parramatta River adjacent to James Ruse Drive. The channel is not expected to be under tidal influence near the site, and should only receive freshwater from stormwater runoff and shallow groundwater discharges near the site.

The vacant triangular shaped area in the southwest corner is grassed and vegetated with gum trees. It does not appear that this part of the site can be accessed from the main site area.

2.6 Previous Contamination Reports

The following information relating to historical contamination assessments is sourced from Sullivan-ES, 2015 noting that only extracts of former reports were supplied to Sullivan-ES in 2015 for the purpose of reviewing. Copies of completed reports with supporting results tables and figures were not supplied.

2.6.1 Contamination Report (Dames and Moore 2000)

The property report prepared for the Contract of Sale in 2000 provided the executive summary of a previous contamination report (Dames and Moore, July 2000) confirming that previous contamination assessments have been conducted at the site. The information stated that:

- *Baby food and adult nutritional products are manufactured onsite.*
- *Groundwater is approximately 2.0 metres below ground level (mbgl) and flows to the south.*
- *Four (4) groundwater wells were sampled during the assessment.*
- *There was an 18,000L UST present at the site.*
- *Two of the four groundwater wells showed hydrocarbon results above the threshold criteria at the time of the report.*
- *Continued groundwater monitoring was recommended.*
- *Fatty sheen material was observed to be seeping from the stormwater channel wall.*
- *Observations of stormwater impacts were made on the north side of the factory building from overflows of formulation vessels, and a greyish silty substance draining into the stormwater channel of unknown material or origin.*

2.6.2 Preliminary Site Investigation (Sullivan-ES, 2015)

Sullivan-ES was engaged by 2a Gregory Place Pty Ltd to conduct a PSI to conduct an appraisal of the current and historical site activities, assess the potential for contamination from those activities, and assess the need for further investigation.

The following conclusions and recommendations are drawn from the PSI (Sullivan-ES, 2020):

Background Site Information

"…Sullivan-ES conclude that the historic activities at the site may have caused potential site contamination and may pose a potential health risk to future human and environmental receptors. The following issues were identified that warrant further investigation:

- *USTs: It is not known if the UST located under the Boiler room or the UST near the loading dock along the southern boundary have been appropriately decommissioned or if localised impacts to soil and groundwater have occurred.*
- *Bulk storage of chemicals: Various types and quantities have been used and stored at the site in various areas (e.g. the tank farm area) at some time or another. It is not known if this practise has caused localised impacts.*
- *Boiler room: It is likely that the contents of the old UST located under the floor of the Boiler room was the fuel source for the boiler. Other types of chemicals may also have been used in the past in this area and may have caused localised impacts.*
- *Pharmaceutical products: Historical manufacturing in general is likely to have impacted soils beneath manufacturing areas.*
- *Vehicle parking: Historical parking along the southern boundary may have subjected localised surface soils to oil and fuel leaks.*
- *11kV Transformer – It is not known if transformer oils have leaked into the surrounding surface soils.*
- *Effluent Treatment Plant (ETP): Effluent treatment operations would have produced effluent sludge as a waste stream. It is not known how this material was historically managed or if localised impacts have occurred around treatment tanks and the network of sewerage pipes across the site.*
- *Groundwater impacts: Previous sampling (Dames and Moore, July 2000) has shown that the groundwater onsite is impacted by petroleum hydrocarbons. It is not known if impacts have increased or decreased since that time.*

Subject to investigating the identified issues listed above, and if required, managing contamination and obtaining regulatory consent in consideration of State Environmental Planning Policy 55 – Remediation of Land 1998 (SEPP55), the site could be made suitable for other uses including residential land use.

We recommend that the contamination issues identified in this Phase 1 should be investigated as part of a Phase 2 Contamination Investigation to assess whether the identified issues have caused impacts to soils and groundwater such that health risks to onsite and offsite receptors can be quantified…"

3

Environmental Setting

3.1 Regional Soil and Geology

A review of the geological map[3] shows the site is located on Quaternary period sediments consisting of silty to peaty quartz sand, silt and clay with ferruginous and humic cementation in places and common shell layers. The sites paleo-environment is documented as stream alluvial and estuarine sediment.

The soil landscape map[4] shows that the underlying soils across the site are characterised as the Disturbed Terrain soil landscape group. This type of soil group has the following traits:

- Landscape – level plain to hummocky terrain, extensively disturbed by human activity, including complete disturbance, removal or burial of soil. Local relief <10 m, slopes <30%. Landfill includes soil, rock, building and waste materials. Original vegetation completely cleared, replaced with turf or grassland.
- Soils – turfed fill areas commonly capped with up to 40 cm of sandy loam or up to 60 cm of compacted clay over fill or waste materials.
- Limitations – dependent on nature of fill material. Mass movement hazard, unconsolidated low wet strength materials, impermeable soil, poor drainage, localised very low fertility and toxic materials.

3.2 Topography and Drainage

The site is situated between approximately 6.5 and 4.5m above sea level (AHD – Australian Height Datum) and comprises a relatively flat concrete or asphalt sealed surface. Much of the site is covered by the main building. Any surface water presumably drains from the roof guttering and the ground surface directly into stormwater inlet pits and into to the adjoining stormwater channel known as Clay Cliff Creek.

3.3 Hydrogeology

The site is located within the Parramatta Georges River Hydrogeological Landscape[5] and characterised by the following traits:

- Aquifer Type: Unconfined in unconsolidated alluvial sediments. Vertical and lateral flow components. Local perching above clay-rich layers (seasonal).
- Depth to Watertable: Shallow to intermediate (range 0-8m).
- Hydraulic Conductivity: Moderate to high (range: 10^{-2}m to 10m/day).
- Salinity: Brackish to saline (range: 1.6 to >4.8 dS/m).

There 1 registered groundwater bore within 500m of the site, located to the north on Hassall Street, refer to table below.

[3] Sydney 1:100,000 Geological Series Sheet 9130 Edition 1 1983 Geological Survey of NSW, Department of Mineral Resources.
[4] www.environment.nsw.gov.au/eSpade2WebApp.
[5] www.environment.nsw.gov.au/eSpade2WebApp.

Table 3-1 Registered Groundwater Bores Information

Bore ID	Date	Distance/Direction	Depth and SWL[1]	Purpose
GW024667	1966	Approx. 100m/N	4.5m / 2.4m	Domestic

(1) Standing Water Level

3.4 Acid Sulfate Soils

The site is situated on the boundary of land classified as Class 4 and Class 5 works in accordance with the Parramatta LEP 2011[6]. The north-eastern half is situated on Class 4 land while the south-western half is situated on Class 5 land.

Development consent is required for Class 4 works for carrying out works that are more than 2 metres below the natural ground surface, and for works by which the water table is likely to be lowered more than 2 metres below the natural ground surface. The proposed development would trigger this requirement given the proposed two basement levels.

Development consent is required for Class 5 works for carrying out works that are within 500m of adjacent Class 1, 2, 3 or 4 land that is below 5m Australian Height Datum (AHD) by which the water table is likely to be lowered below 1m Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

3.5 Heritage

The site is listed under the Parramatta Archaeological Management Unit (AMU) (#2932) and classified as having *"…moderate archaeological research potential."* The site was also classified as to have *"…moderate potential to contain intact subsurface deposits."* This information was obtained by accessing the NSW Office of Environment and Heritage web page July 2015 (http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2242932).

3.6 Integrity Evaluation of Information

Information for section 2.0 and Section 3.0 above was collected from a number of sources for the purposes of this Phase 2 Investigation. Government information sources are considered accurate and without bias. Sullivan-ES were only provided the executive summary of the Dames and Moore 2000 investigation and therefore were not able to provide an appraisal on adequacy. However the subsequent Preliminary Site Investigation (Sullivan-ES 2015) was carried out in accordance with the NSW OEH 2011 Contaminated Land Reporting Guidelines in force at the time and therefore provides a reasonably clear indication of the historical land use and contamination status of the site at the time of the work, which is sufficient for the purposes of this investigation. Sullivan-ES therefore consider the background information to be of an acceptable standard for evaluating contamination risk in accordance with the requirements under SEPP 55 and the SEPP 55 Guidelines

[6] https://www.planningportal.nsw.gov.au/spatialviewer/

4

Assessment Methodology

4.1 Data Quality Objectives

The Data Quality Objectives (DQOs) for the assessment are based on guidance presented in the ASC NEPM 2013 – Schedule B2. The DQOs establish a framework for contamination investigations, which incorporates a seven-step process that defines the problem at the site and then optimises the design of the investigation.

Step 1 - State the Problem

The problems under investigation were the unknown contamination status of the:

- Soils around the suspected USTs onsite
- Soils around the former ETP onsite
- Soils in areas where bulk storage of chemicals occurred
- Liquids contained within the EFP onsite
- Soils where pharmaceutical products were manufactured/stored
- Potential filling beneath building footprints and across the site
- Groundwater across the site
- Unknown potential exposure pathways for human and environmental receptors for proposed development of the site.
- Unknown acid generating potential by ASS/PASS on the site that will be disturbed during bulk earthworks.

Step 2 - Identify the Decision

The principal study questions that arise from Step 1 were:

- Has the presence and extent of contamination in the various environmental media been defined onsite?
- Are or will human and environmental receptors be exposed to contamination and is the risk posed by contamination unacceptable requiring intervention?
- Is the site suitable, in the context of land contamination, for the proposed high density residential land use scenario?

Step 3 - Identify Inputs to the Decision

Primary inputs to making a decision are:

- Available and reliable environmental data obtained from historical reports.
- New data and observations made during field works.
- Results of chemical analyses of samples collected.
- Statistical data of new and existing data sets.
- Assessment of the suitability of new data for the purposes of environmental assessment through application of data quality indicators (DQIs).
- Assessment of the data in the context of the adopted investigation criteria, refer to Section 5.
- Develop/revise the Conceptual Site Model.
- Characterisation of risk.

Assessment Methodology

Step 4 - Define the Study Boundaries

Spatial boundaries were limited to:

- Lateral – Defined by the site boundary as shown on Figures 2 and 3. The southwest site portion across Clay Cliff Creek channel was not subject to intrusive sampling given that this area of the site has never been developed or used for historical activities or any purpose since the site was first developed some 70 years ago. This area was subject to investigation in the PSI (2015).
- Vertical – Collection of new data will be confined to the surface and fill layers onsite in soil to a maximum depth dictated by drilling to natural soils at bore locations.
- Onsite groundwater data will be limited to a maximum depth of approximately 4.0m from the existing ground level. Deeper groundwater and/or aquifers below this depth were not investigated.

Previous, existing and anecdotal data would be used to supplement the study boundaries as required.

Temporal boundaries are defined within the limitations of this report.

Step 5 - Develop a Decision Rule

The decision rule for this assessment will be:

- If the concentration of any analysed contaminant in collected samples exceed adopted investigation criteria for the land use; then characterise and assess risk to relevant receptors.
- If the risk posed by contaminants in shown to be unacceptable for the land use, then make recommendations to ameliorate contaminants (remediation) such that the risk is made acceptable and the site can be made suitable.

A decision on the acceptance of analytical data will be made on the basis of the Data Quality Indicators (DQI) that are compliant with PARCC parameters PARCC parameters for field-based activities as follows.

Field-Based Activities

Precision: A quantitative measure of the variability (or reproducibility) of data. Intra and Inter laboratory duplicates were collected at a rate of one duplicate per 10 primary samples collected (i.e. 10% or an equivalent of 5% each). The relative percent difference (RPD) of the detected concentrations in the parent and duplicate was calculated with the following acceptable limits.

- No RPD limit <10 times LOR.
- 50% RPD limit 10-20 times LOR.
- 30% RPD limit >20 times LOR.

Accuracy: A quantitative measure of the closeness of reported data to the “true” value, applying the following acceptable limits.

- Rinsate and/or field blanks <LOR.

Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on site, with the following conditions met.

- Appropriate sampling methods adopted, and media sampled, and chemicals analysed (Step 7).

Completeness: A measure of the amount of useable data from a data collection activity, with the following conditions met.

- Appropriate Standard Operating Procedures (SOPs), and experienced staff (> 2yrs experienced), and documentation collected (logs, COC, instrument calibration, water monitoring readings). Refer Step 7.

Comparability: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event, with the following conditions met.

- Appropriate Standard Operating Procedures (SOPs), and experienced staff (> 2yrs experienced). Refer Step 7.
- Appropriate sample handling and preservation, and field conditions (Step 7).

Analytical Laboratory-Based Activities

Analytical laboratories operating under a NATA accreditation were assessed based on their internal and accreditation performance. As standard, a suitable internal QA/QC program is employed to include analysis of method blanks, matrix spikes, surrogate spikes, laboratory control samples and laboratory duplicates. The laboratory will report on whether the QA/QC analysis meets the laboratory's adopted internal data quality objectives.

Step 6 - Specify Limits on Decision Errors

Specific limits for this project are in accordance with the appropriate guidance made or endorsed by state and national regulations, appropriate indicators of data quality, and industry standard procedures for field sampling and handling.

This step also examines the certainty of conclusive statements based on the available new site data collected. This includes the following points to quantify tolerable limits:

- A decision can be made based on a certainty assumption of 95% confidence in any given data set. A limit on the decision error will be 5% that a conclusive statement may be a false positive or false negative.

In order for decision rules to be sound, they were designed to minimise decision errors. The risk of decision error was mitigated by:

- Ensuring fieldwork tasks were undertaken by suitably experienced field staff and sub-contractors, with reference to the DQOs presented in this report;
- Ensuring laboratory analyses were undertaken by NATA accredited laboratories; and
- Ensuring interpretation of data was undertaken by suitably experienced environmental consultants and/or outsourcing interpretation to technical experts (if warranted).

Step 7 - Optimise the Design

The sampling program designed for this investigation as described in section 4.2 was aimed at obtaining the necessary data to make the decision identified in Step 2. Subsequent sections detail the sampling program employed.

4.2 Basis to Sampling

The sampling approach was based on a combined judgemental and systematic sampling pattern with a higher degree of frequency and certainty in the achieved data set. In that respect, soil and groundwater

media were the primary media targeted to understand if soil or groundwater pose a risk to future users and if required to inform site remediation and the proposed basement/building design.

The table below presents the sampling locations and rationale. All soil and groundwater sampling locations are presented on Figures 2 and 3 (**Appendix A**).

Table 4-1 Sampling Locations and Rationale

Location ID	Rationale
Soil	
BH01 – BH04, BH11 – BH14, BH25, BH26, HA01 – HA06	Assess beneath building footprints of the warehouse areas and manufacturing and office building/site coverage.
BH05 – BH08	Assess suspected UST(s) located adjacent to loading dock
BH09 and HA08	Assess around former Effluent Treatment Plant tank / site coverage
BH10, BH10A, HA07	Assess former chemical storage area
BH15 – BH19	Assess beneath western carpark / site coverage
BH20	Assess site coverage
BH21 – BH24	Assess suspected UST(s) located in boiler room
Groundwater	
MW01 - MW03	Contamination status of groundwater at suspected UST and former ETP locations and assess groundwater status – site boundaries, upgradient and down gradient, potential offsite to onsite impacts

4.3 Field Sampling Program

Details of the field sampling program are presented below. A Sample Register of soil and groundwater samples is presented in the results tables (**Appendix B**).

Table 4-2 Soil Sampling Works Summary

Activity/Item	Details
Date of Field Activities	8 to 10 November 2021: service location and site inspection, soil and groundwater well drilling, soil sampling and groundwater well installation and development
Soil Logging and Inspection of Material	Soil classifications and descriptions are based on Australian Standard AS1726-1993 Geotechnical Site Investigations. All material exposed at each sample/inspection location was thoroughly inspected for the presence of ACM. Soil descriptions for the lithology encountered during sampling are presented in the borelogs in **Appendix C**.

Assessment Methodology

Activity/Item	Details
Soil Sampling	Soil samples were taken directly from push tube core sampler or the hand auger head using single use disposable nitrile gloves.
Groundwater Monitoring Well Installation	Groundwater monitoring bores were constructed as 50 mm uPVC wells, with a 0.4 mm aperture slotted section. Wells were installed using <2 mm washed sand filter pack and bentonite pellet seal above the slotted section to isolate the groundwater. Construction of the groundwater monitoring wells included: • Bore drilling extended to a depth that intercepted the targeted groundwater system using either solid stem or hollow stem auger rods. • A length of screen was installed across the intercepted groundwater level. • The gravel pack generally extended 0.5 m above the top of the screened interval. • The bentonite seal extended at least 0.5 m above the gravel pack layer and was hydrated. • the bore annulus above the bentonite seal was sealed to the surface with a bentonite/concrete/grout slurry. • Groundwater wells were finished with a flush mounted gatic cover. The groundwater well construction logs are presented in **Appendix C.** Each newly installed monitoring well was developed, immediately after installation, to ensure removal of fine particles from the screened interval, to stabilise the annular filter and to maximise the hydraulic efficiency of the monitoring well. A dedicated submersible pump or bailer was used to develop the wells using a surging action. Well development continued until the turbidity of the water improved or the well became dry. The wells were allowed to stabilise for at least 2 days after development, prior to groundwater sampling.
Decontamination Procedures	Sampling tools were decontaminated between sampling locations with potable water and a solution of Liquinox. Single use disposable nitrile gloves were worn at all times and changed between each soil sample.
Sample Preservation	Samples were placed in laboratory-supplied jars containing appropriate preservatives or suitable asbestos sampling bags. Samples were stored on ice in a cooler while on-site and in transit to the laboratory.
Disposal of Soil Cuttings and Materials	Soil cuttings/spoil were used to backfill boreholes once samples had been collected. Surplus soils from groundwater bores were placed in garden beds/unsealed areas adjacent to the bore. Single use materials used during sampling were placed into garbage bags and disposed off-site. No soil cuttings/spoil were disposed offsite as part of this Phase 2 investigation.

Assessment Methodology

Table 4-3 Groundwater Sampling Works Summary

Activity/Item	Details
Date of Field Activities	12 November 2021
Water Level Gauging	Water level gauging was undertaken prior to purging/sampling of each well. The gauging point was a small notch or north point on the casing to ensure consistent measurements over time. The groundwater levels in all wells onsite were measured within a 2hr period on the same day to enable a consistent comparison of water levels for the determination of hydraulic gradients and flow directions. The following measurements were taken: • Thickness of non-aqueous phase liquids (NAPL) (if present); • Static water level relative to the top of casing; and • Total depth of well. Measurements were undertaken using an electronic interface probe, which was decontaminated between wells. The measurements were recorded on the groundwater field data sheets **Appendix E**.
Field Screening – Water Parameters	The water parameters and a physical description of the samples were recorded on the field data sheets (**Appendix E**) including: • Colour, turbidity, odour, sheen/films, thickness of phase separated liquids/non-aqueous phase liquids (NAPL), if any. The water parameters were taken in the field at the time samples were collected these included: • pH • electrical conductivity (EC) • temperature (Temp.) • dissolved oxygen (DO) • redox potential (Redox).
Well Purging and Sampling	Purging of monitoring wells was undertaken using a submersible 12V pump. Purging was continued until stable water parameters were achieved or until the bore became dry. A physical description of the sample was recorded on the field data sheet (**Appendix E**). Greater than 3 bore volumes are purged from MW02 and MW03 with the submersible 12V pump however MW01 purged dry after 10 litres. The wells were allowed to recharge back to approximately 80% of the initial measured SWL then samples were collected with disposable biodegradable bailers. Details of purging and sampling methods are documented on field sheets. All wells were sampled as soon as practicable following well purging. Groundwater samples were transferred into the appropriate sample containers for organic and inorganic compounds. Sample bottles were filled in order of analyte sensitivity as follows; volatile compounds, semi-volatile compounds then organic compounds. Groundwater well sampling order approach was generally from least to

Assessment Methodology

Activity/Item	Details
	most contaminated based on information collected on site history and observations made during soil sampling. All samples collected for dissolved metals analysis were field filtered with a 0.45µm filter before being placed into an appropriately preserved sample container. Once filled, all sample containers were tightly capped, then placed into a secure, ice-chilled chest.
Decontamination Procedures	Re-usable equipment, such as the water level meter and water quality meter sensors, were decontaminated before and after each use. The water level meter was rinsed in a solution of Liquinox, and then rinsed in potable water. The water quality meter sensors were rinsed in potable water, and then rinsed in a sample of water to be measured, prior to measuring water quality parameters. Some materials and equipment used for groundwater sampling were single-use and/ or dedicated to individual wells.
Sample Preservation	Samples were placed in laboratory-supplied bottles containing appropriate preservatives. Samples were stored on ice in a cooler while on-site and in transit to the laboratory. Samples collected for metals analysis were filtered and put into preserved laboratory supplied bottles.
Disposal of Groundwater and Materials	Groundwater removed during the purging process was stored in buckets and was either returned back to the monitoring well of origin after samples were collected or emptied onto the unsealed ground surface proximal to the well. Single use materials used during sampling were placed into garbage bags and disposed off-site.
Groundwater Levels	All groundwater wells were surveyed to establish site groundwater level and flow gradients. The top of casing (TOC) level was measured relative to the nearest registered benchmark by a registered surveyor. Site groundwater levels and inferred flow direction are presented on Figure 4 in **Appendix A**.

4.3.1 Sample Analyses

Samples were analysed in accordance with the table below.

Table 4-4 Sample Analysis Schedule

	TRH/TPH BTEXN	PAHs	Metals	Asbestos ID in 500g soil	Asbestos ID in Bulk	OC/OP Pesticides & PCBs	Speciated Phenols	VOCs	Full 8270 SVOC scan	ASS/PASS Suite	PFAS Compounds
Primary Soil Samples	46	46	46	7	2	8	15	9	-	6	-
QA/QC – Intra-lab field duplicates	5	5	5	-	-	-	-	-	-	-	-
QA/QC – Trip Blank/Trip Spike	1	-	-	-	-	-	-	-	-	-	-
Primary Water Samples	5	5	5	-	-	-	-	5	5	-	5
QA/QC – Intra-lab field duplicates	1	1	1	-	-	-	-	-	-	-	-
QA/QC – Trip Blank/Trip Spike	1	-	-	-	-	-	-	-	-	-	-
Total all samples	**59**	**57**	**57**	**7**	**2**	**8**	**15**	**14**	**5**	**6**	**5**

Table notes: Total Petroleum/Recoverable Hydrocarbons (TPH/TRH), Benzene, Toluene, Ethylbenzene, Total Xylenes and Naphthalene (BTEXN), Polycyclic Aromatic Hydrocarbons (PAHs), Metals (As, Cd, Cr (total), Cu, Hg, Ni, Pb, Zn), Organochlorine Pesticides (OCPs), and Polychlorinated biphenyls (PCBs), Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs) and Per- and Polyfluoroalkyl Substances (PFAS).

