Iglu No.210 Pty Ltd

Remedial Action Plan

Former Summer Hill Ambulance Station
74-75 Carlton Crescent
Summer Hill, NSW 2130

14 January 2019

55687/120075 (Rev 0)

JBS&G

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JBS&G

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Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Iglu No.210 Pty Ltd (Iglu, the client) to prepare a Remedial Action Plan (RAP) for the former Summer Hill Ambulance Station located at 74-75 Carlton Crescent, Summer Hill, NSW 2130 (the site). The site is formally identified as Lot 2 in DP717782, with a total area of approximately 2,730 m^2. The site location and site layout are presented on **Figure 1** and **Figure 2** respectively.

It is understood that the site is proposed to be redeveloped into high density student accommodation with associated management offices, common rooms over 4 levels and landscaping. The design plans for the proposed redevelopment are provided in **Appendix A**.

This RAP supports the lodgement of Development Application DA2018/220.1 to the Inner West Council.

A range of previous environmental assessments have been undertaken at the site including:

- *Waste Classification Assessment, Proposed Re-Development, 74 & 75 Carlton Crescent, Summer Hill NSW,* Environmental Investigation Services, 26 June 2015 (EIS 2015);
- *Underground Storage Tank Investigation Report, 74-75 Carlton Crescent, Summer Hill*, Land & Groundwater Consulting Pty Ltd, 9 May 2016 (LGC 2016); and
- *Phase 1 and Phase 2 Environmental Site Assessment, Summer Hill Ambulance Station,* 74-75 Carlton Crescent, Summer Hill, NSW 2130, JBS&G, 30 July 2018 (JBS&G 2018).

The previous environmental assessments identified heavy metal, polycyclic aromatic hydrocarbon (PAH) and aesthetic soil issues as well as the presence of five underground storage tanks (UST) that required remediation and/or management. Furthermore, minor concentrations of asbestos in soil was identified, which whilst not a concern from a contaminated land assessment perspective, will require management from a WHS perspective during future activities that may result in ground disturbance in this area of the site.

JBS&G (2018) considered that the site could be made suitable for the proposed land use subject to development and implementation of a site-specific RAP and Asbestos Management Plan (AMP) during future redevelopment works.

The objective of this RAP is to document the procedures and standards to be followed in order to address the small scale heavy metal, PAHs, aesthetic in soil and UST impacts at the site, ensuring the protection of human health and the surrounding environment, such that the impact is remediated/managed in such a manner as to make the site suitable for the high density student accommodation land use.

Overall, it is considered that the proposed actions outlined in this RAP conform to the requirements of the *Contaminated Sites Guidelines for the NSW Site Auditor Scheme (3nd Edition)* (EPA 2017) because they are: technically feasible; environmentally justifiable; and consistent with relevant laws, policies and guidelines endorsed by NSW EPA.

Subject to the successful implementation of the measures detailed in this RAP and subject to the limitations in **Section 12**, it is considered the site can be made suitable for the intended high density student accommodation land use.

A redevelopment specific AMP should be prepared that documents requirements for the removal and/or in-situ management of the identified asbestos impact at the site. The redevelopment specific AMP should be implemented during future site development works.

Upon completion of the remediation works, a validation report shall be prepared to document that the site is suitable for the proposed high density student accommodation land use. Should onsite containment be adopted as the preferred remedial strategy, a Long Term Environmental Management Plan will be required to be prepared and implemented at the site.

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Iglu No.210 Pty Ltd (Iglu, the client) to prepare a Remedial Action Plan (RAP) for the former Summer Hill Ambulance Station located at 74-75 Carlton Crescent, Summer Hill, NSW 2130 (the site). The site is formally identified as Lot 2 in DP717782, with a total area of approximately 2,891 m^2. The site location and site layout are presented on **Figure 1** and **Figure 2** respectively.

It is understood that the site is proposed to be redeveloped as high density student accommodation with associated management offices, common rooms over 4 levels and landscaping. The design plans for the proposed redevelopment are provided in **Appendix A**.

This RAP supports the lodgement of Development Application DA2018/220.1 to the Inner West Council (Council).

A range of previous environmental assessments have been undertaken at the site including:

- *Waste Classification Assessment, Proposed Re-Development, 74 & 75 Carlton Crescent, Summer Hill NSW,* Environmental Investigation Services, 26 June 2015 (EIS 2015);
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The previous environmental assessments identified heavy metal, polycyclic aromatic hydrocarbon (PAH) and aesthetic soil issues as well as the presence of five underground storage tanks (UST) that required remediation and/or management. Furthermore, minor asbestos in soil impacts were identified, which whilst not a concern from a contaminated land assessment perspective, will require management from a WHS perspective during future activities that may result in ground disturbance in this area of the site.

JBS&G (2018) considered that the site could be made suitable for the proposed land use subject to development and implementation of a site-specific RAP and Asbestos Management Plan (AMP) during future redevelopment works.

This RAP was developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objective

The objective of this RAP is to document the procedures and standards to be followed in order to address the small scale heavy metal, PAHs, aesthetic in soil and UST impacts at the site, ensuring the protection of human health and the surrounding environment, such that the impact is remediated/managed in such a manner as to make the site suitable for the high density student accommodation land use.

2. Site Conditions and Surrounding Environment

2.1 Site Identification

The location of the site shown on **Figure 1**. The layout of the site and approximate site boundary are shown on **Figure 2**. The site details are summarised in **Table 2.1**.

Table 2.1: Summary Site Details

Site Address	74-75 Carlton Crescent, Summer Hill, NSW 2130
Lot / DP	Lot 2 in DP717782
Local Government Authority	Inner West Council (formerly Ashfield Council)
Site Owner	Iglu No.210 Pty Ltd
Site Area	Approximately 2,891 m^2
Approximate Geographical Coordinates (MGA 56)	Easting: 327721 Northing: 6248433
Zoning	B2 – Local Centre
Previous Land-use	Commercial / industrial
Current Land-use	Summer Hill Ambulance Station
Proposed Land-use	High density 184 room student accommodation with associated management offices, common rooms over 4 levels and landscaping.

2.2 Site Description

A detailed site inspection was undertaken on 26 May 2017 by Nicola Wells, one of JBS&G's trained and experienced field scientists. A photographic log of the site inspection and subsequent sampling programs is provided in JBS&G (2018). Site features are presented on **Figure 2**.

At the time of the inspection, the site comprised an active ambulance station in an approximately rectangular lot, with a curtailed south-western corner. The majority of the site was covered by the four adjoining ambulance facility buildings and associated concrete slabs. The western most part of the site comprised a driveway with slim garden bed (< 0.5 m in width). The southern portion of the site comprised an on-grade concrete carpark. Stormwater drainage was present within the southern portion of the site.

Five underground storage tanks (USTs) were identified in the southern portion of the site. A diesel UST was located in the south-western corner of the site. Two petrol USTs were located in the central southern site area. Bowsers for each of the USTs were located to north of the USTs, at the southern side of the nearby building. A reportedly decommissioned UST was present to the north-west of the petrol USTs. Near to the eastern site boundary was a fifth UST, which was reported to hold waste oil. An oil-water separator was also located in the central portion of the southern buildings. A 500L above ground oil storage tank was located within a car parking space in the central southern portion of the buildings at the site.

JBS&G understand that the USTs have all potentially been protected using cathodic protection which has likely assisted to maintain the integrity of the USTs and associated fuel lines, thereby reducing the likelihood of leaks.

The north-western ambulance building comprised a two-storey brick heritage building including offices and the ambulance dispatch bay. Access for vehicles from the south was via a secure gate off Hardie Avenue. Access for vehicles from the north from Carlton Crescent was via a secure gate located on the western side of the buildings. Access to the upper floors / maintenance garage in the eastern building was via a concrete ramp. A crawl space was identified below the north-west building. The rear of the western building comprised ambulance parking and supply areas. A variety of building debris and rubbish was observed within the crawl space. Bonded asbestos containing material (ACM) was identified on the surface of the crawl space soils.

The north-eastern building comprised a three storey, split level building. The street level (first floor) comprised an ambulance workshop where repairs and mechanical works were undertaken on the vehicles. Two above ground vehicle hoists were observed. Above this (second floor) were some additional offices. Below the street level in the northern portion of the site was a sub-floor void. Further to the south, a ground floor was present which comprised offices and storage rooms. No significant staining was observed inside the workshop areas or on the painted concrete floors.

Small flammable goods stores were identified within the buildings. These were bunded, lockable and in good condition with no observable staining on the concrete pavements at these locations.

Hazardous building materials including ACM and lead paint were identified within the buildings as documented in the concurrent *Hazardous Materials Survey* report (JBS&G 2017).

Some very minor staining was apparent on the concrete pavements at both bowsers. No odours were associated with the bowsers.

The site was well secured within fencing, other buildings or secure gates bordering the property.

2.3 Surrounding Land-use

The surrounding land-uses of the site are detailed below.

North – Carlton Crescent, with T2 Inner West and South Railway Line and T1 Western Railway Line further afield. Residential properties were located to the north of the railway lines.

East – A commercial / industrial building was located at 72 Carlton Crescent. At the time of the inspection building occupants included lawyers, design firms, a furniture store and a Pilates studio. A panel beater and painting automotive business was located in an industrial style property at 70 Carlton Crescent, further to the east of the site.

South – Public walkway, with a shopping centre and supermarket beyond this. Hardie Avenue and a council carpark were located to the south-east of the site.

West – Public open space (Summer Hill Park / Darrell Jackson Gardens) including tennis courts, basketball court, skate ramp and grassed areas.

2.4 Topography

The site is located within an area of gentle rolling hillslopes with gentle regional falls towards the east and ultimately Hawthorne Canal.

The site slopes to the south from an approximate elevation of 23 m Australian Height Datum (AHD) on Carlton Crescent to an approximate elevation of 19 m AHD near Hardie Avenue, based on review of the LTS Lockley topographical survey (19 June 2017) of the site.

2.5 Geology and Soil

According to the Sydney 1:100 000 Geological Sheet 9130 (1983), the site is underlain by a Triassic Period geological formation, Ashfield Shale of the Wianamatta group, comprising of black to dark-grey shale and laminite.

Review of eSPADE[1] indicated that the site soils comprise residual Blacktown soils, shallow to moderately deep hard setting mottled texture contrast soils, red and brown podzolic soils on crests, grading to yellow podzolic soils on lower slopes and drainage lines.

[1] http://www.environment.nsw.gov.au/eSpade2Webapp# Department of Environment and Heritage, NSW Government. Accessed 10/09/2017

Investigations encountered fill material across the site to a maximum depth of approximately 1.4 metres below ground surface (m bgs) overlying residual clay soils and weathered shale. Observations of depths of fill materials are presented in the bore logs in JBS&G (2018).

2.6 Acid Sulfate Soils

Review of the Liverpool 1:25 000 Acid Sulfate Soil Risk Map[2] indicates the site is located in an area with no known occurrence of acid sulfate soils. This classification relates to site where Acid Sulfate Soil (ASS) or Potential Acid Sulfate Soil (PASS) conditions are not known or not likely to occur. On this basis, no further consideration of ASS management is required.

2.7 Hydrology

The site almost entirely comprises building rooftops, concrete slabs or asphalt with very minimal landscaped zones along the western boundary of the site. On this basis, almost all rainwater is expected to be captured within the rainwater infrastructure on the site and is expected to enter the regional stormwater system located at the south of the site. The regional stormwater system runs to the south-east, towards Hardie Avenue, before heading south along Hardie Avenue (WMAwater 2014[3]).

The nearest surface water receptor is Hawthorne Canal, located approximately 750 m to the east of the site. This creek flows in a northerly direction prior to confluence with Iron Cove Creek approximately 2.4 km to the north-east of the site.

2.8 Hydrogeology

No registered groundwater bores were present within 500m of the site on the NSW Office of Water Groundwater Database[4].

Standing groundwater levels at the time of the ESA (JBS&G 2018) were reported to be approximately 2.2 to 3.5 metres below ground surface (bgs).

It is anticipated that on a regional scale groundwater would move generally to the east following the regional topography toward Hawthorne Canal, discharging to Iron Cove Creek and ultimately Parramatta River.

Given the relatively shallow bedrock underlying the site, it is anticipated groundwater in the vicinity of the site would be resident in cracks and deformities within the shale bedrock. As such, groundwater movement is expected to be low in volume and of a saline nature given the low permeability of the shale and its marine depositional environment.

2.9 Meteorology

Mean monthly temperature range from 17.5 degrees Celsius to 27.8 degrees Celsius. Mean monthly average rainfall ranges from 46.8 mm to 109.3 mm.

Data from Canterbury Racecourse AWS Meteorological Station[5] approximately 3 kilometres from the site.

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2 Liverpool 1:25 000 Acid Sulfate Soil Risk Map – Edition Two, Department of Land and Water Conservation, December 1997.
3 *Hawthorne Canal Flood Study Final Report (Ashfield Council)*, WMAwater Pty Ltd, October 2014 (WMAwater 2014).
4 http://allwaterdata.water.nsw.gov.au/water.stm. Accessed 11/9/2017.
5 http://www.bom.gov.au/climate/averages/tables/cw_066194.shtml. Accessed 11/9/2017.

3. Site History Summary and Previous Site Investigations

3.1 Site History Summary

A full site history was detailed in the ESA (JBS&G 2018). A summary of the site history is presented below.

Period	Activity
1930s	Part of the site used as ambulance station.
1943	Saw-tooth building expansion in the eastern portion of the site.
1961	Remainder of site acquired by Health Administration Corporation and entirety of site used as ambulance station. Extension of eastern building to the south.
1983	Two USTs documented to present on the site.
1986	Renovation and extension of both buildings at the site.
1995	Four USTs documented to present on the site, including two USTs documented in 1983.
2015	EIS (2015) waste classification and geo-technical assessment.
2016	LGC (2016) UST investigation.
2017-2018	ESA (JBS&G 2018) of the site.
Late 2018	Divestment of site from HI to Iglu.

3.2 Previous Site Investigations

3.2.1 Waste Classification (EIS 2015)

EIS (2015) completed a waste classification in conjunction with a geo-technical assessment in 2015. Five borehole locations were sampled. These locations do not appear to have been targeted for environmental purposes and did not sufficiently characterise identified areas of environmental concern (AECs). The EIS (2015) data was re-assessed in JBS&G (2018) for consideration of site suitability purposes and forms part of the data set for this RAP.

3.2.2 UST Investigation (LGC 2016)

LGC conducted an UST investigation that comprised a site inspection and completion of a ground penetrating radar (GPR) survey to confirm the location and footprint of four (4) USTs to assist with proposed development works at the site. No intrusive (soil, soil vapour or groundwater) sampling was undertaken. It was concluded based on the scans that 4 active USTs and two bowsers were present at the site.

Based on the report text it appears that indications of existing facilities were identified and the GRP used to confirm the lateral extent of each UST at the reported location. No survey appears to have been completed across the balance of the site, including in the vicinity of the reportedly decommissioned UST to the east of the diesel UST (#4).

3.2.3 Phase 1 and Phase 2 ESA (JBS&G 2018)

JBS&G was engaged by Health Infrastructure NSW (HI) to conduct an ESA for the site. The ESA sought to characterise potential contamination at the site and to draw conclusions regarding the suitability of the land for a mixed land use scenario, or make recommendations to enable such conclusions for the site. Soil analytical results from the ESA, which include evaluation of data from EIS (2015) are provided in **Table A**, groundwater analytical results are provided in **Table B** and soil vapour analytical results are provided in **Table C**. Soil and soil vapour sampling locations are presented on **Figure 3** with soil criteria exceedances presented on **Figure 4**. Groundwater sampling locations are presented on **Figure 5** with groundwater criteria exceedances presented on **Figure 6**.

The scope of work comprised a desktop review, detailed site investigation including implementation of nine soil sampling locations, six soil vapour sampling locations and five groundwater sampling locations, subsequent laboratory analysis of representative samples for contaminants of potential concern, data evaluation and preparation of an ESA report presenting the outcomes of the investigation.

The following conclusions were provided within the ESA (JBS&G 2018):

- The site is understood to have utilised for commercial and industrial purposes from 1920s until the 1980s. Part of the site has been used as an ambulance facility since the 1930s.
- A range of shallow fill materials were observed across the site at depths ranging from 0.6 to 1.4m bgs. No major anthropogenic inclusions were observed within the fill material. Natural soils underlying the fill material comprised damp, homogeneous, pale brown/grey, high plasticity clay. Weathered shale was encountered below the residual clay at BH01 to BH05 at depths ranging from 1.4 to 3.0 m bgs.
- Minor hydrocarbon odours and staining were observed in natural material from 0.8 to 1.4 m in BH01 (targeting UST SE corner), in fill material from 0.15 to 0.7 m in BH07 (refusal at 0.7 m on obstruction within fill, targeting fuel line) and in fill material from 0.4 - 0.6 m at BH08 (targeting fuel line). No other staining or odours were observed during the subsurface investigation activities. A maximum PID esult of 19.2 ppm was recorded during field screen for volatile contaminants at BH01 0.9-1.0. PID results across the remainder of the site were generally less than 5 ppm and mostly 0 ppm, consistent with the lack of observed gross odours and volatile hydrocarbon impacts.
- Concentrations of lead and carcinogenic PAHs as B(a)P TEQ in some representative fill material samples exceeded health site assessment criteria.
- Concentrations of copper, lead, B(a)P and TRH in some representative soil samples exceeded ecological site assessment criteria.
- A single small (5 by 5 cm) fragment of bonded ACM was observed within fill sample BH07 0.3-0.4. In addition, a fragment of bonded ACM was identified on the ground surface in the building crawl space cavity on the north-western portion of the site. No ACM was observed in drilling spoil at the remaining sample locations at the site. Trace level asbestos (less than the limit of reporting, LOR) was noted to be present within BH07 AQ 0.3-0.5 as loose fibre bundles of chrysotile asbestos with a raw weight of 0.0013 g, being equivalent to 0.00022 %w/w, which is less than the LOR of 0.001 %w/w. Another fragment of bonded ACM was identified on the ground surface within the crawl space within the north-western portion of the site. The ACM material at the site was at the time of the assessment, capped below concrete under current site buildings, thereby eliminating any current, complete inhalation pathway for site users. As such, the material is considered to not present a current exposure risk to site users in the absence of ground disturbance activities.
- The identified ACM, whilst not a concern from a contaminated land assessment perspective, will require management from a WHS perspective during future activities that may result in ground disturbance in this area of the site and as such conditions should be noted on a site Asbestos Register.
- Targeted assessment of potential impacts associated with existing and suspected former UST infrastructure at the site has identified minor soil impacts in the vicinity of several USTs/bowers, occurring at levels less than the adopted health and ecological assessment criteria. No gross soil or groundwater contamination from VOCs, TRH and BTEX were identified associated with the USTs at the site. There were no significant indicators of

contaminant migration associated with the existing UST facilities, however some limited impacts may occur in the immediate vicinity of the facilities that may be encountered during works to decommission and remove the infrastructure in accordance with the requirements of the UPSS Regulation (2014[6]).

- Concentrations of all other COPCs assessed in representative soil samples were less than the site assessment criteria.
- Concentrations of COPCs at groundwater sampling locations were generally less than the site assessment criteria. Minor exceedances of zinc were considered not to represent an unacceptable risk to human and/or ecological receptors within or downgradient of the site.
- Concentrations of COPCs in representative soil vapour samples were less than the relevant site assessment criteria suitable for the proposed development scenario and below the LOR and are considered not to pose an unacceptable risk to site receptors.
- Aesthetic issues pertaining to stained/odorous soils associated with USTs as well as bonded ACM in soils were identified.
- No chemical mixtures or offsite migration risks were identified.
- On this basis, it is considered that the site can be made suitable for the proposed mixed land use scenario subject to implementation of an appropriate RAP to address the identified small scale heavy metal, PAH, aesthetic and UST infrastructure issues.
- Dependent upon the lateral and vertical extent of proposed basements at the site, it is likely that the majority of, or all the impacted soils may be removed from the site during this process given the shallow nature of fill material at the site. The USTs would require formal removal and validation.

[6] The Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 (UPSS Regulation).

4. Contamination Status

4.1 Contamination Issues

Five USTs have been identified at the site which require decommissioning and removal. The approximate location of the USTs are presented on **Figure 7**.

Minor hydrocarbon odours and staining were observed in natural material from 0.8 to 1.4 m in BH01 (targeting UST SE corner), in fill material from 0.15 to 0.7 m in BH07 (refusal at 0.7 m on obstruction within fill, targeting fuel line) and in fill material from 0.4 - 0.6 m at BH08 (targeting fuel line). No other staining or odours were observed. The identified staining and malodorous aesthetic issues will be managed concurrently with the UST removal works.

In addition, a range of soil contamination issues have been identified. Lead (3100 mg/kg) and carcinogenic PAHs as B(a)P TEQ (55.2 mg/kg) in one fill sample BH05_0.25-0.35, and carcinogenic PAHs as B(a)P TEQ in two additional fill samples, EIS BH3 0.1-0.2 (5.8 mg/kg) and QA20170804, duplicate of BH09 0.2-0.3 (5.48 mg/kg) exceeded the health site assessment criteria. The elevated heavy metal and carcinogenic PAHs as B(a)P TEQ pose a potentially unacceptable risk to future site receptors based on the proposed mixed land use scenario and require management and/or remediation.

A single fragment of bonded ACM was observed in fill materials at BH07_0.3-0.4 during sampling and trace level asbestos was reported by the laboratory in soil sample BH07 AQ 0.3-0.5. The concentration of asbestos in soil reported by the laboratory was less than the LOR and adopted health based site assessment criteria. The identified ACM, whilst not a concern from a contaminated land assessment perspective, will require management from a WHS perspective during future redevelopment works.

Table 4.1 below outlines the remedial extents initially estimated at each location that will require remediation and successful validation for the site to be considered suitable for permissible land uses. The approximate remedial extents are shown on **Figure 7.**

Table 4.1: Estimated Remedial Extents

Location	Contamination/Aesthetic Issue	Depth (m bgs)	Area (m^2)	Volume of Impact (m^3)
UST01	Lead, PAHs, TRH, BTEXN, phenols and aesthetic	-	-	-
UST02	Lead, PAHs, TRH, BTEXN, phenols and aesthetic	-	-	-
UST03	Lead, PAHs, TRH, BTEXN, phenols and aesthetic	-	-	-
UST04	Lead, PAHs, TRH, BTEXN, phenols and aesthetic	-	-	-
UST05	Lead, PAHs, TRH, BTEXN, phenols and aesthetic	-	-	-
BH05	Lead and PAHs	0.25-0.4	80	12
BH09	PAHs	0.2->0.3	100	>10
EIS BH03	PAHs	0.1-0.3	30	<10
BH07	Asbestos	0.3-0.4	-	WHS/waste management

Note: All depths, area and volumes provided are approximate in nature as based upon the findings of the previous environmental assessments at the site. Nominal allowances have been made for the initial remedial excavation to extent approximately 50% of the distance to adjacent non-impacted samples.

4.2 Potential Aesthetic Issues

Should demolition activities and/or earthworks identify the presence of additional visible ACM on the ground surface, or stained or malodorous souls, this would be considered to be an aesthetic concern and would require management. As per guidance in WA DoH (2009)[7] and NEPC (2013)[8], there should be no visible ACM within accessible surface soils (top 100 mm) of the site upon completion of the development activities. It is anticipated that any stained and malodorous soils associated with USTs will be addressed during the removal of the USTs, bowsers, pipework and associated impacted soils.

4.3 Potential Ecological Issues

Concentrations of heavy metals (lead, copper, zinc and arsenic) and PAHs were reported to exceed ecological criteria in the ESA (JBS&G 2018). Subject to the absence of deep planting zones at the site, the existing ecological exceedances are not considered to pose an unacceptable risk to ecological receptors as may be present in the proposed development scheme. It is understood that landscaping material/growing media will be imported as part of the redevelopment for the proposed landscaped and planter box areas. The imported material will be assessed in accordance with the requirements of this RAP and will be assessed for site suitability prior to importation to the site.

4.4 Data Gaps

Soils underlying existing buildings across the site have not been fully assessed to date given the existing access limitations and current site buildings/infrastructure. Subsequent to demolition and prior to construction commencement, two additional soil sampling locations should be extended in the central-eastern portion of the site (near to SV01). The sampling results will be compared to the adopted site validation criteria. Should contamination conditions be identified that require further management, the Unexpected Finds Protocol as discussed in **Section 7.1** will be implemented to achieve suitable remedial/management outcomes.

Should on-site containment be pursued as a remedial strategy, additional leachate assessment of fill proposed to be retained onsite below landscaped areas would be required given the increased potential for leachate from water infiltration through the soil profile. The additional leachate analysis is required to demonstrate there is no unacceptable risk to groundwater or off-site migration of contamination via groundwater. No additional leachate assessment is considered to be required if the fill materials are retained below proposed concrete slabs and above the water table.