4.4 Quality Assurance and Quality Control

Quality Assurance and Quality Control (QA/QC) was governed on the basis of the Data Quality Indicators (DQI) using PARCC parameters as listed in the DQOs (Step 5) and reproduced as follows:

- Precision: A quantitative measure of the variability (or reproducibility) of data.
- Accuracy: A quantitative measure of the closeness of reported data to the “true” value.
- Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on site.
- Completeness: A measure of the amount of useable data from a data collection activity.
- Comparability: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.

The Investigation was completed following standard operating procedures for conducting site contamination investigations. Standards followed included:

- General field documentation
- Health and safety
- Use of Personal Protective Equipment (PPE)
- Representative sample collection and labelling
- Equipment calibration
- Chain of Custody documentation for analytical samples

- Decontamination
- Collection of quality control samples (that may include: intra laboratory, inter laboratory, rinsates, blanks, spikes).

The data validation adopted for this assessment was based on the following guidance documents:

- Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM 2013).
- Australian Standard 4482.1 Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds, 2005.
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 540-R-10-011, dated January 2010).
- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 540/R-99/008, dated June 2008).

The data validation process involves the checking of analytical procedure compliance and the assessment of the accuracy and precision of analytical data from a range of quality control measurements generated from both field sampling and analytical programs. Specific elements that have been checked and assessed for this project include:

- preservation and storage of samples upon collection and during transport to the laboratory,
- holding times
- use of appropriate analytical procedures and required LOR
- frequency of conducting quality control measurements
- laboratory blanks & laboratory duplicates
- field duplicates
- matrix spike/matrix spike duplicates (MS/MSDs)
- surrogates (or System Monitoring Compounds)
- the occurrence of apparently unusual or anomalous results.

5

Assessment Criteria

5.1 Soil Investigation Levels

Our understanding is that the proposed site development is likely to contain high-rise residential apartments blocks and associated underlying basement carparking with some landscaped areas across ground surfaces as shown in the design drawings (**Appendix F**). The Clay Cliff Creek stormwater channel is anticipated to form the southern boundary of the proposed development while the vacant southwest portion of the site across Clay Cliff Creek will not form part of the proposed development and will remain as vegetated englobo land.

Basement excavations will extend effectively to the site boundaries with a limited deep soil zone setback off the site/development boundary as shown on the design drawings. As such, minimal original soils will remain following site development and protection of terrestrial ecological receptors is not warranted under this scenario.

Our adopted assessment criteria reflects the sensitive nature of human and environmental receptors as occupants and inhabitants of residential land with minimal opportunity for soil access.

Given the sites uses noted above where the site will likely comprise significant site coverage by basements/buildings and pavement hardstand, there will be minimal terrestrial ecological receptors likely to be present on the site. Therefore, soil data was not compared to the ecological criteria. The following criteria were adopted for assessing soils as listed in Table 1 (**Appendix B**):

- HIL B – Residential with minimal opportunity for soil access.
- HSL D – Commercial/industrial including premises such as shops, offices, factories and industrial sites (in accordance with Table 1A(3), table note (1) of Schedule B1 of ASC NEPM 2013).
- Management Limits – Residential.
- Asbestos HSLs B – Residential with minimal opportunity for soil access.
- Soil Aesthetics.
- USEPA Regional Screening Levels (RSLs) – Residential Soil (in the absence of either Australian Federal or State guidance on health screening values).

The National Environment Protection (Assessment of Site Contamination) Measure 2013 (ASC NEPM 2013) recommends using statistical analysis to assess the laboratory data for soil samples against the health-based criteria to inform remediation and or further investigation, if required. The data set will be as assessed against the following criteria:

- No single value should exceed 250% of the relevant criteria (i.e. contamination hotspot);
- The 95% Upper Confidence Limit (UCL) value of the arithmetic mean concentration of each contaminant should be less than the criteria; and
- The standard deviation (SD) of the results should be less than 50% of the relevant criteria.

Statistical calculations are not required, if all results are below the criteria. The criteria adopted for the assessment are presented in Table 1 (**Appendix B**).

5.1.1 Notes on Adopted Soil Criteria

ASC NEPM 2013 Health-based Investigation Levels (HILs)

The National Environment Protection (Assessment of Site Contamination) Measure 2013 (ASC NEPM 2013) Health-based Investigation Levels (HILs) in Schedule B1 provide a framework that is applicable

for assessing human health risk via all relevant pathways of exposure and covers a broad range of metals and organic substances. Different levels are provided for a variety of exposure settings based on the land use scenario at a particular site. The HIL land use criteria adopted for this site were:

- **HIL B**: Residential with minimal opportunity for soil access: includes dwellings with fully or permanently paved yard space such as high-rise buildings and apartments.

ASC NEPM 2013 Health Screening Levels

The ASC NEPM 2013 HILs in Schedule B1 do not provide criteria for petroleum hydrocarbon chemicals, therefore the Health Screening Levels (HSLs) were developed and form part of the ASC NEPM 2013 in Schedule B1. The ASC NEPM 2013 – HSLs are designed to be protective of human health and are applicable to assessing human health risk via the inhalation pathway. The HSLs used in this report have not been adjusted for site specific parameters such as moisture content for this phase of work. HSLs are available for various depth profiles and predominant lithology (sand, silt and clay).

The HSL land use criteria adopted for the Assessment was:

- **HSL D:** Commercial/industrial including premises such as shops, offices, factories and industrial sites.

Commercial/industrial levels have been used given that the ground floor residencies will overlay basement levels, therefore in accordance with Table 1A(3), table note (1) of Schedule B1 of ASC NEPM 2013) commercial/industrial HSL D criteria can be adopted.

HSLs relevant to soils from the surface down to 4m below ground level with a sandy consistency were adopted.

HSLs for direct contact were also adopted from Table 4 of CRC CARE Technical Report No. 10 by Friebel and Nadebaum (2011).

ASC NEPM 2013 Asbestos Health Screening Levels

The ASC NEPM 2013 asbestos HSLs have been developed for managing land use impacts associated with asbestos and are applicable for assessing risk to human health. The guideline has been derived from the Western Australian Department of Health (WA DoH 2021) guidance. The guidance covers bonded Asbestos Containing Material (bonded ACM), Fibrous Asbestos (FA) and Asbestos Fines (AF).

Visual identification and subsequent laboratory analysis were used to assess for potential asbestos containing materials (ACMs) such as fibro sheeting. The ASC NEPM 2013 Asbestos HSLs include a qualitative approach such that no visible asbestos should be at the soil surface for all forms of asbestos. This qualitative approach was adopted for this investigation. Note, the quantitative criteria (i.e. percentage of asbestos materials) were not used in this Phase 2 given that the analysis was to determine the presence of asbestos only and not to quantify asbestos materials in soils.

ASC NEPM 2013 Management Limits

The ASC NEPM 2013 Management Limits in Schedule B1 are relevant for TRH contaminants only. The Management Limits are specific for soil types (coarse and fine) and land uses. If adopted on a site, Management Limits are intended to avoid or minimise the potential effects of the following and require consideration of site-specific factors to determine the maximum depth to which the limits should apply:

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

ASC NEPM 2013 Aesthetic Considerations

In accordance with the ASC NEPM 2013 in Schedule B1 the aesthetic state of sites is required to be taken into account. Aesthetic issues generally relate to the presence of materials with a negligible risk or non-hazardous inert foreign material in soil or fill resulting from human activity. Sites that have been assessed as being acceptable from a human health and environmental perspective may still contain such foreign anthropogenic material. An assessment of the site aesthetics requires consideration of the natural state of soil on any given site, and a comparison between it and the soil encountered during investigations.

In particular, soils on site should not exhibit discolouration (staining), a malodorous nature (odours), abnormal consistency (rubble and trash) or show visible evidence of industrial wastes.

USEPA Regional Screening Levels (RSLs) – Residential Soil

Regional Screening Levels (RSLs) for residential soils from the United States Environmental Protection Authority (US EPA) have been adopted as interim trigger values where particular organic analytes have been detected where relevant NSW or nationally recognised criteria are absent.

5.2 Groundwater Investigation Levels

The relevant adopted groundwater investigation levels (GILs) were sourced from the ASC NEPM 2013 and supporting document, the Australia and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018 Guidelines). The section below provides information on the adopted GILs. Note the following conditions for using the adopted GILs:

- The values are selected to protect freshwater ecosystems as:
    - the nearest receiving environment is expected to be Clay Cliff Creek stormwater channel immediately to the south of the site or further east of the site.
    - Clay Cliff Creek ultimately discharges into the estuarine ecosystem of the Parramatta River approximately 380 m north of the site.
- Human health need only be protected from volatile hydrocarbons through vapour intrusion given that:
    - The site is connected and will remain connected to supplied towns water (drinking water supply) and no known potable groundwater resource is present onsite nor proximal to the site.
- Groundwater HSLs for assessing vapour intrusion for groundwater between 2-4m below the ground surface in material exhibiting a sandy consistency have been adopted.
- A limitation to groundwater HSLs is that they apply to groundwater deeper than 2.0m below the ground surface, which does not apply to the site (refer Section 6.4.1 – SWLs in all groundwater wells measured at <2.0m). We have adopted the groundwater HSLs in the absence of any health screening criteria for groundwater in this scenario. The more conservative screening values for HSL A and HSL B land uses have been applied regardless of the existence of a future basement

beneath residential living areas on ground floor levels (refer Table 1A(4), table note (1) of Schedule B1 of ASC NEPM 2013).
- Solubility limits were used as default screening values when the chemical of concern exhibits Not-Limiting characteristics, indicating potential partitioning of dissolved chemicals into a free phase and forming Non-Aqueous Phase Liquid (NAPL).

Data has not been assessed against the Drinking Water Guidelines as groundwater extraction for domestic use is not currently being undertaken onsite or in the local area and is considered not likely in the future.

5.2.1 Notes on Adopted Groundwater levels

ASC NEPM 2013 HSL

The ASC NEPM 2013 HSLs have been derived for groundwater in relation to the volatile petroleum hydrocarbons. The approach taken in the development of the HSLs has sought to set a reasonable maximum exposure that corresponds to common scenarios encountered with petroleum-based contamination. The HSLs consider the potential risk to human health via the inhalation pathway only.

ANZG 2018

The Australia and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018 Guidelines) provide Default Guideline Values (DGVs) for organic and inorganic chemicals for the protection of freshwater and marine aquatic ecosystems. For the purposes of this Investigation, the receiving environment of water discharge (both groundwater and surface water) is likely to be either Clay Cliff Creek stormwater channel immediately south of the site which ultimately drains into the Parramatta River or upper reaches of the Parramatta River 380m north of the site which is considered to be tidal and brackish, therefore GILs for the protection of marine water environments were adopted.

PFAS NEMP version 2.0

Human health criteria for drinking water has not been adopted for this project. There is no reasonable direct human contact to groundwater onsite, groundwater is unlikely to be used for drinking purposes onsite or offsite in the general vicinity as there are no registered bores for that purpose. The nearest recreational contact point is likely to be more than 9km north of the site in Paramatta River, so as a conservative measure, recreational contact screening values have been adopted.

Ecological criteria protective of freshwater organisms is reported in the PFAS NEMP version 2.0 (HEPA, Jan 2020). It is noted that the PFAS NEMP version 2.0 includes investigation levels for the protection of aquatic ecosystems based on the following levels of protection:

- 99% species protection – for high conservation value ecosystems;
- 95% species protection – for slightly to moderately disturbed ecosystems; and
- 80% - 90% species protection – for highly disturbed ecosystems.

We consider the 90% species protection values for freshwater ecosystems are relevant to the site and immediately offsite downstream areas because receiving waters of Clay Cliff Creek would be considered a highly disturbed ecosystem.

Given that PFAS bioconcentrate, bioaccumulate, and biomagnify in aquatic food chains, the use of the 99% species protection value is recommended in some guidance. While the PFAS NEMP version 2.0 does not specify which criteria (95% or 99% species protection levels) should be used, it notes that the guidelines do not account for the effects of biomagnification in air-breathing animals or in animals which prey on aquatic organisms; and also notes that the Water Quality Guidelines (ANZG 2018) advise that the 99% species protection level is generally adopted for bioaccumulate or biomagnifying chemicals. Use of the 99% species protection value for PFOS (0.00023 µg/L) is problematic as the value is close to the laboratory analytical limit of detection and presents significant challenges for sampling and analysis. The PFAS NEMP version 2.0 also states that the 99th percentile species protection level may be below the ambient background concentration.

5.3 Potential Acid Sulfate Soils (PASS) Action Criteria

The relevant PASS/ASS action criteria were adopted from Table 4.4 of the ASSMAC 1998: - Acid Sulfate Soils Assessment Guidelines, NSW Acid Sulfate Soils Management Advisory Committee August 1998.

Action criteria selection was based on the following assumed ground conditions/development activities:

- Soil texture was course – sands and loamy sands.
- More than 1,000 tonnes of soils is likely to be disturbed as part of the redevelopment of the site.

6 Results and Discussion

6.1 Field Inspection and Observations

The following observations were made while conducting the Investigation:

- The soil profile was variable across the site, consisting of hardstand (mainly concrete slabs) underlain by sandy gravelly clay fill with thin lenses of ashy fill material directly underneath concrete slabs of the main building. Underlying the fill were natural silty sands and clayey sand which graded to medium grained sands. These observations are in line with the alluvial and estuarine deposits expected of the Quaternary period sediments proximal to the former Clay Cliff Creek alignment and the Parramatta River. Soft shallow weathered shale was unexpectedly observed at location BH06 (MW01).
- Double thickness or two concrete slabs (i.e. >300mm thick) were observed associated with the former chemical storage area (BH10 & BH10A) and a large portion of the former chemical manufacturing and office area(s) at locations HA02 through to HA06. Customary thickness (0.1–0.2 m thick) concrete slabs were observed at remaining locations.
- Refusal on ballast gravels occurred at sample locations HA02 and HA03 directly under the concrete slab. Underlying fill material was not sampled or assessed at these locations.
- Fill ranging from 0.2 m to 0.8 m thick of varying consistency was observed across the majority of soil bores onsite.
    - Ash containing fill materials were observed predominantly directly beneath the concrete slabs in the central portion of the site corresponding to former warehousing and manufacturing and office areas, refer to Figure 5 (**Appendix A**) for expected lateral extent. Deeper ash containing fill was observed at localised areas in the rear car park at locations BH15 and BH18 (Figure 6).
    - Large boulder sized ballast gravels and sand with some ash fill was observed adjacent to the Clay Cliff Creek stormwater channel alignment. The ballast gravel fill was presumably use as a form of stability and hardness over soft unstable sediment soils to allow building construction. Ballast encountered at HA02 and HA03 is representative of this material.
    - Crushed sandstone fill was observed in the carpark area in the western portion of the site.
- The presence or location of the suspected UST adjacent to the loading dock could not be confirmed during the field investigation works.
- While bore drilling BH23 inside the Boiler Room a concrete/hard layer was encountered at approximately 0.3m depth suspected to be the concrete anchor of the UST under the floor. BH23 was moved approximately 1.0m to the northeast of the original location.
- Ashy odours were observed associated with ash fill materials. Ash samples submitted for chemical analysis generally reported no exceedances of contaminants. Given the similar age and time of construction for the majority of the site we surmise similar fill and natural materials would exists under the existing offices and storage area which were not accessible and hence not sampled.
- Anthropogenic wastes; glass, plastic, ceramic tiles etc., were also observed within the ash fill layers at BH02, BH09, BH10A and HA07.
- No visual or olfactory evidence (hydrocarbon odours or oily sheens) was observed at the surface or within boreholes around the locations of the suspected USTs at BH05 to BH08 and BH21 to BH24, nor the effluent treatment tank (HA08 & BH09) or the former chemical storage area (BH10, BH10A & HA07).

6.2 Soil Results

Soil analytical results are presented in Table 1 (**Appendix B**) and in laboratory reports provided in **Appendix G**. The soil results show the following:

- **Carcinogenic PAH** was detected in gravelly clay fill at HA04 (0.4-0.5m blg) at 7.5 mg/kg, above the adopted health-based criterion (4 mg/kg). The Carcinogenic PAH concentration at HA04 is not considered a contamination hotspot.

The carcinogenic PAH impacted soils at HA04 appears to be associated with the gravelly sand and clay fill mixture observed between 0.4 m bgl to 0.7 m bgl. Similar fill materials were also observed in surrounding borehole location HA03 and HA05. The source of carcinogenic PAH impact at HA04 could not be directly determined but likely linked to poor quality historically imported fill. The horizontal extent of carcinogenic PAH impact has been estimated based on where impacted was not observed in surrounding boreholes shown in Figure 5 (**Appendix A**)

- **Carcinogenic PAH** was detected in sandy clay soils at BH06 (2.0-2.2m blg) at 8.60 mg/kg, above the adopted health-based criterion (4 mg/kg).

The result at BH06 is considered an anomaly and not representative of the soils at this depth. Typically PAHs are associated with fill soils, insoluble, immobile by adhering strongly to soil particles in profile and generally contaminant concentrations decreases with depth. Another sample was collected from BH06 at 0.5-0.7 m bgl at the interface between the fill and natural which recorded a carcinogenic PAH result of 1.6 mg/kg. In this instance the highest concentration was observed 1.5m deeper in natural sandy soil. While in the same order of magnitude it doesn't reflect expected contaminant behaviour. It's considered this exceedance was caused by cross contamination during drilling/sampling (e.g. borehole collapse) and the exceedance generally representative of the gravelly clay fill soils above.

- **Bonded asbestos** was detected at the following locations
    - BH13 in sandy clay mixture (0.3-0.4m bgl) - Amosite & Chrysotile Asbestos
    - BH14 as a fragment of bonded sheeting at 0.6m bgl - Amosite & Chrysotile Asbestos
    - BH25 as a fragment of bonded sheeting at 0.4m bgl - Amosite & Chrysotile Asbestos
    - HA01 in the gravelly sand fill (0.3-0.4m bgl) - Amosite & Chrysotile Asbestos

The ACM is in bonded form present in the fill soils at the above locations characterised as a mixture of coarse gravels and sandy clay fill to a depth of approximately 0.5m. All samples confirmed to contain asbestos had both Amosite and Chrysotile asbestos types and looked visually similar suggesting the filling at these locations occurred at the same time. The horizontal extent of ACM impact has been estimated based on where ACM was not observed in surrounding boreholes shown in Figure 5 (**Appendix A**).

All other results for Metals, TRH, BTEX, PAHs, VOCs, SVOCs, Organochlorine Pesticides and PCBs were reported well below the adopted soil criteria or below the LOR.

6.2.1 Comparisons to US EPA Regional Screening Levels

Detectable organic contaminants were compared to USEPA Regional Screening Levels for residential land use, in the absence of any Australian national or state endorsed health screening levels. The soil results did not report concentrations above the adopted USEPA RSLs, refer to the table below.

Results and Discussion

Table 6-1 USEPA Regional Screening Levels Summary Results

Contaminant Detections compared to USEPA RSLs		n-propyl benzene	1,2,4-trimethylbenzene	Disulfoton	Ethion	Pentachloroethane
Sample ID	Depth	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH06_2.0-2.2	2.0-2.2	<0.1	<0.1	**0.8**	**0.4**	<0.5
HA05_0.5-0.7	0.5-0.7	<0.1	<0.1	<0.5	<0.2	**6.3**
HA07_0.6-0.7	0.6-0.7	**0.2**	**0.1**	<0.5	<0.2	<0.5
HA08_1.4-1.5	1.4-1.5	<0.1	<0.1	<0.5	<0.2	**6.1**
USEPA RSL - Residential		**3,800**	**24**	**2.5**	**32**	**7.7**

Common uses for the chemicals detected above are presented below:

- N-propylbenzene is used as a solvent and an intermediate in organic synthesis[7].
- 1,2,4-trimethylbenzene and n-propylbenzene are used in fuels and fuel additives
- Pentachloroethane[8] is used as a solvent for oil and grease, in metal cleaning, and has a role as a non-polar solvent.
- Disulfoton[9] and Ethion[10] are both manufactured phosphorous based pesticides.

With the exception of chemical detections at BH06, historical site activities in the areas where these detections occurred are associated with pharmaceutical manufacturing (HA05 – former laboratory), the effluent treatment plant (ETP) and former chemical store (HA07 and HA08). While these contaminants are not above the adopted RSLs to screen for health risks, they are not naturally occurring compounds in the environment and their presence suggests some impact has potentially occurred due to historical activities onsite. It is known that a variety of chemicals were stored and used on the site in the past, which is reflective of the chemical inventory stated on Safework NSW dangerous goods/bulk chemical licenses (refer to **Section 2.2.5**). While many of the chemical depots appear to be aboveground or roof storage, spills and leaks onto ground surfaces could have occurred in the past, as well as leaks from influent pipework and pit infrastructure associated with the ETP.

In the context of the future residential development with basement carparking, 1,2,4-trimethylbenzene and n-propylbenzene are volatile and pentachloroethane is semi volatile which may present a potential health risk through vapour intrusion. At this stage it remains unclear whether the results for these compounds represents a worst-case scenario or whether a yet undetected contamination source zone may exist.

A potential source of the organo-phosphorous pesticides at BH06 is not able to be identified with respect to historical activities and particularly with consideration to the anomalous PAH results as discussed above in **Section 6.2**.

[7] Altarawneh, M.; Dlugogorski, B. Z. Reactions of HO_2 with n-propylbenzene and its phenylpropyl radicals. Combust. Flame 2015, 162 (4), 1406-1416.
[8] https://pubchem.ncbi.nlm.nih.gov/compound/Pentachloroethane
[9] https://pubchem.ncbi.nlm.nih.gov/compound/disulfoton
[10] wwwn.cdc.gov/TSP/PHS/PHS.aspx

6.3 PASS/ASS Results

Selected samples were subjected to chemical analysis for chromium reducible sulfur to quantify the sulfur and acidity parameters of the soils. The table below presents the summary analytical results, while analytical results are presented in Table 2 (**Appendix B**) and in the laboratory reports provided in **Appendix G**.

Table 6-2 PASS/ASS Summary Results

Sample ID	Depth (m bgl)	Action Criteria (coarse texture material) (>1,000 tonnes disturbed)		Liming rate
		Sulfur Trail (%S)	Acid Trail (mol H+/tonne)	
		0.03	**18**	**-**
BH01_1.5-2.0	1.5 - 2.0	<0.005	<5	<0.1
BH05_1.5-1.7	1.5 - 1.7	0.025	16	NA
BH19_1.4-1.6	1.4 - 1.6	0.017	11	NA
BH19_2.3-2.5	2.3 - 2.5	<0.005	<5	<0.1
BH20_2.5-2.7	2.5 - 2.7	<0.005	<5	<0.1
BH22_2.3-2.4	2.3 - 2.4	<0.005	<5	<0.1

The results indicate the acid trail, an indication of acid generating potential, for the majority of soils tested were less than the detection limit. The samples with non-detections were collected from 1.5-2.7 m bgl or greater depth. The acid trail action criteria at boreholes BH05 and BH19 collected from between 1.4 -1.7 m bgl did record results which are up to 89% of the action criteria which is considered significant in the context of the planned development. The preliminary assessment of PASS/ASS is based on a limited set of six (6) soil results that show minimal management of PASS/ASS would be required during soil disturbance, however, the data set is small and would require additional verification sampling prior to bulk earthworks. Verification sampling should form part of the Acid Sulfate Soil Management Plan to be prepared for the site.

6.4 Groundwater

6.4.1 Field Observations and Quality Parameters

The following observations were made while sampling groundwater:

- Groundwater yield was low at MW01 to high flowing at MW02 and MW03.
- Groundwater showed no signs of contamination by hydrocarbons (no odours or sheens observed).
- Electrical conductivity was generally potable (freshwater) given the low readings at MW02 and MW03.
- pH readings show generally neutral to slightly acidic to neutral conditions across the site.

Groundwater field parameters are summarised in Table 6-3 below. Field sheets are presented in **Appendix E**.

Table 6-3 Groundwater Field Parameters Summary

Well	SWL (mBTOC)	Bore Depth (mBTOC)	Electrical Conductivity (EC) (uS/cm)	pH	Temperature (^{0}C)	Redox (mV)	Dissolved Oxygen (mg/L)	Observations / Comments
MW01	1.45	3.93	2,001	6.98	19.5	42.3	2.48	Slightly grey, turbid, no odours or sheens
MW02	1.49	3.96	580	6.37	17.2	76.1	1.97	Brown, turbid, no odours or sheens
MW03	1.93	3.86	430	7.04	19.4	96.2	0.55	Brown slightly turbid, no odours or sheens

Table notes: Standing Water Level (SWL), metres below top of casing (mBTOC), metres below ground level (mbgl), micro Siemens per centimetre (uS/cm), milli Volts (mV), milligrams per litre (mg/L), parts per million (ppm)

6.4.2 Inferred Groundwater Flow Gradient

Groundwater wells were surveyed to Australian Height Datum (m AHD) to calculate reduced groundwater levels using the SWL values above as follows:

- MW01 – 2.92m AHD
- MW02 – 3.19m AHD
- MW03 – 3.12m AHD

Based on the measured groundwater levels, there is an inferred gentle hydraulic gradient migrating to the east in general alignment with Clay Cliff Creek as shown on Figure 4 (**Appendix A**).

Note that representative groundwater levels are indicative given only one round of groundwater levels were collected and the limited spatial coverage across the site.

6.4.3 Groundwater Results

Groundwater analytical results are presented in Table 3 (**Appendix B**) and in the laboratory reports provided in **Appendix G**.

Human Health

The groundwater results reported no exceedances of the adopted health screening levels for low and high density residential for vapour intrusion or NEMP version 2.0 (HEPA, Jan 2020) human health - recreational use for Per- and Polyfluoroalkyl (PFAS) compounds.

Ecological Health

Groundwater results reported no heavy metal exceedances of the adopted GILs.

The groundwater results did not report PFAS compounds[11] at concentrations above the adopted GILs for Ecological – Marine 90% or 95% species protection values, and PFOA was not detected onsite above the 99% species protection values. PFOS was detected in MW02 (0.0007 µg/L) and MW03 (0.027 µg/L) exceeding the draft NEMP version 2.0 marine 99% species protection value (0.00023 µg/L).

The site history suggests that the most chemically intensive activity would likely have been manufacturing of pharmaceuticals by Wyeth Pharmaceuticals during their occupation of the site. NEMP 2.0 (HEPA 2020) does not specifically list manufacturing of pharmaceuticals as an activity or a source site of PFAS, although general chemical storage and associated firefighting safety equipment is listed as a source, as well as wastewater treatment from industrial inputs. It is difficult to link these activities with PFAS contamination given the low-level concentrations in groundwater. Total concentrations of all PFAS is relatively similar between groundwater samples and water samples collected from the ETP (see below) and therefore detectable concentrations of PFAS in site groundwater is indicative of conditions in an industrial setting and broadly considered to represent ambient background concentrations.

Overall, groundwater is considered of good quality, it is not currently used onsite and is unlikely to be used in future as the site will remain connected to town mains water, as such there appears to be no apparent exposure links to onsite human or ecological receptors.

6.5 Former Effluent Treatment Plant Liquid Results

Liquid samples collected from the ETP analytical results are presented in Table 3 (**Appendix B**) and in the laboratory reports provided in **Appendix G**.

Results reported no exceedances of the adopted human health screening levels however exceedances of copper and zinc above marine 95% species protection GILs were recorded. PFAS compounds were not recorded above the adopted GILs for Ecological – Marine 90%, 95%, or the PFOA 99% species protection values. However, PFOS was detected in both ETP samples (both 0.0012 µg/L) above the draft NEMP v2 marine 99% species protection value (0.00023 µg/L). This is considered trivial however as the total PFAS concentration recorded in both samples was an order of magnitude less than the 95% species protection value for PFOS. As stated above, total PFAS concentrations in groundwater and water contained in the ETP tank are relatively similar, therefore PFAS detections are consider ambient background levels at the site.

Liquid in the ETP tank is considered an accumulation of rainwater that has become impacted by copper and zinc perhaps from residues within the tank itself. During demolition and decommissioning of the former ETP, the liquids contained in the ETP tank should be managed appropriately so that direct discharges do not pose a risk to offsite aquatic environments.

6.6 Conceptual Site Model

A Conceptual Site Model (CSM) has been developed in consideration of the current results and field observations under this Investigation only. The CSM takes into account the future use of the land as

[11] PFHxS – Perfluorohexane sulfonic acid, PFOS -Perfluorooctane sulfonic acid, PFOA – Perfluorooctanoic acid.

high-rise residential apartments and associated basement carparking with ground levels gardens and landscaped areas.

6.6.1 Contamination Sources, Media and Contaminants of Concern

Overall, the main contamination sources and contaminants of concern within the site are as follows:

- The former USTs onsite - hydrocarbons (petroleum), PAHs and Lead.
- The former ETP liquids - hydrocarbons, heavy metals, volatile and semi volatile organic compounds and potentially PFAS.
- Former ETP network of pipes and pits near the ETP tank and possibly below ground beneath site buildings - hydrocarbons, heavy metals, volatile and semi volatile organic compounds and potentially PFAS.
- Former bulk storage of chemicals area - hydrocarbons, heavy metals, volatile and semi volatile organic compounds.
- Former pharmaceutical products manufacturing and storage areas - hydrocarbons, heavy metals, volatile and semi volatile organic compounds.
- Filling materials including ash beneath building footprints and across the site - hydrocarbons, heavy metals, PAHs, PCBs, pesticides and asbestos.

6.6.2 Receptors and Exposure Pathway

Potential Receptors and Exposure pathways are considered to be as follows:

- Future construction/site worker related to site redevelopment – acute exposure
    - direct contact/ingestion of soil.
    - vapour inhalation in excavation pit from contaminated soil or groundwater.
    - direct contact/ingestion of potentially contaminated groundwater.
    - inhalation of asbestos dust.
- Future residents/space users – Chronic exposure
    - direct contact/ingestion of soil.
    - inhalation of asbestos dust.
    - vapour intrusion/inhalation in basement(s) from contaminated soil or groundwater.
    - Aesthetic impact at ground surface.
- Terrestrial organisms – Chronic exposure
    - Soil - Not assessed as part of this investigation as there will be limited terrestrial ecosystems to protect given the design of the proposed development containing basements.
    - Contact with groundwater.

6.6.3 Source-Pathway-Receptor Linkages

The following Source-Pathway-Receptor linkages are considered to exist:

- potential link between bonded ACM fragments associated with fill materials beneath the manufacturing and offices area (BH13, BH14, BH25 & HA01) and asbestos fibre inhalation risk to future human receptors which requires intervention.
- potential link between carcinogenic PAHs in fill soils at HA04 and BH06 and future human receptors (ingestion and direct contact risks) which requires intervention.

The suspected UST near the loading dock and the UST beneath the Boiler Room floor do not show impacts to surrounding soils or groundwater. USTs should be decommissioned (including any impacted pit soils) in accordance with *POEO (Underground Petroleum Storage Systems) Regulation 2019.*

There is a potential linkage between current/future users and the volatile and semi-volatile compounds detected (1,2,4-trimethylbenzene, n-propylbenzene and pentachloroethane) in fill soils beneath the former manufacturing/offices/laboratory areas of the main building, adjacent to the former ETP and former chemical store (potential vapour intrusion risk) which requires further consideration during decommissioning.

There is no apparent linkage between current/future users and PFAS impacted groundwater directly beneath the site because as the site will remain connected to town mains water. Groundwater is shallow yet is not proposed to be used at the ground surface onsite. Groundwater reports elevated levels of PFOS above the 99% species protection values (marine) in an industrial setting which suggests the detected levels are likely ambient background concentrations that is unlikely to be posing a risk to aquatic receptors on or offsite. Consideration for management of groundwater/dewatering during the proposed development may be necessary as it will likely to be encountered during any basement carpark construction.

There is no apparent linkage between current/future users and the remnant liquids contained within the effluent treatment tank. While not considered a health risk, the liquid waste requires disposal offsite to a licenced liquid waste treatment facility during decommissioning of the former ETP.

6.6.4 Data Gaps and Delineation of Impacted Areas

Sufficient data was gathered to assess the potential health risks identified in the PSI (Sullivan-ES, 2015) associated with USTs, the ETP, manufacture and bulk storage of chemicals/pharmaceuticals and unknown fill quality; however, the extent of the identified impacted areas requires delineation for the purpose of remediation. The following areas should be delineated and/or further assessed during site redevelopment:

- The extent of bonded ACM impacted fill materials identified at sampling locations BH13, BH14, BH25 and HA01.
- The extent of Carcinogenic PAH impacted gravelly clay fill identified at sampling locations HA04 and BH06.
- The extent of volatile and semi-volatile compounds (1,2,4-trimethylbenzene, n-propylbenzene and pentachloroethane) identified in fill soils at sampling locations HA05, HA07 and HA08.
- Potential contamination beneath building footprints of the existing offices and storage areas that were not accessible for sampling during the Phase 2 investigation.
- Fill materials around the southwest portion of the main building at locations HA02 and HA03 where hand auger sampling could not penetrate through ballast gravels.
- Additional assessment for PASS/ASS to verify the findings in this Phase 2.

7

Quality of Analytical Data

Analytical data validation is the process of assessing whether the data is in compliance with method requirements and project specifications. The primary objective of this process is to ensure that data of known quality are reported, and to identify if data can be used to fulfil the overall project objectives.

On the basis of the analytical data validation procedure employed, the overall quality of the analytical data produced is considered to be of an acceptable standard for interpretive use. The table below provides a summary of the data validation.

Table 7-1 Data Quality

Requirement	Compliance	Comments
Field Duplicates	Yes	Intra-laboratory duplicate samples were collected by splitting a sample into the primary and duplicate sample containers. A combined total of: • 5x soil intra-laboratory duplicates were collected for 46 primary soil samples • 1x water intra-laboratory duplicate was collected for 5 primary water samples Resulting in greater than 1 duplicate per 10 primary samples analysed (i.e. >10%) in accordance with AS4482.1: 2005. Inter-laboratory duplicate samples were not collected as part of this assessment. Refer Tables 4 and 5 (**Appendix B**).
RPDs	Yes	All calculated RPDs fall within the acceptable limits of <30% to <50% with the exception of the following soil RPDs: • BH09_0.8-1.0 and QC03 – Lead 52.9% and Nickel 103.7% (>30%) when conc. > 20x LOR; and • BH17_0.8-0.9 and QC05 – Chromium 55.8%, Copper 106.8%, Lead 98.9%, Nickel 80.4% and Zinc 144.% (>30%) when conc. > 20x LOR; The resultant RPDs of the samples above are not significantly excessive. Minor heterogeneity of samples could be the cause. Further in all instances the recorded concentrations are three or more orders of magnitude less than the relevant HIL criterion and therefore do not impact on the contamination status of the site. Given the large data set and very minor number of non-compliance, we do not see that it would impact the veracity of the data quality in this instance. All Groundwater calculated RPDs fall within the acceptable limits of <30% to <50%. Where concentrations of either sample is <LOR or <10 times the LOR, then no RPD was calculated. This evaluation is in accordance with section 8 of AS4482.1: 2005.

Quality of Analytical Data

Requirement	Compliance	Comments
		Refer Tables 4 and 5 (**Appendix B**).
Trip Blanks and Trip Spikes	Yes	Trip blanks and trip spikes were collected as part of the Phase 2. All soil and groundwater trip blanks were non-detect indicating no cross contamination occurred during field sampling and transport to the laboratory i.e. false positive results. All soil and groundwater trip spike results were within acceptable limits (i.e. 70-130%) indicating negligible loss of volatiles occurred during field sampling and transport to the laboratory i.e. false negative results. Refer Tables 4 and 5 (**Appendix B**).
Sampling equipment properly decontaminated	Yes	Disposable equipment used (bailer, nitrile gloves). Any sampling tools were decontaminated between sampling locations with a solution of Liquinox and rinsed with potable water.
Rinsate Blanks	NA	Rinsate blank samples were not collected as part of this assessment.
Sample Preservation	Yes	Samples were properly preserved. Samples were compliant with required storage temperature.
Samples delivered to laboratory within sample holding times.	Yes	Confirmed from COCs and laboratory reports.
Equipment Calibration	Yes	Refer to **Appendix E**.
Analytical procedures	Yes	All NATA accredited. All analyses meet compliance requirements. ***Soil Review*** *Primary laboratory used for the soil analysis was SGS.* • SE225793 - All Data Quality Objectives were met with the exception of the following: o 3x surrogate recoveries outside criteria due to matrix interference o 3x laboratory duplicate recovery outside criteria due to sample heterogeneity o 7 matrix spike exceedances due to either: ▪ Matrix interference; ▪ Sample heterogeneity; or ▪ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level). The data set overall is considered suitable and representative of the conditions encountered during the investigation. The minor number

Quality of Analytical Data

Requirement	Compliance	Comments
		of non-conformances noted above are not expected to affect data quality of the analyses in soil all less than detection or multiple orders of magnitude less than the adopted criteria therefore the likelihood of false negative results is negligible. ***Groundwater Review*** *Primary laboratory used for the groundwater analysis was SGS.* SE225820 R1 - All Data Quality Objectives were met with the exception of the following: o 1 PFAS surrogate recovery was marginally outside criteria o The extraction date for the trip spike and trip blank were a day late for volatile analysis. The late extraction dates for the trip blank and trip spike analysis unaffected the results, the blanks were non-detect and spike recovery was within acceptable limits. Overall, these outliers are considered do not impact the laboratories overall quality objectives. On this basis the data set is deemed be acceptable for evaluating data to meet the project objectives.
SOPs and competent field personnel	Yes	Sampling procedures follow industry standards, and field staff (Adam Sullivan – more than 23 years' experience. Sean Guenther – 20 years' experience) are competent in sampling methods and QA/QC protocols.

8 Conclusions and Recommendations

The following conclusions are made based on the findings of this Phase 2 investigation and subject to the limitations presented in **Section 10**:

- Asbestos containing fibre cement fragments were observed in gravelly ash fill at sample locations BH13, BH14, BH25 and HA01 clustered together and sealed under concrete slabs beneath the former manufacturing and offices area of the main building. While there are no health risks to current site users as the area is sealed under concrete, there is a potential risk to future site users by the asbestos impacted fill that requires remediation prior to or during site development.
- The gravelly sandy fill soils represented by results for sampling locations HA04 and BH06, are impacted by carcinogenic PAHs in concentrations that exceed the human health criterion. While there are no health risks to current site users as the areas are sealed under concrete slabs, there is a potential risk to future site users by contaminated soils at HA04 and BH06 that requires remediation prior to or during site development.
- Volatile and semi-volatile compounds were detected in fill soils beneath the former manufacturing/offices/laboratory area of the building, adjacent to the ETP tank and near the former chemical store. Concentrations were below adopted health screening levels and considered relatively low level in soils and were not detectable in groundwater. However these chemicals are not naturally occurring which indicates either there are residues of these chemicals causing low level concentrations in soils or there is a potential unknown contamination source (hotspot) underneath the structures which may present a potential health risk for the proposed development.
- Preliminary assessment shows that potential acid sulfate soils exist onsite and will require management if disturbed. PASS results indicate potential acid generation of soils deeper than 1.5 m may not require treatment, however shallower soils at boreholes BH05 and BH19 recorded results that were up to 89% of the action criteria which is considered significant in the context of the planned development. An Acid Sulfate Soils Management Plan (ASSMP) is to be prepared that documents verification sampling and management of potential acid generation during soil disturbance.
- The exact position of the suspected UST near the loading dock could not be verified during the investigation and may not exist, however there is likely to be a UST under the Boiler Room floor. No soil or groundwater impacts were detected at either location. In accordance with current legislation, if not used in a two-year period or temporarily abandoned, all USTs present onsite must be decommissioned in accordance with *POEO (Underground Petroleum Storage Systems) Regulation 2019.*
- Groundwater onsite is of relatively good quality with no exceedances of the adopted human health screening levels for vapour intrusion or the adopted GILs for ecological receptors except for PFAS.
- PFAS compounds in groundwater were not significant to warrant any further consideration. Site history shows there is no current or historical credible onsite source of PFAS, and the concentrations of PFAS detected in groundwater are most likely ambient background concentrations in the area.
- The liquid contained within the ETP tank was not found to be contaminated from a human health perspective. The liquid was found to have some heavy metal and PFAS detections above the ecological criterion. Liquid contained within the tank is a waste and requires disposal offsite to a licenced liquid waste treatment facility during decommissioning of the ETP.

Sullivan-ES conclude that the site can be made suitable for the proposed high density residential use subject to closing out data gaps, decommissioning of USTs and the ETP onsite and performing remediation works in localised areas of the site to remove any unacceptable health risks.

8.1 Recommendations

We recommend that a Remedial Action Plan (RAP) is prepared to document the existing contamination status of the site, present additional sampling requirements to close out data gaps, methodology to located and decommission suspected USTs, detail and evaluate the most suitable method/s to remediate soil identified in this Phase 2 in consideration of the proposed high density residential development.

The RAP should be prepared or reviewed and approved by a Certified Environmental Practitioner specialising in Site Contamination (CEnvP-SC) as certified by one of the two schemes recognised by the NSW Environment Protection Authority.

The RAP is to include all items required as listed in the contaminated land consultants reporting guidelines (NSW EPA 2020), as well as consideration of the following items as a minimum:

- Decommissioning of USTs in accordance with *POEO (Underground Petroleum Storage Systems) Regulation 2019*.
- Remediation of impacted fill materials for bonded asbestos fragments in and around locations BH13, BH14, BH25 and HA01 including any additional delineation sampling to refine localised remediation extent(s).
- Remediation of impacted fill materials for carcinogenic PAHs at HA04 and BH06 including any additional delineation sampling to refine localised remediation extents.
- Data gap closure including additional soil sampling to characterise contamination status associated with:
    - former manufacturing/offices/laboratory areas of the building, adjacent to the EFT and former chemical store for volatile and semi volatile organic compounds.
    - beneath current office and storage building footprints which were not accessible during the Phase 2 investigation
- Disposal of the remnant liquids in the ETP tank and subsequent decommissioning of the ETP and all associated pipes and pits.
- Materials management, classification, handling requirements and disposal.
- Unexpected finds protocol – paying particular attention to potential contamination issues relating to the network of pipes and pits associated with the ETP, ashy fill materials under various locations of the main building, fill quality in the vicinity of locations HA02 and HA03, and the underground water tank and pumphouse outside the Boiler Room along the north entrance driveway.

9

References

Australian Standard 4482.1 Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds, 2005.

Contaminated Land Management Act 1997 (NSW).

Environmental Planning and Assessment Act 1979.

HEPA PFAS National Environmental Management Plan, Version 2.0, January 2020.

NSW EPA Guidelines for the NSW Site Auditor Scheme (3rd Edition), 2017.

National Environment Protection (Assessment of Site Contamination) Measure 2013.

NSW EPA 2014. Waste Classification Guidelines – Part 1: Classifying Waste.

NSW EPA Contaminated Land Guidelines: Consultants Reporting on Contaminated Land, 2020.

NSW EPA, Sampling Design Guidelines, 1995.

NSW EPA, Guidelines for Implementing Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019.

Parramatta Development Control Plan 2011

Parramatta Local Environmental Plan 2011

Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019.

Protection of the Environment Operations Act 1997.

Protection of the Environment Operations (Waste) Regulations 2014.

State Environmental Planning Policy No.55 – Remediation of Land 1998 (SEPP55).

Sullivan Environmental Sciences Pty Ltd, Preliminary Site Investigation, August 2015.

Work Health and Safety Act 2011.

Work Health and Safety Regulation 2017.

10

Limitations

Sullivan Environmental Sciences Pty Ltd, (Sullivan-ES) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of 30 Auburn Road Pty Ltd and only those third parties who have been authorised in writing by Sullivan-ES to rely on this Report.

It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this Report.

Where this Report indicates that information has been provided to Sullivan-ES by third parties, Sullivan-ES has made no independent verification of this information except as expressly stated in the Report. Sullivan-ES assumes no liability for any inaccuracies in or omissions to that information.

This Report was prepared between 8 November 2021 and 3 March 2022 and is based on the conditions encountered and information reviewed at the time of preparation. Sullivan-ES disclaims responsibility for any changes that may have occurred after this time.

Investigations undertaken in respect of this Report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and contamination may have been identified in this Report.

Subsurface conditions can vary across a particular site and cannot be exhaustively defined by the investigations described in this Report.

This Report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This Report does not purport to give legal advice.

Except as required by law, no third party may use or rely on this Report unless otherwise agreed by Sullivan-ES.