4.5 WHS Management

Concentrations of asbestos (in bonded and friable form) below the relevant site contamination land use criteria identified in two locations below the existing site slabs. This impact does not necessarily require remediation with regard to long term health exposure risk as discussed in **Section 4.1** above, but still requires management from a WHS perspective under SafeWork NSW requirements and will also require consideration from a waste perspective if materials are proposed to be disposed offsite.

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[7] *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia,* WA Department of Health, 2009 (WA DoH 2009).

[8] *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1),* National Environment Protection Council, 2013 (NEPC 2013).

5. Remediation Options

5.1 Remediation Objectives

The remediation objectives are outlined as follows:

- Decommissioning and removal of contamination sources inclusive of existing USTs and associated infrastructure;
- Removal of unacceptable risks to human health and the environment from the identified impacted soils and potential risks associated with the USTs and impacted fill material (metals and PAHs) such that the site is suitable for the proposed use;
- Remove unacceptable aesthetic impacts from the site;
- Assess minor data gaps;
- Validate the remedial works in accordance with the relevant NSW EPA Guidelines and with reference to the adopted site criteria; and
- Document the validation process.

This RAP has been prepared with reference to the following guidelines and legislation:

- *Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land.* Department of Urban Affairs and Planning. NSW Environment Protection Authority (DUAP 1998);
- *Contaminated Sites: Sampling Design Guidelines, September 1995*. NSW EPA 1995 (EPA 1995);
- *Guidelines for Consultants Reporting on Contaminated Sites.* Office of Environment and Heritage, 2011 (OEH 2011);
- *Guidelines for the NSW Site Auditor Scheme (3rd Edition).* Environment Protection Authority, October 2017 (EPA 2017);
- *National Environment Protection (Assessment of Site Contamination Measure) Measure 1999 (as amended 2013).* National Environment Protection Council (NEPC 2013);
- *Work Health and Safety Regulation 2017*. NSW Government Legislation. (*WHS Regulations 2017*);
- *How to Safely Remove Asbestos - Code of Practice*. 2018 (SWA 2018a);
- *How to Manage and Control Asbestos in the Workplace - Code of Practice*, 2018 (SWA 2018b);
- *Management of Asbestos in the Non-occupational Environment*. enHealth Council, 2005 (enHealth 2005); and
- *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia.* WA Department of Health, 2009 (WA DoH 2009).

5.2 Extent of Remediation

Based on the findings of the previous investigations (refer to **Section 3**) and subject to the limitations of these investigations, the anticipated extent of the proposed remedial works is shown on **Figure 7** and summarised in **Table 4.1**.

5.3 Remedial Options

5.3.1 EPA (2017) Guidance

The *Contaminated Sites Guidelines for the NSW Auditor Scheme* (EPA 2017) provides guidance on the preference for soil remediation and management:

1. On-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level;
2. Off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site;
3. Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill; and
4. Consolidation and isolation of the soil on-site by containment within a properly designed barrier.

In addition, it is also a requirement that remediation should not proceed in the event that it is likely to cause a greater adverse effect than leaving the site undisturbed. In addition, where there are large quantities of soil with low levels of contamination, alternative strategies are required to be considered or developed (EPA 2017).

Consideration of each of the available options is presented in **Table 5.1**, taking into account the proposed future redevelopment scheme details.

5.3.2 UST Remediation

Two options exist for decommissioning fuel storage infrastructure, and the selected option must follow the established hierarchy for selection of soil remediation methods in NSW as outlined in **Section 5.3**. Reference to DECC (2009[9]) indicates that it is industry best practice to remove USTs that are no longer required.

With consideration to EPA's endorsed guideline hierarchies for soil remediation options and groundwater clean-up objectives (DECC 2009), and to the site specific contaminants and environmental setting, the preferred remediation strategy is outlined as follows. Where geotechnical and/or heritage considerations do not restrict earthworks, then:

- Decommissioning and removal of the USTs and associated linework if present, including removal and disposal of any residual contents, in accordance with relevant regulations standards and guidelines, as noted in **Section 6.4**;
- Excavation and off-site disposal, on-site containment or onsite treatment of any impacted backfill material and natural soils exceeding adopted land use criteria; and
- Reinstatement of excavations to proposed site development levels in these areas using a combination of validated excavated and/or site-won material, or validated imported fill if required.

Remediation works under these circumstance will include the removal of the USTs and any related infrastructure (bowsers, anchors, pipework, etc), and the excavation of tank backfill materials, fill material and natural soils to the limits of impact, or to practical limits (e.g. site boundary or building footings).

[9] *Guidelines for Implementing the POEO (Underground Petroleum Storage Systems) Regulation 2008*, DECC (2009) UPSS Guidelines.

Where other issues such as adjacent building structural stability preclude the removal of the USTs, in-situ decommissioning of one or more of the USTs would be considered to be an appropriate contingency.

Table 5.1: Remedial Options Matrix

Option of Treatment	Discussion	Conclusion
Option 1: Onsite treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level.	Lead and PAH impacted soils Metals and PAHs are unable to be destroyed. However, there are a number of microencapsulation treatment technologies which can reduce the mobility of the identified inorganic contaminants of concern (e.g. cement stabilisation). Microencapsulation is not considered necessary given the relatively low level of identified impact and the absence of contamination migration.	Not a suitable option.
	TRH impacted soils associated with USTs TRH impacted soils associated with the disused USTs can be treated on-site through landfarming to promote biodegradation of petroleum-based impacts. Subject to validation, the material could then be reused as backfill on-site and therefore presents a sustainable remedial option. However, this process can take considerable time and requires a sizeable area which may unduly delay the construction timeframe. Furthermore, given the proximity of neighbouring properties, it may be difficult to manage rogue odours from the biodegradation treatment works.	**A potential option.**
Option 2: Offsite treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site.	Lead and PAH impacted soils The material could possibly be treated off-site via microencapsulation technologies, however, microencapsulation is not considered necessary given the relatively low level of identified impact and the absence of heavy metal/PAH migration and the financial and ecological cost of transporting materials to and from the treatment facility are likely prohibitive.	Not a suitable option.
	TRH impacted soils associated with UST This option is technically feasible however involves duplication of transport and material handling costs, involved in removing the material to an appropriately licensed off-site treatment facility, assuming a facility licensed to treat this type of material can be identified. This option is considered not to be cost effective or sustainable And may result in delays to the construction program.	Not a suitable option.
Option 3: Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill.	Lead and PAH impacted soils Given that onsite treatment is likely to be impractical for site operations/access, off-site disposal is a suitable option. Off-site disposal would be a time-effective remedial option and would result in no-ongoing management requirements for development works. Additional suitable material may also require importation to establish site development levels. However, the costs and waste volumes generated from the redevelopment require consideration with regard to development plans.	**A suitable option.**
	TRH impacted soils associated with UST Off-site disposal of soil impacted associated with the UST may be the preferred option dependent upon the nature of impact (e.g., volatile impacts). Off-site disposal would be time-effective remedial option and result in no-ongoing management requirements. However, as noted above, cost and sustainability factors will require consideration.	**A suitable option.**

Option 4: Consolidation and isolation of the soil by on-site containment within a properly designed barrier and on-going management.	<u>Lead and PAH impacted soils</u> Onsite containment is a suitable remedial option for the identified lead and PAH impacted soils, subject to confirmation that no unacceptable leaching or migration issues are present. It is noted that on-site containment of contaminated soil would require the potential for future exposure of site users/workers to the contamination to be managed by the implementation of a long term environmental management plan (LTEMP). Implementation of a LTEMP is considered feasible for the site given the proposed land use. Given that the LTEMP may require permanent notation on title, planning certificates, etc consideration of the potential implications for property asset values/management in evaluation of this option. On-site containment of impacted materials is in accordance with guiding principles of ecologically sustainable development (ESD) and the *Waste Avoidance and Resource Recovery Act 2001* (WARR Act 2001) given the reduction in waste volumes requiring off-site disposal.	**The preferred option.**
	<u>TRH impacted soils associated with UST</u> Dependent upon the volatility, presence of odours and leachability of contaminants identified, on-site containment of material from UST remedial works may be an option. If unacceptable concentrations of volatile compounds or the potential for leaching is identified, on-site containment would not be considered a suitable option. It is noted that containment of contaminated soil would require the potential exposure to contamination to be managed by the implementation of a LTEMP. Implementation of a LTEMP is considered feasible for the site given the proposed land use, subject to considerations as noted above. On-site containment of impacted materials would be in accordance with guiding principles of ecologically sustainable development (ESD) and the *Waste Avoidance and Resource Recovery Act 2001* (WARR Act 2001).	**A potential option.**

5.4 Preferred Remedial Strategy

A number of potential remedial options have been outlined in **Table 5.1**. The nominated preferred remedial strategy for the site is:

1. Decommissioning and off-site removal of USTs, associated infrastructure, and surrounding impacted fill/soil material if present, including removal and disposal of any residual UST contents, in accordance with relevant regulations standards and guidelines; and
2. On-site containment of lead, PAH and asbestos impacted fill materials preferably below proposed concrete building slabs, but above the water table and implementation of a LTEMP.

6. Remedial Plan

6.1 Approvals, licences and notifications

State Environment Planning Policy Number 55 (SEPP55) Remediation of Land

Under Clause 9 (e) of SEPP 55, remediation work is considered Category 1 remediation work (i.e., requiring development consent) when remediation work is carried out, or to be carried out in a heritage conservation area. As per **Section 10.1**, the site is located within a heritage conservation area pursuant to the Ashfield Local Environmental Plan (LEP) 2013. On this basis, the proposed remedial works at the site are considered to be Category 1 Remedial Works (as per SEPP 55) and require consent.

Asbestos Works

Trace level friable asbestos (i.e., less than 0.1 g/kg in accordance AS4964[10]) that was not visible during field investigations was detected by the laboratory in soil samples from BH07. In addition, less than 10 m^2 of bonded ACM has been identified within fill materials at the site.

To this extent, there is no requirement to notify SafeWork NSW for removal works and no requirement to engage a Class A or Class B Licensed Asbestos Removalist for in-ground remedial works. However, management / removal of asbestos containing material within these areas will require the implementation of asbestos controls such as donning PPE, air monitoring and suppressing dust in accordance with the AMP, Code of Practice SWA 2018a[11] and SWA 2018b[12] given the known presence of ACM.

Should visible friable asbestos, or friable asbestos at concentrations greater than 0.1 g/kg, or >10 m^2 of bonded ACM be identified within fill materials prior to the commencement of, or during the removal works, then SafeWork NSW will be required to be notified and Class A and/or B Licensed Asbestos Removalist contractors engaged for the inground remedial works.

Remediation works shall not commence until all required approvals, licences and notifications have been granted and/or received.

6.2 Site Establishment

The boundary of the extent of remediation will be defined by the Remediation Consultant. The Remediation Contractor (herein referred to as the "Contractor") shall secure these areas to ensure that all safety and environmental controls are implemented. These controls will include, but not be limited to:

- Locate and isolate all required utilities in the proximity of the works;
- Assess need for and implement any necessary traffic controls;
- Work area security fencing;
- Site signage and contact numbers;
- Stabilised site entry gate;
- Appropriate decontamination areas for personnel and plant;
- Sediment fencing (attached to security fencing) where necessary; and

[10] Australian Standard. Method for the qualitative identification of asbestos in bulk samples. AS 4964-2004 (AS4964).

[11] *How to Safely Remove Asbestos - Code of Practice*. Safe Work Australia, 2018 (SWA 2018a)

[12] *How to Manage and Control Asbestos in the Workplace - Code of Practice.* Safe Work Australia, 2018 (SWA 2018b);

- Stormwater runoff and sediment controls (e.g. silt fences) where necessary.

6.3 Data Gaps

The following data gaps remain present at the site and require further assessment or consideration prior to, or during demolition/remediation works at the site such that appropriate assessment of contamination risks may be managed/resolved and the site may be validated as suitable for the proposed land use.

6.3.1 Central-eastern Portion

Given access constraints associated with the existing building, limited characterisation of conditions has been possible in the central eastern site portion, beneath the former vehicle maintenance area. To assess conditions, following demolition and removal of the ground floor slab in the proposed sampling locations, it is proposed to collect two additional soil samples from the central-eastern portion of the site to between former soil sampling locations.

The proposed sample locations are presented on **Figure 7**. The proposed analytical suite is presented in **Table 8.3**. .

6.3.2 Leachability Assessment

To the extent practical, it is proposed to retain impacted fill materials below the proposed building concrete slabs, and above the water table, thereby eliminating the potential for increased leaching and therefore off-site migration of identified heavy metals, PAHs and TRH/BTEX in soil.

However, should the proposed on-site containment areas be located below landscaped zones, or fall partially within the water table, then additional assessment of the potential for heavy metal, PAH and TRH/BTEX leaching and off-site migration would be required prior to placement of the material within the proposed containment areas. The additional assessment would comprise additional soil sampling in areas of identified impact and subsequent laboratory analysis of samples for total contaminant concentrations and leachability studies to demonstrate that potential rates of contaminant migration are sufficiently low so as not to present an unacceptable risk, and as such the proposed containment location is suitable.

The scope of this additional investigation would depend on the specific location and details of the development and remedial strategy and as such, has not been defined herein.

6.4 Remedial Works – UST Removal

Removal of the UST infrastructure and associated TRH impacted soils as identified on **Figure 7** will include the following:

- Removal and disposal of any pavements/hardstand over the USTs and associated infrastructure, and any concrete anchors that may be in place;
- Inspection and removal of any residual liquid contents from the USTs and linework (e.g. fuel, water and rust inhibiter mix) and off-site disposal in accordance with the EPA (2014) Waste Classification Guidelines;
- Excavation and off-site disposal of all fuel related infrastructure to a licensed destruction facility (retaining destruction documentation for validation purposes);
- Identification and excavation of all contaminated backfill sands/surrounding soils in the vicinity of the USTs and associated line work and bowsers (if present), including discoloured/odorous soil/shale, followed by temporary stockpiling;
- Validation of the walls and base of the excavations as per requirements of **Section 8.3.1**;

- Sampling of the excavated/stockpiled soils for on-site reuse, containment or waste classification and offsite disposal; and
- Reinstatement of the excavation with material obtained from either suitable excavated backfill, site-won soils or imported soils, which have been validated as appropriate for use.

Decommissioning, removal, transport and disposal of the USTs and removal and disposal of any residual contents should be undertaken with consideration of applicable legislation, standards and guidelines, including but not limited to:

- *Work, Health and Safety Act* and associated regulations;
- *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008* (UPSS Regulation);
- *Waste Classification Guidelines Part 1: Classifying waste*, NSW EPA (2014);
- *Guidelines for Implementing the POEO (Underground Petroleum Storage Systems) Regulation 2008*, DECC (2009) UPSS Guidelines;
- *Australian Standard AS1940-2004 The storage and handling of flammable and combustible liquid*;
- *AS 4976-2008 The removal and disposal of underground petroleum storage tanks*; and
- *WorkCover (2005) Code of Practice: Storage and Handling of Dangerous Goods (*as a guide only).

6.5 Remedial Works – Onsite Containment Option

Where management of impacted soils will be completed via onsite containment beneath future finished levels, procedures as documented following will require to be implemented to ensure all environmental/health objectives are addressed.

It is proposed to retain impacted fill materials below the proposed building concrete slabs, and above the water table.

6.5.1 Excavation of Impacted Soils

The impacted soils shall be 'chased out' under the direction and supervision of the Remediation Consultant. The procedure for undertaking this excavation activity will be:

- Excavation of impacted soils to nominated lateral and vertical extent (refer to **Section 5.2**), with confirmation via sampling and laboratory analysis that the soils meet the adopted validation criteria (**Section 8.5**);
- Excavated soils shall be stockpiled on a hardstand or plastic liner pending placement for on-site containment; and
- Any unexpected finds will be managed as per **Section 7**.

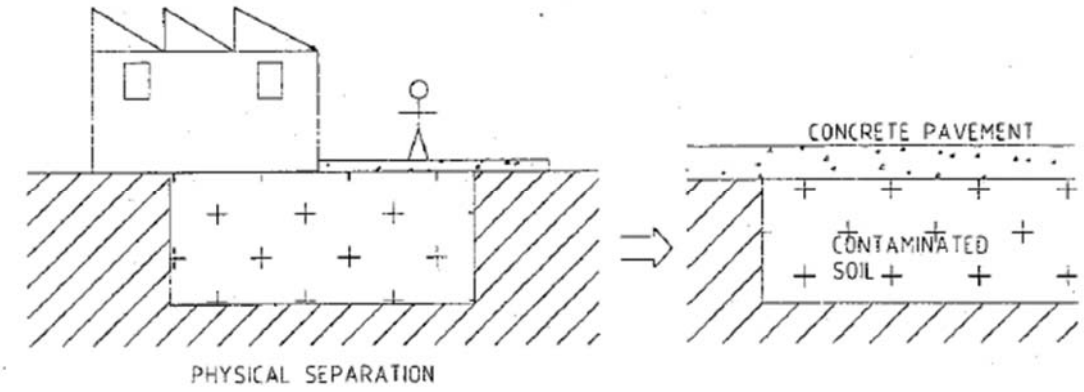
6.5.2 Containment Overview

Impacted fill may be managed via containment and the implementation of permanent physical separation or within a "Containment Cell", which eliminates the exposure. The minimum requirements for the physical separation to be adopted in remediation of the site include:

- Permanent concrete floor/ground/wall slabs or asphaltic concrete surfaced pavements and underlain by a visual "marker layer", i.e., underlying buildings, roads, pathways; or
- Top (concrete) of pile foundations (no marker layer required for below pile foundations); or

- Subject to closure of the data gap on leachability, a minimum soil cover thickness of 0.5 m in landscaped or mass planting/shallow landscaped areas and 1.5 m in tree pit zones which is underlain by a visual "marker layer" in unpaved areas, i.e., parks, gardens and green open spaces etc.

A conceptual sketch, sourced from ANZECC 1999[13], is shown following:



The marker layer shall consist of a bright coloured (orange or similar) non-woven polyester continuous filament or PET (such as nonwoven geotextiles) or similar with a minimum density of approximately 150 grams per square metre (or equivalent). The marker layer must:

- Be easily recognisable within soils (i.e., bright orange in colour);
- Be durable as a long term marker layer (i.e., > 140 grams per square metre); and
- Maintain integrity during remedial/civil works such as capping layer insulation and road/building construction.

Additionally, the marker layer must meet geotechnical and civil specifications where required.

The specific details of the marker layer are required to be included in the site validation report and LTEMP documents in addition to surveyed plans showing the extent of capped area within the site.

6.5.3 Specific Capping Arrangements

The following capping procedures will be applied to appropriate scenarios across the site, prior to completion of construction works:

- Beneath permanent structures – installation of a marker layer over contaminated fill material and permanent concrete slab as the physical barrier.
- Permanent hardstand structures (i.e., concrete slabs, pile caps or asphaltic concrete or similar, but not bricks or pavers) – installation of a marker layer overlying potentially contaminated material followed by sub-grade material validated as environmentally suitable materials for human exposure and then the permanent structure (e.g., exterior concrete footpaths, asphaltic roads, etc.).
- Within underground services trenches / services – service infrastructure will require remediation to 150 mm below the depth of services, with a marker layer installed on the vertical and horizontal trench faces, followed by service installation and backfill consisting of environmentally suitable materials for potential human and/or ecological exposure.

[13] *Guidelines for the Assessment of On-site Containment of Contaminated Soil,* Australian and New Zealand Environment and Conservation Council, September 1999. (ANZECC 1999).

- Turfed areas – installation of the marker layer at a minimum depth of 500 mm below final finished site levels, with a capping layer consisting of environmentally suitable materials for potential human and/or ecological exposure.
- Mass planting / shallow landscaping areas – installation of the marker layer at a minimum depth of 500 mm below the final finished site levels, with a capping layer consisting of environmentally suitable materials for potential human and/or ecological exposure.
- New tree pit zones – installation of the marker layer at a minimum depth of 1500 mm below the final finished site levels, with a capping layer consisting of environmentally suitable materials for potential human and/or ecological exposure, noting that the maker layer should extend the depth required for installation of the new tree's existing root ball.

Material above the marker layer extending to the final finished ground level will be required to be environmentally suitable material for human and/or ecological exposure (as appropriate). This may include: virgin excavated natural material (VENM) sourced from on-site, imported VENM, excavated natural material (ENM) or similar material certified in accordance with an exemption issued by the NSW EPA that also meets site suitability criteria.

At the interface of remediated and non-remediated areas, the extent of the marker and capping layer should be extended a minimum of 300 mm laterally outside the extent of remediated area or to the extent of the site boundary, where practicable. This may include battering of the marker/capping layer to tie-in with existing site levels within the 300mm outside of the remediated area, where practicable.

Validation of capping arrangements will be required as outlined in **Section 8**, including inspections by the Remediation Consultant, a survey plan prepared by a registered surveyor showing the level and lateral extent of the marker layer and permanent capping in relation to the site boundaries.

6.6 Remedial Works – Offsite Disposal Option

Where management of impacted soils will be completed via excavation and off-site disposal, procedures as documented following will require to be implemented to ensure all environmental/health objectives are addressed.

6.6.1 Excavation of Impacted Soils

The impacted soils shall be 'chased out' under the direction and supervision of the Remediation Consultant. The procedure for undertaking this excavation activity will be:

- Excavation of impacted soils to nominated lateral and vertical extent (refer to **Section 5.2**), until the soils meet the adopted validation criteria (**Section 8.5**);
- Excavated soils shall be stockpiled on a hardstand or plastic liner pending offsite disposal or loaded directly into the back of a truck for disposal; and
- Any unexpected finds will be managed as per **Section 7**.

6.6.2 Offsite Disposal of Material

Any material requiring disposal shall be classified prior to removal by the Remediation Consultant in accordance with *Waste Classification Guidelines Part 1: Classifying Waste,* NSW EPA (2014) and relevant waste regulations. Disposal of waste to licensed waste facilities in accordance with relevant waste regulations will be undertaken by the Contractor. All waste tracking documentation including disposal dockets must be maintained by the Contractor and must be provided to the Principal and the Remediation Consultant for inclusion in the validation report.

Any asbestos waste exceeding 100 kilograms or more than 10 m^2 of bonded ACM in one load disposed off-site must be tracked using the NSW EPA online system WasteLocate.

6.6.3 Validation

Validation of the remedial works will be conducted by the Remediation Consultant to demonstrate the remediation objectives have been achieved. Details of the validation program are provided in **Section 8**.

6.6.4 Backfilling of excavations and Imported Fill Materials

Upon confirmation of soil validation, excavations will be reinstated using validated material, existing non-impacted site materials and/or validated imported fill material where required. Materials proposed to be imported to the site will be assessed prior to importation in accordance with **Section 8.5**.

6.7 Site Disestablishment

On completion of the remediation works all plant/equipment and safety/environmental controls shall be removed from the site by the Contractor. All equipment used during asbestos remediation works will need to be appropriately decontaminated or disposed of as asbestos waste by the Contractor, in accordance with SWA (2018a), EPA (2014) and relevant waste regulations.

7. Contingency Plan

A review of remediation works has been undertaken to identify potential risks to meeting the specified site validation criteria. A number of potential risks have been identified. These are listed following with contingencies that will be implemented to ensure that validation criteria are met.