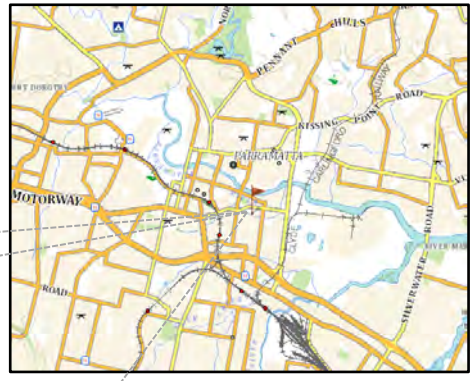
To the extent permitted by law, Sullivan-ES expressly disclaims and excludes liability for any loss, damage, cost or expenses suffered by any third party relating to or resulting from the use of, or reliance on, any information contained in this Report. Sullivan-ES does not admit that any action, liability or claim may exist or be available to any third party.

It is the responsibility of third parties to independently make inquiries or seek advice in relation to their particular requirements and proposed use of the site.

A

Appendix A Figures



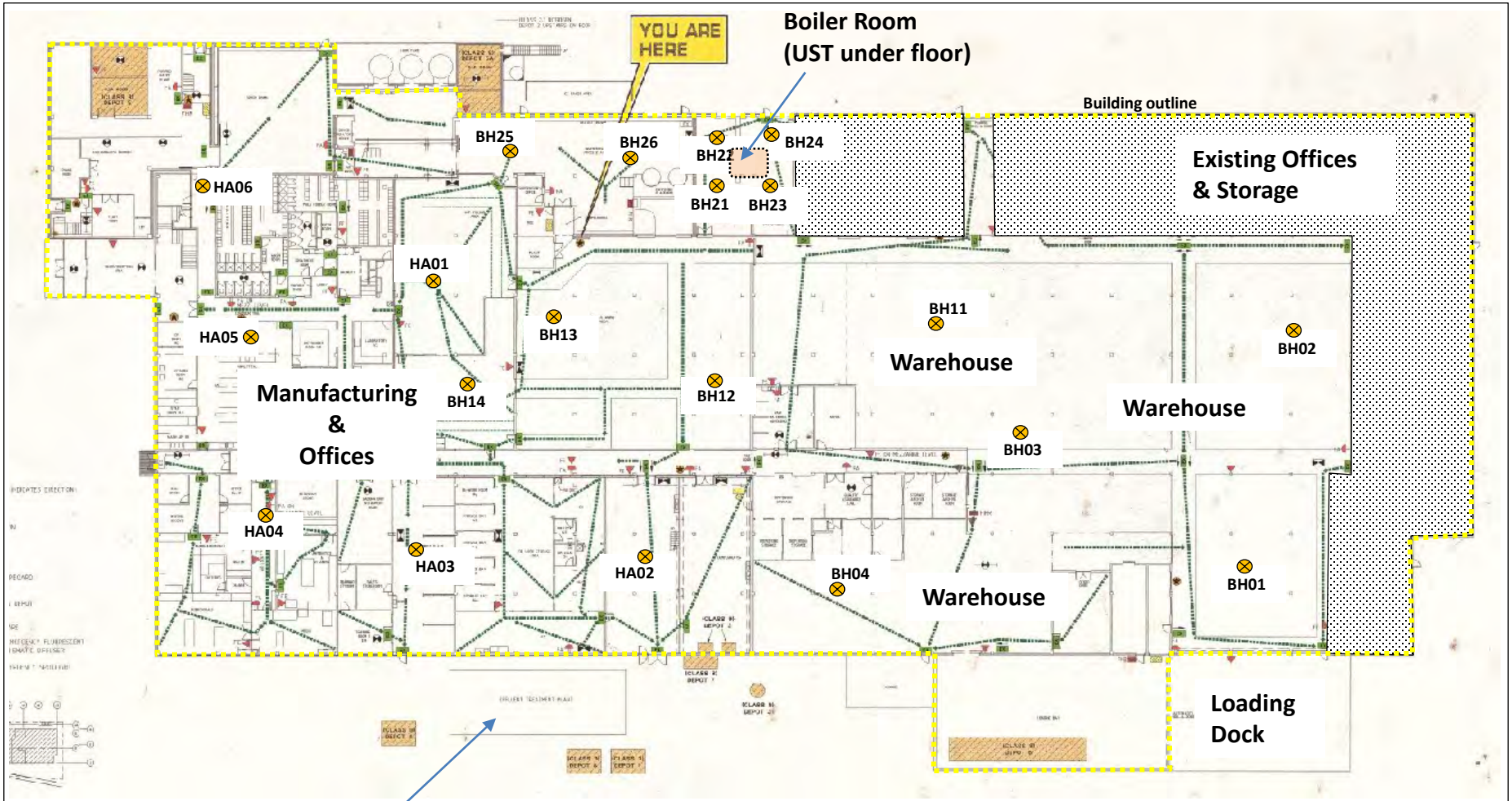


N

Not to scale

Source: https://maps.six.nsw.gov.au/

SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Figure 1: **Site Location**	Address: **2A Gregory Place, Harris Park NSW 2150**



SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Figure 2: **Indoor Sampling Locations**	Address: **2A Gregory Place, Harris Park NSW 2150**



Possible UST area

Soil bore

Groundwater well

Groundwater well (destroyed)

Not to scale

All added locations approximate

Source: Nearmaps Oct 2021

SULLIVAN environmental sciences

Project #: **SES_617 Harris Park**

Title: **Detailed Phase 2 Contamination Investigation**

Figure 3: **Outdoor Sampling Locations**

Address: **2A Gregory Place, Harris Park NSW 2150**



Groundwater well (SWL mAHD)

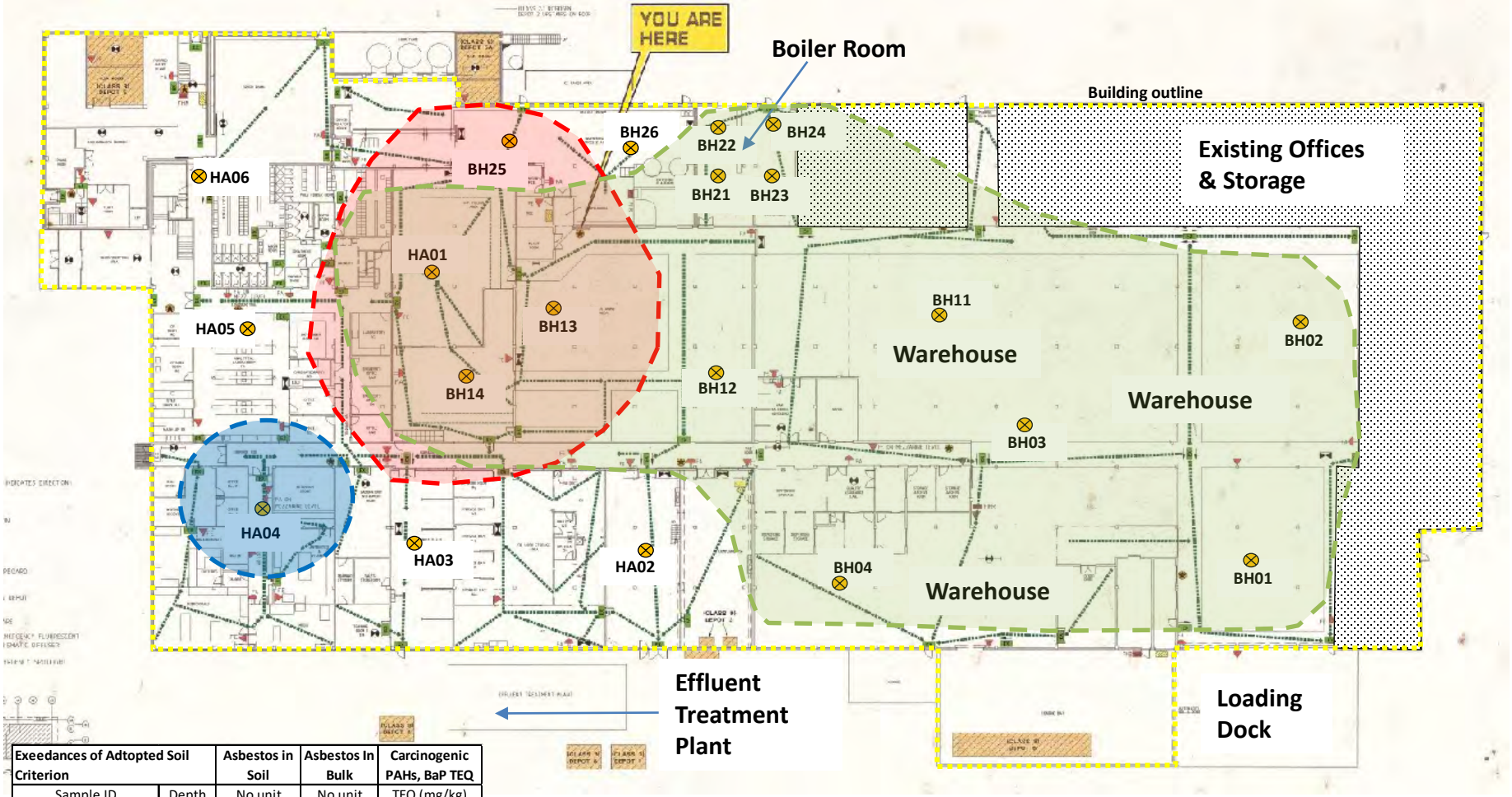
Inferred groundwater flow

Groundwater well (destroyed)

Not to scale
All added locations approximate

Source: Nearmaps Oct 2021

SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Figure 4: **Inferred Groundwater Flow**	Address: **2A Gregory Place, Harris Park NSW 2150**



Exeedances of Adtopted Soil Criterion		Asbestos in Soil	Asbestos In Bulk	Carcinogenic PAHs, BaP TEQ
Sample ID	Depth	No unit	No unit	TEQ (mg/kg)
BH06_2.0-2.2	2.0-2.2	-	-	8.6
BH13_ACM_0.4	0.4	Yes	-	-
BH14_ACM_0.6	0.6	-	Yes	-
BH25_0.4	0.54	Yes	-	-
HA01_0.3-0.4	0.3-0.4	Yes	-	<0.2
HA04_0.4-0.5	0.4-0.5	-	-	7.5
HA01_0.3-0.4_FCP	0.3-0.4	-	Yes	-
HIL B - Residential (Minimal Soil Access)		Detect	Detect	4

Estimated area impacted by bonded asbestos

Estimated area impacted by Carcinogenic PAHs

Estimated area ash containing fill materials

Not to scale
All added locations approximate
Soil bore

N

SULLIVAN environmental sciences

Project #: **SES_617 Harris Park**

Title: **Detailed Phase 2 Contamination Investigation**

Figure 5: **Indoor Soil Exceedances**

Address: **2A Gregory Place, Harris Park NSW 2150**



Exeedances of Adtopted Soil Criterion		Asbestos in Soil	Asbestos In Bulk	Carcinogenic PAHs, BaP TEQ
Sample ID	Depth	No unit	No unit	TEQ (mg/kg)
BH06_2.0-2.2	2.0-2.2	-	-	8.6
BH13_ACM_0.4	0.4	Yes	-	-
BH14_ACM_0.6	0.6	-	Yes	-
BH25_0.4	0.54	Yes	-	-
HA01_0.3-0.4	0.3-0.4	Yes	-	<0.2
HA04_0.4-0.5	0.4-0.5	-	-	7.5
HA01_0.3-0.4_FCP	0.3-0.4	-	Yes	-
HIL B - Residential (Minimal Soil Access)		Detect	Detect	4

Estimated area impacted by Carcinogenic PAHs

Estimated area ash containing fill materials

Groundwater well (destroyed)

Groundwater well Soil bore

Not to scale

All added locations approximate

Source: Nearmaps Oct 2021

N

SULLIVAN environmental sciences

Project #: **SES_617 Harris Park**

Title: **Detailed Phase 2 Contamination Investigation**

Figure 6: **Outdoor Soil Exceedances**

Address: **2A Gregory Place, Harris Park NSW 2150**

B

Appendix B Results Tables

Table 1
SES_617 - Soil Analytical Results
Harris Park - Contamination Assessment

Sample ID	Date	Depth	Moisture	pH	Conductivity of Extract (1:5 dry sample basis)	Asbestos in Soil Detected	Estimated Fibres	Asbestos In Bulk Detected	Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg	Benzene	Toluene	Ethylbenzene	m/p-xylene	o-xylene	Total Xylenes	Total BTEX	Naphthalene	Benzene (F0)	TRH C6-C9	TRH C6-C10	TRH C6-C10 minus BTEX (F1)
						Asbestos			Total Recoverable Elements								BTEXN								Volatile Hydrocarbons			
Units			%w/w	pH Units	µS/cm	No unit	%w/w	No unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			1	0.1	1	0	0.01	0	1	0.3	0.5	0.5	1	0.5	2	0.05	0.1	0.1	0.1	0.2	0.1	0.3	0.6	0.1	0.1	20	25	25
HIL B - Residential with Minimal Access to Soils			-	-	-	Detect	-	Detect	500[#5]	150	500	30000	1200[#4]	1200	60000	120[#3]	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	NL(560)	NL(64)	-	-	230	-	NL(9)	3	-	-	260
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	NL(560)	NL(64)	-	-	NL(300)	-	NL(9)	3	-	-	370
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	NL(560)	NL(64)	-	-	NL(300)	-	NL(9)	3	-	-	630
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	21000	5900	-	-	17000	-	2200	140	-	-	5600
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum			27.9	0.0	0.0	0.0	0.0	0.0	5.0	0.3	19.0	77.0	450.0	72.0	480.0	1.5	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
BH01_0.2-0.3	8/11/2021	0.2-0.3	14.4	-	-	-	-	-	3	<0.3	3.2	15	13	14	15	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
QC01	8/11/2021	-	17.3	-	-	-	-	-	3	<0.3	2.8	11	11	13	15	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	13.8	-	-	-	-	-	3	<0.3	4.6	5.4	34	4.4	21	0.07	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH02_1.5-1.7	8/11/2021	1.5-1.7	14.3	-	-	-	-	-	4	<0.3	10	10	27	5.4	20	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH03_0.3-0.5	8/11/2021	0.3-0.5	14.8	-	-	-	-	-	2	<0.3	4.2	12	60	2.1	21	0.14	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH04_0.3-0.5	8/11/2021	0.3-0.5	21.5	-	-	-	-	-	2	<0.3	2.6	16	6	20	15	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH04_1.2-1.4	8/11/2021	1.2-1.4	10.9	-	-	-	-	-	4	<0.3	5.7	6.7	14	3.3	16	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH05_0.4-0.5	8/11/2021	0.4-0.5	9.8	-	-	-	-	-	2	<0.3	10	58	7	72	39	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	14.1	-	-	-	-	-	3	<0.3	7.2	13	28	8.8	36	0.19	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH06_2.0-2.2	8/11/2021	2.0-2.2	18.0	-	-	-	-	-	5	<0.3	9.5	19	93	4.7	110	0.38	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH07_0.3-0.5	8/11/2021	0.3-0.5	14.1	-	-	-	-	-	3	<0.3	9.1	18	35	12	68	0.07	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH08_0.4-0.5	8/11/2021	0.4-0.5	12.5	-	-	-	-	-	1	<0.3	7.4	46	5	58	32	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH08_0.8-1.0	8/11/2021	0.8-1.0	19.6	-	-	-	-	-	5	<0.3	8.1	15	54	5.2	61	0.28	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
QC03	8/11/2021	-	16.7	-	-	-	-	-	5	<0.3	8.3	17	50	7.2	63	0.13	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH09_0.5-0.6	8/11/2021	0.5-0.6	9.9	-	-	-	-	-	3	<0.3	12	30	32	41	50	0.07	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
QC02	8/11/2021	-	11.2	-	-	-	-	-	3	<0.3	12	19	55	13	58	0.12	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH09_1.9-2.0	8/11/2021	1.9-2.0	11.0	-	-	-	-	-	2	<0.3	4.1	3.1	5	1.4	7.8	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH10A_0.7-0.8	9/11/2021	0.7-0.8	18.3	-	-	-	-	-	3	<0.3	6.8	16	52	15	44	0.13	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH10A_1.1-1.3	9/11/2021	1.1-1.3	10.9	-	-	-	-	-	2	<0.3	2.4	4.5	15	1.5	11	0.08	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH11_0.2-0.3	9/11/2021	0.2-0.3	18.8	-	-	-	-	-	3	<0.3	2.6	9.7	8	9.3	10	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
QC04	9/11/2021	-	19.8	-	-	-	-	-	3	<0.3	2.2	9.0	7	7.6	10	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH12_0.2-0.3	9/11/2021	0.2-0.3	15.7	-	-	-	-	-	3	<0.3	5.7	46	27	4.0	20	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	No	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	10.7	-	-	-	-	-	4	<0.3	12	5.9	18	3.0	17	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH13_0.3-0.4	9/11/2021	0.3-0.4	10.5	-	-	-	-	-	3	<0.3	7.4	14	11	15	29	0.09	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	Yes	>0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	14.0	-	-	-	-	-	3	<0.3	12	18	9	40	39	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	17.2	-	-	-	-	-	3	<0.3	6.6	35	68	5.1	210	0.83	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH15_1.2-1.4	9/11/2021	1.2-1.4	16.2	-	-	-	-	-	4	<0.3	7.0	9.6	27	3.3	32	1.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH16_0.5-0.6	9/11/2021	0.5-0.6	8.8	-	-	-	-	-	2	<0.3	7.5	31	40	45	78	0.07	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH17_0.8-0.9	9/11/2021	0.8-0.9	13.8	-	-	-	-	-	4	<0.3	11	28	71	7.5	160	0.17	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
QC05	9/11/2021	-	11.4	-	-	-	-	-	4	<0.3	6.2	8.5	24	3.2	26	0.19	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH18_0.6-0.7	9/11/2021	0.6-0.7	14.9	-	-	-	-	-	3	<0.3	7.9	22	67	5.8	59	0.13	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH18_0.9-1.0	9/11/2021	0.9-1.0	15.7	-	-	-	-	-	5	<0.3	7.4	10	29	3.6	30	0.16	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH19_0.8-1.0	9/11/2021	0.8-1.0	14.4	-	-	-	-	-	2	<0.3	5.0	5.5	16	3.7	18	0.09	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	10.8	-	-	-	-	-	4	<0.3	5.8	6.0	27	2.0	32	0.09	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	11.1	-	-	-	-	-	3	<0.3	6.3	7.7	17	3.4	14	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH21_1.9-2.0	10/11/2021	1.9-2.0	12.5	-	-	-	-	-	3	<0.3	5.1	3.8	5	2.1	10	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH22_0.2-0.3	10/11/2021	0.2-0.3	12.5	-	-	-	-	-	2	<0.3	5.7	7.6	11	5.0	12	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH22_2.6-2.7	10/11/2021	2.6-2.7	15.8	-	-	-	-	-	2	<0.3	4.0	3.1	5	2.0	10	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	27.9	-	-	-	-	-	3	<0.3	4.4	12	11	8.9	9.7	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH23_2.2-2.3	10/11/2021	2.2-2.3	12.6	-	-	-	-	-	1	<0.3	2.9	5.1	10	1.5	5.7	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH24_0.2-0.4	10/11/2021	0.2-0.4	15.7	-	-	-	-	-	2	<0.3	3.6	12	7	9.2	19	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH24_2.6-2.7	10/11/2021	2.6-2.7	14.5	-	-	-	-	-	<1	<0.3	1.7	2.1	4	0.9	3.2	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH25_0.4	10/11/2021	0.54	-	-	-	Yes	>0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	18.1	-	-	No	<0.01	-	2	0.3	13	29	450	30	480	0.65	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
BH26_2.4-2.5	10/11/2021	2.4-2.5	13.0	-	-	-	-	-	<1	<0.3	2.7	2.5	5	1.6	4.6	<0.05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA01_0.3-0.4	8/11/2021	0.3-0.4	11.4	-	-	Yes	>0.01	-	<1	<0.3	8.0	18	13	31	41	0.06	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA04_0.4-0.5	9/11/2021	0.4-0.5	18.4	-	-	-	-	-	2	<0.3	19	22	100	7.4	150	0.21	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA05_0.5-0.7	9/11/2021	0.5-0.7	16.4	-	-	No	<0.01	-	2	<0.3	6.1	16	52	5.8	42	0.16	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA06_0.4-0.6	9/11/2021	0.4-0.6	16.1	-	-	No	<0.01	-	2	<0.3	6.4	17	74	6.8	56	0.15	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA07_0.4-0.5	9/11/2021	0.4-0.5	14.5	-	-	-	-	-	2	<0.3	4.5	15	110	2.9	56	0.42	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA07_0.6-0.7	9/11/2021	0.6-0.7	20.7	-	-	-	-	-	3	<0.3	6.0	77	220	4.0	56	0.55	<0.1	<0.1	<0.1	0.3	<0.1	0.3	<0.6	<0.1	<0.1	<20	<25	<25
HA08_1.4-1.5	9/11/2021	1.4-1.5	11.7	-	-	-	-	-	1	<0.3	6.1	9.0	23	3.3	56	0.14	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	<0.1	<20	<25	<25
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[87%]	[90%]	[92%]	[92%]	[92%]	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<0.1	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	TRH C10-C14	TRH C15-C28	TRH C29-C36	TRH C37-C40	TRH >C10-C16	TRH >C10-C16 - Naphthalene (F2)	TRH >C16-C34 (F3)	TRH >C34-C40 (F4)	TRH C10-C36 Total	TRH >C10-C40 Total (F bands)	Naphthalene	2-methylnaphthalene	1-methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b&j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(ah)anthracene	Benzo(ghi)perylene
	Total Recoverable Hydrocarbons										Polynuclear Aromatic Hydrocarbons[#1 #2]																	
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	20	45	45	100	25	25	90	120	110	210	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HIL B - Residential with Minimal Access to Soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)	-	-	-	-	-	NL(560)	-	-	-	-	NL(9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)	-	-	-	-	-	NL(560)	-	-	-	-	NL(9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)	-	-	-	-	-	NL(560)	-	-	-	-	NL(9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential	-	-	-	-	-	4200	5800	8100	-	-	2200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential	-	-	-	-	1000	-	2500	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum	0.0	230.0	190.0	0.0	0.0	0.0	380.0	0.0	420.0	380.0	0.5	0.6	0.6	1.5	0.2	1.0	12.0	2.7	16.0	14.0	6.5	7.0	6.8	3.2	6.0	3.5	0.6	3.1
BH01_0.2-0.3	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC01	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.2	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01_1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02_1.5-1.7	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03_0.3-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04_0.3-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.2	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04_1.2-1.4	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05_0.4-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
BH05_1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	1.2	0.3	2.5	2.3	1.2	1.3	1.2	0.7	1.2	0.7	0.1	0.6
BH06_2.0-2.2	<20	190	130	<100	<25	<25	280	<120	320	280	0.4	0.1	0.1	1.5	0.1	1.0	8.7	2.4	14	12	6.3	7.0	6.8	3.2	6	3.5	0.6	3.1
BH07_0.3-0.5	<20	<45	68	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.6	0.6	0.3	0.3	0.3	0.2	0.3	0.2	<0.1	0.2
BH08_0.4-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08_0.8-1.0	<20	52	<45	<100	<25	<25	<90	<120	<110	<210	0.1	<0.1	<0.1	0.4	<0.1	0.1	1.8	0.5	3.8	3.6	1.9	2.0	2.0	1.0	1.8	1.1	0.2	1.0
QC03	<20	64	51	<100	<25	<25	110	<120	120	<210	<0.1	<0.1	<0.1	0.3	<0.1	0.1	1.7	0.5	3.8	3.6	1.9	2.0	2.1	1.0	1.9	1.2	0.2	1.1
BH09_0.5-0.6	<20	59	81	<100	<25	<25	130	<120	140	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.4	0.4	0.2	0.2	0.2	0.1	0.2	0.1	<0.1	0.1
QC02	<20	80	96	<100	<25	<25	150	<120	180	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.6	0.5	0.2	0.3	0.3	0.1	0.2	0.1	<0.1	0.1
BH09_1.9-2.0	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH10A_0.7-0.8	<20	45	110	<100	<25	<25	100	<120	160	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	0.2	1.2	1.1	0.5	0.6	0.6	0.3	0.5	0.3	<0.1	0.3
BH10A_1.1-1.3	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH11_0.2-0.3	<20	61	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.4	<0.1	0.2	0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC04	<20	57	<45	<100	<25	<25	<90	<120	<110	<210	0.3	0.6	0.6	<0.1	<0.1	<0.1	0.9	<0.1	0.4	0.3	0.2	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12_0.2-0.3	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12_ACM_0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13_0.3-0.4	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13_ACM_0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14_ACM_0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.3	0.2	0.1	0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1
BH15_1.2-1.4	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	0.3	0.2	0.2	0.2	<0.1	0.2	0.1	<0.1	0.1
BH16_0.5-0.6	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.5	0.4	0.2	0.2	0.3	0.1	0.2	0.1	<0.1	0.1
BH17_0.8-0.9	<20	230	190	<100	<25	<25	380	<120	420	380	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	0.1	1.0	1.0	0.6	0.8	0.7	0.3	0.5	0.4	0.1	0.4
QC05	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.1	0.7	0.7	0.4	0.4	0.4	0.2	0.3	0.2	<0.1	0.2
BH18_0.6-0.7	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.6	0.2	1.4	1.3	0.7	0.7	0.8	0.3	0.7	0.4	<0.1	0.4
BH18_0.9-1.0	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.1	0.9	0.9	0.5	0.5	0.6	0.3	0.5	0.4	<0.1	0.3
BH19_0.8-1.0	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	0.3	0.2	0.2	0.2	<0.1	0.2	0.1	<0.1	0.1
BH19_1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20_2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21_1.9-2.0	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22_0.2-0.3	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22_2.6-2.7	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22_2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.2	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23_2.2-2.3	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24_0.2-0.4	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24_2.6-2.7	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25_0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26_2.4-2.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA01_0.3-0.4	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.2	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA04_0.4-0.5	<20	180	120	<100	<25	<25	270	<120	300	270	0.5	0.5	0.5	0.8	0.2	0.3	12	2.7	16	14	6.5	5.7	6.0	2.5	5.2	3.3	0.4	3.0
HA05_0.5-0.7	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA06_0.4-0.6	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA07_0.4-0.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	0.1	0.1	0.1	<0.1	0.1	0.1	<0.1	0.1
HA07_0.6-0.7	<20	65	92	<100	<25	<25	130	<120	160	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.1	0.2	<0.1	0.1	0.1	<0.1	0.1
HA08_1.4-1.5	<20	<45	<45	<100	<25	<25	<90	<120	<110	<210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trip Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Carcinogenic PAHs, BaP TEQ <LOR=0	Carcinogenic PAHs, BaP TEQ <LOR=LOR	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	Total PAH (18)	Total PAH (NEPM/WHO 16)	Phenol	2-methyl phenol (o-cresol)	3/4-methyl phenol (m/p-cresol)	Total Cresol	2-chlorophenol	2,4-dimethylphenol	2,6-dichlorophenol	2,4-dichlorophenol	2,4,6-trichlorophenol	2-nitrophenol	4-nitrophenol	2,4,5-trichlorophenol	2,3,4,6/2,3,5,6-tetrachlorophenol	Pentachlorophenol	2,4-dinitrophenol	4-chloro-3-methylphenol	Hexachlorobenzene (HCB)
	Polynuclear Aromatic Hydrocarbons[#1 #2]					Speciated Phenols																
Units	TEQ (mg/kg)	TEQ (mg/kg)	TEQ (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.3	0.2	0.8	0.8	0.5	0.5	1	1.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	1	0.5	2	2	0.05
HIL B - Residential with Minimal Access to Soils	4	4	4	-	400	45000	-	-	4700	-	-	-	-	-	-	-	-	-	130	-	-	15
HSL-D Commercial for VI (Sand, 0 to <1m)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum	8.6	8.6	8.6	79.0	78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BH01_0.2-0.3	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	<0.1
BH02_1.5-1.7	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH04_1.2-1.4	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
BH05_1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	1.6	1.6	1.6	13	13	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH06_2.0-2.2	8.6	8.6	8.6	76	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.5	0.4	0.5	0.5	3.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH08_0.8-1.0	2.7	2.7	2.7	21	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	2.7	2.7	2.7	21	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	0.3	0.4	0.3	2.2	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
QC02	0.3	0.4	0.4	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	0.7	0.8	0.8	6.1	6.1	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH10A_1.1-1.3	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	<0.2	<0.3	<0.2	1.3	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	<0.2	<0.3	<0.2	3.3	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH12_ACM_0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
BH13_ACM_0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH14_ACM_0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	<0.2	<0.3	<0.2	1.3	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_1.2-1.4	0.2	0.3	0.3	1.6	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	0.3	0.4	0.3	2.4	2.4	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	<0.1
BH17_0.8-0.9	0.8	0.8	0.8	6.3	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05	0.5	0.6	0.5	3.9	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	0.9	1.0	0.9	7.5	7.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH18_0.9-1.0	0.7	0.8	0.7	5.3	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.8-1.0	0.2	0.3	0.3	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
BH19_1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH22_0.2-0.3	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
BH22_2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH23_2.2-2.3	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
BH26_2.4-2.5	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	<0.2	<0.3	<0.2	0.9	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	7.5	7.5	7.5	79	78	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	<0.1
HA05_0.5-0.7	<0.2	<0.3	<0.2	<0.8	<0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06_0.4-0.6	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
HA07_0.4-0.5	<0.2	<0.3	<0.2	0.8	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	<0.2	<0.3	0.2	1.4	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA08_1.4-1.5	<0.2	<0.3	<0.2	<0.8	<0.8	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<2	<2	-
Trip Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes
NL - Derived soil HSL exceeds soil saturation concentraiton
To obtain F2 subtract napthalene from the >C10 - C16 fraction.
To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
Separate management limits for BTEX & naphthalene are not available hence should not be subtracted from the relevant fractions to obtain F1 & F2
EILs derived using following assumed parameters; pH=6.5, CEC=10, Clay =10% and OC=1%
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98)
#4 Elemental mercury: HIL does not address elemental mercury.
#5 Arsenic: HIL assumes 70% oral bioavailability.
#6 Lead: HILs A,B,C based on blood lead models
* Criteria for total Aldrin and Dieldrin combined
Criteria for total DDT, DDE and DDD combined
^ Criteria for total endosulfan combined
** Criteria for total chlordane combined