Additionally, the associated remedial works health and environmental risks/hazards and their minimisation/mitigation are further discussed in **Sections 9.**

7.1 Unexpected Finds Protocol

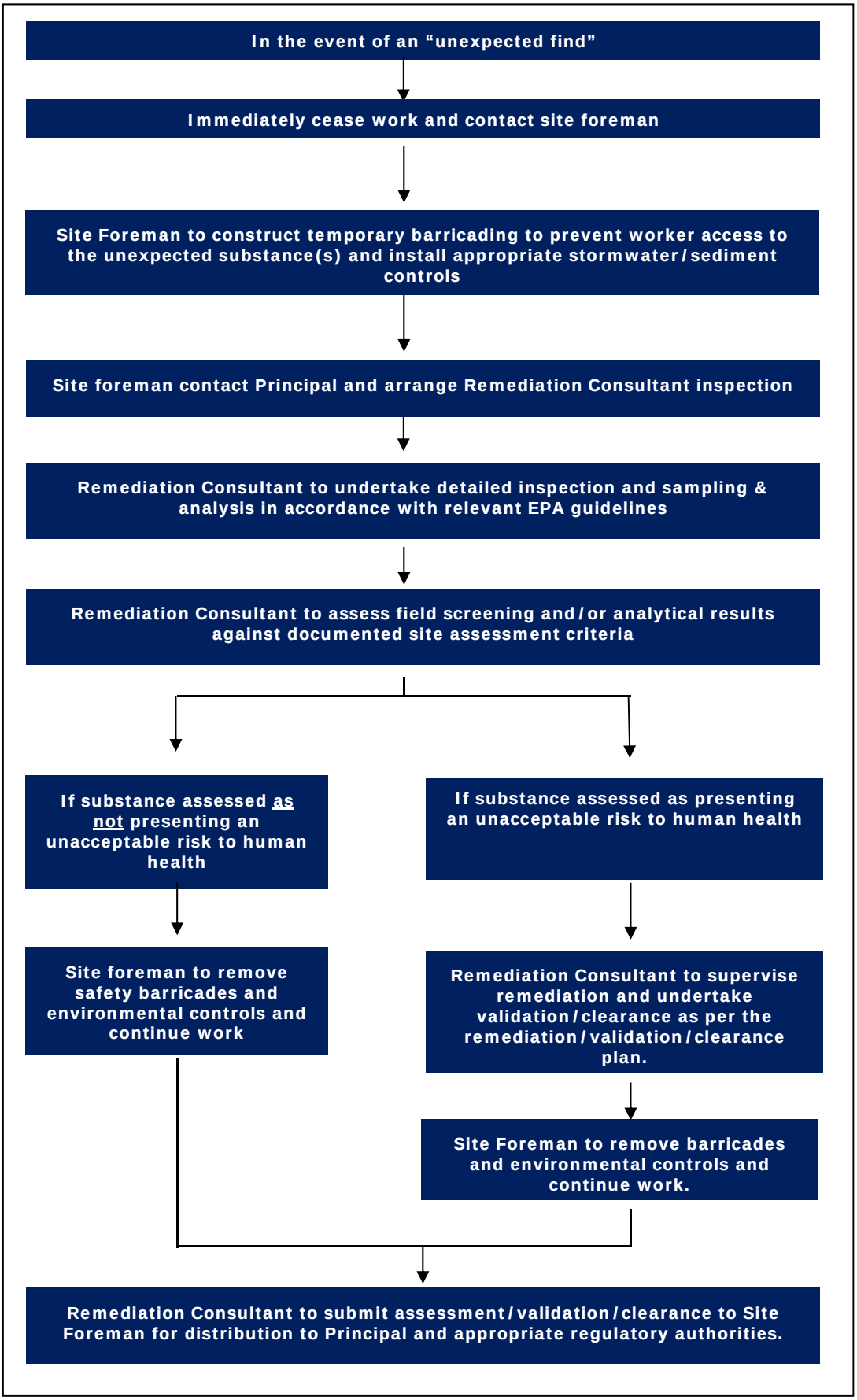
It is acknowledged that previous investigations of the site have been undertaken to assess the identified contaminants of potential concern in selected parts of the site. However, ground conditions between sampling points may vary, and further hazards may arise from unexpected sources and/or in unexpected locations during remediation. The nature of any residual hazards which may be present at the site are generally detectable through visual or olfactory means, for example:

- Significant soil, soil vapour or groundwater impacts associated with leaking from known UST infrastructure;
- Additional petroleum infrastructure beyond the 5 known USTs;
- ACM fragments encountered in impacted fill materials;
- Friable ACM such as lagging (visible) encountered;
- Drums of soil/chemicals/waste;
- bottles/containers of chemicals (visible); and
- ash and/or slag contaminated soils/fill materials (visible).

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances be identified (or any other unexpected potentially hazardous substance), the procedure summarised in **Flowchart 7.1** is to be followed.

An enlarged version of the unexpected finds protocol, suitable for use onsite, should be posted in the Site Office and referred to during the site-specific induction by the Contractor.

Flowchart 7.1: Unexpected Finds Protocol



7.2 Contingency Scenarios

7.2.1 Remedial Strategy Constraints

In the event that the proposed remedial works do not meet the validation criteria, or if the selected remedial strategy is not able to proceed, the following actions will be considered to ensure, firstly, the safety and health of people and the environment and, secondly, that the overall project objectives are achieved:

- Reassessment of remedial and validation options for impacted materials; and
- Continued controlled excavation/sorting of impacted soils; or
- Containment of impacted materials onsite and development and implementation of a suitable LTEMP to manage any residual contamination (if appropriate).

7.2.2 Material Storage Breach

In the event any stockpiled materials escape (or have the potential to escape), then the management controls shall be rectified and investigations undertaken to review the adequacy of the controls and any improvements implemented.

7.2.3 Complaints

Due to the nature of the activities and type of contaminants identified at the site there is a potential for complaints to be received from members of the public relating to environmental emissions including:

- Dust emissions arising from soil excavation, material handling and transport;
- Odour emissions arising from handling of malodorous soil;
- Visibly impacted surface water quality in stormwater system in proximity of the site; and
- Noise and vibration from excavation.

Monitoring of all environmental emissions shall be undertaken as detailed in **Section 9** and appropriate actions taken to further control emissions following receipt of a complaint. Such additional controls may include the following actions:

- Disturbance of soils during meteorologically favourable periods only; and/or
- application of odour masking chemicals on odorous materials; and/or
- Revision of odour control provided to open excavations, stockpiled materials, including covering of highly impacted soils. etc; and/or
- Increasing environmental controls including covering and/or wetting down soils which are generating dust.

7.2.4 Severe Weather

Weather will be monitored on a daily basis via checking an internet based weather service provider. Should severe weather be forecast, especially strong winds or heavy rain, remedial works will stop until safe to re-commence. All site management controls will be implemented to the extent practicable as outlined in **Section 9** prior to any severe weather events.

8. Validation Plan

8.1 Overview

Validation data is required to be collected to verify the effectiveness of the remediation works and document the condition of the site as being suitable for the permissible land uses. Validation activities will be required for the following:

- Excavations formed by removal of USTs, associated petroleum infrastructure and impacted soil/shale;
- Excavations formed by removal of heavy metal and PAH impacted materials;
- Waste materials requiring offsite disposal;
- Residual soils underneath stockpiles where contaminated material has been stored (if not on hardstand/lined);
- Confirmation the site surface soils (0 – 100 mm) does not contain visually identifiable asbestos or other soils contain unacceptable staining or malodorous aesthetic issues; and
- Importation of materials to site.

8.2 Data Quality Objectives

Data Quality Objectives (DQOs) were developed for the validation program, as discussed in the following sections.

8.2.1 State the Problem

The site contains five USTs as well as heavy metal and PAH impacted fill material that require remediation for the site to be considered suitable for future proposed land uses.

To appropriately demonstrate that the remedial works have been completed in accordance with this RAP, sufficient data in the form of observations, sample analytical data, material tracking records, etc. are required to be collected and assessed in a defensible manner.

8.2.2 Identify the Decision

The following decisions are required to be made during the validation works:

- Are there any unacceptable risks to onsite or offsite receptors following the remediation of impacted soil?
- Was all UPSS-related infrastructure removed and disposed appropriately?
- Have marker and capping layers (where required) been installed appropriately and in accordance with RAP requirements?
- Have all aesthetic issues been addressed?
- Have waste materials been classified and disposed of offsite to a facility licensed to accept the classified waste?
- Was imported material used as backfill suitable for the intended land use?
- Is there any potential migration of contaminants from the site?
- Have the works been completed in accordance with the RAP, or where variations to the works were required, have these met the objectives of the RAP?
- Is the site suitable for the proposed land uses?

8.2.3 Identify Inputs to the Decision

The inputs to the decision are:

- Previous investigation data and data gap assessment outcomes as completed under this RAP;
- Field observations, sampling and analytical data during remedial works;
- Field observations, sampling and analytical data for offsite disposal of waste materials;
- Documentation of appropriate classification of imported materials;
- Assessment criteria for potentially contaminated media including soil, soil vapour and/or groundwater; and
- Data quality indicators as assessed by quality assurance/quality control procedures (QA/QC).

8.2.4 Define the Study Boundaries

The study boundaries of the site are defined as follows:

- The approximate lateral extent of the works relevant to this RAP is shown on **Figure 7**; and
- The vertical extent of the works for each of the remedial areas as discussed in **Section 4.1**.

Ultimately the study boundaries will comprise the lateral and vertical extent of the site successfully validated in accordance with the requirements of this plan. The temporal limits of the assessment will comprise the duration of the remedial works and validation programs.

8.2.5 Decision Rules

The decision rules adopted to answer the decisions identified in **Table 8.1** below.

Table 8.1: Decision Rules

Decision Required to be Made	Decision Rule
1. Are there any unacceptable risks to onsite or offsite receptors from any residual soil contamination?	Soil analytical data will be compared EPA endorsed criteria to be adopted as site validation criteria. Statistical analyses of the data in accordance with relevant guidance documents will be undertaken, if appropriate, to facilitate the decisions. The following statistical criteria will be adopted with respect to soils: Either: the reported concentrations are all below the site criteria; Or: the average site concentration for each analyte must be below the adopted site criterion; no single analyte concentration exceeds 250% of the adopted site criterion; and the standard deviation of the results must be less than 50% of the site criteria. And: the 95% upper confidence limit (UCL) of the average concentration for each analyte must be below the adopted site criterion. If the statistical criteria stated above are satisfied, the decision is **No**. If the statistical criteria are not satisfied, the decision is **Yes**.
2. Was all UPSS-related infrastructure removed and disposed appropriately?	Are there are outstanding issues in relation to the removal and disposal of the UPSS? If there are no outstanding issues, the answer to the decision is **No**. If there are outstanding issues, the answer to the decision is **Yes**.
3. Have marker and capping layers (where required) been installed appropriately and in accordance with RAP requirements?	Has the marker and capping layer been installed appropriately and in accordance with the RAP requirements? If the criteria stated above are satisfied, the decision is **No**. If the criteria are not satisfied, the decision is **Yes**.
4. Are there any aesthetic issues remaining following remediation works?	If there were any remaining unacceptable aesthetic impacts including staining, odours, anthropogenic inclusions or visible ACM in the top 100 mm, the answer to the decision will be **Yes**.

Decision Required to be Made	Decision Rule
	Otherwise, the answer to the decision will be **No**.
5. Was excess excavated soil classified and disposed of offsite to a facility licensed to accept the classified waste?	Soil analytical data will be compared against EPA Waste Classification Guidelines (2014). Statistical analyses of the data in accordance with relevant guidance documents will be undertaken, if appropriate, to facilitate the decisions (as detailed above). Appropriate waste classification and disposal documents to be obtained. If there are no outstanding issues, the answer to the decision is **No**. If there are outstanding issues, the answer to the decision is **Yes**.
6. Was imported material used as backfill suitable for the intended land use?	Material required to be imported onto the site as capping, trench backfill or road building purposes (or any other purpose) are required to be demonstrated to be Virgin Excavated Natural Material (VENM), Excavated Natural Materials (ENM) or material considered suitable for beneficial reuse in accordance with a resource recovery exemption issued by NSW EPA under clauses 51 and 51A of the Protection of the Environment Operations (Waste) Regulation 2014. All imported material must not be classified as containing asbestos. All imported materials will be assessed to ensure the entirety of the capping layer from surface to the marker layer is validated upon conclusion of remedial works. <u>VENM</u> Laboratory analysis results will be compared to published background levels (metals) and nominated laboratory LORs (for all man-made chemical constituents) for VENM. The Remediation Consultant will conduct a site inspection of all VENM source sites and approve any VENM Certificates prior to importation of material. If either the source site or supporting documentation is unsatisfactory in regards to certainty of the material comprising VENM, the Remediation Consultant will undertake additional sampling to confirm chemical characterisation of VENM material and prepare any required documentation. <u>ENM</u> ENM will be assessed in accordance with the "Excavated Natural Material Exemption 2014". The Remediation Consultant will conduct a site inspection of all ENM source sites and approve any ENM material characterisations prior to importation of material. If either the source site or supporting documentation is unsatisfactory in regards to certainty of the material comprising ENM, the Remediation Consultant will undertake additional sampling to confirm chemical characterisation of ENM material and prepare any required documentation. <u>Resource Recovery Exemptions</u> Any materials falling under this category will be assessed in accordance with the relevant resource recovery exemption. The Remediation Consultant will undertake additional assessment and reporting if required to ensure compliance with the relevant resource recovery exemption.
7. Is there any potential migration of contaminants from the site?	Should concentrations of contaminants remain at the site following validation, which could pose an unacceptable risk from migration (or should off-site sources pose a potentially unacceptable risk to the site), the answer is **Yes**, and further investigation or management may be required. Otherwise the answer is **No**.
8. Have all remediation works been completed in accordance with the requirements of the RAP, or where variations were required, have these been appropriate to meed the RAP objectives?	Evaluation of the RAP requirements and completed scope of works will be completed on a qualitative basis. If the completed works are inconsistent with the RAP objectives, the answer will be **No**. In this instance, evaluation of the works will be undertaken with consideration to the RAP objectives. If the works are inconsistent with the stated objectives, the answer is **No**. Otherwise the answer to the decision is **Yes**.
9. Is the site suitable for the proposed uses?	Is the answer to any of the above decisions Yes? If yes, have the outstanding issues appropriately addressed by further assessment/remediation/management or implementation of an EMP? If the issues have been appropriately addressed, the answer to the decision is Yes, potentially subject to ongoing implementation of the EMP.

Decision Required to be Made	Decision Rule
	Otherwise, the decision is No and the requirements for further remediation of the Site and/or implementation of additional management measures (as documented in an amended EMP) are required to be documented such that the answer to the decision can be Yes.

8.2.6 Specify Limits of Decision Error

This step seeks to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting inherent uncertainty in the data. Data generated during this project needs to robust and reliable to facilitate decisions to be made with confidence.

Specific limits for this project were adopted in accordance with the appropriate guidance from the NSW EPA, NEPC (2013), appropriate indicators of data quality indicators (DQIs) used to assess QA/QC and standard JBS&G procedures for field sampling and handling.

To assess the useability of the data prior to making decisions, the data were assessed against pre-determined DQIs to assess precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters). The acceptable limit on decision error was 95% compliance with DQIs.

The QA/QC program is documented in **Table 8.2**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples for chemical COPCs. For asbestos precision is assessed by whether the identification results for duplicate samples were in agreement with the original sample.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards. Note only applied to chemical COPC.
- **Representativeness** –expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; and ensuring analysing laboratories use consistent analysis techniques; and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Table 8.2 Summary of Data Quality Indicators for Soil Validation Program

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50% RPD[1]
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD[1]
Laboratory Duplicates	1 / 20 samples	<50% RPD[1]
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	All samples	-[2]
Samples extracted and analysed within holding times.	All samples	Soil: organics (14 days), inorganics (6 months) Metals (6 months)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Storage blank	1 per lab batch	<LOR
Rinsate sample	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples extracted and analysed within holding times	NATA accreditation
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples[2]
Limits of reporting appropriate and consistent	All Samples extracted and analysed within holding times	All samples[2]
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples[2]
Appropriate documentation	All Samples	All samples[2]
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR<= Site assessment criteria

[1] If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.

[2] A qualitative assessment of compliance with standard procedures and appropriate sample collection methods will be completed during the DQI compliance assessment.

8.2.7 Optimise the Design for Obtaining Data

The purpose of this step is to identify a resource-effective field investigation sampling design that generates data that are expected to satisfy the performance criteria, as specified in the preceding steps of the DQO Process.

For these works, after the removal of the USTs and impacted fill materials, the resultant excavation walls/base/stockpile footprint will be inspected/sampled in accordance with **Table 8.3** with the results assessed against the validation criteria in **Section 8.5**.

Imported materials will also require validation to ensure their appropriateness (from a contamination perspective) for use on the site in accordance with the NEPC (2013) guidelines or relevant exemptions (such as VENM and ENM). Sample densities are outlined in **Table 8.3**. The validation criteria are discussed in **Section 8.5**.

Materials requiring offsite disposal are required to be classified in accordance with EPA (2014) Waste Classification Guidelines. Sample densities are outlined in **Table 8.3**.

Table 8.3: Validation Analytical Schedule

Item	Sampling Frequency			Analytes
	Excavation Base	Excavation Walls	Materials	
Excavations formed by the removal of UST and associated impacted soils	1 sample / 100 m^2 (10 m grid), minimum of 2 per base	1 sample / 10 linear metres, minimum of 1 per excavation face; and 1 sample / per strata type	N/A	Lead, PAHs, TRH/BTEXN and phenols
Fuel feed lines	1 sample / 5 m line	N/A	N/A	Lead, PAHs, TRH/BTEXN and phenols
Bowsers	1 sample / bowser	N/A	N/A	Lead, PAHs, TRH/BTEXN and phenols
Remote Fill Points	1 sample / fill point	N/A	N/A	Lead, PAHs, TRH/BTEXN and phenols
Fill materials associated with UST	N/A	N/A	1 sample / 25 m^3 up to 100 m^3. Minimum of three samples per stockpile. Reduced sampling density for volumes > 100 m^3.	Lead, PAHs, TRH/BTEXN and phenols (plus asbestos for off-site disposal)
Excavations formed by the removal of heavy metal and PAH impacted soils	1 sample / 100 m^2 (10 m grid), minimum of 2 per base	1 sample / 10 linear metres; and 1 sample / 1 m depth	N/A	Heavy metals PAHs
Stockpile footprints	1/100 m^2 (10 m grid) with a minimum of 2 samples	N/A	N/A	Relevant COPCs as per impacted material type
Data gaps	1 / 400 m^2 (20 m grid) 2 samples proposed	N/A	N/A	Heavy Metals TRH/BTEX OCPs/PCBs

Item	Sampling Frequency			Analytes
	Excavation Base	Excavation Walls	Materials	
				PAHs Asbestos (500mL)
Waste classification of materials requiring offsite disposal	N/A	N/A	1/100 m^3 with a minimum of 3 samples	Heavy Metals TRH/BTEX OCPs/PCBs PAHs Asbestos (500mL)
Imported Materials of VENM, if required	N/A	N/A	Minimum 3 samples per source site. Maximum of 10 samples.	As a minimum: Heavy metals TRH/BTEX PAHs OCPs/PCBs Asbestos (500mL)
Imported Materials of ENM, if required	N/A	N/A	As per ENM Order.	Heavy metals TPH/BTEX PAHs pH EC RTA 276 (foreign materials) Asbestos (500mL)
Recycled/Recovered Products	N/A	N/A	As per relevant exemption	As per exemption plus Asbestos (500mL)

8.3 Validation Methodology

The soil sampling method shall be determined by the Remedial Consultant as consistent with the observations and appropriate to generate representative samples. The soil sampling method shall be consistent with the data quality indicators in **Section 8.2.6**.

8.3.1 UST and Impacted Soil Removal

The validation program for the removal of the USTs and associated impacted soils comprises:

- Inspection of the excavated areas by a suitably trained and experienced environmental consultant to confirm the extent of potentially impacted materials have been removed. Screening using a calibrated PID to be used where appropriate. If additional potentially impacted material is identified, further excavation will be conducted and the affected area will be re-inspected until such time as visual and olfactory validation is obtained;
- Following visual and olfactory validation, soil samples will be collected from the remediation area walls as per **Table 8.3**;
- Excavation validation samples will be analysed at a laboratory NATA accredited for the required analyses. If the concentration of COPCs are identified in any of the excavation validation samples exceeding criteria, then the soils will be excavated a minimum 0.3 m up to 0.5 m further in the direction of failure and the validation process repeated. Alternatively, where impact exceeding criteria is not identified by the laboratory, the remedial areas will be deemed to have been successfully remediated and validated; and

- Excavated soils associated with the UST removal that are potentially not impacted will be sampled as per the rate identified in **Table 8.3**. If the concentration of contaminants in stockpiled materials are above the adopted site criteria, the materials will be required to be treated, disposed of off-site, or a risk assessment completed to determine whether the materials are suitable for onsite containment. Alternatively, if the materials are found to be suitable for on-site retention – they can be reinstated on-site.

8.3.2 Heavy Metal and PAH Impact Remedial Excavations

The validation program for excavations to remove heavy metal and PAH impacted fill is:

- Inspection of the excavation base and walls by a suitably trained and experienced person. If visual or olfactory indicators of contamination are observed, the excavation will be extended and the affected excavation surface re-inspected until such time as visual validation is obtained.
- Following visual validation, soil samples will be collected as per **Table 7.3**.
- If heavy metal or PAH concentrations exceed the adopted validation criteria in any validation sample, the excavation will be extended in the direction relating to the failed sample, and the validation inspection and sampling process repeated.

8.3.3 Footprint of Contaminated Stockpiles

Where stockpiles have been stored on hardstand, geo-textile or plastic lining, visual validation will be used for validation of the stockpile footprint. Validation sampling would only occur when a breach of the containment method is identified.

Where impacted material has temporarily been stored on unsealed ground surfaces, the validation program for the footprint of contaminated stockpiles is:

- Inspection of the stockpile footprint by a suitably trained and experienced person. If impacted material is identified, surface soils are required to be scraped (100 mm), and the footprint re-inspected until such time as visual validation is obtained;
- Following visual validation, soil samples will be collected from the footprint on a 10 m grid, and analysed in accordance with **Table 8.3**, based on the material type previously stockpiled; and
- If contamination is identified in a validation sample at concentrations above the site validation criteria, the soil represented by the failed validation sample will be scraped and managed (via onsite containment or offsite disposal), and the validation inspection and sampling process repeated for the failed area. Alternatively, where contamination is not identified in the samples by laboratory analysis, the footprint will be deemed to have been successfully validated.

8.3.4 Aesthetics Validation

Prior to the completion of remedial works, the ground surface of the site shall be thoroughly inspected by the Remediation Consultant to confirm the absence of visual ACM. Should any observable ACM or unacceptable anthropogenic inclusions be identified, the area should be emu-picked or capped with 100 mm of environmentally validated soil prior to re-inspection by the remediation consultant.

Aesthetic impacts associated with the UST infrastructure, including odorous and/or stained/discoloured soil will be addressed as per the validation process documented in **Section 8.3.1**.

Any additional aesthetic issues will be managed via the UFP process.

8.3.5 Imported Materials

Fill materials imported on site are required to be either VENM, ENM or any other suitable material. Imported materials will require validation prior to being imported to site.

Imported material source sites will be visited by the Remediation Consultant prior to confirmation of approval to import. Supporting documentation must be provided by the Contractor for imported materials to be assessed against the validation plan, relevant guidelines/exemptions and adopted site criteria.

The Remediation Consultant will collect additional samples and prepare appropriate documentation for imported materials in lieu of adequate information provided by the Contractor to ensure all material imported to site is appropriately validated prior to importation.

Validation sampling will be undertaken in accordance with **Table 8.3**.

8.3.6 Data Gap Sampling Under Buildings and Structures

Soil validation sampling for asbestos and chemical constituents will be conducted by the Remediation Consultant under structures or slabs where data gaps remain. It is proposed to sample at two additional locations in the central-eastern portion of the site. All results will be compared to the adopted site soil validation criteria.

If contamination is identified in a soil sample completed for the data gap investigation at concentrations above the site validation criteria, the area and associated result will be considered under the Unexpected Finds Protocol. Further assessment will consider whether material will require management and/or remediation so as to make the site suitable for the proposed use.

Alternatively, where contamination is not identified in the samples by laboratory analysis, the area will be deemed to have been successfully validated.

8.3.7 Validation of Onsite Containment

Where on-site containment of impacted material is undertaken during the remediation activities, validation of the implemented measures will be required as per the following.

Marker Layer

Visual inspection will be undertaken by the Remediation Consultant to verify the suitable installation of the marker layer across required areas. Photographic records and a survey prepared by a Registered Surveyor of the marker layer installation, including vertical and lateral extents will be organised by the Contractor and submitted to the Client and Remediation Consultant for inclusion in the validation report.

Capping Layer

Material to be used as a capping layer must be validated by the Remediation Consultant as environmentally suitable, consisting of VENM, ENM, suitable on-site materials (i.e. treated material or VENM from the site) or material considered suitable for beneficial reuse via a resource recovery exemption issued by NSW EPA. Additionally, contaminant concentrations in any capping layer material must not exceed the adopted site validation criteria for soils.

The capping layer must be placed at the thicknesses specified for each capping scenario as detailed in **Section 6.5.** Photographic records and a survey of the capping layer installation, which details the final thicknesses of the capping layer, including the vertical and lateral extents must prepared for/by the Contractor and provided to the Client and Remediation Consultant for inclusion in the validation report.

Surveys

The Remedial Contractor must provide a survey of the marker layer and capping layer prepared by a registered surveyor that demonstrates the lateral and vertical extents each layer. The capping layer survey must demonstrate that the minimum capping thicknesses (as per **Section 6.5**) have been achieved.

8.4 Laboratory Analysis

NATA accredited laboratories shall be used for all analysis of samples. Appropriate methods and limits of reporting (LORs) are required for comparison to relevant criteria.

8.5 Soil Validation Criteria

8.5.1 Assessment Criteria Selection

As per the decision process for assessment of urban development sites (EPA 2017), a set of health and ecological assessment thresholds derived from NEPC (2013) or other EPA endorsed guidelines was used for evaluation of site contamination data collected for this assessment.

The proposed student accommodation land use represents a scenario whereby residents will live in boarding/apartments, with internal common facilities and have minimal opportunities for direct soil access. No private gardens are proposed. The communal landscaped area is largely covered by paved areas, with some smaller areas of grassed and landscaped areas. These communal areas have been designed for passive use by residents and are not public open spaces for recreational activities by the broader public.