Table 1
SES_617 - Soil Analytical Results
Harris Park - Contamination Assessment

OC Pesticides in Soil

Sample ID	Date	Depth	alpha-BHC	Lindane	Heptachlor	Aldrin	beta-BHC	delta-BHC	Heptachlor epoxide	o.p-DDE	alpha-Endosulfan	gamma-Chlordane	alpha-Chlordane	trans-Nonachlor	p.p-DDE	Dieldrin	Endrin	o.p-DDD	o.p-DDT	beta-Endosulfan	p.p-DDD	p.p-DDT	Endosulfan sulfate	Endrin aldehyde	Methoxychlor	Endrin ketone	Isodrin	Mirex	Sum of DDD + DDE + DDT	Sum of Aldrin + Dieldrin
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			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	0.2	0.05	0.05	0.2	0.05	0.1	0.1	0.05	0.05
HIL B - Residential with Minimal Access to Soils			-	-	10	10*	-	-	-	600#	400^	90**	90**	-	600#	10*	20	600#	600#	400^	600#	600#	-	-	500	-	-	-	600#	10*
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.8-1.0	9/11/2021	0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
HA05_0.5-0.7	9/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA08_1.4-1.5	9/11/2021	1.4-1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OP Pesticides in Soil

Sample ID	Date	Depth	Dichlorvos	Dimethoate	Diazinon (Dimpylate)	Fenitrothion	Malathion	Chlorpyrifos (Chlorpyrifos Ethyl)	Parathion-ethyl (Parathion)	Bromophos Ethyl	Methidathion	Ethion	Azinphos-methyl (Guthion)
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
HIL B - Residential with Minimal Access to Soils			-	-	-	-	-	340	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-
Maximum			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	-	-	-	-	-	-	-	-	-	-	-
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	-	-	-	-	-	-	-	-	-	-	-
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	-	-	-	-	-	-	-	-	-	-	-
BH19_0.8-1.0	9/11/2021	0.8-1.0	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2
HA05_0.5-0.7	9/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-
HA08_1.4-1.5	9/11/2021	1.4-1.5	-	-	-	-	-	-	-	-	-	-	-
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-

PCBs in Soil

Sample ID	Date	Depth	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1262	Arochlor 1268	Total PCBs (Arochlors)
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1
HIL B - Residential with Minimal Access to Soils			-	-	-	-	-	-	-	-	-	1
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-
Maximum			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	-	-	-	-	-	-	-	-	-	-
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	-	-	-	-	-	-	-	-	-	-
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	-	-	-	-	-	-	-	-	-	-
BH19_0.8-1.0	9/11/2021	0.8-1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.3	<2
HA05_0.5-0.7	9/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-
HA08_1.4-1.5	9/11/2021	1.4-1.5	-	-	-	-	-	-	-	-	-	-
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-

Sample ID	Date	Depth	Dichlorodifluoromethane (CFC-12)	Chloromethane	Vinyl chloride (Chloroethene)	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone (2-propanone)	Iodomethane	1,1-dichloroethene	Acrylonitrile	Dichloromethane (Methylene chloride)	Allyl chloride	Carbon disulfide	trans-1,2-dichloroethene	MtBE (Methyl-tert-butyl ether)	1,1-dichloroethane	Vinyl acetate	MEK (2-butanone)	cis-1,2-dichloroethene	Bromochloromethane	Chloroform	2,2-dichloropropane	1,2-dichloroethane	1,1,1-trichloroethane	1,1-dichloropropene	Carbon tetrachloride	Dibromomethane	1,2-dichloropropane	Trichloroethene (Trichloroethylene - TCE)	2-nitropropane	Bromodichloromethane	MIBK (4-methyl-2-pentanone)
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			1	1	0.1	1	1	1	10	5	0.1	0.1	0.5	0.1	0.5	0.1	0.1	0.1	10	10	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	10	0.1	1
HIL B - Residential with Minimal Access to Soils			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
BH19_0.8-1.0	9/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
HA05_0.5-0.7	9/11/2021	0.5-0.7	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
HA08_1.4-1.5	9/11/2021	1.4-1.5	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
SES_617 - Soil Analytical Results
Harris Park - Contamination Assessment

			Volatile Organic Compounds																																																																															
			cis-1,3-dichloropropene	trans-1,3-dichloropropene	1,1,2-trichloroethane	1,3-dichloropropane	Chlorodibromomethane	2-hexanone (MBK)	1,2-dibromoethane (EDB)	Tetrachloroethene (Perchloroethylene,PCE)	1,1,1,2-tetrachloroethane	Chlorobenzene	Bromoform	cis-1,4-dichloro-2-butene	Styrene (Vinyl benzene)	1,1,2,2-tetrachloroethane	1,2,3-trichloropropane	trans-1,4-dichloro-2-butene	Isopropylbenzene (Cumene)	Bromobenzene	n-propylbenzene	2-chlorotoluene	4-chlorotoluene	1,3,5-trimethylbenzene	tert-butylbenzene	1,2,4-trimethylbenzene	sec-butylbenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	p-isopropyltoluene	1,2-dichlorobenzene	n-butylbenzene	1,2-dibromo-3-chloropropane	1,2,4-trichlorobenzene	Hexachlorobutadiene	1,2,3-trichlorobenzene	Total VOC	Total Volatile Chlorinated Hydrocarbons	Total Chlorinated Hydrocarbons VIC EPA	Total Other Chlorinated Hydrocarbons VIC EPA	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b&j&k)fluoranthene	Benzo(b&j)fluoranthene	Benzo(k)fluoranthene	Benzo(ghi)perylene	Benzo(a)pyrene	Chrysene	Dibenzo(ah)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-methylnaphthalene	2-methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Carcinogenic PAHs, BaP TEQ, <LOR=0	2-acetylaminofluorene	7,12-dimethyl-benz(a)anthracene	3-methylcholanthrene	Aldrin	Alpha-BHC	Beta-BHC	Delta-BHC	Gamma-BHC (Lindane)	p,p-DDD	p,p-DDE	p,p-DDT	Dieldrin	Alpha-endosulfan	Beta-endosulfan	Endosulfan sulphate	Endrin	Heptachlor	Heptachlor epoxide	Isodrin	Methoxychlor	Mirex	Alpha-chlordane	Gamma-chlordane
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	TEQ (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.1	0.1	0.1	5	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	24	3	1.8	1.8	0.1	0.1	0.1	0.1	0.2	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	0.2	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HIL B - Residential with Minimal Access to Soils			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,800	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	**Date**	**Depth**																																																																																
Maximum			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.4**	**1.0**	**2.6**	**3.3**	**2.2**	**0.9**	**1.1**	**1.3**	**1.8**	**0.2**	**7.2**	**0.0**	**1.4**	**0.0**	**0.0**	**0.1**	**4.5**	**6.1**	**2.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<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	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	**0.4**	**1.0**	**2.6**	**3.3**	**2.2**	**0.9**	**1.1**	**1.3**	**1.8**	**0.2**	**7.2**	<0.1	**1.4**	<0.1	<0.1	**0.1**	**4.5**	**6.1**	**2.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	**0.2**	**0.6**	**1.1**	**0.7**	**0.4**	<0.1	**0.4**	**0.5**	<0.1	**1.8**	<0.1	<0.1	<0.1	<0.1	<0.1	**1.1**	**1.5**	**0.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	**0.1**	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH19_0.8-1.0	9/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	**0.3**	**0.6**	**0.4**	**0.2**	**0.2**	**0.3**	**0.2**	<0.1	**0.6**	<0.1	**0.2**	<0.1	<0.1	<0.1	**0.3**	**0.5**	**0.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA05_0.5-0.7	9/11/2021	0.5-0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<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	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	**0.1**	**0.4**	**0.6**	**0.4**	**0.2**	**0.3**	**0.3**	**0.3**	<0.1	**1.0**	<0.1	**0.3**	<0.1	<0.1	<0.1	**0.6**	**0.8**	**0.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	**0.2**	<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	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA08_1.4-1.5	9/11/2021	1.4-1.5	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<24	<3	<3.3	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<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	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.2	<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	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
SES_617 - Soil Analytical Results
Harris Park - Contamination Assessment

Full 8270 SVOC in Soil

			Endrin ketone	Azinphos-methyl (Guthion)	Bromophos ethyl	Carbophenothion	Chlorfenvinphos-cis	Chlorfenvinphos-trans	Chlorpyrifos (Chlorpyrifos Ethyl)	Chlorpyrifos-methyl	Co-Ral (Coumaphos)	Diazinon (Dimpylate)	Dichlorvos	Demeton-S-methyl	Dimethoate	Disulfoton (Di-syston)	EPN	Ethion	Ethoprophos (ethoprop or prophos)	Famphur (Famophos)	Fenamiphos (Phenamiphos)	Fenchlorophos (Ronnel)	Fenitrothion	Fenthion	Malathion (Maldison)	Methidathion	Mevinphos-cis/trans	o,o,o-triethyl phosphorothioate	Parathion ethyl (Parathion)	Parathion methyl	Phorate	Pirimiphos-ethyl	Pirimiphos-methyl	Profenofos	Prothiophos (Tokuthion)	Sulfotepp	Tetrachlorvinphos (Stirophos)	PCB Congener C28	PCB Congener C52	PCB Congener C101	PCB Congener C118	PCB Congener C138	PCB Congener C153	PCB Congener C180	Hexachlorobenzene (HCB)	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloroproprene	Pentachlorobenzene	Pentachloroethane	1,2,3,5 and 1,2,4,5 - tetrachlorobenzene	1,2,3,4-tetrachlorobenzene	1/2-Chloronaphthalene	1,2,4-trichlorobenzene	Bis(2-ethylhexyl)phthalate	Bis(2-ethylhexyl)adipate	Butyl benzyl phthalate	Di-n-butyl phthalate	Diethyl phthalate	Dimethyl phthalate	Dioctyl phthalate	Carbofuran	Carbaryl	Trifluralin	N-nitroso-di-n-butylamine (NDBA)	N-nitroso-diethylamine (NDEA)	N-nitroso-di-n-propylamine (NDPA)	N-nitroso-morpholine (NMOR)	N-nitroso-piperidine (NPIP)	N-nitroso-pyrrolidine (NPYR)	4-amino biphenyl	Acetophenone	1,3-dinitrobenzene	2,4-dinitrotoluene	2,6-dinitrotoluene	Isophorone	Nitrobenzene	p-(dimethylamino) azobenzene	Phenacetin	Pentachloronitrobenzene (quintozene)
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.2	0.2	0.5	2	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.2	0.5	0.2	0.5	1	0.5	0.2	0.5	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	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	1	0.5	1	0.5	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	1	1	0.5	1	0.5	0.5	0.5	0.5	1	1	0.5
HIL B - Residential with Minimal Access to Soils			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	**Date**	**Depth**																																																																																		
Maximum			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.8**	**0.0**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**6.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.8**	<0.5	**0.4**	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
BH19_0.8-1.0	9/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
HA05_0.5-0.7	9/11/2021	0.5-0.7	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	**6.3**	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
HA08_1.4-1.5	9/11/2021	1.4-1.5	<0.1	<0.2	<0.2	<0.5	<2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	**6.1**	<1	<0.5	<1	<0.5	<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	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
SES_617 - Soil Analytical Results
Harris Park - Contamination Assessment

Sample ID	Date	Depth	Aniline	4-chloroaniline	2-nitroaniline	3-nitroaniline	4-nitroaniline	Diphenylamine	o-toluidine	5-nitro-o-toluidine	1-naphthylamine	2-naphthylamine	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Bis(2-chloroisopropyl) ether	Bis(2-chloroethyl) ether	4-chlorophenyl phenyl ether	4-bromophenyl phenyl ether	Methyl methanesulfonate	Ethyl methanesulfonate	Dibenzofuran	Benzyl alcohol	Safrole	Isosafrole Isomer 1	Isosafrole Isomer 2	1,4-naphthoquinone	Thionazin	3/4-methyl phenol (m/p-cresol)	2-methyl phenol (o-cresol)	2,6-dichlorophenol	2,4,5-trichlorophenol	4-chloro-3-methylphenol	2-chlorophenol	2,4-dichlorophenol	2,4-dimethylphend	2-nitrophenol	Phenol	2,4,6-trichlorophenol	Pentachlorophenol	4-nitrophenol
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			3	1	1	1	1	0.5	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	1	1	0.5	1	0.5	1	1	0.5	1	1	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
HIL B - Residential with Minimal Access to Soils			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 0 to <1m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 1-2m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL-D Commercial for VI (Sand, 2-4m)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care Direct Contact HSL-B Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USEPA Regional Screening Levels - Residential			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
BH01_0.2-0.3	8/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.3-0.5	8/11/2021	0.3-0.5	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
BH04_1.2-1.4	8/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.5-0.7	8/11/2021	0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_2.0-2.2	8/11/2021	2.0-2.2	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
BH07_0.3-0.5	8/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	8/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.8-1.0	8/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.5-0.6	8/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_1.9-2.0	8/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10A_0.7-0.8	9/11/2021	0.7-0.8	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
BH10A_1.1-1.3	9/11/2021	1.1-1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_ACM_0.2-0.3	9/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.6-0.8	9/11/2021	0.6-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.3-0.4	9/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_ACM_0.4	9/11/2021	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_ACM_0.6	9/11/2021	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.7-0.8	9/11/2021	0.7-0.8	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
BH15_1.2-1.4	9/11/2021	1.2-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.5-0.6	9/11/2021	0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.8-0.9	9/11/2021	0.8-0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.6-0.7	9/11/2021	0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.9-1.0	9/11/2021	0.9-1.0	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
BH19_0.8-1.0	9/11/2021	0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.3-0.4	10/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.3-0.5	10/11/2021	0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_1.9-2.0	10/11/2021	1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.2-0.3	10/11/2021	0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_2.2-2.3	10/11/2021	2.2-2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_0.2-0.4	10/11/2021	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24_2.6-2.7	10/11/2021	2.6-2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.4	10/11/2021	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4-0.5	10/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_2.4-2.5	10/11/2021	2.4-2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4	8/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4-0.5	9/11/2021	0.4-0.5	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
HA05_0.5-0.7	9/11/2021	0.5-0.7	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
HA06_0.4-0.6	9/11/2021	0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.4-0.5	9/11/2021	0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07_0.6-0.7	9/11/2021	0.6-0.7	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
HA08_1.4-1.5	9/11/2021	1.4-1.5	<3	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Trip Spike A	4/11/2021	Spike A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	4/11/2021	Blank 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01_0.3-0.4_FCP	4/11/2021	0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2 SES_617 - PASS Soil Analytical Results Harris Park - Contamination Assessment			Moisture	TAA (Titratable Actual Acidity)					Chromium Reducible Sulphur (CRS)		HCl Extractable S, Ca and Mg in Soil/Solids ICP OES	Acid Neutralising Capacity (ANC)				Chromium Suite Net Acidity Calculations						
				pH KCl	Titratable Actual Acidity	Titratable Actual Acidity (TAA) moles H+/tonne	Titratable Actual Acidity (TAA) S%w/w	Sulphur (SKCl)	Chromium Reducible Sulphur (Scr)	Chromium Reducible Sulphur (Scr)	Acid Soluble Sulfur (SHCl)	Acid Neutralisation Capacity (ANCBT) as % $CaCO_3$	Acid Neutralisation Capacity (ANCBT) as kg H_2SO_4/t	ANC as % $CaCO_3$	Lime Equivalence	s-Net Acidity	a-Net Acidity	Liming Rate	Verification s-Net Acidity	a-Net Acidity without ANCBT	Liming Rate without ANCBT	s-Net Acidity without ANC
Units			%w/w	pH Units	kg H2SO4/T	moles H+/T	%w/w S	%w/w	%	moles H+/T	%w/w	% CaCO3	kg H2SO4/T	% CaCO3	% CaCO3	%w/w S	moles H+/T	kg CaCO3/T	%w/w S	moles H+/T	kg CaCO3/T	%w/w S
EQL			1	0	0.25	5	0.01	0.005	0.005	5	0.005	0.1	0.1	0.1	0.1	0.005	5	0.1	-20	5	0.1	0.005
ASSMAC 1998 - >1000T disturbance*			-	-	-	18	0.03		0.03	18	-	-	-	-	-	0.03	18	-	-	18	-	0.03
Sample ID	**Date**	**Depth**																				
BH01_1.5-2.0	8/11/2021	1.5-2.0	-	**7.4**	<0.25	<5	<0.01	-	<0.005	<5	-	**0.1**	**1.2**	**0.1**	**0.1**	<0.005	<5	<0.1	**-0.03**	<5	<0.1	<0.005
BH05_1.5-1.7	8/11/2021	1.5-1.7	-	**5.8**	**0.49**	**10**	**0.02**	-	**0.009**	**6**	-	-	-	-	-	**0.025**	**16**	NA	**0.01**	**16**	NA	**0.025**
BH19_1.4-1.6	9/11/2021	1.4-1.6	-	**6.2**	**0.31**	**6**	**0.01**	-	**0.007**	<5	-	-	-	-	-	**0.017**	**11**	NA	**0.01**	**11**	NA	**0.017**
BH19_2.3-2.5	9/11/2021	2.3-2.5	-	**6.4**	<0.25	<5	<0.01	-	<0.005	<5	-	-	-	-	-	<0.005	<5	<0.1	0.00	<5	<0.1	<0.005
BH20_2.5-2.7	10/11/2021	2.5-2.7	-	**6.4**	<0.25	<5	<0.01	-	<0.005	<5	-	-	-	-	-	<0.005	<5	<0.1	0.00	<5	<0.1	<0.005
BH22_2.3-2.4	10/11/2021	2.3-2.4	-	**6.4**	<0.25	<5	<0.01	-	<0.005	<5	-	-	-	-	-	<0.005	<5	<0.1	0.00	<5	<0.1	<0.005