To this extent, the HIL B – standard residential land use scenario with minimal opportunities for soil access has been adopted as the site validation criteria for the site.

8.6 Soil Validation Criteria

The site validation criteria are presented on **Table A** and summarised as follows:

- Health based investigation levels (HILs) for residential with minimal opportunities for soil access (HIL B);
- Health Screening Levels (HSLs) for petroleum hydrocarbons considering potential for vapour intrusion within fine grained soils for low-high density residential land use (HSL A & HSL B);
- HSLs for direct contact for intrusive maintenance workers;
- Management limits for TRH fractions for Residential, Parkland and Public Open Space, land use, fine soils;
- HSLs for asbestos in soil for residential with minimal opportunities for soil access land use (HSL B); and
- Ecological Investigation/Screening Levels (EILs/ESLs) for urban residential land use.

EILs have been calculated via the summing of ambient background concentrations (ABC) and added contaminant limits (ACL), based on soil characteristics of the site, as presented in **Table A**. ABCs were based on Olszowy et al (1995)[14].

Where no criteria are present for a contaminant, the laboratory limit of reporting (LOR) will be used as an initial screening criteria.

[14] *Trace element concentrations in soils from rural and urban areas of Australia*, H Olszowy, P Torr, P Imray, Department of Human Services and Health, Environmental Protection Agency, published 1995 (Olszowy *et* al. 1995)

8.6.1 Application of Soil Assessment Criteria

For soils to be considered as meeting the adopted validation criteria (i.e., not posing an unacceptable risk), the following criteria will be adopted:

- Either:
  - All contaminant concentrations will be less than the adopted site assessment criteria,
- Or:
  - The upper 95% confidence limit on the average concentration for each analyte (calculated for samples collected from consistent soil horizons, stratigraphy or material types) is below the adopted criterion;
  - No single analyte concentration exceeded 250% of the adopted criterion; and
  - The standard deviation of the results is less than 50% of the criterion.

8.7 Waste Disposal Off-site

All wastes requiring off-site disposal must be classified in accordance with *Waste Classification Guidelines* (EPA 2014). The Contractor is responsible for the lawful disposal of the classified waste to a licensed waste disposal facility lawfully able to accept the waste.

Disposal dockets for each individual off-site waste disposal load must be provided to the Client and to the Remediation Consultant by the Contractor to demonstrate appropriate off-site disposal of waste occurred for site validation assessment purposes.

8.8 Material Tracking Plan

The movement of all earth/aggregate based materials on the site, to the site and from the site is required to be subject to a Material Tracking Plan (MTP). The MTP shall be administered by the Remediation Consultant with the provision of all required information by the Contractor.

Material tracking shall be required for all materials that are moved / excavated from a location on the site and not wholly replaced in the same locations within 12 hours of material movement (i.e., soils excavated for testpitting / assessment do not require material tracking, however all other material will require tracking).

8.9 Material Tracking Data

To this extent, all excavation and filling works as undertaken for the purposes of site remediation require the following information to be recorded by the Contractor on Material Tracking Forms (MTFs) and in an electronic Material Tracking Spreadsheet (MTS) and verified by the Remediation Consultant, with respect to material placement activities:

- Date (yyyy/mm/dd);
- Unique MTF identification (starting at 001);
- Site figure showing source (cut) and placement (fill);
- Estimated volume (cubic metres);
- Type of material;
- Depth of source (RL)
- Depth of placement (RL);
- Source (from) information in terms of MGA56 co-ordinates as established by site GPS and/or survey;

- Placement (to) information in terms of MGA56 co-ordinates as established by site GPS and/or survey;
- Source (from) information in terms of site feature (e.g. Remedial Zone);
- Placement (to) information in terms of site feature (e.g. Remedial Zone);
- Source (from) information from off-site source site (e.g., Quarry A);
- Placement (to) information for off-site disposal (e.g., tip, EPA tracking number, docket reference);
- Reference document (where necessary, i.e. virgin excavated natural material / excavated natural material classification);
- Purpose of placement (i.e. containment, surplus to site requirements etc); and
- Comments (when required).

For material which has been removed for the purposes of environmental remediation, and is proposed to be moved again subsequent to the completion / validation of environmental remediation works, MTFs for the replacement of the material shall make reference to the initial MTFs generated by the excavation of the materials for remediation. As part of the validation of the material tracking forms, mass / material balances shall be assessed at each stage where additional material tracking forms are generated for particular site material.

It is the responsibility of the Contractor to ensure the MTF(s) are completed and submitted to the Remediation Consultant at the end of each day's work. The Remediation Consultant has ownership of the MTFs on receipt of all the necessary information from the Contractor.

The Remediation Consultant is required to review the submitted MTFs and to investigate/resolve any discrepancies. Following this review, a copy of the MTFs will be forwarded to the Principal. Ideally this would occur within two days of the Remediation Consultant verifying the MTFs from the Contractor.

The MTP is considered an active process and revisions of the MTP will be undertaken to improve the MTFs and MTS to ensure comprehensive and efficient material tracking.

8.10 Reporting

8.10.1 Validation Report

At the completion of remediation works, a validation report will be prepared in general accordance with EPA (2017) and OEH (2011) *Guidelines for Consultants Reporting on Contaminated Site*, documenting the works as completed.

This report will contain information including:

- Details of the remediation works conducted;
- Information demonstrating that the objectives of this RAP have been achieved, in particular the validation sample results and assessment of the data against both the pre-defined DQO and the remediation acceptance (validation) criteria;
- Information demonstrating compliance with appropriate regulations and guidelines;
- Any variations to the strategy undertaken during the implementation of the remedial works;
- Results of all environmental monitoring undertaken during the course of the remedial works;

- Details of any environmental incidents occurring during the course of the remedial works and the actions undertaken in response to these incidents;
- Verification of regulatory compliance;
- Details on waste classification, tracking and off-site disposal including landfill dockets; and
- Clear statement of the suitability of the site with respect to permissible land uses.

The report will serve to document the remediation works for future reference.

8.10.2 Long Term Environmental Management Plan

Should the remediation result in on-site containment of impacted fill materials, a Long Term Environmental Management Plan (LTEMP) will be required. The LTEMP will document provisions for the long-term management of the marker and capping layers integrity and detail the required controls for future works below the marker layer.

9. Site Management Plan

9.1 Overview

Additional management controls in any development consent will need to be met, together with general requirements of Council's applicable Development Control Plans (DCPs).

9.2 Hours of Operation

All remediation works shall be conducted within the following hours or as specified on the development consent:

- Monday to Friday: 7am to 6pm.
- Saturday: 8am to 1pm.
- Sunday and public holidays: No work permitted.

9.3 Erosion and Sediment Control Policy

All works shall be conducted in general accordance with *Soils and Construction Managing Urban Stormwater Standards* (Landcom 2004), which outlines the general requirements for the preparation of a soil and water management plan.

9.4 Stockpile Management

All materials stockpiled onsite will be managed by the Contractor. Unique numbers will be provided for each stockpile, the source of the stockpile, its estimated volume, material characterisation and its location onsite will also be recorded.

The following general procedures will be implemented by the Contractor:

- No stockpiles of soil or other materials shall be placed on footpaths or road reserves unless prior Council approval has been obtained; and
- All stockpiles of soil or other materials shall be placed away from drainage lines, gutters or stormwater pits or inlets.

9.4.1 Temporary Management

Any temporary stockpiles must be kept damp (not flooded) and where proposed to remain in-site for more than a day, covered by geo-fabric/plastic or sealed with a soil binding product as soon as practical. Where weather conditions are appropriate (cool/cold weather, minimal wind and/or precipitation), temporary stockpiles may be kept moist as a temporary control measure. The control measure will extend beyond the perimeter of the stockpiles and shall be secured to prevent being blown away by wind. Stockpiles must be placed in a secured, signed and excluded location onsite.

9.4.2 Long Term Management

Long term stockpiles must be covered with geo-fabric or sealed with a soil binding product (dust-bloc) or sealed with hydro mulch. Large stockpiles should be bunded to prevent impacted water runoff.

Regular inspections of long term stockpiles should be undertaken to ensure the controls implemented are in good condition, no dust is being generated from the stockpile and no runoff is occurring.

When the seal is broken on long term stockpiles, such as moving, excavation or tracking over the stockpile, the interim management measures must be implemented until such a time that the long term controls can be re-implemented on the stockpile.

9.5 Site Access

All vehicle access to the site shall be stabilised to prevent the tracking of sediment onto the roads and footpaths. All materials must be removed from the roadway on a daily or as required basis.

9.6 Excavation Pump-out

It is unlikely that any remedial excavation pump-out will be required given the limited excavation requirements.

9.7 Noise

Remediation work shall not give rise to 'offensive noise' as defined in the *Protection of the Environment Operations* (POEO) Act 1997. All equipment and machinery associated with the remediation work shall be operated by the Contractor in accordance with the *POEO Act* (*1997*) and its *Noise Control Regulations 2000*.

Noise generated should be managed so as not to adversely impact the amenity or residents/business adjoining or nearby the site.

All machinery and equipment used on site will be in good working order and fitted with appropriate silencers when necessary.

9.8 Vibration

Vibration generated should be managed so as not to adversely impact the amenity or residents/business adjoining or nearby the site.

9.9 Dust Control

During the remedial works, as necessary, excavation areas will be wetted down using a water spray to minimise the potential for dust to be generated by the Contractor. A wetting or bonding agent may be used to further bind the soil to minimise airborne dust generation/asbestos fibre release.

All impacted soils must be wetted (but not flooded) prior to and during excavation and movement of the soils.

Dust shall also be controlled by ensuring vehicles leave via the designated (stabilised) site access and all equipment have dust suppressors fitted by the Contractor.

Where significant fugitive emissions are observed from asbestos inspection / treatment pads, or bioremediation areas, these areas shall be wetted and/or covered by the Contractor.

Meteorological conditions will be monitored by the Remediation Consultant and Contractor. Remedial work will be stopped or modified where meteorological conditions are adverse (i.e., dry conditions and strong winds towards sensitive receptors).

9.10 Airborne Asbestos Fibre Monitoring

Whilst only trace level asbestos and limited bonded ACM have been identified, it is recommended that airborne asbestos fibre monitoring is completed during remedial works given the known presence of small concentrations of ACM and proximity of the site to public receptors.

To this extent, airborne asbestos fibre monitoring will be conducted in accordance with the requirements of the National Occupational Health and Safety Commission (NOHSC*) Asbestos Code of Practice and Guidance Notes*, in particular the Guidance note for the estimation of airborne asbestos dust [NOHSC 3002:2005]. The Remediation Consultant shall undertake airborne asbestos fibre monitoring at a minimum of four static locations daily during remediation works that will disturb asbestos impacted materials. Monitoring locations will include site perimeter locations and downwind locations. Wind Rose information available from the Bureau of Meteorology (BOM) for the nearest weather stations will be used to determine common prevailing winds in the area.

Air filters shall be analysed by a NATA accredited laboratory and results shall be required to be below 0.01 fibres/mL. All detections of fibres shall be further analysed by scanning electron microscope (SEM) to confirm the fibres are asbestos.

If respirable asbestos fibres are confirmed and present between 0.01 and 0.02 fibres/mL, the following controls must be implemented by the licensed asbestos removalist, in accordance with SWA 2018a;

- Review control measures;
- Investigate the cause; and
- Implement controls to eliminate or minimise exposure and prevent further release.

If respirable asbestos fibres are confirmed and present above 0.02 fibres/mL, the following controls must be implemented by the licensed asbestos removalist, in accordance with SWA 2018a;

- Stop removal work;
- Notify SafeWork NSW by phone, then by fax or written statement that work has ceased;
- Investigate the cause;
- Implement controls to eliminate or minimise exposure and prevent further release; and
- Do not recommence removal work until further air monitoring is conducted and fibre levels are detected below 0.01 fibres/mL.

A daily report air monitoring report will be prepared documenting the previous/same days airborne asbestos fibre air monitoring results. This report will be made available to all relevant stakeholders.

9.11 Hazardous Materials

Hazardous and/or intractable wastes arising from the remediation work shall be removed and disposed of in accordance with the requirements of NSW EPA, SafeWork NSW and the relevant regulations by the Contractor.

In particular, any hazardous wastes will be transported by a NSW EPA licensed transporter.

9.12 Disposal of Contaminated Soil

All soils will be classified, managed and disposed in accordance with the *Waste Classification Guidelines* (EPA 2014). Documentary evidence for all soil disposal shall be kept for inclusion in the Validation Report.

Trucks will be loaded in designated areas. The Contractor shall ensure that there is no material tracked out onto the street and that the load is securely covered. In addition, all site vehicles must leave the site in a forward direction.

The Contractor shall also log truck movements and approximate volume, via registration number and consignment number (where applicable), into and out of the site.

All appropriate road rules shall be observed and state roads will be selected as far as practicable over local roads when deciding on the transport route to the off-site material disposal location.

Plant and vehicles should limit their speed when working within asbestos exclusion zones and only traverse designated paths.

WasteLocate is now operational within NSW and any loads of asbestos waste that trigger the values of WasteLocate must be tracked via the online system.

Additional requirements for offsite disposal of soils are presented in **Section 8**.

9.13 Groundwater

It is anticipated that no dewatering will be required for the remediation works. If dewatering is required as part of the remediation works, a licence shall be applied for from the NSW Office of Water for approval to extract groundwater.

9.14 Site Signage and Contact Numbers

A sign/s shall be displayed adjacent to the site access point/s throughout the duration of the works with the contact details of the Contractor and project manager as provided and maintained by the Contractor.

9.15 Site Security

The remedial areas shall be secured against unauthorised access by means of an appropriate fence or barricade or other means by the Contractor. All persons working in asbestos remedial areas must be inducted, have undertaken required training and don appropriate PPE. The access gates to the site will be locked at all times when remedial works are not occurring.

9.16 Community Consultation

Owners and/or occupants of adjacent premises and across the road from the site should be notified at least seven days prior to the commencement of preparation for the remediation works. As a minimum, the notification shall include the details of an appropriate contact person.

9.17 Health and Safety Management

A Work Health & Safety Management Plan (WHSP) shall be prepared by the Contractor prior to commencement of remediation works on the site. The Plan shall contain procedures and requirements that are to be implemented as a minimum during the works.

The objectives of the WHSP are:

- Ensure all regulatory requirements for the proposed works are satisfied;
- To apply standard procedures that minimises risks resulting from the works;
- To ensure all employees are provided with appropriate training, equipment and support to consistently perform their duties in a safe manner; and
- To have procedures to protect other site workers and the general public.

These objectives will be achieved by:

- Assignment of responsibilities;
- An evaluation of hazards;
- Establishment of personal protection standards, mandatory safety practices and procedures;
- Monitoring of potential hazards and implementation of corrective measures; and

Provision for contingencies that may arise while operations are being conducted at the site.

10. Regulatory Approvals / Licensing

10.1 State Environment Planning Policy Number 55 (SEPP55) Remediation of Land

Under Clause 9 (e) of SEPP 55, remediation work is considered Category 1 remediation work (i.e., requiring development consent) when remediation work is carried out, or to be carried out in a heritage conservation area. The site is located within a heritage conservation area pursuant to the Ashfield Local Environmental Plan (LEP) 2013. On this basis, the proposed remedial works at the site are considered to be Category 1 Remedial Works (as per SEPP 55) and require consent.

10.2 Protection of the Environment Operations Act 1997

The proposed remediation/validation activities are not required to be licensed under *the Protection of the Environment Operation Act (1997)* since the works do not involve:

- Treat otherwise than by incineration and store more than 30 000 cubic metres of contaminated soil originating exclusively from the site, or
- Disturb more than an aggregate area of 3 hectares of contaminated soil originating exclusively from the site.

10.3 Protection of The Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transporting. The proposed works on the site will not require to be licensed.

Under Clauses 76 and 79 of the POEO Regulation 2014, asbestos waste (> 100 kgs, or more than 10 m^2 in a single load), must be tracked using WasteLocate.

Section 42 of the Regulation stipulates special transportation, reporting, re-use and recycling requirements relating to asbestos waste and must be complied with regardless whether the activity is licensed.

The requirements for the transportation of asbestos waste include:

- Bonded asbestos material must be securely packaged at all times;
- Friable asbestos material must be kept in a sealed container;
- Asbestos-contaminated soils must be wetted down; and
- All asbestos waste must be transported in a covered, leak-proof vehicle.

The transporter of asbestos waste must cause the following information to be given to the EPA prior to the transportation of asbestos waste loads:

- Source site details including address, name and contact details;
- Date of proposed transportation commencement;
- Name, address and contact details of disposal site; and
- Approximate weight of each class of asbestos in each load.

The transporter of asbestos waste must ensure the following information is given to the disposal site before or at delivery:

- Unique consignment code issued by EPA in relation to that load; and
- Any other information specified in the Asbestos and Waste Tyres Guidelines.

The requirements relating to the off-site disposal of asbestos waste are as follows:

- Asbestos waste in any form must be disposed of only at a landfill site that may lawfully receive the waste,
- When asbestos waste is delivered to a landfill site, the occupier of the landfill site must be informed by the person delivering the waste that the waste contains asbestos,
- When unloading and disposing of asbestos waste at a landfill site, the waste must be unloaded and disposed of in such a manner as to prevent the generation of dust or the stirring up of dust,
- Asbestos waste disposed of at a landfill site must be covered with virgin excavated natural material or other material as approved in the facility's environment protection licence.

Section 48 of the Regulation requires that wastes are stored in an environmentally safe manner. It also stipulates that vehicles used to transport waste must be covered when loaded.

10.4 Waste Classification Guidelines (EPA 2014)

All wastes generated and proposed to be disposed offsite shall be assessed, classified and managed in accordance with this guideline. Where wastes require immobilisation prior to offsite disposal (to reduce waste classifications) an immobilisation approval shall be sought in accordance with Part 2 of this guideline. Immobilisations are only anticipated to be required with unexpected finds that cannot be retained on site and cannot be disposed directly offsite to a licensed facility.

10.5 Asbestos Removal Regulations and Codes of Practice

The excavation of fill containing asbestos will be managed in accordance with the Work Health and Safety Act (2011) and Work Health and Safety Regulation (2017), "*How to Safely Remove Asbestos: Code of Practice,* SafeWork Australia (SWA 2018a), *How to Manage and Control Asbestos in the Workplace Code of Practice*, SafeWork Australia (SWA 2018b), NSW WorkCover Guidelines and the NSW EPA Waste Classification Guidelines.

All airborne asbestos fibre monitoring works must be undertaken by a competent person (or Licenced Asbestos Assessor), in accordance with SafeWork NSW requirements.

11. Conclusions and Recommendations

11.1 Conclusions

Overall, it is considered that the proposed actions outlined in this RAP conform to the requirements of the *Contaminated Sites Guidelines for the NSW Site Auditor Scheme (3nd Edition)* (EPA 2017) because they are: technically feasible; environmentally justifiable; and consistent with relevant laws, policies and guidelines endorsed by NSW EPA.

Subject to the successful implementation of the measures detailed in this RAP and subject to the limitations in **Section 12**, it is considered the site can be made suitable for the intended high density student accommodation land use.

11.2 Recommendations

In addition to this RAP, a redevelopment specific AMP should be prepared that documents requirements for the removal and/or in-situ management of the identified asbestos impact at the site. The redevelopment specific AMP should be implemented during future site development works.

Upon completion of the remediation works, a validation report shall be prepared to document that the site is suitable for the proposed high density student accommodation land use. Should onsite containment be adopted as the preferred remedial strategy, a Long Term Environmental Management Plan will be required to be prepared and implemented at the site.

12. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures

Legend:

Approximate Site Boundary

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0	Date: 14-Jan-2019
Drawn By: AV	Checked By: MH

Scale 1:7,500

0 80 160

metres

Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

SITE LOCATION

FIGURE 1

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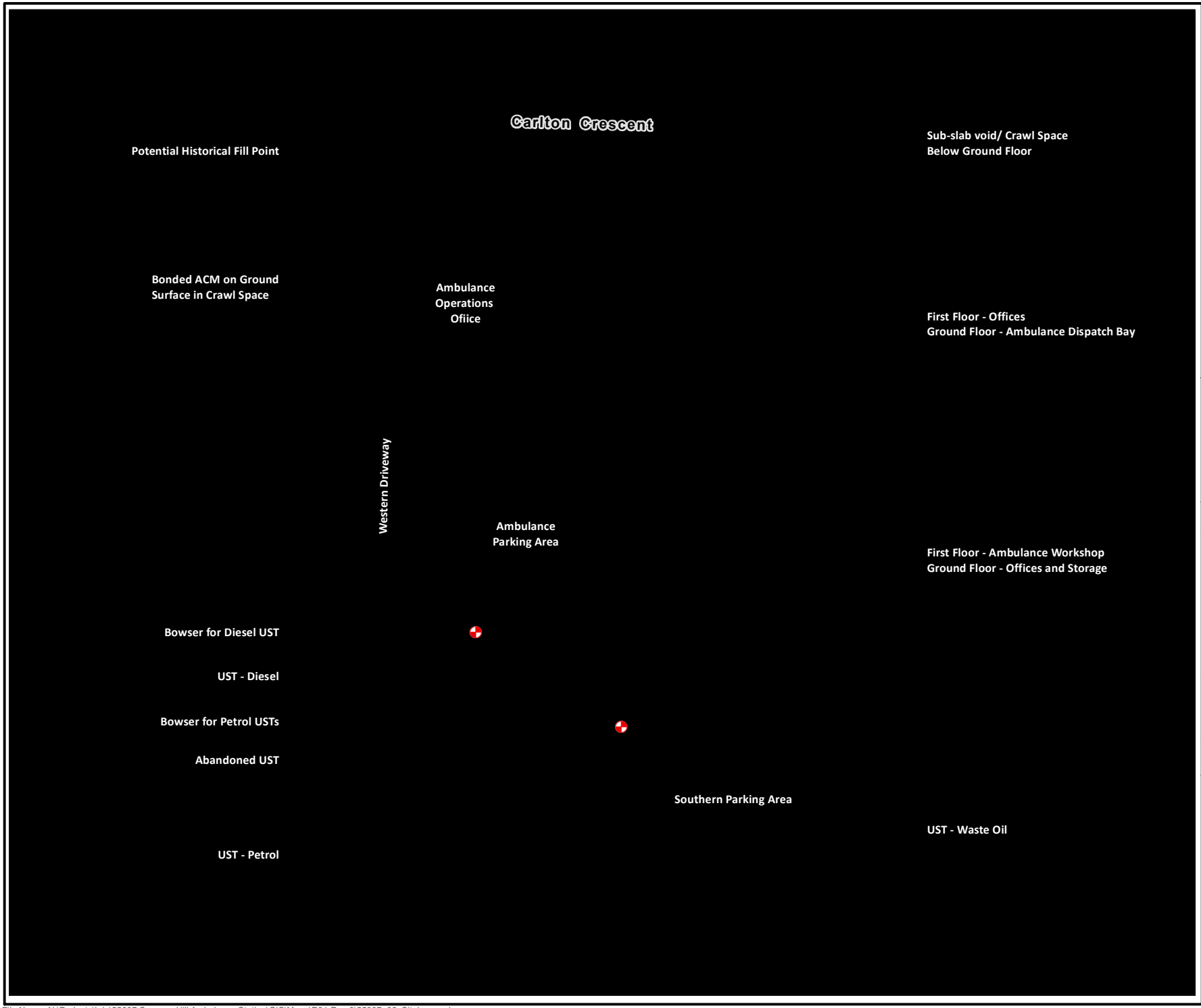


Legend:

- Approximate Site Boundary
- Inferred UST Location
- Inferred Bowser Location

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0	Date: 14-Jan-2019
Drawn By: AV	Checked By: MH

Scale 1:500

0 6 12

metres

Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

SITE LAYOUT

FIGURE 2

File Name: N:\Projects\Iglu\55687 Summer Hill Ambulance Station\GIS\Maps\R01 Rev 0\55687_02_SiteLay.mxd
Reference: Near Maps - http://www.nearmap.com.au/. Imagery 06-05-2017.

Legend:

- Approximate Site Boundary
- Inferred UST Location
- Inferred Bowser Location
- EIS 2015 Borehole

JBS&G Samples

- Borehole
- Soil Vapour

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0	Date: 14-Jan-2019
Drawn By: AV	Checked By: MH

Scale 1:500

0 6 12

metres

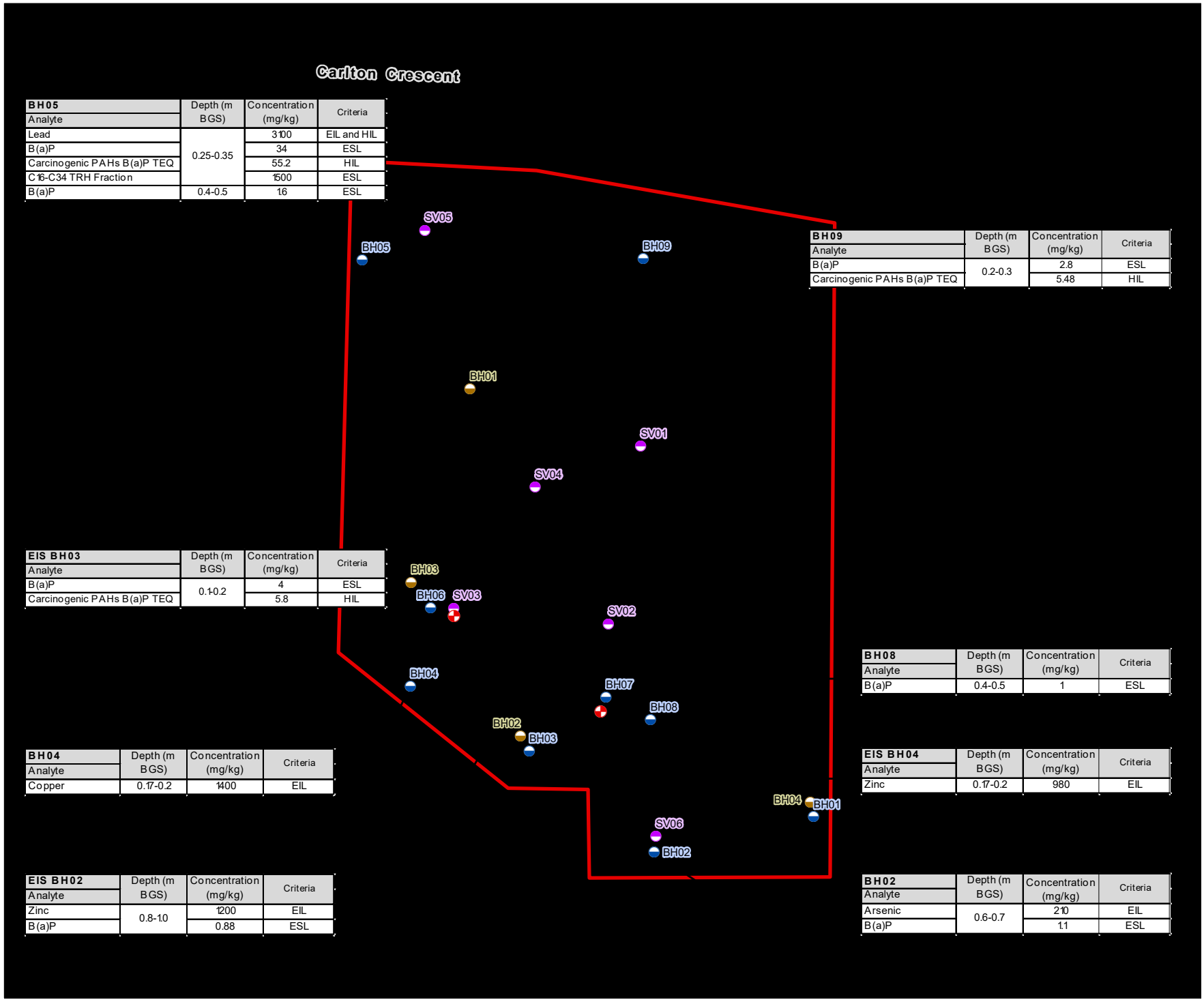
Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

SOIL AND SOIL VAPOUR SAMPLING LOCATIONS

FIGURE 3

File Name: N:\Projects\Iglu\55687 Summer Hill Ambulance Station\GIS\Maps\R01 Rev 0\55687_03_SoilSamples.mxd
Reference: Near Maps - http://www.nearmap.com.au/. Imagery 06-05-2017.



BH05	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
Lead	0.25-0.35	3100	EIL and HIL
B(a)P		34	ESL
Carcinogenic PAHs B(a)P TEQ		55.2	HIL
C16-C34 TRH Fraction		1500	ESL
B(a)P	0.4-0.5	1.6	ESL

BH09	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
B(a)P	0.2-0.3	2.8	ESL
Carcinogenic PAHs B(a)P TEQ		5.48	HIL

EIS BH03	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
B(a)P	0.1-0.2	4	ESL
Carcinogenic PAHs B(a)P TEQ		5.8	HIL

BH08	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
B(a)P	0.4-0.5	1	ESL

BH04	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
Copper	0.17-0.2	1400	EIL

EIS BH04	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
Zinc	0.17-0.2	980	EIL

EIS BH02	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
Zinc	0.8-1.0	1200	EIL
B(a)P		0.88	ESL

BH02	Depth (m BGS)	Concentration (mg/kg)	Criteria
Analyte			
Arsenic	0.6-0.7	210	EIL
B(a)P		1.1	ESL

Legend:

- Approximate Site Boundary
- Inferred UST Location
- Inferred Bowser Location
- EIS 2015 Borehole

JBS&G Samples

- Borehole
- Soil Vapour

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0 | Date: 14-Jan-2019

Drawn By: AV | Checked By: MH

Scale 1:500

0 6 12

metres

Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

SOIL EXCEEDANCES

FIGURE 4

File Name: N:\Projects\Iglu\55687 Summer Hill Ambulance Station\GIS\Maps\R01 Rev 0\55687_04_SoilExceed.mxd
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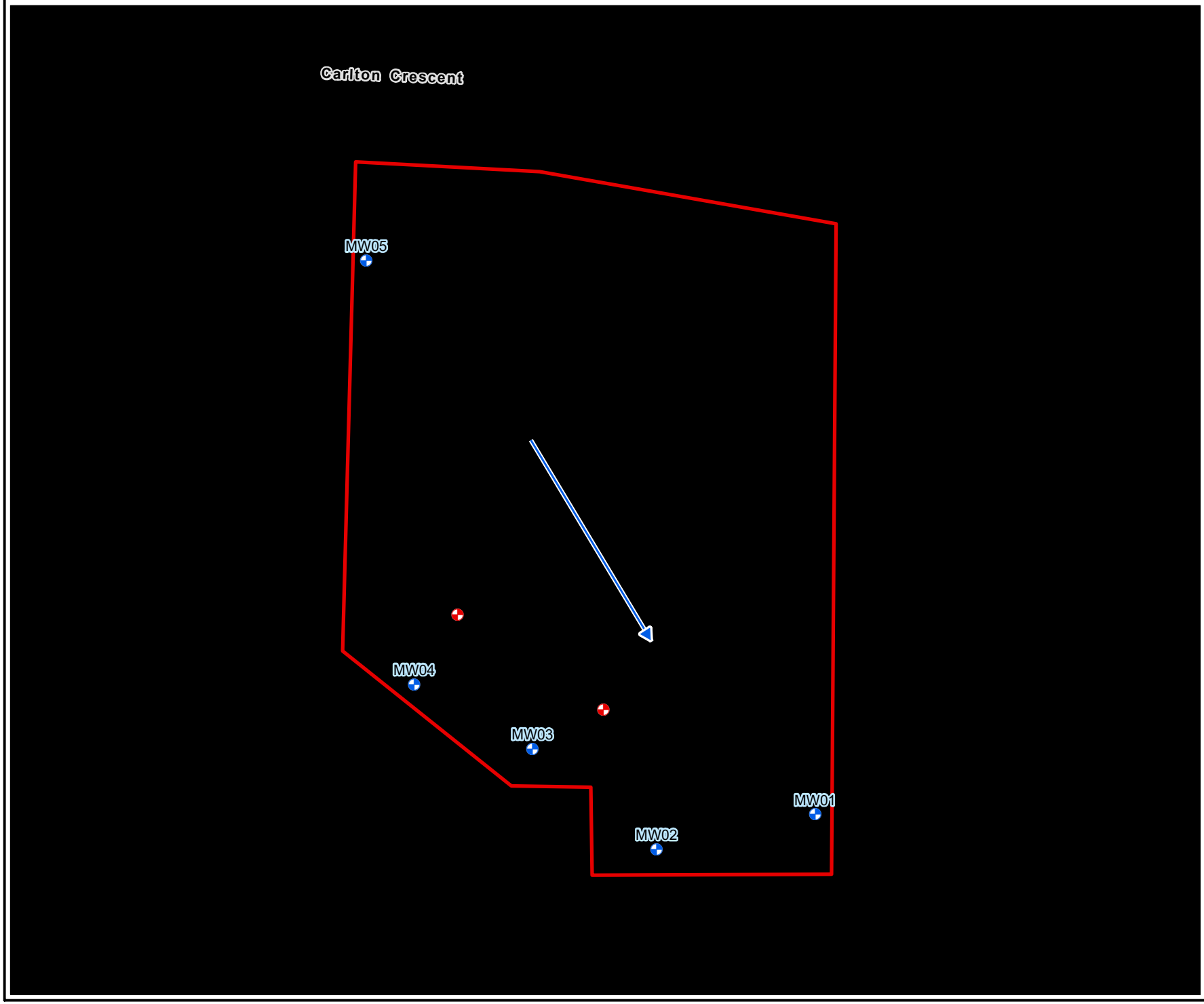


Legend:

- Approximate Site Boundary
- Inferred UST Location
- Inferred Groundwater Flow Direction
- Inferred Bowser Location
- Groundwater Well

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0	Date: 14-Jan-2019
Drawn By: AV	Checked By: MH

Scale 1:500

0 6 12

metres

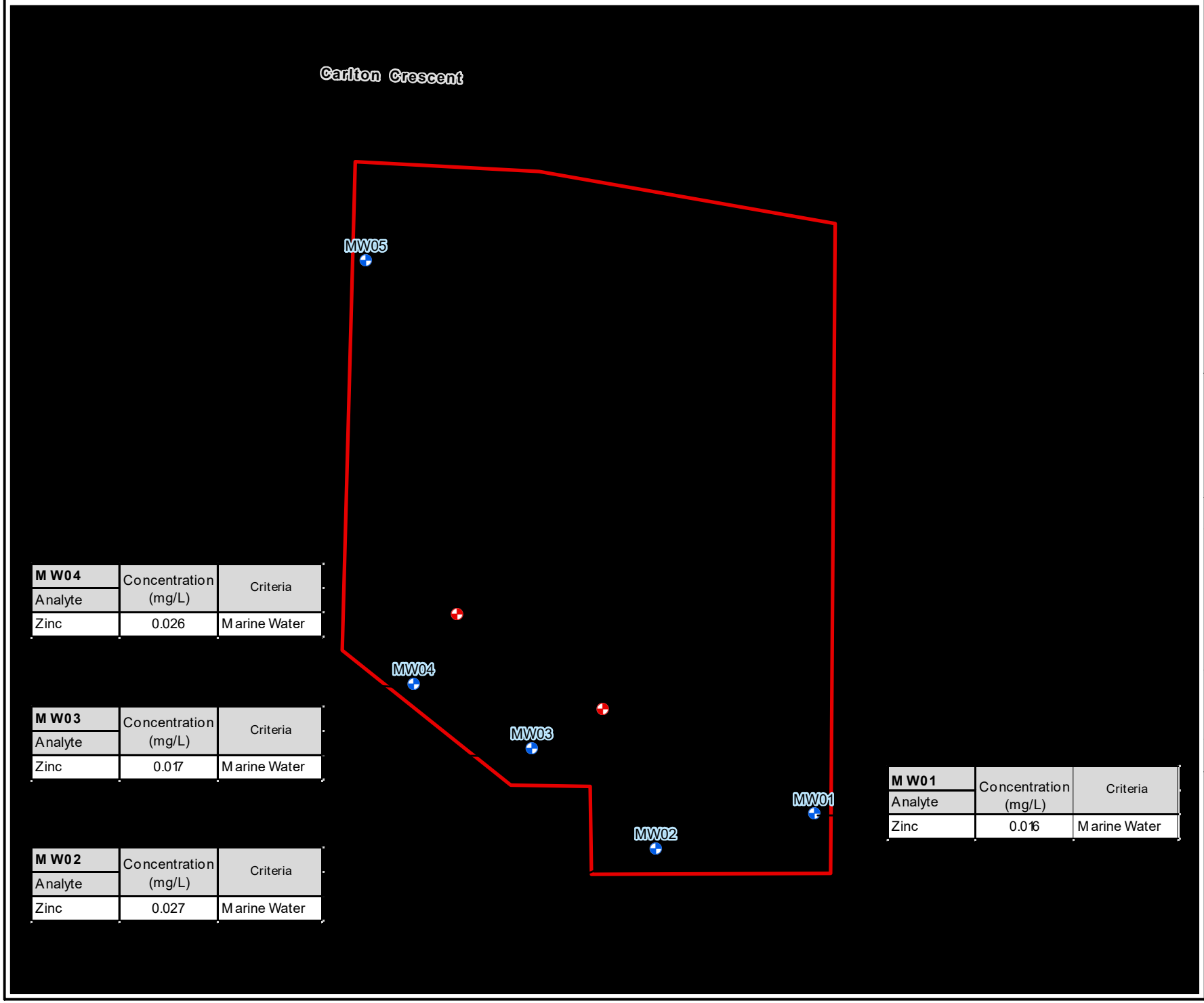
Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

GROUNDWATER SAMPLING LOCATIONS

FIGURE 5

File Name: N:\Projects\Iglu\55687 Summer Hill Ambulance Station\GIS\Maps\R01 Rev 0\55687_05_GWSamples.mxd
Reference: Near Maps - http://www.nearmap.com.au/. Imagery 06-05-2017.



MW04	Concentration (mg/L)	Criteria
Analyte		
Zinc	0.026	Marine Water

MW03	Concentration (mg/L)	Criteria
Analyte		
Zinc	0.017	Marine Water

MW02	Concentration (mg/L)	Criteria
Analyte		
Zinc	0.027	Marine Water

MW01	Concentration (mg/L)	Criteria
Analyte		
Zinc	0.016	Marine Water

Legend:

- Approximate Site Boundary
- Inferred UST Location
- Inferred Bowser Location
- Groundwater Well

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0 | Date: 14-Jan-2019

Drawn By: AV | Checked By: MH

Scale 1:500

0 6 12

metres

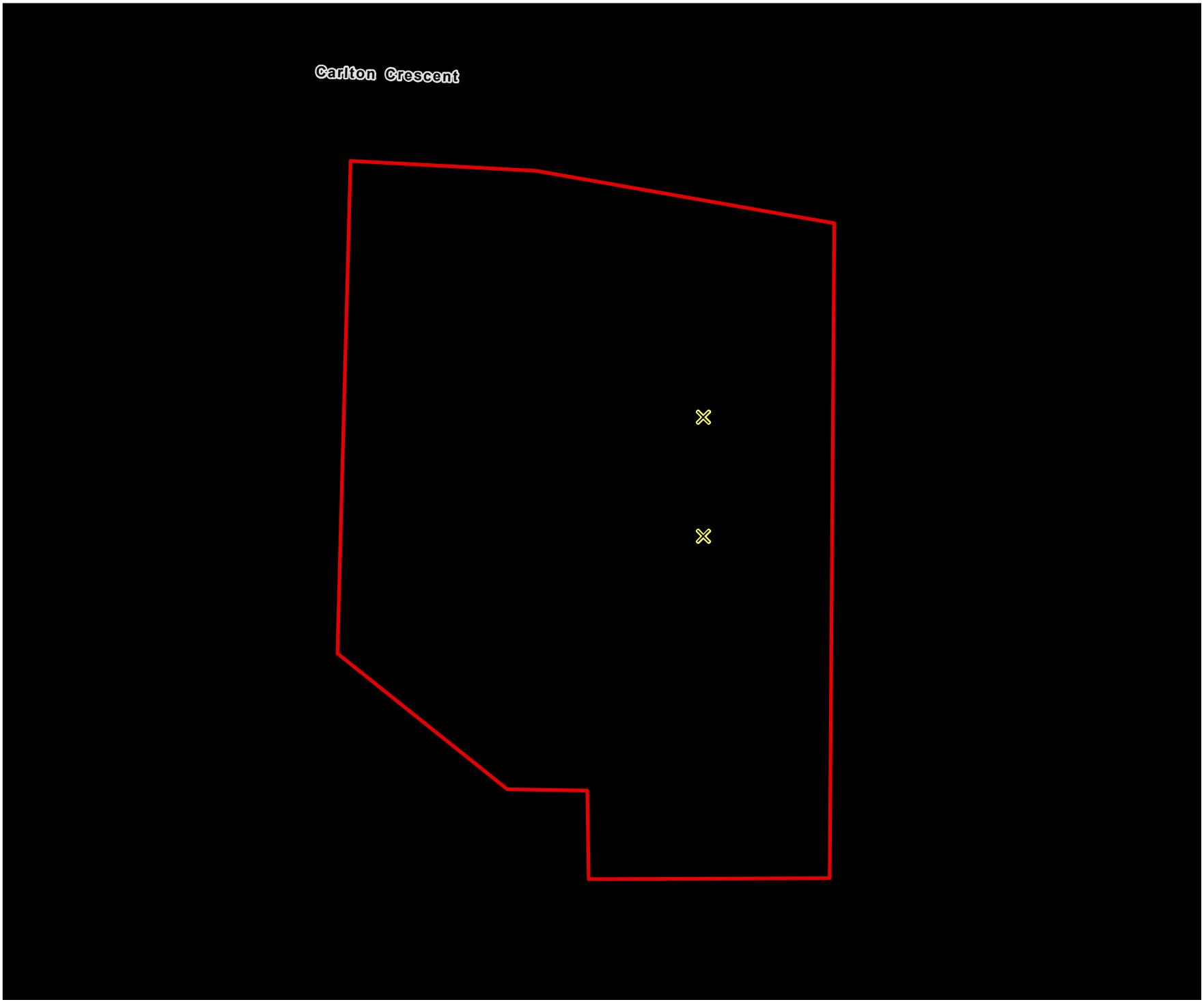
Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

GROUNDWATER EXCEEDANCES

FIGURE 6

File Name: N:\Projects\Iglu\55687 Summer Hill Ambulance Station\GIS\Maps\R01 Rev 0\55687_06_GWExceed.mxd
Reference: Near Maps - http://www.nearmap.com.au/. Imagery 06-05-2017.



Legend:

- Approximate Site Boundary
- Inferred UST Location
- Remedial Extents
- Data Gap Sample Location

[redacted]

Job No: 55687

Client: Iglu

Version: R01 Rev 0	Date: 14-Jan-2019
Drawn By: AV	Checked By: MH

Scale 1:500

0 6 12

metres

Coor. Sys. GDA 1994 MGA Zone 56

74-75 Carlton Crescent
Summer Hill, NSW

REMEDIAL EXTENTS & DATA GAPS

FIGURE 7

File Name: N:\Projects\Iglu\55687 Summer Hill Ambulance Station\GIS\Maps\R01 Rev 0\55687_07_RemExtents.mxd
Reference: Near Maps - http://www.nearmap.com.au/. Imagery 06-05-2017.

Appendix A Design Plans

DEVELOPMENT APPLICATION	
NOT FOR CONSTRUCTION	

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

Site Plan

Check all dimensions and site conditions prior to commencement of any work, the purchase or ordering of any materials, fittings, plant, services or equipment and the preparation of shop drawings and/or the fabrication of any components.
All drawings to be read in conjunction with all architectural documents and all other consultants documents.
Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.
All drawings may not be reproduced or distributed without prior permission from the architect.

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Drawing No.	[Revision]

A01.000 - SITE PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
http://www.batessmart.com.au

Sydney 43 Brisbane Street
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T 02 8354 5100 F 02 8354 5199
email syd@batessmart.com.au
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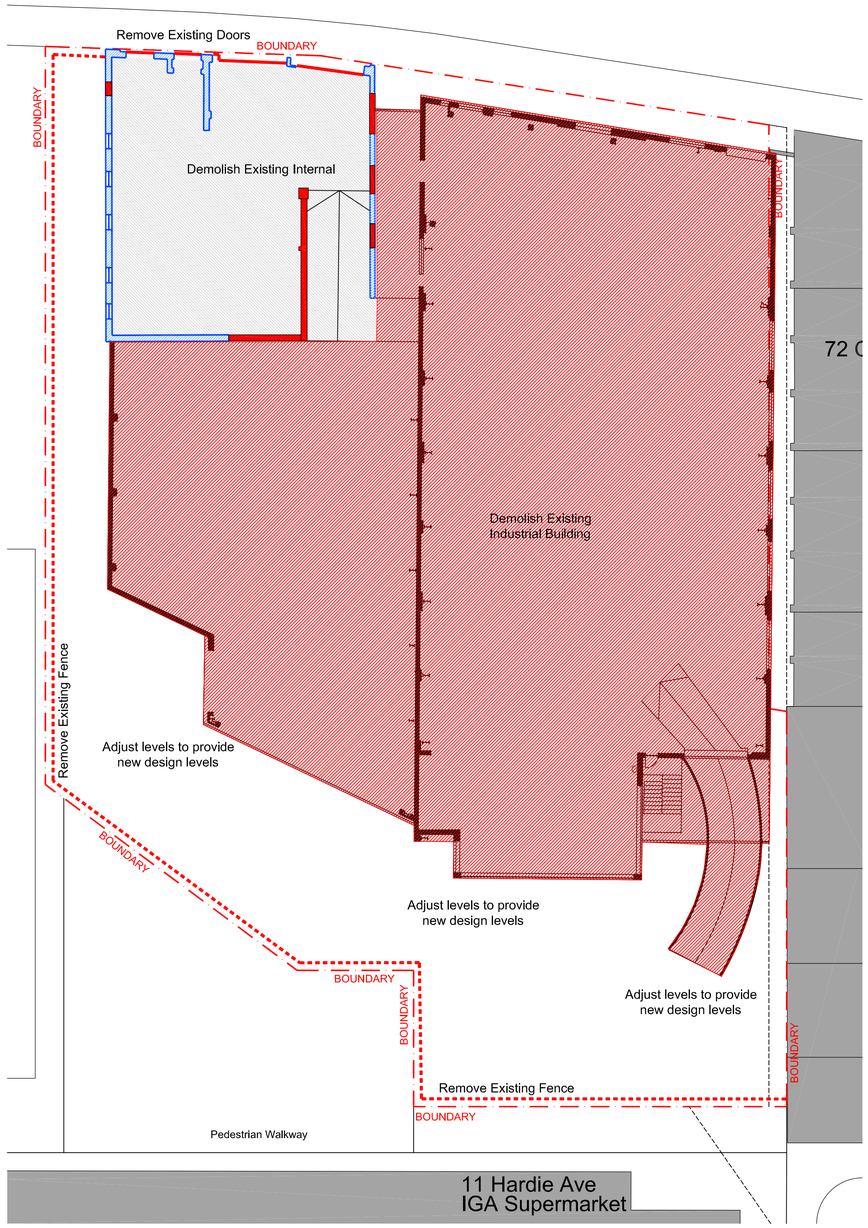
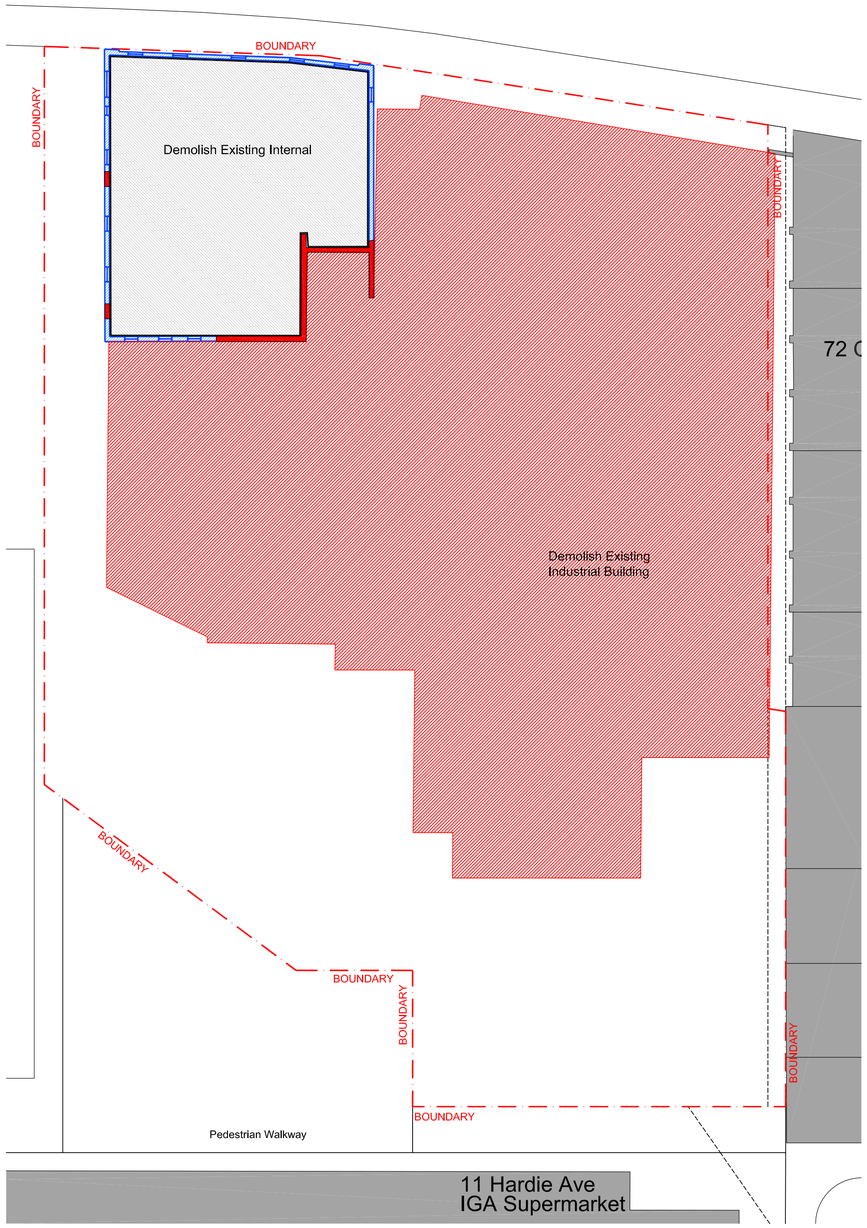