Notes

ASSMAC 1998: - Acid Sulfate Soils Assessment Guidelines, NSW Acid Sulfate Soils Management Advisory Committee August 1998

*Action Criteria if more than 1000 tonnes disturbed

Table 3
SES617 - Groundwater and Effluent Treatment Plant
Analytical Results
Harris Park - Contamination Assessment

Sample ID	Date	Heavy Metals								Total Petroleum Hydrocarbons						Total Recoverable Hydrocarbons - ASC NEPM 2013						
		Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg	Benzene (F0)	C6 - C9 Fraction	TRH C10-C14	TRH C15-C28	TRH C29-C36	TRH C37-C40	C6 - C10 Fraction	TRH C6-C10 minus BTEX (F1)	TRH >C10-C16	TRH >C10-C16 - Naphthalene (F2)	TRH >C16-C34 (F3)	TRH >C34-C40 (F4)	TRH C10-C40
Units		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		1.0	0.1	1.0	1.0	1.0	1.0	5.0	0.1	0.5	40.0	50.0	200.0	200.0	200.0	50.0	50.0	50.0	60.0	500.0	500.0	320.0
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	800	-	-	-	-	-	-	1,000	-	1,000	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		13*	0.7	4.4	1.3	4.4	7	8	0.1	500	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	**2**	<0.1	<1	**1**	<1	**2**	<5	<0.0001	<0.5	<40	<50	<200	<200	<200	<50	<50	<60	<60	<500	<500	<320
MW02	12/11/2021	<1	<0.1	<1	<1	<1	**2**	<5	<0.0001	<0.5	<40	<50	<200	<200	<200	<50	<50	<60	<60	<500	<500	<320
MW03	12/11/2021	<1	<0.1	<1	<1	<1	<1	<5	<0.0001	<0.5	<40	<50	<200	<200	<200	<50	<50	<60	<60	<500	<500	<320
QZ01	12/11/2021	<1	<0.1	<1	<1	<1	<1	<5	<0.0001	<0.5	<40	<50	<200	<200	<200	<50	<50	<60	<60	<500	<500	<320
ETP01	12/11/2021	<1	<0.1	<1	**4**	<1	<1	**100**	<0.0001	<0.5	<40	<50	<200	<200	<200	<50	<50	<60	<60	<500	<500	<320
ETP02	12/11/2021	<1	<0.1	<1	**3**	<1	<1	**100**	<0.0001	<0.5	<40	<50	<200	<200	<200	<50	<50	<60	<60	<500	<500	<320
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Date	BTEXN							
		Benzene	Toluene	Ethylbenzene	m/p-xylene	o-xylene	Naphthalene	Total Xylenes	Total BTEX
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR		0.5	0.5	0.5	1.0	0.5	0.5	1.5	3.0
HSL-A&B Residential for VI (Sand)		800	NL(61,000)	NL(3,900)	-	-	NL(170)	NL(21,000)	-
ANZG 2018 Eco (Marine) 95% Protection		500	-	-	200*	350*	50	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-
MW01	12/11/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5
MW02	12/11/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5
MW03	12/11/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5
QZ01	12/11/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5
ETP01	12/11/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5
ETP02	12/11/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5
Trip Spike C	26/10/2021	[105%]	[105%]	[103%]	[102%]	[102%]	-	-	-
Trip Blank 3	26/10/2021	<0.5	<0.5	<0.5	<1	<0.5	<3	<0.5	<1.5

Sample ID	Date	Polycyclic Aromatic Hydrocarbons																		
		Naphthalene	2-methylnaphthalene	1-methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b&j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(ah)anthracene	Benzo(ghi)perylene	Total PAH (18)
Units		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		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
HSL-A&B Residential for VI (Sand)		NL(170)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
MW02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
MW03	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
QZ01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
ETP01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
ETP02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Date	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic Acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR		0.0005	0.0005	0.0005	0.0005	0.0005	0.0010	0.001
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	10	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	220	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	19	-	-
MW01	12/11/2021	<0.0005	**0.0008**	<0.0005	**0.0076**	**0.0086**	**0.001**	<0.001
MW02	12/11/2021	**0.0087**	**0.0050**	**0.0012**	**0.0063**	**0.0074**	**0.002**	<0.001
MW03	12/11/2021	**0.0095**	**0.0036**	**0.0010**	<0.0005	<0.0005	<0.001	<0.001
QZ01	12/11/2021	-	-	-	-	-	-	-
ETP01	12/11/2021	**0.0065**	**0.0012**	**0.0014**	**0.0044**	**0.0060**	<0.001	<0.001
ETP02	12/11/2021	**0.0076**	**0.0014**	**0.0014**	**0.0034**	**0.0031**	<0.001	<0.001
Trip Spike C	26/10/2021	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-

Notes

NEPM 2013 Table 1A(41) - Health Screening Level HSL for Low and High Density Residential for Vapour Intrusion (Sand)

Australian and New Zealand Water quality guidelines 2018 Freshwater Ecological 95% Protection Values

*No marine 95% protection value, Freshwater 95% protection value adopted

Table 3
SES617 - Groundwater and Effluent Treatment Plant
Analytical Results
Harris Park - Contamination Assessment

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level

Sample ID	Date	Perfluoroundecanoic acid (PFUnA)	Perfluorododecanoic acid (PFDoA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutane sulfonate (PFBS)	Perfluoropentane sulfonate (PFPeS)	Perfluorohexane sulfonate (PFHxS)	Perfluoroheptane sulfonate (PFHpS)	Perfluorooctane sulfonate (PFOS)	Sum of PFHxS and PFOS	Perfluorononane sulfonate (PFNS)	Perfluorodecane sulfonate (PFDS)	Perfluorododecane sulfonate (PFDoS)	1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	Perfluorooctane sulfonamide (PFOSA)	N-Methylperfluorooctane sulfonamide (N-MeFOSA)	N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	N-Methylperfluorooctanesulfonamidoacetic acid (N MeFOSAA)	N-Ethylperfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	Total PFAS (n=30)
	Units	**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	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.0002**	**0.0002**	**0.0002**	**0.0002**	**0.0005**	**0.0005**	**0.0005**	**0.0005**	**0.0005**	**0.0005**	**0.002**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.006**
	HSL-A&B Residential for VI (Sand)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ANZG 2018 Eco (Marine) 95% Protection	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NEMP V2 Human Health - Recreational Use (HEPA, Jan	-	-	-	-	-	-	-	**2**	-	**2**	**2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NEMP V2 Ecological - Marine water 95% species	-	-	-	-	-	-	-	-	-	**0.13**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NEMP V2 Ecological - Marine water 99% species	-	-	-	-	-	-	-	-	-	**0.00023**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	**0.018**
MW02	12/11/2021	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	**0.0004**	<0.0002	**0.0007**	**0.0011**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	**0.0328**
MW03	12/11/2021	<0.001	<0.001	<0.001	<0.001	<0.002	**0.002**	<0.001	**0.0041**	<0.0002	**0.027**	**0.031**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	**0.0782**
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	**0.0003**	<0.0002	**0.0012**	**0.0015**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	**0.0225**
ETP02	12/11/2021	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	**0.0002**	<0.0002	**0.0012**	**0.0014**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	**0.0197**
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Date	Dichlorodifluoromethane (CFC-12)	Chloromethane	Vinyl chloride (Chloroethene)	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone (2-propanone)	Iodomethane	1,1-dichloroethene	Acrylonitrile	Dichloromethane (Methylene chloride)	Allyl chloride	Carbon disulfide	trans-1,2-dichloroethene	MtBE (Methyl-tert-butyl ether)	1,1-dichloroethane	Vinyl acetate	MEK (2-butanone)	cis-1,2-dichloroethene	Bromochloromethane	Chloroform (THM)	2,2-dichloropropane	1,2-dichloroethane	1,1,1-trichloroethane	1,1-dichloropropene	Carbon tetrachloride	Dibromomethane	1,2-dichloropropane	Trichloroethene (Trichloroethylene,TCE)	Bromodichloromethane (THM)	MIBK (4-methyl-2-pentanone)
	Units	**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	**5.0**	**5.0**	**0.3**	**10.0**	**5.0**	**1.0**	**10.0**	**5.0**	**0.5**	**0.5**	**5.0**	**2.0**	**2.0**	**0.5**	**2.0**	**0.5**	**10.0**	**10.0**	**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**
	HSL-A&B Residential for VI (Sand)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ANZG 2018 Eco (Marine) 95% Protection	-	-	**100**	-	-	-	-	-	**700**	-	-	-	-	-	-	**90**	-	-	-	-	-	-	**1900**	**270**	-	**240**	-	-	-	-	-
	NEMP V2 Human Health - Recreational Use (HEPA, Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NEMP V2 Ecological - Marine water 95% species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NEMP V2 Ecological - Marine water 99% species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	<5	<5	<0.3	<10	<5	<1	<10	<5	<0.5	<0.5	<5	<2	<2	<0.5	<0.5	<0.5	<10	<10	<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
MW02	12/11/2021	<5	<5	<0.3	<10	<5	<1	<10	<5	<0.5	<0.5	<5	<2	<2	<0.5	<0.5	<0.5	<10	<10	<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
MW03	12/11/2021	<5	<5	<0.3	<10	<5	<1	<10	<5	<0.5	<0.5	<5	<2	<2	<0.5	<0.5	<0.5	<10	<10	<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
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<5	<5	<0.3	<10	<5	<1	<10	<5	<0.5	<0.5	<5	<2	<2	<0.5	<0.5	<0.5	<10	<10	<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
ETP02	12/11/2021	<5	<5	<0.3	<10	<5	<1	<10	<5	<0.5	<0.5	<5	<2	<2	<0.5	<0.5	<0.5	<10	<10	<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
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3
SES617 - Groundwater and Effluent Treatment Plant
Analytical Results
Harris Park - Contamination Assessment

		VOCs in Water																																	
		cis-1,3-dichloropropene	trans-1,3-dichloropropene	1,1,2-trichloroethane	1,3-dichloropropane	Dibromochloromethane (THM)	2-hexanone (MBK)	1,2-dibromoethane (EDB)	Tetrachloroethene (Perchloroethylene,PCE)	1,1,1,2-tetrachloroethane	Chlorobenzene	Bromoform (THM)	cis-1,4-dichloro-2-butene	Styrene (Vinyl benzene)	1,1,2,2-tetrachloroethane	1,2,3-trichloropropane	trans-1,4-dichloro-2-butene	Isopropylbenzene (Cumene)	Bromobenzene	n-propylbenzene	2-chlorotoluene	4-chlorotoluene	1,3,5-trimethylbenzene	tert-butylbenzene	1,2,4-trimethylbenzene	sec-butylbenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	p-isopropyltoluene	1,2-dichlorobenzene	n-butylbenzene	1,2-dibromo-3-chloropropane	1,2,4-trichlorobenzene	Hexachlorobutadiene	1,2,3-trichlorobenzene
Units		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		0.5	0.5	0.5	0.5	0.5	5.0	0.5	0.5	0.5	0.5	0.5	1.0	0.5	0.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	6500	-	-	-	-	70	-	-	-	-	30*	400	-	-	-	-	-	-	-	-	-	-	-	260	60	-	160	-	-	20	-	3
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	Date																																		
MW01	12/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<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	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW02	12/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<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	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW03	12/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<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	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<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	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ETP02	12/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<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	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b&j)fluoranthene	Benzo(k)fluoranthene	Benzo(ghi)perylene	Benzo(a)pyrene	Chrysene	Dibenzo(ah)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-methylnaphthalene	2-methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	2-acetylaminofluorene	7,12-dimethyl-benz(a)anthracene	3-methylcholanthrene
Units		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		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	Date																					
MW01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5
MW02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5
MW03	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5
ETP02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Aldrin	Alpha-BHC	Beta-BHC	Delta-BHC	Gamma-BHC (Lindane)	p,p-DDD	p,p-DDE	p,p-DDT	Dieldrin	Alpha-endosulfan	Beta-endosulfan	Endosulfan sulphate	Endrin	Heptachlor
Units		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		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	Date														
MW01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW03	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ETP02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3
SES617 - Groundwater and Effluent Treatment Plant
Analytical Results
Harris Park - Contamination Assessment

Full 8270 SVOC in Water

Sample ID	Date	Heptachlor epoxide	Isodrin	Methoxychlor	Mirex	Alpha-chlordane	Gamma-chlordane	Endrin ketone	Azinphos-methyl (Guthion)	Bromophos ethyl	Carbophenothion	Chlorfenvinphos-cis	Chlorfenvinphos-trans	Chlorpyrifos (Chlorpyrifos Ethyl)	Chlorpyrifos-methyl	Co-Ral (Coumaphos)	Diazinon (Dimpylate)	Dichlorvos	Demeton-S-methyl	Dimethoate	Disulfoton (Di-syston)	EPN	Ethion	Ethoprophos (Ethoprop or Prophos)	Famphur (Famophos)
	Units	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5	5.0	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.5	<5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
MW02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.5	<5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
MW03	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.5	<5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.5	<5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
ETP02	12/11/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.5	<5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Date	Fenamiphos (Phenamiphos)	Fenchlorophos (Ronnel)	Fenitrothion	Fenthion	Malathion (Maldison)	Methidathion	Mevinphos-cis/trans	o,o,o-triethyl phosphorothioate	Parathion ethyl (Parathion)	Parathion methyl	Phorate	Pirimiphos-ethyl	Pirimiphos-methyl	Profenofos	Prothiophos (Tokuthion)	Sulfotepp	Tetrachlorvinphos (Stirophos)	PCB Congener C28	PCB Congener C52	PCB Congener C101	PCB Congener C118	PCB Congener C138	PCB Congener C153	PCB Congener C180
	Units	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	0.5	0.5	0.2	0.5	0.2	0.5	1.0	0.5	0.2	0.5	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
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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
MW02	12/11/2021	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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
MW03	12/11/2021	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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
ETP02	12/11/2021	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<1	<0.5	<0.2	<0.5	<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
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Date	Hexachlorobenzene (HCB)	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Pentachlorobenzene	Pentachloroethane	1,2,3,4-tetrachlorobenzene	1/2-Chloronaphthalene	1,2,4-trichlorobenzene	Bis(2-ethylhexyl)phthalate	Bis(2-ethylhexyl)adipate	Butyl benzyl phthalate	Di-n-butyl phthalate	Diethyl phthalate	Dimethyl phthalate	Dioctyl phthalate	Carbofuran	Carbaryl
	Units	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	0.1	0.5	0.5	0.5	0.5	2.0	0.5	0.5	0.5	0.5	0.5	1.0	0.5	10.0	1.0	1.0	10.0	5.0	1.0	1.0	0.5	0.5
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	12/11/2021	<0.1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<10	<1	<1	<10	<5	<1	<1	<0.5	<0.5
MW02	12/11/2021	<0.1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<10	<1	<1	<10	<5	<1	<1	<0.5	<0.5
MW03	12/11/2021	<0.1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<10	<1	<1	<10	<5	<1	<1	<0.5	<0.5
QZ01	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<10	<1	<1	<10	<5	<1	<1	<0.5	<0.5
ETP02	12/11/2021	<0.1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<10	<1	<1	<10	<5	<1	<1	<0.5	<0.5
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3
SES617 - Groundwater and Effluent Treatment Plant
Analytical Results
Harris Park - Contamination Assessment

		Trifluralin	N-nitroso-di-n-butylamine (NDBA)	N-nitroso-diethylamine (NDEA)	N-nitroso-di-n-propylamine (NDPA)	N-nitroso-morpholine (NMOR)	N-nitroso-piperidine (NPIP)	N-nitroso-pyrrolidine (NPYR)	4-amino biphenyl	Acetophenone	1,3-dinitrobenzene	2,4-dinitrotoluene	2,6-dinitrotoluene	Isophorone	Nitrobenzene	p-(dimethylamino) azobenzene	Phenacetin	Pentachloronitrobenzene (quintozene)	Aniline	4-chloroaniline	2-nitroaniline	3-nitroaniline	4-nitroaniline	Diphenylamine	o-Toluidine	5-nitro-o-toluidine	1-naphthylamine	2-naphthylamine	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Bis(2-chloroisopropyl) ether	4-chlorophenyl phenyl ether	4-bromophenyl phenyl ether	Methyl methanesulfonate	Ethyl methanesulfonate	Dibenzofuran	Benzyl alcohol	Safrole	Isosafrole Isomer 1	Isosafrole Isomer 2	1,4-naphthoquinone	Thionazin	3/4-methyl phenol (m/p-cresol)	2-methyl phenol (o-cresol)	2,6-dichlorophenol	2,3,4,6-tetrachlorophenol	2,4,5-trichlorophenol	4-chloro-3-methylphenol	2-chlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2-nitrophenol	Phenol	2,4,6-trichlorophenol	Pentachlorophenol	4-nitrophenol	Total Endosulfan (alpha+beta+sulfate)
Units		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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR		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	1.0	1.0	1.0	1.0	1.0	1.0	2.0	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	0.5	0.5	0.5	0.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.2
HSL-A&B Residential for VI (Sand)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG 2018 Eco (Marine) 95% Protection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Human Health - Recreational Use (HEPA, Jan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 95% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP V2 Ecological - Marine water 99% species		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	**Date**																																																															
MW01	12/11/2021	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2
MW02	12/11/2021	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2
MW03	12/11/2021	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2
QZO1	12/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ETP01	12/11/2021	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2
ETP02	12/11/2021	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2
Trip Spike C	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 3	26/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 4 Soil Sampling QAQC	Sample ID Date		BH01_0.2-0.3 8/11/21	QC01 8/11/21	%RPD	BH08_0.8-1.0 8/11/21	QC03 #####	%RPD	BH09_0.5-0.6 8/11/21	QC02 #####	%RPD	BH11_0.2-0.3 9/11/21	QC04 #####	%RPD	BH17_0.8-0.9 9/11/21	QC05 #####	%RPD
Moisture	%w/w	1	14.4	17.3	**18.3**	19.6	16.7	**16.0**	9.9	11.2	**12.3**	18.8	19.8	**5.2**	13.8	11.4	**19.0**
Arsenic, As	mg/kg	1	3	3	**0.0**	5	5	**0.0**	3	3	**0.0**	3	3	**0.0**	4	4	**0.0**
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-
Chromium, Cr	mg/kg	0.5	3.2	2.8	**13.3**	8.1	8.3	**2.4**	12	12	**0.0**	2.6	2.2	**16.7**	11	6.2	**55.8**
Copper, Cu	mg/kg	0.5	15	11	**30.8**	15	17	**12.5**	30	19	**44.9**	9.7	9.0	**7.5**	28	8.5	**106.8**
Lead, Pb	mg/kg	1	13	11	**16.7**	54	50	**7.7**	32	55	**52.9**	8	7	**13.3**	71	24	**98.9**
Nickel, Ni	mg/kg	0.5	14	13	**7.4**	5.2	7.2	**32.3**	41	13	**103.7**	9.3	7.6	**20.1**	7.5	3.2	**80.4**
Zinc, Zn	mg/kg	2	15	15	**0.0**	61	63	**3.2**	50	58	**14.8**	10	10	**0.0**	160	26	**144.1**
Mercury, Hg	mg/kg	0.1	<0.05	<0.05	-	0.28	0.13	**73.2**	0.07	0.12	**52.6**	<0.05	<0.05	-	0.17	0.19	**11.1**
Benzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Toluene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
m/p-xylene	mg/kg	0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-
o-xylene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Total Xylenes	mg/kg	0.3	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	-	<0.6	<0.6	-	<0.6	<0.6	-	<0.6	<0.6	-	<0.6	<0.6	-
Naphthalene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
TRH C6-C9	mg/kg	20	<20	<20	-	<20	<20	-	<20	<20	-	<20	<20	-	<20	<20	-
TRH C6-C10	mg/kg	25	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-
TRH C10-C14	mg/kg	20	<20	<20	-	<20	<20	-	<20	<20	-	<20	<20	-	<20	<20	-
TRH C15-C28	mg/kg	45	<45	<45	-	52	64	**20.7**	59	80	**30.2**	61	57	**6.8**	230	<45	-
TRH C29-C36	mg/kg	45	<45	<45	-	<45	51	-	81	96	**16.9**	<45	<45	-	190	<45	-
TRH C37-C40	mg/kg	100	<100	<100	-	<100	<100	-	<100	<100	-	<100	<100	-	<100	<100	-
TRH >C10-C16	mg/kg	25	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-	<25	<25	-
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	-	<90	110	-	130	150	**14.3**	<90	<90	-	380	<90	-
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	<120	<120	-	<120	<120	-	<120	<120	-	<120	<120	-
TRH C10-C36 Total	mg/kg	110	<110	<110	-	<110	120	-	140	180	**25.0**	<110	<110	-	420	<110	-
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	<210	<210	-	<210	<210	-	<210	<210	-	380	<210	-
Naphthalene	mg/kg	0.1	<0.1	<0.1	-	0.1	<0.1	-	<0.1	<0.1	-	<0.1	0.3	-	<0.1	<0.1	-
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	0.1	0.6	**142.9**	<0.1	<0.1	-
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	0.2	0.6	**100.0**	<0.1	<0.1	-
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	-	0.4	0.3	**28.6**	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Acenaphthene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Fluorene	mg/kg	0.1	<0.1	<0.1	-	0.1	0.1	**0.0**	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Phenanthrene	mg/kg	0.1	0.2	0.2	**0.0**	1.8	1.7	**5.7**	0.2	0.3	**40.0**	0.4	0.9	**76.9**	0.5	0.4	**22.2**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	1.9	1.9	**0.0**	0.2	0.2	**0.0**	0.1	0.2	**66.7**	0.6	0.4	**40.0**
Chrysene	mg/kg	0.1	<0.1	0.1	-	2.0	2.0	**0.0**	0.2	0.3	**40.0**	0.2	0.2	**0.0**	0.8	0.4	**66.7**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	2.0	2.1	**4.9**	0.2	0.3	**40.0**	<0.1	0.1	-	0.7	0.4	**54.5**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	1.0	1.0	**0.0**	0.1	0.1	**0.0**	<0.1	<0.1	-	0.3	0.2	**40.0**
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	-	1.8	1.9	**5.4**	0.2	0.2	**0.0**	<0.1	<0.1	-	0.5	0.3	**50.0**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	1.1	1.2	**8.7**	0.1	0.1	**0.0**	<0.1	<0.1	-	0.4	0.2	**66.7**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	0.2	0.2	**0.0**	<0.1	<0.1	-	<0.1	<0.1	-	0.1	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	1.0	1.1	**9.5**	0.1	0.1	**0.0**	<0.1	<0.1	-	0.4	0.2	**66.7**
Carcinogenic PAHs, BaP TEQ	TEQ (mg/kg)	0.2	<0.2	<0.2	-	2.7	2.7	**0.0**	0.3	0.4	**28.6**	<0.2	<0.2	-	0.8	0.5	**46.2**
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	-	21	21	**0.0**	2.2	2.9	**27.5**	1.3	3.3	**87.0**	6.3	3.9	**47.1**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	-	21	21	**0.0**	2.2	2.9	**27.5**	1.0	2.2	**75.0**	6.3	3.9	**47.1**