GROUND FLOOR PLAN



FIRST FLOOR PLAN

Demolish Existing Industrial Building
Retain Existing Walls and Windows
Remove existing wall/ create new opening
Demolish Existing Internal
Remove Existing Door
Remove Existing Fence

Demolish Existing Industrial Building
Retain Existing Walls and Windows
Remove existing wall/ create new opening
Demolish Existing Internal

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

Demolition Plan

Scale	1:200@A1 1:400@A3
Drawn	Checked
Project No.	S12235
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Drawing No.	[Revision]

A01.010 - DEMOLITION PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
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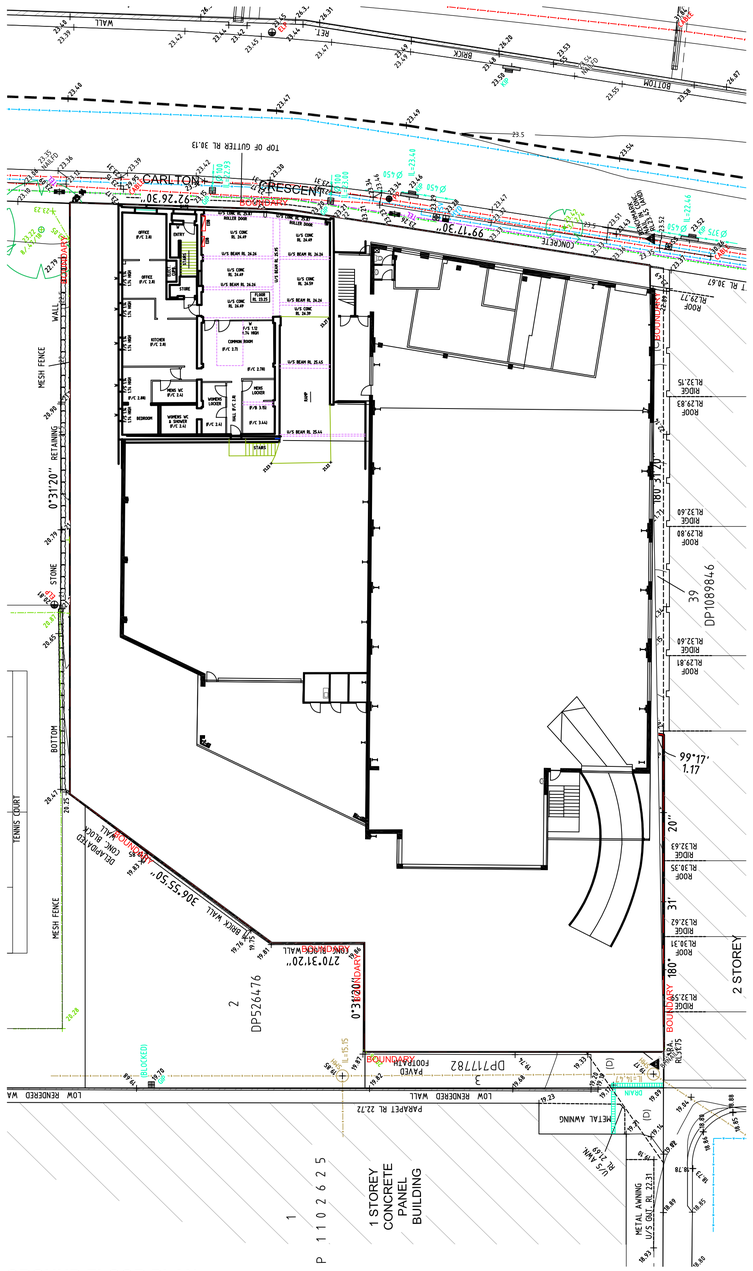
BATESSMART



GROUND FLOOR PLAN

FIRST FLOOR PLAN

ROOF PLAN

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

Existing Plans

Scale	1:250@A1 1:500@A3
Drawn	Checked
Project No.	S12235
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Plot File	S:\12200-12299\S12235_Iglu_74CarltonCrSummerHill\70_Cad\F ... ...\total\DA\A01.020 - Existing Plan.dwg
Drawing No.	[Revision]

A01.020 - EXISTING PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
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BATESSMART

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

LEGEND

New opening in existing

Existing retained

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

Ground Plan

Scale	1:200@A1 1:400@A3
Drawn	Checked
Project No.	S12235
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Drawing No.	[Revision]

A03.000 - GROUND PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
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BATESSMART

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

LEGEND

New opening in existing

Existing retained

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

L01 Plan

Scale	1:200@A1 1:400@A3
Drawn	Checked
Project No.	S12235
Status	FOR INFORMATION
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Drawing No.	[Revision]

A03.001 - L01 PLAN

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Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
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BATESSMART

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

L02 Plan

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Drawn	Checked
Project No.	S12235
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Drawing No.	[Revision]

A03.002 - L02 PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
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http://www.batessmart.com.au

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BATESSMART

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

Roof Plan

Scale	1:200@A1 1:400@A3
Drawn	Checked
Project No.	S12235
Status	FOR INFORMATION
Plot Date	7/12/2018 11:57:35 AM
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Drawing No.	[Revision]

A03.003 - ROOF PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
http://www.batessmart.com.au

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Surry Hills NSW 2010 Australia
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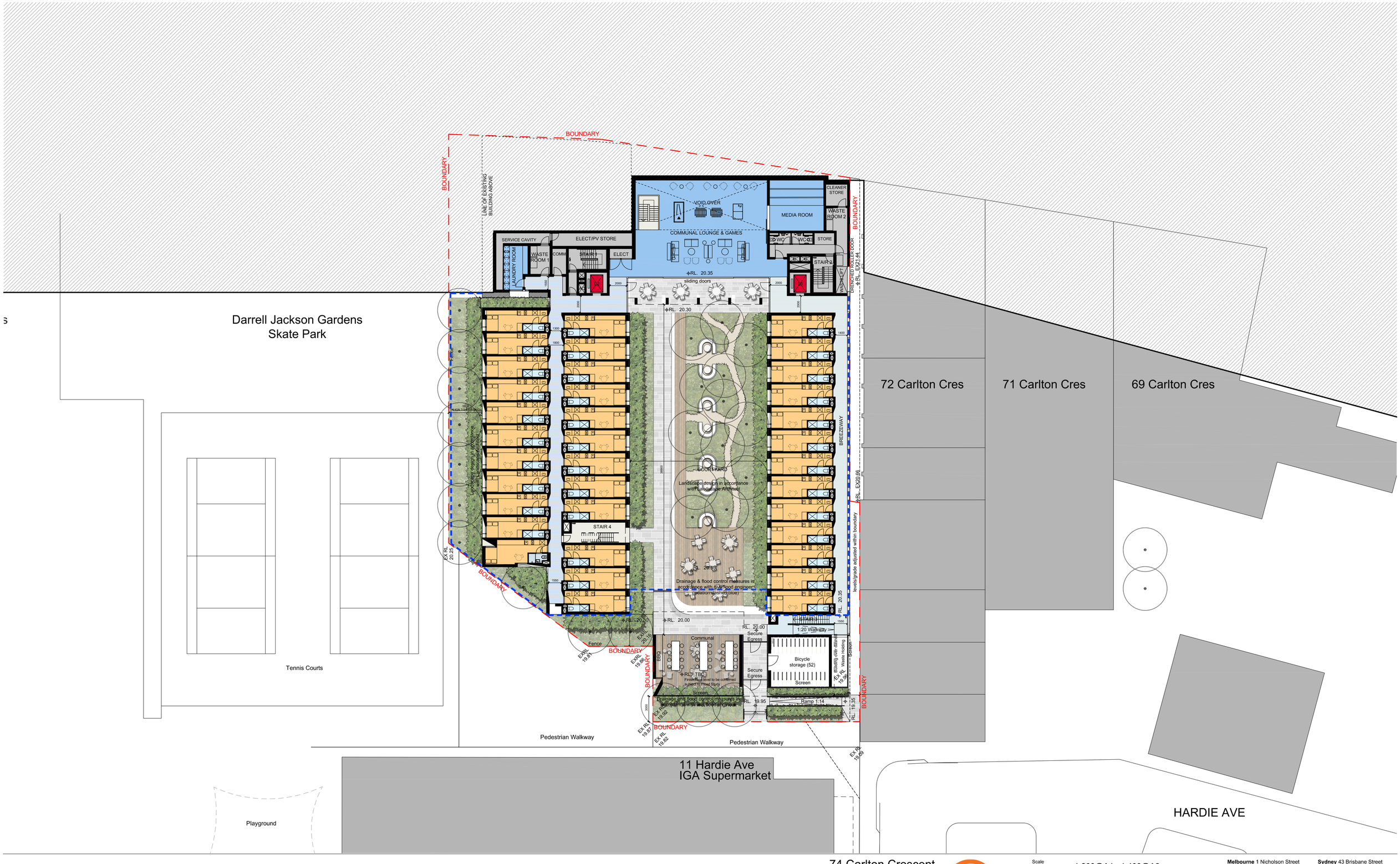
email syd@batessmart.com.au
http://www.batessmart.com.au

Bates Smart Architects Pty Ltd ABN 68 094 740 986

BATESSMART



DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

Lower Ground Plan

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Drawing No.	[Revision]

A03.100 - LOWER GROUND PLAN

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
http://www.batessmart.com.au

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email syd@batessmart.com.au
http://www.batessmart.com.au

Bates Smart Architects Pty Ltd ABN 68 094 740 986

BATESSMART

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

1. Performance vision glass/ Metal window reveal/ Metal louvres
2. Metal planter box to landscape architect's detail
3. Slim profile brick
4. Off-form Concrete
5. Steel framed clear DGU vision glass
6. Steel Gate
7. Performance vision glass/Metal window reveal/ glass louvres
8. Metal frame and steel balustrade screen
9. Metal panel
10. Timber batten screen

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

North Elevation

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Drawing No.	[Revision]

A07.000 - NORTH ELEVATION

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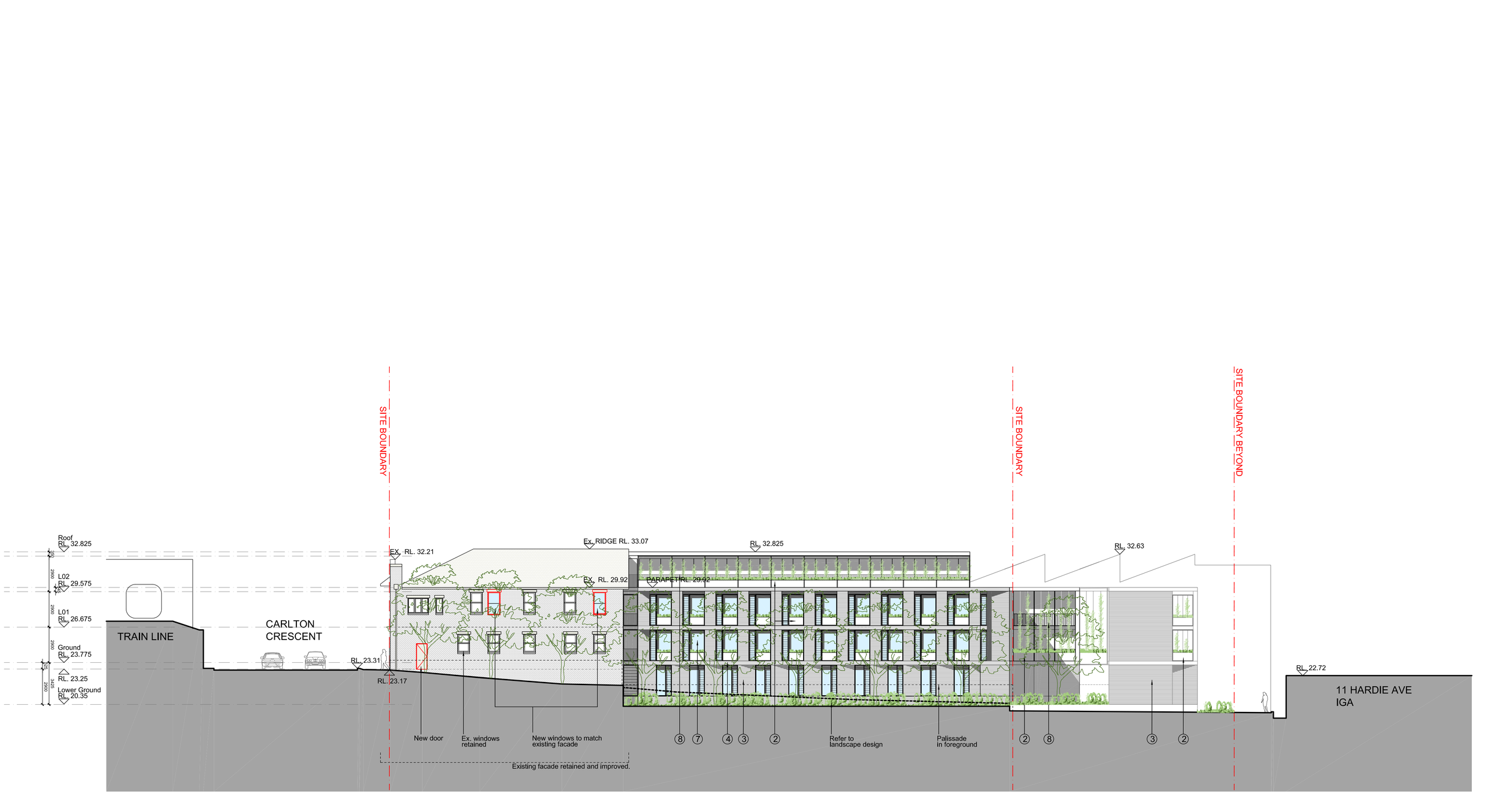

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

1. Performance vision glass/ Metal window reveal/ Metal louvres
2. Metal planter box to landscape architect's detail
3. Slim profile brick
4. Off-form Concrete
5. Steel framed clear DGU vision glass
6. Steel Gate
7. Performance vision glass/Metal window reveal/ glass louvres
8. Metal frame and steel balustrade screen
9. Metal panel
10. Timber batten screen

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

West Elevation

Scale	1:150@A1 1:300@A3
Drawn	Checked
Project No.	S12235
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Drawing No.	[Revision]

A07.001 - WEST ELEVATION

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DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

1. Performance vision glass/ Metal window reveal/ Metal louvres
2. Metal planter box to landscape architect's detail
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4. Off-form Concrete
5. Steel framed clear DGU vision glass
6. Steel Gate
7. Performance vision glass/Metal window reveal/ glass louvres
8. Metal frame and steel balustrade screen
9. Metal panel
10. Timber batten screen

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

South Elevation

Scale	1:150@A1 1:300@A3
Drawn	Checked
Project No.	S12235
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Drawing No.	[Revision]

A07.002 - SOUTH ELEVATION

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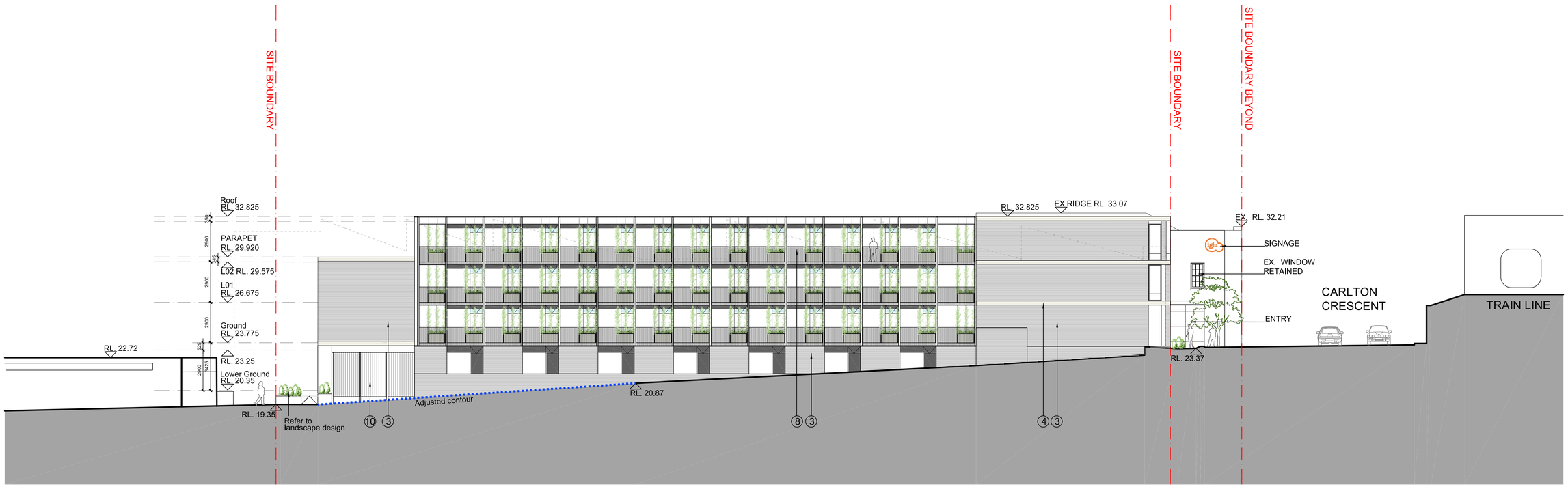

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

1. Performance vision glass/ Metal window reveal/ Metal louvres
2. Metal planter box to landscape architect's detail
3. Slim profile brick
4. Off-form Concrete
5. Steel framed clear DGU vision glass
6. Steel Gate
7. Performance vision glass/Metal window reveal/ glass louvres
8. Metal frame and steel balustrade screen
9. Metal panel
10. Timber batten screen

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent Summer Hill

East Elevation

Scale	1:150@A1 1:300@A3
Drawn	Checked
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Drawing No.	[Revision]

A07.003 - EAST ELEVATION

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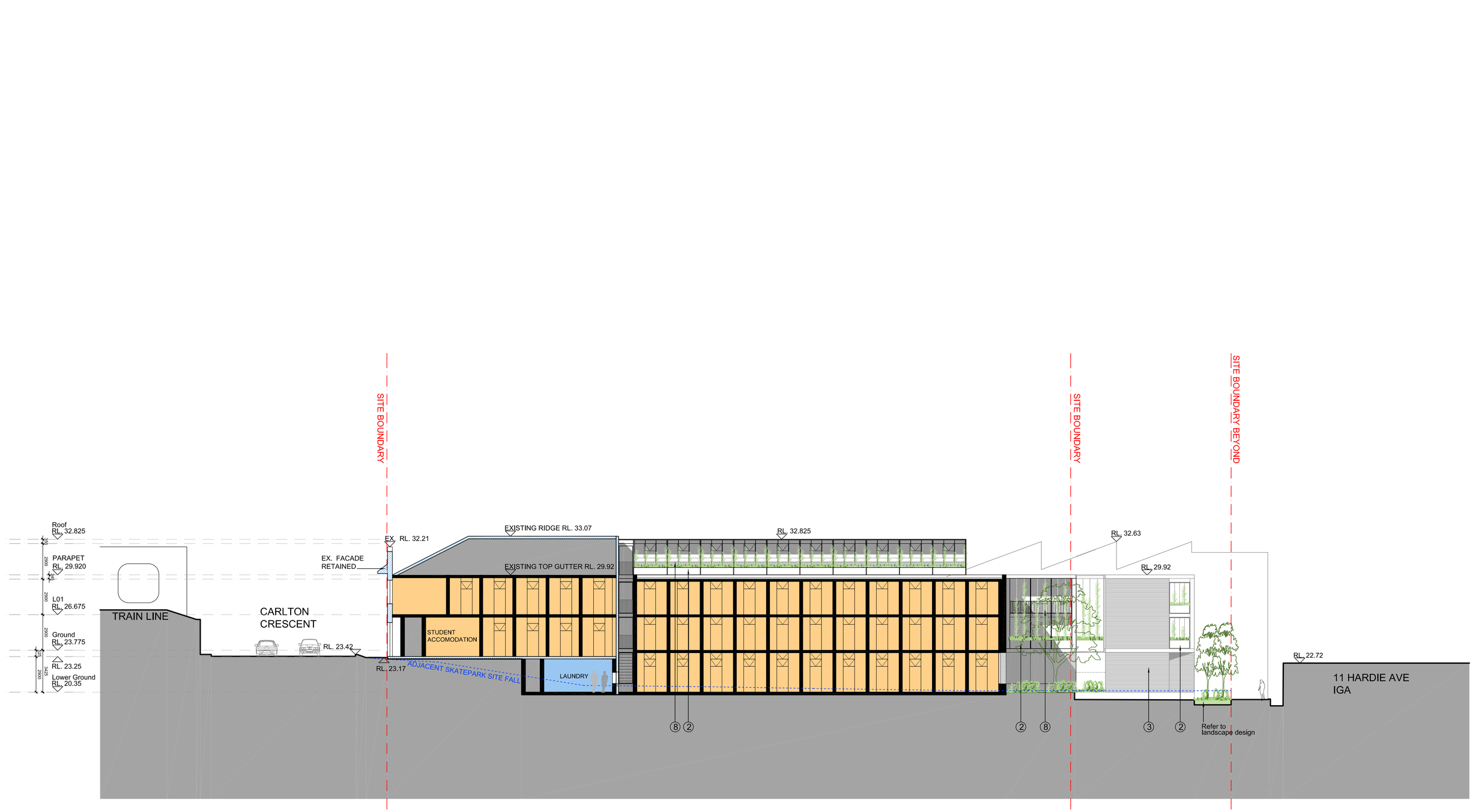
SITE BOUNDARY

SITE BOUNDARY

SITE BOUNDARY BEYOND



DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

1. Performance vision glass/ Metal window reveal/ Metal louvres
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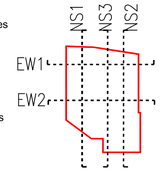
4. Off-form Concrete
5. Steel framed clear DGU vision glass
6. Steel Gate
7. Performance vision glass/Metal window reveal/ glass louvres
8. Metal frame and steel balustrade screen
9. Metal panel
10. Timber batten screen



Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

NS Long Section 01

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Drawn	Checked
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Drawing No.	[Revision]

A08.000 - NS LONG SECTION 01

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BATESSMART

SITE BOUNDARY

SITE BOUNDARY

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

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9. Metal panel
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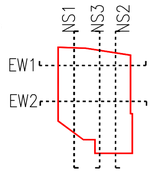

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

NS Long Section 02

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Drawn	Checked
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Status	FOR INFORMATION
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Drawing No.	[Revision]