Table 4 Soil Sampling QAQC	Sample ID Date		Trip Spike A 4/11/2021	Trip Blank 1 4/11/2021
Benzene	mg/kg	0.1	[87%]	<0.1
Toluene	mg/kg	0.1	[90%]	<0.1
Ethylbenzene	mg/kg	0.1	[92%]	<0.1
m/p-xylene	mg/kg	0.2	[92%]	<0.2
o-xylene	mg/kg	0.1	[92%]	<0.1
Total Xylenes	mg/kg	0.3	-	<0.3
Total BTEX	mg/kg	0.6	-	<0.6
Naphthalene	mg/kg	0.1	-	<0.1
Criteria			***70%-130%***	***<LOR***

Table 5 Groundwater Sampling QAQC	Units	LOR	MW03 12/11/2021	QZ01 12/11/2021	%RPD
Arsenic, As	µg/L	1.0	<1	<1	-
Cadmium, Cd	µg/L	0.1	<0.1	<0.1	-
Chromium, Cr	µg/L	1.0	<1	<1	-
Copper, Cu	µg/L	1.0	<1	<1	-
Lead, Pb	µg/L	1.0	<1	<1	-
Nickel, Ni	µg/L	1.0	<1	<1	-
Zinc, Zn	µg/L	5.0	<5	<5	-
Mercury, Hg	µg/L	0.1	<0.0001	<0.0001	-
Benzene (F0)	µg/L	0.5	<0.5	<0.5	-
C6 - C9 Fraction	µg/L	40.0	<40	<40	-
TRH C10-C14	µg/L	50.0	<50	<50	-
TRH C15-C28	µg/L	####	<200	<200	-
TRH C29-C36	µg/L	####	<200	<200	-
TRH C37-C40	µg/L	####	<200	<200	-
C6 - C10 Fraction	µg/L	50.0	<50	<50	-
TRH C6-C10 minus BTEX (F1)	µg/L	50.0	<50	<50	-
TRH >C10-C16	µg/L	50.0	<60	<60	-
TRH >C10-C16 - Naphthalene (F2)	µg/L	60.0	<60	<60	-
TRH >C16-C34 (F3)	µg/L	####	<500	<500	-
TRH >C34-C40 (F4)	µg/L	####	<500	<500	-
TRH C10-C40	µg/L	####	<320	<320	-
Benzene	µg/L	0.5	<0.5	<0.5	-
Toluene	µg/L	0.5	<0.5	<0.5	-
Ethylbenzene	µg/L	0.5	<0.5	<0.5	-
m/p-xylene	µg/L	1.0	<1	<1	-
o-xylene	µg/L	0.5	<0.5	<0.5	-
Naphthalene	µg/L	0.5	<3	<3	-
Total Xylenes	µg/L	1.5	<0.5	<0.5	-
Total BTEX	µg/L	3.0	<1.5	<1.5	-
Naphthalene	µg/L	0.1	<0.1	<0.1	-
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	-
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	-
Acenaphthylene	µg/L	0.1	<0.1	<0.1	-
Acenaphthene	µg/L	0.1	<0.1	<0.1	-
Fluorene	µg/L	0.1	<0.1	<0.1	-
Phenanthrene	µg/L	0.1	<0.1	<0.1	-
Anthracene	µg/L	0.1	<0.1	<0.1	-
Fluoranthene	µg/L	0.1	<0.1	<0.1	-
Pyrene	µg/L	0.1	<0.1	<0.1	-
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	-
Chrysene	µg/L	0.1	<0.1	<0.1	-
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	-
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	-
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	-
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	-
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	-
Total PAH (18)	µg/L	1.0	<1	<1	-

Table 5 Groundwater Sampling QAQC	Sample ID Date		Trip Spike C 13/12/2021	Trip Blank 3 13/12/2021
Moisture	%w/w	1	<1	-
Benzene	mg/kg	0.1	[105%]	<0.5
Toluene	mg/kg	0.1	[105%]	<0.5
Ethylbenzene	mg/kg	0.1	[103%]	<0.5
m/p-xylene	mg/kg	0.2	[102%]	<1
o-xylene	mg/kg	0.1	[102%]	<0.5
Total Xylenes	mg/kg	0.3	-	<3
Total BTEX	mg/kg	0.6	-	<0.5
Naphthalene	mg/kg	0.1	-	<1.5
Criteria			***70%-130%***	***<LOR***

C

Appendix C Borehole and Groundwater Logs

ENVIRONMENTAL BOREHOLE LOG: BH01

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.0m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
0	HA					Concrete (0.115m)	No odours observed No suspected ACM observed
						FILL: Sand and ash/slag gravels, black	
			BH01_0.2-0.3 (QC01)			FILL: Sandy silt; brown, medium grained, loose, damp.	
			BH01_0.4-0.5				
0.5	PT					NATURAL Silty SAND: brown orange, medium grained, loose, damp to moist	
1							
1.5			BH01_1.5-1.7 BH01_1.5-2.0 (PASS)				
2						End of borehole at 2.0m	
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH02

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.0m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.13m)	No odours or staining observed No suspected ACM observed
						FILL: Sand and ash/slag gravels, black.	
						FILL: Sandy silt; brown, medium grained, loose, damp. Ceramic and gravel fragments present.	
			BH02_0.4-0.5				
0.5	PT					NATURAL Silty SAND: brown tan, medium grained, loose, moist	
1						SAND: tan to fawn with orange mottles, fine to medium grained, moist to wet. Grading to more orange	
1.5			BH02_1.5-1.7			Sandy CLAY: orange brown, low plasticity, stiff, damp	
2						End of borehole at 2.0m	
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH03

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.0m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
0	HA					Concrete (0.15m)	No odours or staining observed No suspected ACM observed
						FILL: Sand and ash/slag gravels, black.	
			BH03_0.3-0.5			FILL: Sandy Silt with some clay; brown, medium grained, loose, damp.	
0.5						Clay content increasing with depth	
1	PT					NATURAL Sandy CLAY: orange brown, low to medium plasticity, firm, moist.	
1.5						Becoming wetter	
2						Orange mottles and ironstone gravels present	
						End of borehole at 2.0m	
2.5							

ENVIRONMENTAL BOREHOLE LOG: BH04

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.0m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.21m)	
			BH04_0.3-0.5			FILL: Sand and ash/slag gravels, black grey with large gravels	No odours or staining observed No suspected ACM observed
0.5						NATURAL Clay SAND: brown red, medium grained, low plasticity, firm, moist.	
1	PT					Sandy CLAY: orange brown, low to medium plasticity, firm, moist	
			BH04_1.2-1.4			▽	Wet at 1.2m
1.5						CLAY: light brown orange, medium plasticity, firm with ironstone gravels present Becoming lighter grey	
2						End of borehole at 2.0m	
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH05

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.7m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.17m)	
						FILL: Sandy Gravel, brown, large boulder/ballast gravels, moist	No odours or staining observed No suspected ACM observed
			BH05_0.4-0.5				
0.5	SS						
						NATURAL? Gravelly CLAY: grey, low to medium plasticity, firm, dry.	
1	PT					NATURAL Sandy CLAY: grey then grey tan, high plasticity, soft, moist	
1.5			BH05_1.5-1.7 (PASS)				
2						ESTUARINE Clay/Silts	Anoxic estuarine odour
2.5							
						End of borehole at 2.7m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

BOREHOLE & GROUNDWATER LOG BH06 (MW01)

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
ADDRESS Gregory Place, Harris Park NSW
DRILLING COMPANY Epoca Drilling Pty Ltd
PROJECT NAME Site Contamination Assessment

TOTAL DEPTH 4.1m
DIAMETER 50mm
CASING uPVC
SCREEN uPVC Factory Slotted

DATE 8/11/2021
COORD SYS m AHD
SURFACE ELEVATION -
WELL TOC -

COMMENTS HA = Hand Auger, SS = Solid Stem Auger, PT = Push Tube

LOGGED BY A.S.
CHECKED BY S.G.

Depth (m)	Drill Method	PID	Samples	Graphic Log	Moisture	Material Description	Additional Observations	Well Diagram
0	HA					Concrete (0.16m)	No ACM observed No odours or staining observed	Gatic Cover
0.2						FILL: Gravelly Clay mixture, brown, large boulder ballast gravels, moist with roots.		
0.4								Bentonite plug
0.6			BH06_0.5-0.7			NATURAL Silty CLAY: brown with red yellow mottles, low to medium plasticity, some grey gravel/slate, moist		
0.8								
1	PT					Sandy CLAY: brown, medium plasticity, firm, moist.		
1.2								
1.4								
1.6								
1.8						Grey and wet		
2			BH06_2.0-2.2					
2.2								Fine grained sand filter pack
2.4								
2.6								
2.8	SS							
3						SHALE: weathered grey shale with some clay		
3.2								
3.4								
3.6								
3.8								
4								Backfilled
4.2						Refusal of borehole at 4.1m on shale		
4.4								

Disclaimer This bore log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH07

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.7m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.15m)	
						FILL: Sand and rock mixture with clay, brown, some ash gravels, large boulder/ballast gravels, moist, roots present	No odours or staining observed No suspected ACM observed
	SS		BH07_0.3-0.5				
0.5						NATURAL Sandy CLAY: brown grey, low to medium plasticity, firm, moist.	
1	PT					Becoming grey	
1.5						Becoming light brown, sticky	
2							
2.5						Clayey SAND: grey, medium grained, sand content increasing, moist	
						End of borehole at 2.7m	Wet at 2.7m

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH08

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.7m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.11m)	
						FILL: Sand Clay and rock mixture, dark brown, large boulder/ballast gravels, moist, roots present	No odours or staining observed No suspected ACM observed
	SS		BH08_0.4-0.5				
0.5						NATURAL Sandy CLAY: brown, low plasticity, medium grained sand, firm, moist.	
			BH08_0.8-1.0 (QC03)				
1	PT						
1.5						Sandy CLAY; grey, wet and sticky	
2						Clayey SAND: light grey, very soft.	
						Sandy CLAY; dark grey, low to medium plasticity, stiff, wet	
2.5							
						End of borehole at 2.7m	Wet at 2.7m

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

BOREHOLE & GROUNDWATER LOG BH09 (MW02)

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
ADDRESS Gregory Place, Harris Park NSW
DRILLING COMPANY Epoca Drilling Pty Ltd
PROJECT NAME Site Contamination Assessment

TOTAL DEPTH 4.1m
DIAMETER 50mm
CASING uPVC
SCREEN uPVC Factory Slotted

DATE 8/11/2021
COORD SYS m AHD
SURFACE ELEVATION -
WELL TOC -

COMMENTS HA = Hand Auger, SS = Solid Stem Auger, PT = Push Tube, HF = Hollow Stem Auger

LOGGED BY A.S.
CHECKED BY S.G.

Depth (m)	Drill Method	PID	Samples	Graphic Log	Moisture	Material Description	Additional Observations	Well Diagram
0	HA					Concrete (0.18m)	No ACM observed No odours or staining observed	Gatic Cover
0.2						Bedding sand then FILL: Gravelly sand mixture, brown, large boulder ballast gravels, moist.		
0.4	SS		BH09_0.5-0.6 (QC02)			FILL Clay mixture, brown to dark brown, medium plasticity with brick, ceramic and gravels. Ash like odour.		Bentonite plug
0.6								
0.8						NATURAL Sandy CLAY/Clayey SAND: brown to light brown, medium grained, loose, moist.		
1	PT							
1.2								
1.4								
1.6						Clayey SAND: light brown, medium grained, wet.		
1.8								
2			BH09_1.9-2.0					
2.2						Orange red with ironstone gravels		Fine grained sand filter pack
2.4								
2.6	HF							
2.8						Light brown		
3								
3.2								
3.4								
3.6						Red grey and wet		
3.8								
4								Backfilled
4.2						End of borehole at 4.1m		
4.4								

Disclaimer This bore log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH10

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 08/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 0.4m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.13m)	
						FILL Sand bedding layer (0.1m) then FILL: Sandy Gravel, grey	No Samples collected No odours or staining observed No suspected ACM observed
	SS						
0.5						Refusal on second slab at 0.4m	
1							
1.5							
2							
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH10A

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.7m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
						Concrete (2 slabs present totaling 0.57m)	Faint ash like odour No staining observed No suspected ACM observed
0.5	HA		BH10A_0.7-0.8			FILL Sand bedding layer (0.1m) then FILL: Sandy Clay, grey, medium plasticity, soft, moist to wet with roots, timber, ceramic tiles.	
1	PT		BH10A_1.1-1.3			NATURAL Sandy CLAY: brown, medium plasticity, medium grained sand, soft, moist.	
1.5						Clayey SAND: light brown, medium grained, wet	
2						Yellow brown	
2.5						Yellow grey	
						End of borehole at 2.7m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH11

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.0m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
0	HA					Concrete (0.14m)	
			BH11_0.2-0.3 (QC02)			FILL: ashy slag gravelly mixture	Ash like odour No staining observed No suspected ACM observed
						NATURAL? Silty Sandy CLAY: brown, low to medium plasticity, firm, moist.	
0.5	PT					NATURAL Sandy CLAY: orange brown, low to medium plasticity, hard, damp	
1							
1.5						Orange red mottles as above	
2						Brown as above	
						End of borehole at 2.0m	
2.5							

ENVIRONMENTAL BOREHOLE LOG: BH12

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.0m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.23m)	
			BH12_0.2-0.3 BH12_ACM_0.2-0.3			FILL: Sand, gravel and ash mixture, grey brown, glass present.	Ash like odour No staining observed Suspected ACM observed
						NATURAL? Sandy CLAY, brown, low plasticity, loose, damp	
0.5						NATURAL Sandy CLAY; yellow brown orange mottles, low plasticity, firm damp.	
	PT		BH12_0.6-0.8				
1						Becoming hard.	
1.5						Becoming soft	
2						Becoming hard and brown	
						End of borehole at 2.0m	
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH13

PROJECT NUMBER SES_617	**DRILLING DATE** 09/11/2021	**BORE SIZE** 100mm
CLIENT 2A Gregory Place Pty Ltd	**DRILLING COMPANY** EPOCA Drilling P/L	**TOTAL DEPTH** 0.6m
LOCATION Gregory Place, Harris Park NSW	**DRILLING METHOD** Truck Mounted Drill Rig	**LOGGED BY** A.S.
PROJECT NAME Site Contamination Assessment		**CHECKED BY** S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.12m)	
			BH13_0.2-0.3			FILL Gravelly Sand: yellow, medium grained then Sandy Clay mixture with asbestos fragments	No odours or staining observed Suspected ACM observed
			BH13_0.3-0.4 BH13_ACM_0.4				
0.5						Borehole abandoned due to high ACM content present at 0.4m	
1							
1.5							
2							
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 03 Feb 2022

ENVIRONMENTAL BOREHOLE LOG: BH14

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 0.6m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
0	HA					Concrete (0.12m)	Ash like odour No staining observed Suspected ACM observed
						FILL Gravelly Sand: black grey, medium grained with ash then Sandy Clay mixture with asbestos fragments	
			BH14_0.4-0.5				
0.5			BH14_ACM_0.6				
						Borehole abandoned due to high ACM content present at 0.6m	
1							
1.5							
2							
2.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH15

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	SS					Asphalt	
						FILL: Roadbase gravels	
			BH15_0.2-0.3			FILL: Crushed sandstone; red orange yellow and white, loose, dry. Brick and large sandstone boulders present	No staining observed No suspected ACM observed
0.5						Grey/Black with an ash like odour	
			BH15_0.7-0.8				
1	PT					Black ash layer	
						NATURAL Silty CLAY: green grey, low to medium plasticity, firm to stiff, moist	
			BH15_1.2-1.4				
1.5							
						Light brown to green, moist to wet	
2						Sandy CLAY: grey, low plasticity, soft to firm, moist	
2.5						End of borehole at 2.5m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH16

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	SS					Concrete (0.17m)	No staining observed No suspected ACM observed
						FILL: Sand and crushed sandstone; light brown, loose, dry. Large sandstone boulders present	
0.5			BH16_0.5-0.6			FILL: Gravelly Clay, grey, low plasticity, sandstone fragments, moist, ashy odour.	
1	PT					NATURAL Sandy CLAY: grey, non-plasticity, firm, moist.	
1.5						Grey brown, high plasticity, very soft, wet	
2							
2.5						End of borehole at 2.5m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH17

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	SS					Asphalt	No odours or staining observed No suspected ACM observed
						FILL: Roadbase gravels.	
						FILL: Crushed sandstone; white grey, loose, dry.	
0.5						Red brown.	
						FILL: Sandy Clay; brown, low plasticity, firm, brick fragments present.	
			BH17_0.8-0.9				
						NATURAL CLAY: grey, medium plasticity, firm, moist.	
1	PT						
1.5						Light brown with some ironstone gravels	
						Sandy CLAY: grey brown, low plasticity, firm, moist.	
2						Grey green with red/orange mottles, some gravel	
2.5						End of borehole at 2.5m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH18

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	SS					Asphalt	
						FILL: Roadbase gravels.	
						FILL: Crushed sandstone; white grey, loose, dry.	No odours or staining observed No suspected ACM observed
0.5						FILL: Clay with sandstone fragments, dark grey, medium plasticity, firm, moist. Some ashy gravels.	Ashy odours observed
			BH18_0.6-0.7				
						NATURAL Sandy CLAY: grey, high plasticity, soft, moist.	
			BH18_0.9-1.0				
1	PT						
						Grey green and soft	
1.5							
						Grey and very soft	
2							
						Brown grey with yellow and soft	
2.5						End of borehole at 2.5m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 17 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH19

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 09/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	Field pH	Samples	Graphic Log	USCS	Material Description	Additional Observations
0	SS					Asphalt	No odours or staining observed No suspected ACM observed
						FILL: Roadbase gravels.	
						FILL: Crushed sandstone; white grey yellow, loose, dry.	
0.5							
			BH19_0.8-1.0			NATURAL? Gravelly Sandy CLAY, grey green, low to medium plasticity, firm, moist.	
1	PT						
		7.70				Becoming Silty Clay, grey green.	
			BH19_1.4-1.6				
1.5						NATURAL Sandy CLAY/Clayey SAND: brown, low to medium plasticity, medium grained, firm, moist.	
		7.36					
2							
			BH19_2.3-2.5			Red orange yellow and firm	
		7.41					
2.5						End of borehole at 2.5m	

BOREHOLE & GROUNDWATER LOG BH20 (MW03)

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
ADDRESS Gregory Place, Harris Park NSW
DRILLING COMPANY Epoca Drilling Pty Ltd
PROJECT NAME Site Contamination Assessment

TOTAL DEPTH 4.0m
DIAMETER 50mm
CASING uPVC
SCREEN uPVC Factory Slotted

DATE 10/11/2021
COORD SYS m AHD
SURFACE ELEVATION -
WELL TOC -

COMMENTS HA = Hand Auger, SS = Solid Stem Auger, PT = Push Tube

LOGGED BY A.S.
CHECKED BY S.G.