A08.001 - NS LONG SECTION 02

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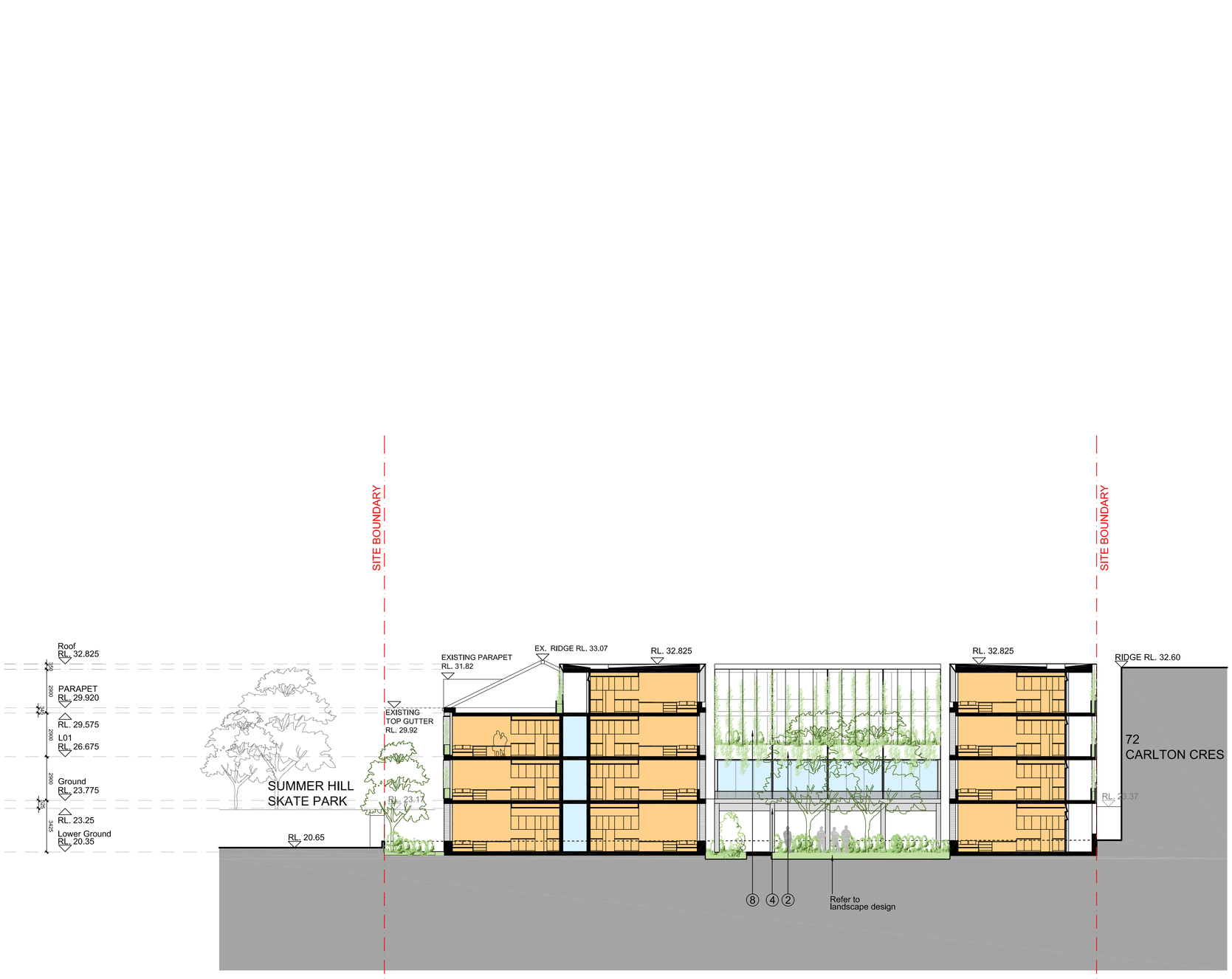
BATESSMART



DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

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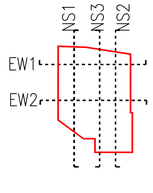

Revision	Date	Description	Initial	Checked

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

EW Cross Section 01

Scale	1:150@A1 1:300@A3
Drawn	Checked
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Status	FOR INFORMATION
Plot Date	7/12/2018 11:58:54 AM
Plot File	S:\12200-12299\S12235_Iglu_74CarltonCrSummerHill\70_Cad\F ... ... \total\DA\A08.002 - EW Cross Section 01.dwg
Drawing No.	[Revision]

A08.002 - EW CROSS SECTION 01

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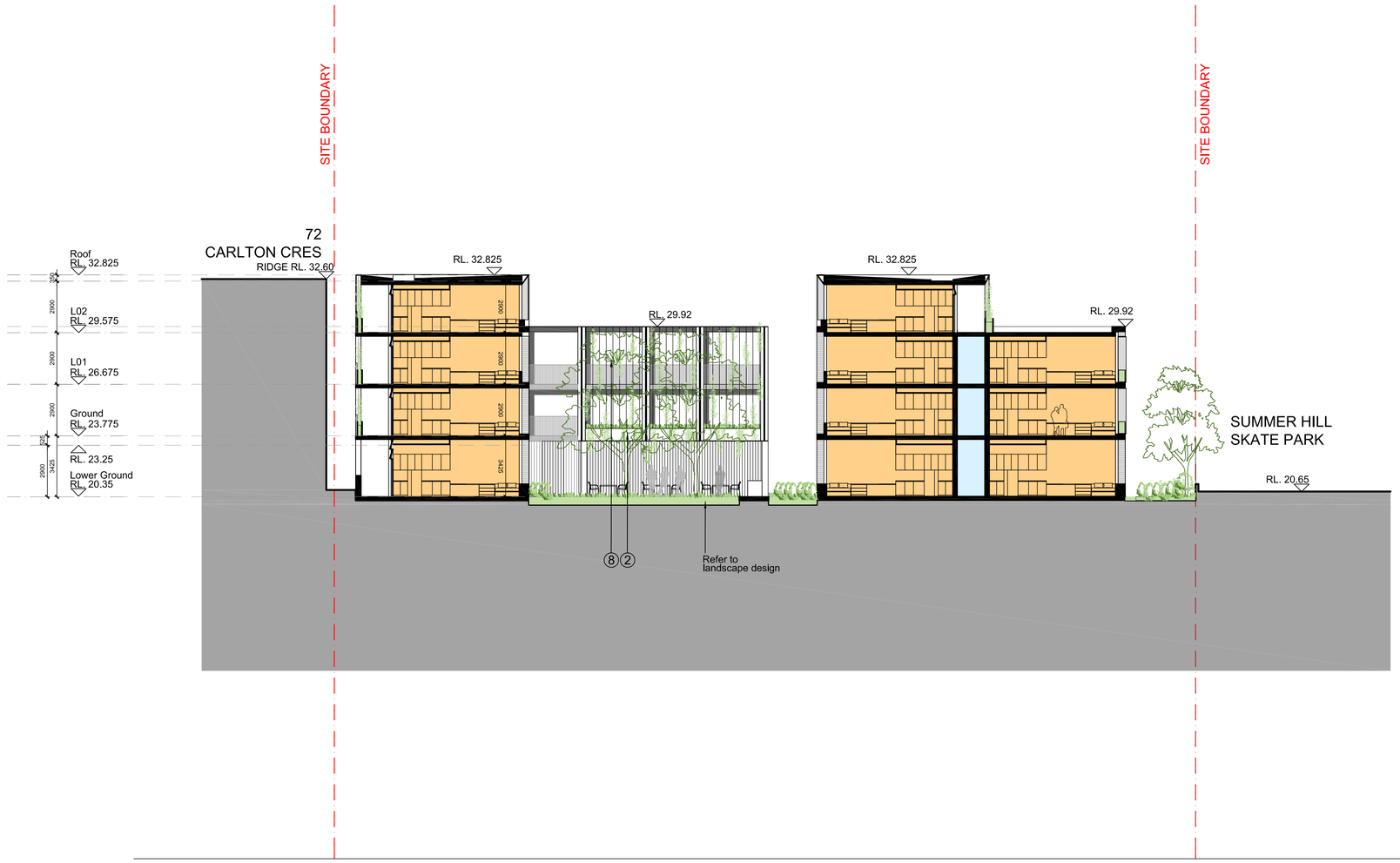

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

Material Key

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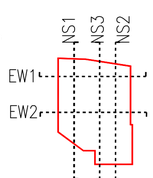

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

EW Cross Section 02

Scale	1:150@A1 1:300@A3
Drawn	Checked
Project No.	S12235
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Drawing No.	[Revision]

A08.003 - EW CROSS SECTION 02

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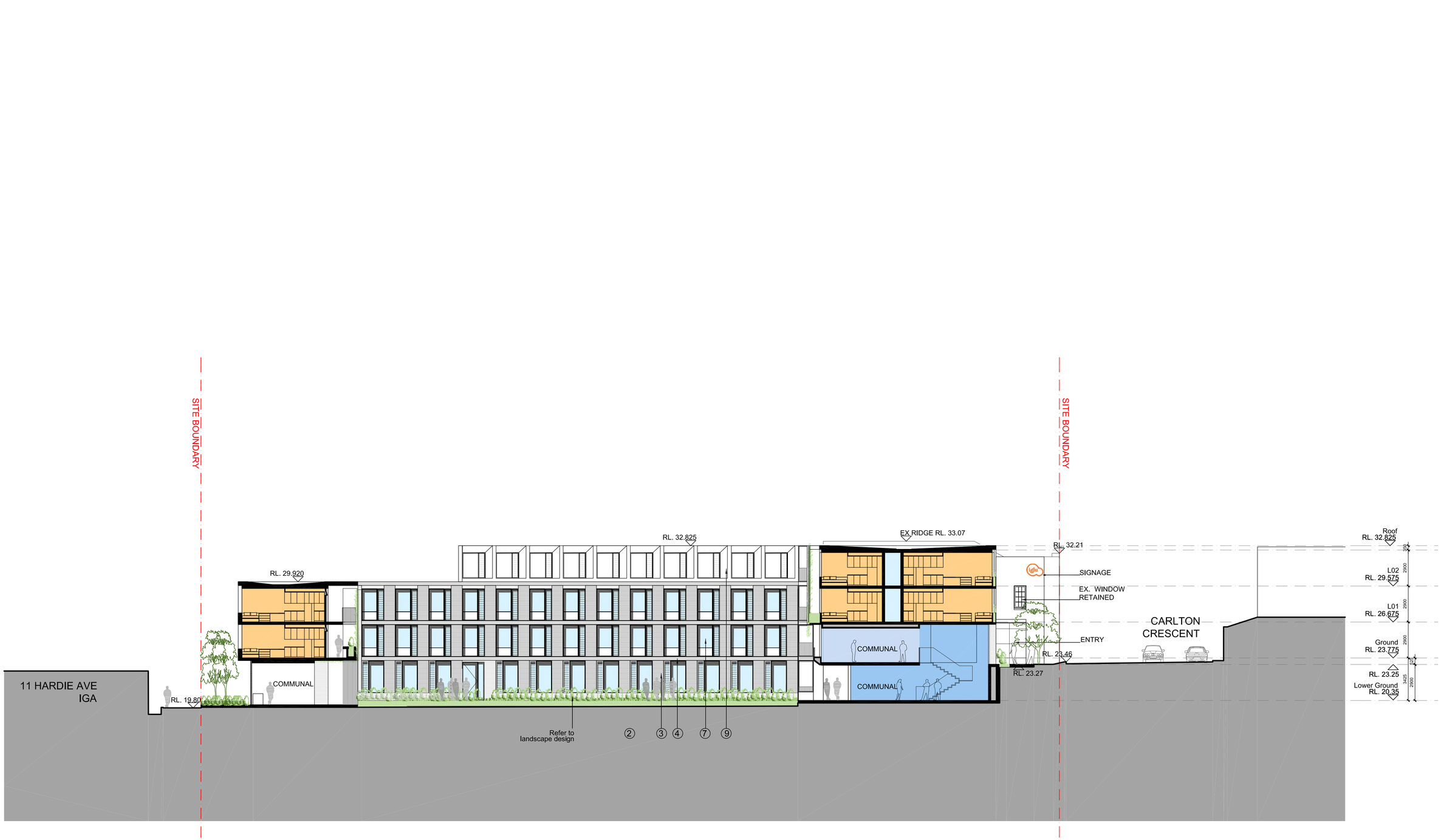
BATESSMART



DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

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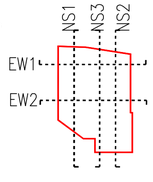

Revision	Date	Description	Initial	Checked
A	07.12.18	For Development Application	JC	WG

74 Carlton Crescent
Summer Hill

NS Long Section 03

Scale	1:150@A1 1:300@A3
Drawn	Checked
Project No.	S12235
Status	FOR INFORMATION
Plot Date	7/12/2018 11:59:10 AM
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Drawing No.	[Revision]

A08.004 - NS LONG SECTION 03

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Appendix B Summary Tables

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

	Metals & Metalloids										TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEX					
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Iron	Iron (%)	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2.00	0.40	1.00	1.00	20.00	0.01	1.00	0.10	1.00	1.00	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00		50.00	20.00	20.00	0.10	0.10	0.10	0.10	0.20	0.30
NEPM 2013 EIL - Urban Residential (generic)	100		500	240			1100		280	860																		
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																	1300	5600		120		180	65	125	105			45
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																												
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																												
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																1000	3500	10000			800							
NEPM 2013 Soil HIL B	500	150	500	30000			1200	120	1200	60000																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																				280		50	0.7	NL	480			110
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																				NL		90	1	NL	NL			310
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																									
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	-	-	-	63,000	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	10	<0.4	21	11	-	-	31	<0.1	<5	79	<20	<20	570	400	970	<50	900	210	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	<2	<0.4	<5	6.2	-	-	22	<0.1	<5	<5	<20	<20	<50	<50	<50	<50	<50	<100	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	210	<0.4	37	34	-	-	710	2.3	6.2	200	<20	<20	56	<50	56	<50	<100	<100	-	<50	<20	<20	-	-	-	-	-	-
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	10	<0.4	27	8.5	-	-	25	<0.1	<5	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	4.7	<0.4	24	12	-	-	17	<0.1	<5	9.8	<20	<20	<50	<50	<50	<50	<100	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	32,000	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	2.3	<0.4	21	18	-	-	21	<0.1	<5	7.8	<20	<20	<50	<50	<50	<50	<100	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
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BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	22	<0.4	19	68	-	-	3100	0.9	19	170	<20	<20	740	760	1500	<50	1500	240	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	10	<0.4	23	21	-	-	490	0.2	5.7	130	<20	<20	81	<50	81	<50	110	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	10	<0.4	21	15	-	-	40	<0.1	<5	11	<20	<20	<50	<50	<50	<50	<100	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
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BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	40	<0.4	29	15	-	-	34	<0.1	6.2	47	<20	<20	<50	<50	<50	<50	<100	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	0.5	0.5	0.7	5	5.7
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	14	<0.4	15	41	-	-	82	0.3	110	81	26	60	<50	<50	60	<50	<100	<100	-	<50	44	33	<0.1	0.6	0.4	0.9	8.7	9.6
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	11	<0.4	29	27	-	-	160	0.2	14	69	<20	<20	66	<50	66	<50	110	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	3	<0.4	8.9	55	-	-	42	<0.1	25	290	<20	<20	60	<50	60	<50	<100	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	<4	<0.4	61	22	-	-	6	<0.1	60	74	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	9	<0.4	19	12	-	-	18	<0.1	6	38	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	7	<0.4	42	22	-	-	31	<0.1	32	48	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	32	4	31	150	-	-	470	0.3	26	1200	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	11	0.4	19	48	-	-	220	0.2	7	120	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	9	<0.4	24	7	-	-	25	<0.1	4	9	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	52	1	31	1400	-	-	390	0.2	36	980	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	9	<0.4	18	11	-	-	17	<0.1	1	3	-	-	-	-	-	<50	<100	<100	-	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3
QA20170804	JBS&G 2017	2017/08/04	557460	6.3	<0.4	17	61	-	-	180	0.2	22	310	<20	<20	180	61	241	<50	230	<100	-	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20170804	JBS&G 2017	2017/04/08	172940	5	<0.4	11	45	-	-	130	0.2	14	210	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1
Statistical Summary																																
Number of Results				25	25	25	25	2	2	25	25	25	25	16	16	16	16	15	24	24	24	1	24	24	24	24	24	24	24	24	24	24
Number of Detects				23	3	24	25	2	2	25	10	17	24	1	1	7	3	8	0	5	2	0	0	1	1	0	2	2	2	2	2
Minimum Concentration				<2	<0.4	<5	6.2	32000	3.2	6	<0.1	1	3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
Minimum Detect				2.3	0.4	8.5	6.2	32000	3.2	6	0.2	1	3	26	60	56	61	56	ND	110	210	ND	ND	44	33	ND	0.5	0.4	0.7	5	5.7
Maximum Concentration				210	4	61	1400	63000	6.3	3100	2.3	110	1200	26	60	740	760	1500	<50	1500	240	<50	<50	44	33	<0.2	<1	0.5	<1	8.7	9.6
Maximum Detect				210	4	61	1400	63000	6.3	3100	2.3	110	1200	26	60	740	760	1500	ND	1500	240	ND	ND	44	33	ND	0.6	0.5	0.9	8.7	9.6
Average Concentration				20	0.39	23	86			253	0.23	17	165	11	14	125	98	214	25	158	65		25	12	12	0.069	0.26	0.16	0.28	1	1.2
Median Concentration				10	0.2	21	21	47500	4.75	40	0.05	6.2	69	10	10	37.5	25	56	25	50	50	25	25	10	10	0.05	0.05	0.05	0.05	0.1	0.15
Standard Deviation				41	0.77	12	276			621	0.47	24	294	4	13	213	200	430	0	335	50		0	6.9	4.7	0.025	0.23	0.13	0.27	1.9	2.1
Number of Guideline Exceedances				1	0	0	1	0	0	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				1	0	0	1	0	0	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Polycyclic Aromatic Hydrocarbons																								
				Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound)*	Carcinogenic PAHs as B(a)P TEQ	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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				0.10	0.10	0.10	0.10	0.05	0.50		0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.50		
NEPM 2013 EIL - Urban Residential (generic)																						170					
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil								0.7																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																											
NEPM 2013 Soil HIL B										4		4														400	
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																						5					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																						NL					
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																									
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	0.6	1.1	1.4	-	1.9	1.631	1	-	0.5	0.8	1.1	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	1.8	8.6	-
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH03_AQ_0.3-0.5	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH04_AQ_0.3-1.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	<0.5	2.6	5.4	29	34	55	-	55	55.2	33	-	23	32	27	9.3	40	0.9	20	<0.5 - 1.1	23	43	323.3	-
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	1.6	1.6	2.9	-	2.9	2.868	1.4	-	2.1	1.5	1.7	0.6	2.6	<0.5	1.8	<0.5	1.4	2.7	19	-
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH05_2.9-3.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-
BH05_AQ_0.25-0.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<1.21	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.7	1.2	0.6785	<0.5	-	<0.5	0.6	0.6	<0.5	0.9	<0.5	<0.5	1.7 - 2.7	<0.5	1	6.4	-
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	0.9	1	1.4	1.7	1.9	1.684	0.9	-	1.3	1	1.1	<0.5	1.5	<0.5	1.3	<0.5	<0.5	1.5	10.5	-
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.6	1.2	0.6435	<0.5	-	<0.5	<0.5	0.6	<0.5	0.9	<0.5	<0.5	<0.5	0.8	0.9	3.8	-
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.5	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.5	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.5	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	<0.1	<0.1	0.2	0.7	0.88	1.2	1.2	1.3	-	-	1	0.6	-	0.8	<0.1	1.7	<0.1	0.5	<0.1	0.7	1.7	-	9.2
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	<0.1	<0.1	0.8	3.5	4	5.8	5.8	5.8	-	-	6.1	2.4	-	3.3	0.5	7.1	0.2	2.4	<0.1	3.2	6.9	-	41
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.5	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	<0.1	<0.1	<0.1	0.3	0.4	0.6	0.6	0.7	-	-	0.8	0.3	-	0.4	<0.1	0.6	<0.1	0.3	<0.1	0.2	0.6	-	3.9
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.5	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0
QA20170804	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	1.3	3.4	2.8	5.5	5.5	5.5	5.486	2.5	-	3.2	2.3	3.4	1.5	6.9	<0.5	3	<0.5	5.5	6.7	42.5	-
QC20170804	JBS&G 2017	2017/04/08	172940	<0.1	0.2	0.2	0.7	0.6	0.9	0.9	0.9	0.772	-	-	0.5	-	0.7	<0.1	1.4	<0.1	0.4	<0.1	0.5	1.4	-	7.6
Statistical Summary																												
Number of Results				25	25	25	25	25	25	13	25	17	16	8	25	16	25	25	25	25	25	25	25	25	16	9	
Number of Detects				0	2	5	11	9	9	8	20	8	5	3	9	6	11	4	12	2	8	2	8	12	8	9	
Minimum Concentration				<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	0.644	<0.5	<0.5	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	0
Minimum Detect				ND	0.2	0.2	0.3	0.4	0.6	0.6	0.7	0.644	0.9	0.8	0.3	0.6	0.4	0.5	0.6	0.2	0.3	1.7	0.2	0.6	1.2	3.9	
Maximum Concentration				<0.5	2.6	5.4	29	34	55	5.8	55	55.2	33	6.1	23	32	27	9.3	40	0.9	20	2.7	23	43	323.3	41	
Maximum Detect				ND	2.6	5.4	29	34	55	5.8	55	55.2	33	6.1	23	32	27	9.3	40	0.9	20	2.7	23	43	323.3	41	
Average Concentration				0.18	0.28	0.47	1.8	2	3.1	1.4	3.6	4.4	2.6	1.1	1.5	2.5	1.7	0.62	2.7	0.21	1.3	0.27	1.5	2.8	26	6.9	
Median Concentration				0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.605	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.725	0	
Standard Deviation				0.098	0.49	1.1	5.7	6.7	11	1.9	11	13	8.1	2	4.6	7.9	5.3	1.8	8	0.17	4	0.42	4.6	8.6	80	13	
Number of Guideline Exceedances				0	0	0	0	7	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances(Detects Only)				0	0	0	0	7	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Chlorinated Alkanes																		Chlorinated Alkenes											
				1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.50	0.50	0.50	0.50	0.50	0.50		0.50	0.50	0.50		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
NEPM 2013 EIL - Urban Residential (generic)																																	
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																	
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																																	
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																	
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																	
NEPM 2013 Soil HIL B																																	
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																	
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																	
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																															
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH03_AQ_0.3-0.5	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH04_AQ_0.3-1.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_2.9-3.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_AQ_0.25-0.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170804	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC20170804	JBS&G 2017	2017/04/08	172940	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1
Statistical Summary																																		
Number of Results				16	16	16	16	16	16	1	16	16	16	1	16	16	16	16	16	15	16	16	1	1	15	16	16	16	16	16	16	16	16	16
Number of Detects				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.5	<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	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.5	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.27	0.27	0.27	0.27	0.27	0.27		0.27	0.27	0.27		0.27	0.27	0.27	0.27	0.27	0.41	0.27	0.27			0.25	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Median Concentration				0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation				0.063	0.063	0.063	0.063	0.063	0.063		0.063	0.063	0.063		0.063	0.063	0.063	0.063	0.063	0.36	0.063	0.063			0	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Trihalomethanes				Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons							Chlorinated Benzenes						
				Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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				0.50	0.50	0.50	0.50	0.50	0.50		0.50	0.50				0.50		0.50	0.50	0.50	0.50		0.50	0.50			0.50	0.50	0.50	0.50	0.05
NEPM 2013 EIL - Urban Residential (generic)																															
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																															
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																															
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																															
NEPM 2013 Soil HIL B																															15
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																															
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																															
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																												
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-
BH03_AQ_0.3-0.5	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-
BH04_AQ_0.3-1.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH05_2.9-3.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-
BH05_AQ_0.25-0.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	<0.5	<0.5	<0.5	<0.5	7.6	3	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	15	3	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170804	JBS&G 2017	2017/08/04	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05
QC20170804	JBS&G 2017	2017/04/08	172940	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<0.1
Statistical Summary																															
Number of Results				16	16	16	16	16	16	1	16	16	1	1	1	16	1	16	15	15	16	1	16	15	1	1	16	16	16	16	10
Number of Detects				0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<1	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.05
Minimum Detect				ND	ND	ND	ND	7.6	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<1	<1	<1	<1	15	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<0.1
Maximum Detect				ND	ND	ND	ND	15	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.27	0.27	0.27	0.27	1.6	0.61		0.27	0.27				0.27		0.27	0.25	0.25	0.27		0.27	0.25			0.27	0.27	0.27	0.27	0.028
Median Concentration				0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.5	0.5	0.5	0.25	0.5	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.25	0.025
Standard Deviation				0.063	0.063	0.063	0.063	4	0.94		0.063	0.063				0.063		0.063	0	0	0.063		0.063	0			0.063	0.063	0.063	0.063	0.0079
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Solvents	Polychlorinated Biphenyls								Phenols																			
				2-Propanone (Acetone)	Arodor 1016	Arodor 1221	Arodor 1232	Arodor 1242	Arodor 1248	Arodor 1254	Arodor 1260	PCBs (Total)	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2-chlorophenol	2-Methylphenol	2-nitrophenol	3- & 4-Methylphenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Chloro-3-Methylphenol	4-nitrophenol	Phenol	Phenols (Total)	Total Halogenated Phenol	Total Non-Halogenated Phenol	Total Tetrachlorophenols
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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				0.50	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.00	1.00	0.50	0.50	5.00	0.50	0.50	0.20	1.00	0.40	5.00	20.00	1.00	5.00	0.50		1.00	20.00	1.00
NEPM 2013 EIL - Urban Residential (generic)																																
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																																
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																
NEPM 2013 Soil HIL B												1															45000					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																													
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH03_AQ_0.3-0.5	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH04_AQ_0.3-1.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_2.9-3.0	JBS&G 2017	2017/08/03	559156	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.25-0.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170804	JBS&G 2017	2017/08/04	557460	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	<1	<20	<1
QC20170804	JBS&G 2017	2017/04/08	172940	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-
Statistical Summary																																
Number of Results				15	17	17	17	17	17	17	17	17	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	1	10	10	10
Number of Detects				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<5	<1	<20	<1
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<5	<1	<20	<1
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.27	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.5	0.5	0.25	0.25	2.5	0.25	0.25	0.1	0.5	0.2	2.5	10	0.5	2.5	0.25		0.5	10	0.5
Median Concentration				0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.5	0.25	0.25	2.5	0.25	0.25	0.1	0.5	0.2	2.5	10	0.5	2.5	0.25	2.5	0.5	10	0.5
Standard Deviation				0.065	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Sulfur Compounds	Organochlorine Pesticides																										
				Carbon disulfide	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Dieldrin	DDD	DDT	DDT+DDE+DDD (Sum of Total)	Chlordane	delta-BHC	Endosulfan alpha	Endosulfan beta	gamma-Chlordane	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Pentachlorophenol	Toxaphene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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				0.50	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	0.10	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00	1.00
NEPM 2013 EIL - Urban Residential (generic)													180																
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																													
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																													
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																													
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																													
NEPM 2013 Soil HIL B							10							600	90						20			10			500	130	30
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																													
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																													
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																												
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<1
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
BH03_AQ_0.3-0.5	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
BH04_AQ_0.3-1.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	<0.5	<0.05	<0.05	0.28	<0.05	-	<0.05	0.28	<0.05	<0.05	<0.05	17	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	2.8	2	<0.05	<0.05	<1	<1
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	0.09	0.06	<0.05	<0.05	<1	<1
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<1
BH05_2.9-3.0	JBS&G 2017	2017/08/03	559156	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.25-0.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<1
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<1
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	1.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<1
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<1
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<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	<0.1	<0.1	<0.1	<0.1
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QA20170804	JBS&G 2017	2017/08/04	557460	<0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<1
QC20170804	JBS&G 2017	2017/04/08	172940	-	<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	<0.1	<0.1	<0.1	-	-
Statistical Summary																													
Number of Results				15	18	18	18	18	9	18	18	18	18	18	17	18	18	18	1	18	18	18	17	18	18	18	18	18	17
Number of Detects				0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	4	3	0	0	0	0
Minimum Concentration				<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1
Minimum Detect				ND	ND	ND	0.28	ND	ND	ND	0.28	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	0.09	0.06	ND	ND	ND	ND
Maximum Concentration				<0.5	<0.1	<0.1	0.28	<0.1	<0.1	<0.1	0.28	<0.1	<0.1	<0.1	17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.8	2	<0.1	<0.1	<1	<1
Maximum Detect				ND	ND	ND	0.28	ND	ND	ND	0.28	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	2.8	2	ND	ND	ND	ND
Average Concentration				0.25	0.038	0.038	0.054	0.038	0.05	0.038	0.052	0.038	0.038	0.038	1.1	0.038	0.038	0.038		0.038	0.038	0.038	0.037	0.22	0.15	0.038	0.038	0.3	0.29
Median Concentration				0.25	0.0375	0.0375	0.05	0.0375	0.05	0.0375	0.05	0.0375	0.0375	0.0375	0.05	0.0375	0.0375	0.0375	0.05	0.0375	0.0375	0.0375	0.025	0.05	0.05	0.0375	0.0375	0.5	0.5
Standard Deviation				0	0.013	0.013	0.059	0.013	0	0.013	0.058	0.013	0.013	0.013	4.1	0.013	0.013	0.013		0.013	0.013	0.013	0.013	0.65	0.46	0.013	0.013	0.23	0.23
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A: Soil Analytical Table
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Herbicides	Ionic Balance			Asbestos									Asbestos	Asbestos - Trace Analysis							Other	
				Dinoseb	Cation Exchange Capacity	EC 1:5 soil:water	pH_Lab	Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos Reported Result	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthetic Fibres - Comment	% Clay	% Moisture 103oC
				mg/kg	meq/100g	µS/cm	ph Units	g	%w/w	%w/w	g	g	g	g	g	g	g	Comment	Comment	Comment	Comment	Comment	Comment	Comment	%	%
EQL				20.00	0.05	10.00	0.10																		1.00	1.00
NEPM 2013 EIL - Urban Residential (generic)																										
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																										
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B									0.04																	
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL										0.001																
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																										
NEPM 2013 Soil HIL B																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																										
Smaple Name	**Sampling Round**	**Sample Date**	**Lab Report**																							
BH01_0.4-0.5	JBS&G 2017	2017/08/03	557460	-	23	110	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	16
BH01_0.9-1.0	JBS&G 2017	2017/08/03	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
BH01_2.9-3.0	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
BH01_AQ_0.3-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	615	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH02_0.6-0.7	JBS&G 2017	2017/08/03	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH02_0.9-1.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH02_2.9-3.0	JBS&G 2017	2017/08/03	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
BH02_AQ_0.6-0.7	JBS&G 2017	2017/08/03	557530	-	-	-	-	556	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH03_2.9-3.0	JBS&G 2017	2017/08/03	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
BH03_AQ_0.3-0.5	JBS&G 2017	2017/08/03	557530	-	-	-	-	576	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH04_0.9-1.0	JBS&G 2017	2017/08/03	557460	-	20	150	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	20
BH04_2.9-3.0	JBS&G 2017	2017/08/03	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
BH04_AQ_0.3-1.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	662	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH05_0.25-0.35	JBS&G 2017	2017/08/03	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
BH05_0.4-0.5	JBS&G 2017	2017/08/03	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
BH05_0.9-1.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
BH05_2.9-3.0	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
BH05_AQ_0.25-0.4	JBS&G 2017	2017/08/03	557530	-	-	-	-	731	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH05_AQ_0.4-0.8	JBS&G 2017	2017/08/03	557530	-	-	-	-	488	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH06_0.8-0.9	JBS&G 2017	2017/08/04	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
BH06_AQ_0.3-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	607	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH07_0.3-0.4	JBS&G 2017	2017/08/03	559156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
BH07_0.5-0.6	JBS&G 2017	2017/08/04	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
BH07_AQ_0.3-0.5	JBS&G 2017	2017/08/04	557530	-	-	-	-	600	0	0.0002	0	0	0	0	0.0013	0.0013	0.0013	1	1	1	1	1	1	1	-	-
BH08_0.4-0.5	JBS&G 2017	2017/08/04	557460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
BH08_AQ_0.4-0.6	JBS&G 2017	2017/08/04	557530	-	-	-	-	618	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
BH09_0.2-0.3	JBS&G 2017	2017/08/04	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
BH09_AQ_0.2-0.3	JBS&G 2017	2017/08/04	557530	-	-	-	-	594	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	-	-
EIS BH1 0.17-0.18	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH1 0.8-1.0	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.13-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH2 0.8-1.0	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.1-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH3 0.5-0.95	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 0.17-0.2	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIS BH4 1.5-1.95	EIS 2015	2015/05/26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20170804	JBS&G 2017	2017/08/04	557460	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
QC20170804	JBS&G 2017	2017/04/08	172940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5
Statistical Summary																										
Number of Results				10	2	2	2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	2	20
Number of Detects				0	2	2	2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	2	20
Minimum Concentration				<20	20	110	7.1	488	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	11	8.5
Minimum Detect				ND	20	110	7.1	488	ND	0.0002	ND	ND	ND	ND	0.0013	0.0013	0.0013	1	1	1	1	1	1	1	11	8.5
Maximum Concentration				<20	23	150	8.8	731	0	0.0002	0	0	0	0	0.0013	0.0013	0.0013	1	1	1	1	1	1	1	25	23
Maximum Detect				ND	23	150	8.8	731	ND	0.0002	ND	ND	ND	ND	0.0013	0.0013	0.0013	1	1	1	1	1	1	1	25	23
Average Concentration				10				605	0	0.00002	0	0	0	0	0.00013	0.00013	0.00013	1	1	1	1	1	1	1		18
Median Concentration				10	21.5	130	7.95	603.5	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	18	19
Standard Deviation				0				64	0	0.000063	0	0	0	0	0.00041	0.00041	0.00041	0	0	0	0	0	0	0		4.3
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B: Groundwater Analytical Summary
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Metals & Metalloids								Chlorinated Alkanes																Chlorinated Alkenes										
				Arsenic (Total) (Filtered)	Cadmium (Filtered)	Chromium (Total) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Inorganic) (Filtered)	Nickel (Filtered)	Zinc (Filtered)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEPM 2013 GIL - Drinking Water				0.01	0.002		2	0.01	0.001	0.02									0.003					0.003				0.004		0.03			0.00	0.00	0.00	0.00	0.05				0.0003
NEPM 2013 GIL - Marine Waters					0.0007		0.0013	0.0044	0.0001	0.007	0.015				1.9																									
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																								
NHMRC (2011) (as amended Feb 2016 Health) Factor 10 Applied to Recreational				0.1	0.02		20	0.1	0.01	0.2									0.03					0.03				0.04		0.3							0.5			0.2	0.003
WHO 2008 - Petroleum Products in Drinking Water																																								
Sample Name	**Location**	**WellCode**	**Sample Date**	**Lab Report**																																				
MW01		MW01	11/08/2017	558341	0.002	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.003	0.016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.02	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW02		MW02	11/08/2017	558341	0.002	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.006	0.027	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.022	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW03		MW03	11/08/2017	558341	0.003	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.004	0.017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.018	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW04		MW04	11/08/2017	558341	0.005	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.004	0.026	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.024	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW05		MW05	11/08/2017	558341	0.004	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.027	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
QA20170811		MW05	11/08/2017	558341	0.004	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.021	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
QC20170811		MW05	8/11/2017	173315	0.004	<0.0001	<0.001	<0.001	<0.001	<0.00005	0.001	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	-	<0.01	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01
Statistical Summary																																								
Number of Results				7	7	7	7	7	7	7	7	7	7	7	7	7	7	1	7	7	7	1	7	7	7	7	7	6	7	7	1	1	6	7	7	7	7	7	7	7	7
Number of Detects				7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				0.002	<0.0001	<0.001	<0.001	<0.001	<0.00005	0.001	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Minimum Detect				0.002	ND	ND	ND	ND	ND	0.001	0.008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				0.005	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.006	0.027	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	0.027	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01
Maximum Detect				0.005	ND	ND	ND	ND	ND	0.006	0.027	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.027	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.0034	0.000093	0.0005	0.0005	0.0005	0.000046	0.0029	0.016	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005		0.0005	0.0005	0.0005		0.0005	0.0005	0.0011	0.0011	0.0011	0.022	0.0011	0.0005				0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0011
Median Concentration				0.004	0.0001	0.0005	0.0005	0.0005	0.00005	0.003	0.016	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0215	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Standard Deviation				0.0011	0.000019	0	0	0	0.0000094	0.002	0.008	0	0	0	0	0	0		0	0	0		0	0	0.0017	0.0017	0.0017	0.0032	0.0017	0				0	0	0	0	0	0	0	0.0017
Number of Guideline Exceedances				0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	7
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B: Groundwater Analytical Summary
Project Number: 52961
Project Name: Summer Hill Ambulance Station

	Trihalomethanes				TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX					
	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.00	0.00	0.00	0.00	0.01	0.05	0.10	0.10	0.10	0.05	0.10	0.10	0.05	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
NEPM 2013 GIL - Drinking Water	0.25	0.25	0.25	0.25												0.001	0.3	0.8			0.6
NEPM 2013 GIL - Marine Waters																0.5					
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m													NL		NL	5	NL	NL			NL
NHMRC (2011) (as amended Feb 2016 Health) Factor 10 Applied to Recreational	2.5	2.5	2.5	2.5		0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9			0.01	3	8			6
WHO 2008 - Petroleum Products in Drinking Water						0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09			0.01	0.3	0.7	0.5		
Sample Name **Location** **WellCode** **Sample Date** **Lab Report**																					
MW01		MW01	11/08/2017	558341	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
MW02		MW02	11/08/2017	558341	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
MW03		MW03	11/08/2017	558341	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
MW04		MW04	11/08/2017	558341	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
MW05		MW05	11/08/2017	558341	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
QA20170811		MW05	11/08/2017	558341	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
QC20170811		MW05	8/11/2017	173315	<0.001	<0.001	<0.001	<0.001	<0.01	<0.05	<0.1	<0.1	-	<0.05	<0.1	<0.1	-	<0.01	-	<0.001	<0.001	<0.001	<0.001	<0.002	-
Statistical Summary																					
Number of Results	7	7	7	7	7	7	7	7	6	7	7	7	6	7	6	7	7	7	7	7	6
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.001	<0.001	<0.001	<0.001	<0.01	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.01	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.001	<0.005	<0.001	<0.001	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.0005	0.0022	0.0005	0.0005	0.0093	0.025	0.05	0.05	0.05	0.025	0.05	0.05	0.025	0.0093	0.01	0.0005	0.0005	0.0005	0.0005	0.001	0.0015
Median Concentration	0.0005	0.0025	0.0005	0.0005	0.01	0.025	0.05	0.05	0.05	0.025	0.05	0.05	0.025	0.01	0.01	0.0005	0.0005	0.0005	0.0005	0.001	0.0015
Standard Deviation	0	0.00076	0	0	0.0019	0	0	0	0	0	0	0	0	0.0019	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	7	7	6	0	7	7	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B: Groundwater Analytical Summary
Project Number: 52961
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					Polycyclic Aromatic Hydrocarbons																	Monocyclic Aromatic Hydrocarbons									
					Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	
NEPM 2013 GIL - Drinking Water									0.00001																						0.03	
NEPM 2013 GIL - Marine Waters																			0.05													
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																			999999													
NHMRC (2011) (as amended Feb 2016 Health) Factor 10 Applied to Recreational									0.0001																						0.3	
WHO 2008 - Petroleum Products in Drinking Water									0.0007																							
Sample Name	**Location**	**WellCode**	**Sample Date**	**Lab Report**																													
MW01		MW01	11/08/2017	558341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-
MW02		MW02	11/08/2017	558341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-
MW03		MW03	11/08/2017	558341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-
MW04		MW04	11/08/2017	558341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-
MW05		MW05	11/08/2017	558341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-
QA20170811		MW05	11/08/2017	558341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-
QC20170811		MW05	8/11/2017	173315	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	-	0	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Statistical Summary																																	
Number of Results					7	7	7	7	7	1	6	7	6	7	7	7	7	7	7	7	7	6	1	7	7	1	7	7	1	1	1	7	1
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.00005	0	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration					0.000029	0.000029	0.000029	0.000029	0.000011		0.000025	0.000029	0.000025	0.000029	0.000029	0.000029	0.000029	0.000029	0.000036	0.000029	0.000029	0.000025		0.0005	0.0005		0.0005	0.0005				0.0005	
Median Concentration					0.000025	0.000025	0.000025	0.000025	0.000005	0.00025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Standard Deviation					0.0000094	0.0000094	0.0000094	0.0000094	0.000017		0	0.0000094	0	0.0000094	0.0000094	0.0000094	0.0000094	0.0000094	0.000028	0.0000094	0.0000094	0		0	0		0	0				0	
Number of Guideline Exceedances					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
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B: Groundwater Analytical Summary
Project Number: 52961
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					Miscellaneous Hydrocarbons							Chlorinated Benzenes							Solvents		Polychlorinated Biphenyls							
					1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	2-Propanone (Acetone)	MTBE	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.00	0.00	0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEPM 2013 GIL - Drinking Water								0.001				0.03	0.03	1.5		0.04	0.3											
NEPM 2013 GIL - Marine Waters													0.02															
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																												
NHMRC (2011) (as amended Feb 2016 Health) Factor 10 Applied to Recreational					0.01			0.01						15		0.4	3											
WHO 2008 - Petroleum Products in Drinking Water																												
Sample Name	**Location**	**WellCode**	**Sample Date**	**Lab Report**																								
MW01		MW01	11/08/2017	558341	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW02		MW02	11/08/2017	558341	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW03		MW03	11/08/2017	558341	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW04		MW04	11/08/2017	558341	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW05		MW05	11/08/2017	558341	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
QA20170811		MW05	11/08/2017	558341	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
QC20170811		MW05	8/11/2017	173315	<0.001	-	-	<0.01	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	-	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-
Statistical Summary																												
Number of Results					7	6	6	7	1	7	6	1	1	7	7	7	7	7	6	7	7	7	7	7	7	7	7	6
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<1	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration					0.0005	0.0005	0.0005	0.0011		0.0005	0.0005			0.0005	0.0005	0.0005	0.0005	0.000057	0.5	0.0005	0.00057	0.00057	0.00057	0.00057	0.00057	0.00057	0.00057	0.0005
Median Concentration					0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00005	0.5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Standard Deviation					0	0	0	0.0017		0	0			0	0	0	0	0.000019	0	0	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0
Number of Guideline Exceedances					0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B: Groundwater Analytical Summary
Project Number: 52961
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					Phenols																		Organic Sulfur Compounds
					2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2-chlorophenol	2-Methylphenol	2-nitrophenol	3- &4-Methylphenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Chloro-3-Methylphenol	4-nitrophenol	Phenol	Phenols (Total)	Total Halogenated Phenol	Total Non-Halogenated Phenol	Total Tetrachlorophenols	Carbon disulfide
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.01	0.01	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.01	0.03	0.10	0.01	0.03	0.00		0.01	0.10	0.03	0.00
NEPM 2013 GIL - Drinking Water						0.02	0.2				0.3													
NEPM 2013 GIL - Marine Waters																			0.4					
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																								
NHMRC (2011) (as amended Feb 2016 Health) Factor 10 Applied to Recreational						0.2	2				3													
WHO 2008 - Petroleum Products in Drinking Water																								
Sample Name	**Location**	**WellCode**	**Sample Date**	**Lab Report**																				
MW01		MW01	11/08/2017	558341	<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	-	<0.01	<0.1	<0.03	<0.001
MW02		MW02	11/08/2017	558341	<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	-	<0.01	<0.1	<0.03	<0.001
MW03		MW03	11/08/2017	558341	<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	-	<0.01	<0.1	<0.03	<0.001
MW04		MW04	11/08/2017	558341	<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	-	<0.01	<0.1	<0.03	<0.001
MW05		MW05	11/08/2017	558341	<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	-	<0.01	<0.1	<0.03	<0.001
QA20170811		MW05	11/08/2017	558341	<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	-	<0.01	<0.1	<0.03	<0.001
QC20170811		MW05	8/11/2017	173315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
Statistical Summary																								
Number of Results					6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	6	6	6	6
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	<0.05	<0.01	<0.1	<0.03	<0.001
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.01	<0.01	<0.003	<0.003	<0.03	<0.003	<0.003	<0.003	<0.01	<0.006	<0.03	<0.1	<0.01	<0.03	<0.003	<0.05	<0.01	<0.1	<0.03	<0.001
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration					0.005	0.005	0.0015	0.0015	0.015	0.0015	0.0015	0.0015	0.005	0.003	0.015	0.05	0.005	0.015	0.0015		0.005	0.05	0.015	0.0005
Median Concentration					0.005	0.005	0.0015	0.0015	0.015	0.0015	0.0015	0.0015	0.005	0.003	0.015	0.05	0.005	0.015	0.0015	0.025	0.005	0.05	0.015	0.0005
Standard Deviation					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B: Groundwater Analytical Summary
Project Number: 52961
Project Name: Summer Hill Ambulance Station

				Organochlorine Pesticides																									Herbicides	EPA VIC - IWRG621
				4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Dieldrin	DDD	DDT	DDT+DDE+DDD (Sum of Total)	Chlordane	delta-BHC	Endosulfan alpha	Endosulfan beta	gamma-Chlordane	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Pentachlorophenol	Toxaphene	Dinoseb	Chlorinated Hydrocarbons EPAVic
				µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
EQL				0.10	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.10	5.00
NEPM 2013 GIL - Drinking Water						0.0003						0.009		0.002										0.0003	0.01		0.01			
NEPM 2013 GIL - Marine Waters																											0.011			
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																				0.000004										
NHMRC (2011) (as amended Feb 2016 Health) Factor 10 Applied to Recreational						0.003						0.09		0.02									0.003		0.1	3	0.1			
WHO 2008 - Petroleum Products in Drinking Water																														
Sample Name	**Location**	**WellCode**	**Sample Date**	**Lab Report**																										
MW01		MW01	11/08/2017	558341	<0.1	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	20
MW02		MW02	11/08/2017	558341	<0.1	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	22
MW03		MW03	11/08/2017	558341	<0.1	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	18
MW04		MW04	11/08/2017	558341	<0.1	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	24
MW05		MW05	11/08/2017	558341	<0.1	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	27
QA20170811		MW05	11/08/2017	558341	<0.1	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	21
QC20170811		MW05	8/11/2017	173315	<0.2	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Statistical Summary																														
Number of Results				7	7	6	7	1	7	7	7	7	6	6	7	7	7	1	7	7	7	6	7	7	7	7	6	6	6	6
Number of Detects				0	0	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
Minimum Concentration				<0.1	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.1	18
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18
Maximum Concentration				<0.2	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.01	<0.1	27
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27
Average Concentration				0.057	0.000057	0.00005	0.000057		0.000057	0.000057	0.000057	0.000057	0.00005	0.0005	0.000057	0.000057	0.000057		0.000057	0.000057	0.000057	0.00005	0.000057	0.000057	0.000057	0.000057	0.005	0.005	0.05	22
Median Concentration				0.05	0.00005	0.00005	0.00005	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00005	0.00005	0.00005	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.005	0.005	0.05	21.5
Standard Deviation				0.019	0.000019	0	0.000019		0.000019	0.000019	0.000019	0.000019	0	0	0.000019	0.000019	0.000019		0.000019	0.000019	0.000019	0	0.000019	0.000019	0.000019	0.000019	0	0	0	3.2
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table D: Soil Vapour Analytical Summary
Project Number: 52961
Project Name: Summer Hill Ambulance Station

	Organic Alcohols	Chlorinated Alkanes													Chlorinated Alkenes									
	Isopropyl alcohol	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Trichlorofluoromethane	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
EQL	10.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
NEPM 2013 HIL Commercial/Industrial D Indoor Air (Attenuation Factor 0.1)			23																	0.03		0.8		0.008	0.01
NEPM 2013 HIL Commercial/Industrial D Soil Vapour			230																	0.3		8		0.08	0.1
NEPM 2013 HIL Residential B Indoor Air (Attenuation Factor 0.1)			6																	0.008		0.2		0.002	0.003
NEPM 2013 HIL Residential B Soil Vapour			60																	0.08		2		0.02	0.03
NEPM 2013 Soil Vapour HSL A & HSL B - Clay 0 to <1m																									
NEPM 2013 Soil Vapour HSL D - Clay 0 to <1m																									
Sample Name	**Sample Date**	**Monitoring Round**	**Lab Report**																						
QC_110817SV_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
QC_110817SV_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV01_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV01_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV02_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV02_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV03_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV03_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV04_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV04_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV05_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV05_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV06_BACK	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
SV06_FRONT	2017/08/11	JBS&G 2017	558483	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

Statistical Summary

Number of Results	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<1.6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.8	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Median Concentration	0.8	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	14
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table D: Soil Vapour Analytical Summary
Project Number: 52961
Project Name: Summer Hill Ambulance Station

	Trihalomethanes				TRHs (NEPC 2013		BTEX				PAHs	Monocyclic Aromatic Hydrocarbons									aneous Hydroc		Chlorinated Benzenes						Misce
	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	>C10-C16 Fraction	C6-C10 Fraction	Benzene	Ethylbenzene	Toluene	Xylene (Total)	Naphthalene	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	1,2-dibromoethane	Dibromomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobutadiene
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
EQL	0.50	0.50	0.50	0.50	10.00	10.00	0.50	0.50	0.50	1.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	5.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
NEPM 2013 HIL Commercial/Industrial D Indoor Air (Attenuation Factor 0.1)																													
NEPM 2013 HIL Commercial/Industrial D Soil Vapour																													
NEPM 2013 HIL Residential B Indoor Air (Attenuation Factor 0.1)																													
NEPM 2013 HIL Residential B Soil Vapour																													
NEPM 2013 Soil Vapour HSL A & HSL B - Clay 0 to <1m							1	420	1600	280	1																		
NEPM 2013 Soil Vapour HSL D - Clay 0 to <1m							5	1800	6500	1200	4																		

Sample Name	Sample Date	Monitoring Round	Lab Report																											
QC_110817SV_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
QC_110817SV_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV01_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV01_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV02_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV02_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV03_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV03_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV04_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV04_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV05_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV05_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV06_BACK	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
SV06_FRONT	2017/08/11	JBS&G 2017	558483	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5

Statistical Summary

Number of Results	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.08	<0.08	<0.08	<0.08	<1.6	<1.6	<0.08	<0.08	<0.08	<0.24	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.04	0.04	0.04	0.04	0.8	0.8	0.04	0.04	0.04	0.12	0.066	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.4	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25
Median Concentration	0.04	0.04	0.04	0.04	0.8	0.8	0.04	0.04	0.04	0.12	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.4	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0.096	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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