Depth (m)	Drill Method	PID	Samples	Graphic Log	Moisture	Material Description	Additional Observations	Well Diagram
0	HA					Concrete (0.15m)		Gatic Cover
0.2						Bedding sand.	No ACM observed No odours or staining observed	
0.4			BH20_0.3-0.4			NATURAL Sandy SILT - Silty SAND: dark brown, fine grained sand, fairly uniform, medium dense and moist.		Bentonite plug
0.6								
0.8								
1	PT					Colour changes: tan brown with minor red flecks, some banding with coarser sands. Clay content increasing		
1.2								
1.4								
1.6						Red tan brown mottling		
1.8								
2						Sand band; dark red to brown, medium coarse, wet	Wet at 2.0m onwards	
2.2								Fine grained sand filter pack
2.4								
2.6			BH20_2.5-2.7 (PASS)			Clay content increases, yellow grey mottling, wet		
2.8								
3						Clayey SAND: brown, medium grained, saturated		
3.2								
3.4								
3.6								
3.8								
4						End of borehole at 4.0m		
4.2								
4.4								

Disclaimer This bore log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH21

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 10/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.19m)	Copper pipe in slab
			BH21_0.3-0.5			Silty SAND - Sandy SILT, orange brown, fine sands, uniform, medium dense, moist.	No odours or staining observed No suspected ACM observed
0.5						Becoming NATURAL Clayey SAND, orange red, medium course sands, moist.	
1							
	PT						
1.5						SAND; brown, uniform, medium to course grained moist.	
			BH21_1.9-2.0			▽	Wet at 2.0m
2							
2.5							
						End of borehole at 2.7m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH22

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 10/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.16m)	
			BH22_0.2-0.3			FILL: Silty sand and gravel mixture with some ash and concrete rubble	No odours or staining observed No suspected ACM observed
0.5						NATURAL Clayey SAND, orange red, medium course sands, moist.	
1							
	PT						
1.5						SAND; brown, uniform, medium to course grained moist.	
2						▽	Wet at 2.0m
						Clayey SAND; grey brown, medium course sands, wet.	
			BH22_2.3-2.4 (PASS)				
2.5						SAND; brown, uniform, medium to course grained saturated.	
			BH22_2.6-2.7				
						End of borehole at 2.7m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH23

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 10/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS Refusal at original borehole location on concrete at 0.3m, BH23 moved 1m NE. HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.12m)	
						FILL: Ashy slag sub-base layer	
			BH23_0.2-0.3				No odours or staining observed
						NATURAL Clayey SAND, orange red, medium course sands, moist.	No suspected ACM observed
0.5							
1							
	PT						
1.5						SAND; brown, uniform, medium to course grained moist.	
2						▽	Wet at 2.0m
						Gravelly SAND; grey brown, medium course sands, wet.	
			BH23_2.2-2.3				
						SAND; brown, uniform, medium to course grained saturated.	
2.5							
						End of borehole at 2.7m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH24

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 10/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.14m)	
			BH24_0.2-0.4			FILL: Ashy slag gravels and cinders sub-base layer	No odours or staining observed
0.5						NATURAL Clayey SAND, orange red, medium course sands, moist.	No suspected ACM observed
1							
	PT						
1.5						SAND; brown, uniform, medium to course grained moist.	
2						▽	Wet at 2.0m
2.5			BH24_2.6-2.7				
						End of borehole at 2.7m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH25

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 10/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 0.45m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA		BH25_0.4 (Bulk)			Concrete (0.17m) FILL: Gravel sub-base layer	No odours or staining observed
0.5 1 1.5 2 2.5						End of borehole at 0.45m on fibre cement materials possible ACM pipe	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: BH26

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 10/11/2021
DRILLING COMPANY EPOCA Drilling P/L
DRILLING METHOD Truck Mounted Drill Rig

BORE SIZE 100mm
TOTAL DEPTH 2.5m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
0	HA					Concrete (0.19m)	
						FILL: Road base gravel sub-base	
						FILL: Gravelly sand and ashy layer, very coarse.	No odours or staining observed No suspected ACM observed
			BH26_0.4-0.5				
0.5						NATURAL Clayey SAND, orange red, medium course sands, moist.	
1							
	PT						
1.5						SAND; brown, uniform, medium to course grained moist.	
						▽	Wet at 2.0m
2							
			BH26_2.4-2.5				
2.5						End of borehole at 2.5m	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: HA01

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 8/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.8m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.11m)	No odours or staining observed Multiple ACM fragments observed
						Bedding sand to 0.2m then FILL: Gravelly sand mixture with ACM sheet fragments. some ashy gravel with clay pipe pieces	
			HA01_0.3-0.4				
0.5						NATURAL Clayey SAND - Sandy CLAY, orange red, non plastic, medium grained sands, dense and dry.	
						End of borehole at 0.8m	
1							
1.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: HA02

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 8/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.4m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA		No sample collected			Concrete (0.3m)	
						Road base gravels	No odours or staining observed No ACM fragments observed
0.5						Refusal of borehole at 0.4m on smooth hard object	
1							
1.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: HA03

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 8/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.4m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA		No sample collected			Concrete (0.3m)	
						Road base and ballast gravels	No odours or staining observed No ACM fragments observed
0.5						Refusal of borehole at 0.4m on ballast rock	
1							
1.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: HA04

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 9/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.9m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.3m)	
						Gravel road base to 0.4m then	
			HA04_0.4-0.5			FILL: Gravelly sand and clay mixture.	No odours or staining observed No ACM observed
0.5						NATURAL Silty SAND - Sandy CLAY; brown, non plastic, fine to medium grained sands, dense and moist.	
1						End of borehole at 0.9m	
1.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: HA05

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 9/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.9m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.25m)	No odours or staining observed No ACM observed
						FILL: Gravelly clay mixture, brown large concrete chunks and other rubble.	
0.5			HA05_0.5-0.7			NATURAL Sandy CLAY - Clayey SAND with silt; brown, non plastic, fine grained sands, medium dense and moist.	
						End of borehole at 0.9m	
1							
1.5							

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 24 Jan 2022

ENVIRONMENTAL BOREHOLE LOG: HA06

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 9/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.8m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.3m)	
						NATURAL Sandy Silty CLAY; brown, non plastic, medium dense with some gravels, and moist.	
			HA06_0.4-0.6				
0.5							No odours or staining observed No ACM observed
						End of borehole at 0.8m	
1							
1.5							

ENVIRONMENTAL BOREHOLE LOG: HA07

PROJECT NUMBER SES_617
CLIENT 2A Gregory Place Pty Ltd
LOCATION Gregory Place, Harris Park NSW
PROJECT NAME Site Contamination Assessment

DRILLING DATE 9/11/2021
DRILLING COMPANY NA
DRILLING METHOD Hand Auger

BORE SIZE 100mm
TOTAL DEPTH 0.9m
LOGGED BY A.S.
CHECKED BY S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					Concrete (0.15m)	
						FILL Brick rubble and glass then Clayey Silty Sand mixture with metal and ceramic pieces	
			HA07_0.4-0.5				
0.5							No odours or staining observed No ACM observed
			HA07_0.6-0.7				
						NATURAL Clayey SAND with Silts; brown, medium grained, dense, and moist.	
						End of borehole at 0.9m	
1							
1.5							

ENVIRONMENTAL BOREHOLE LOG: HA08

PROJECT NUMBER SES_617	**DRILLING DATE** 9/11/2021	**BORE SIZE** 100mm
CLIENT 2A Gregory Place Pty Ltd	**DRILLING COMPANY** NA	**TOTAL DEPTH** 1.5m
LOCATION Gregory Place, Harris Park NSW	**DRILLING METHOD** Hand Auger	**LOGGED BY** A.S.
PROJECT NAME Site Contamination Assessment		**CHECKED BY** S.G.

COMMENTS HA = Hand auger, SS = Solid flight auger, PT = Push tube

Depth (m)	Method	PID	Samples	Graphic Log	USCS	Material Description	Additional Observations
	HA					FILL? Silty Sands - Sandy Silt; dark brown, loose with minor gravel.	No odours or staining observed No ACM observed
						NATURAL? Silty SAND - Clayey SAND; brown, fine grained sands, dense, and moist.	
0.5						Various brown colours with depth, predominantly light to medium brown.	
1							
			HA08_1.4-1.5				
1.5						End of borehole at 1.5m	

D

Appendix D Site Photos



Photo 1: Boiler Room – Underground tank under concrete floor

Photo 2: Effluent Treatment Plant



SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Appendix D	Address: **2A Gregory Place, Harris Park NSW 2150**



Photo 3: Underground water storage tank and pump house

Photo 4: Underground water storage tank



SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Appendix D	Address: **2A Gregory Place, Harris Park NSW 2150**



Photo 5: Old Chemical Depot

Photo 6: Former Aboveground Storage Tank bund – Old Chemical Depot



SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Appendix D	Address: **2A Gregory Place, Harris Park NSW 2150**



Photo 7: Clay Cliff Creek channel

Photo 8: Hand auger HA03 – Slab thickness and ballast sub-base



SULLIVAN environmental sciences	Project #: **SES_617 Harris Park**	Title: **Detailed Phase 2 Contamination Investigation**
	Appendix D	Address: **2A Gregory Place, Harris Park NSW 2150**

E

Appendix E Field Sheets and Calibration Certificates

F

Appendix F Proposed Development Plans

DRAFT

UNIT TYPES

1 BED		
98		
1 BED + S		
31	129*	(27.6%)
2 BED		
277		
2 BED + S		
21	298	(63.7%)
3 BED		(8.7%)
41		

Grand total: 468

UNIT TYPES - BLD A

1 BED		
32		
1 BED + S		
20	52	(25.4%)
2 BED		
117		
2 BED + S		
18	135	(65.9%)
3 BED		(8.7%)
18		

Grand total: 205

UNIT TYPES - BLD B

1 BED		
46		
1 BED + S		
3	49	(32.7%)
2 BED		
88		
2 BED + S		
3	91	(60.7%)
3 BED		(6.6%)
10		

Grand total: 150

UNIT TYPES - BLD C

1 BED		
20		
1 BED + S		
8	28	(24.8%)
2 BED		(63.7%)
72		
3 BED		(11.5%)
13		

Grand total: 113

NATURAL CROSS VENTILATION

YES
A: 111

YES
B: 94

YES
C: 71

276 (59.0%)

ADG GUIDELINE = 280.8 (60%)

SOLAR ACCESS (9AM-3PM)

YES
A: 152

YES
B: 88

YES
C: 88

328 (70.1%)

ADG GUIDELINE = 327.6 (70%)

GFA SCHEDULE

LEVEL	GFA (m²)
BUILDING A:	
L1 (G)	2640.45
L2	2939.04
L3	2939.04
L4	2939.04
L5	2726.16
L6	2074.24
L7	1428.88
L8	1428.88
	19115.71
BUILDING B:	
L1 (G)	2164.74
L2	2159.03
L3	2158.46
L4	2158.46
L5	1817.94
L6	1320.42
L7	971.96
L8	971.96
	13722.99
BUILDING C:	
L1 (G)	1136.94
L2	1253.30
L3	1253.30
L4	1253.30
L5	1253.30
L6	1253.30
L7	1253.30
L8	1253.30
	9910.05
PROPOSED GFA	42748.75
PROPOSED FSR	2.20:1
PROPOSED FSR (DEVELOPABLE)	2.51:1
TOTAL SITE AREA	19,480.00 m²
PROPOSED SITE AREA (DEVELOPABLE)	17,021.51 m²
TARGET GFA	48,700 m²
TARGET FSR	2.50:1

issue	amendment	date
1	PCG MEETING #1	21.07.21
2	ISSUE TO TRAFFIC ENGINEER FOR COMMENT	23.07.21

legend

do not scale from drawings.

the layout shown and the areas noted on this drawing are indicative only. layouts are to be read in conjunction with floor plans, elevations + sections.

architect
stanisic architects
Level 10 257 Clarence Street, Sydney NSW 2000
T (61 2) 9358 2588
www.stanisic.com.au ABN 11002633481
NSW ARB Frank Stanisic 4480

client
HALLMARK

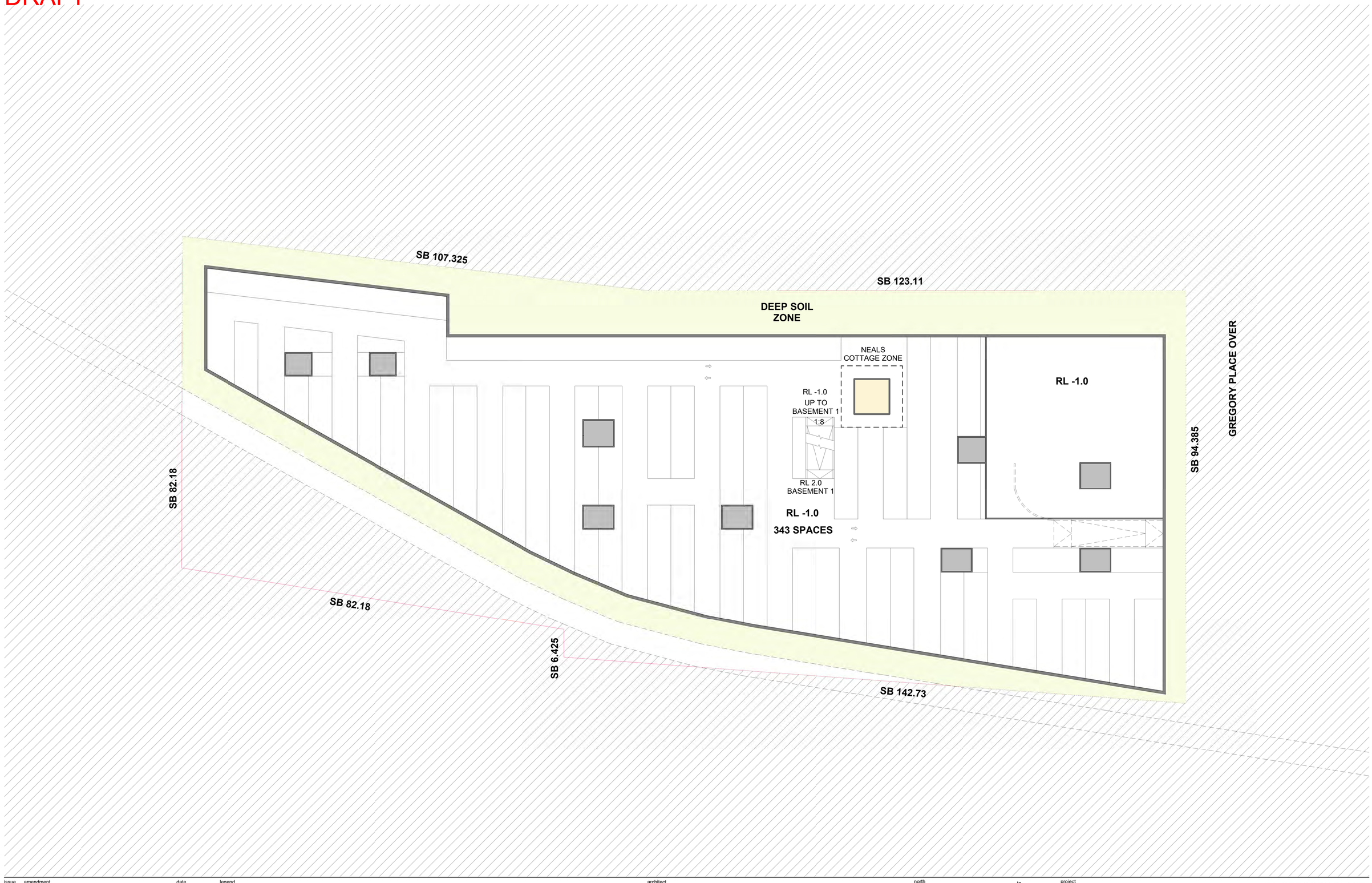
PRELIMINARY NOT FOR SUBMISSION

project
2A GREGORY PLACE
HARRIS PARK

checked: Checker
drawing: DEVELOPMENT DATA
scale:
drawn: Author
issue: 2
scale bar:
project no: 14 004
drawing no: CD 0002

23-Jul-21 3:10:51 PM

DRAFT



issue	amendment	date	legend
1	ISSUE TO TRAFFIC ENGINEER FOR COMMENT	23.07.21	

23-Jul-21 3:10:57 PM

do not scale from drawings.

the layout shown and the areas noted on this drawing are indicative only. layouts are to be read in conjunction with floor plans, elevations + sections.

architect

stanisic architects
Level 10 257 Clarence Street, Sydney NSW 2000
T (61 2) 9358 2588
www.stanisic.com.au ABN 11002633481
NSW ARB Frank Stanisic 4480

client

HALLMARK

PRELIMINARY NOT FOR SUBMISSION

north: tn

scale: 1:400@A1, 1:800@A3

scale bar: 0 4 8 12 16 20 m

project: 2A GREGORY PLACE, HARRIS PARK

drawing: BASEMENT 2 PLAN

checked: FS

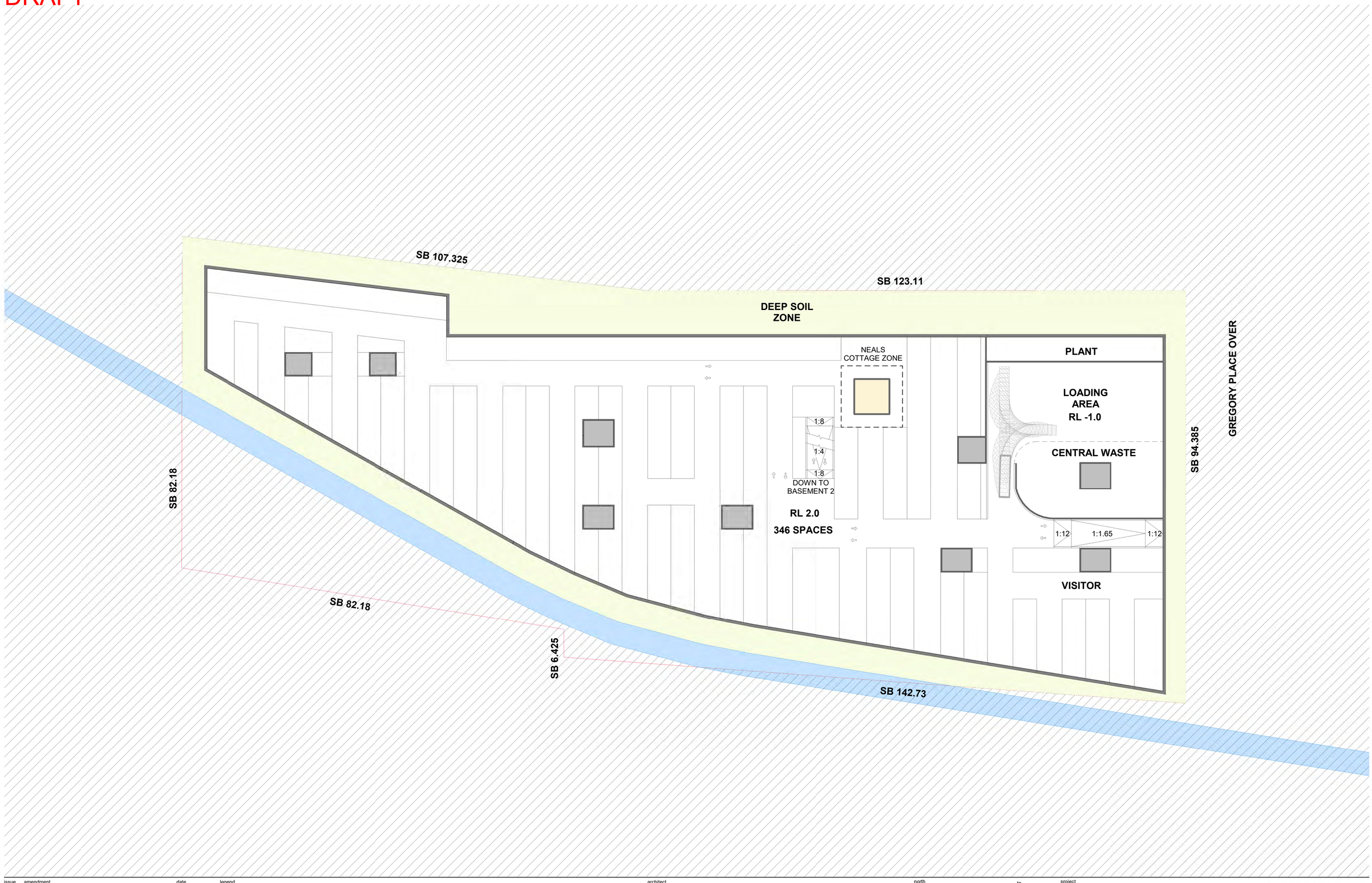
drawn: JN/AN

project no: 14 004

issue: 1

drawing no: CD 2001

DRAFT



issue	amendment	date	legend
1	ISSUE TO TRAFFIC ENGINEER FOR COMMENT	23.07.21	

23-Jul-21 3:11:03 PM

do not scale from drawings.

the layout shown and the areas noted on this drawing are indicative only. layouts are to be read in conjunction with floor plans, elevations + sections.

architect

stanisic architects Level 10 257 Clarence Street, Sydney NSW 2000
T (61 2) 9358 2588
www.stanisic.com.au ABN 11002633481
NSW ARB Frank Stanisic 4480

client

HALLMARK

PRELIMINARY NOT FOR SUBMISSION

north: tn

scale: 1:400@A1, 1:800@A3

scale bar: 0 4 8 12 16 20 m

project: 2A GREGORY PLACE, HARRIS PARK

checked: FS

drawing: BASEMENT 1 PLAN

drawn: JN/AN

issue: 1

project no: 14 004

drawing no: CD 2002

DRAFT



issue	amendment	date
1	PCG MEETING #1	21.07.21
2	ISSUE TO TRAFFIC ENGINEER FOR COMMENT	23.07.21

legend
- 1 BED
- 2 BED
- 3 BED

do not scale from drawings.

the layout shown and the areas noted on this drawing are indicative only. layouts are to be read in conjunction with floor plans, elevations + sections.

architect

stanisic architects
Level 10 257 Clarence Street, Sydney NSW 2000
T (61 2) 9358 2588
www.stanisic.com.au ABN 11002633481
NSW ARB Frank Stanisic 4480

client

HALLMARK

PRELIMINARY NOT FOR SUBMISSION

north: tn

scale: 1:400@A1, 1:800@A3

scale bar: 0 4 8 12 16 20 m

project: 2A GREGORY PLACE, HARRIS PARK

checked: FS

drawing: LEVEL 1 (G) PLAN

drawn: JN/AN

issue: 2

project no: 14 004

drawing no: CD 2003

23-Jul-21 3:11:15 PM

G

Appendix G Laboratory Analytical Certificates