



UPG Edmondson Parkland Pty Ltd
Edmondson Park
Environmental Site Assessment
Sites 1-5

Buchan Avenue, Edmondson Park

26 July 2022

63384/ 146,510 (Rev 0)

JBS&G

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Abbreviations

Term	Definition
ACM	Asbestos Containing Materials
AEC	Areas of Environmental Concern
AHD	Australian Height Datum
bgl	Below ground level
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
Btoc	Below Top of Casing
CLM Act	Contaminated Land Management Act 1997
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DP	Deposited Plan
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EIL	Ecological Investigation Levels
EPA	NSW Environment Protection Authority
ESLs	Ecological Screening Levels
Ha	Hectare
HILs	Health Investigation Levels
HSLs	Health Screening Levels
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
LOR	Limit of Reporting
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
OCP	Organochlorine Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photo-ionisation Detector
POEO Act	Protection of Environment Operations Act 1997
QA/QC	Quality Assurance/Quality Control
RAP	Remedial Action Plan
R&H SEPP	Resilience and Hazards State Environmental Planning Policy
RPD	Relative Percentage Difference
SAQP	Sampling Analytical and Quality Plan
TCLP	Toxicity Characterisation Leachate Procedure
TRH	Total Recoverable Hydrocarbons
VOC	Volatile Organic Compounds

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by UPG Edmondson Parkland Pty Ltd (Urban Property Group, the client) to provide a site development application (DA) stage site contamination assessment for the proposed development of Sites 1 to 5 at Buchan Avenue, Edmondson Park, NSW (the site) as shown in **Figure 1 (Attachment 2)**. The site is legally identified as part Lots 2 DP1264963 and Lot 3 DP1257105. The site has an area of approximately 5.16 hectares (ha).

To support a proposed development application to Liverpool Council, UPG has requested JBS&G review current site conditions and provide confirmation of the current suitability of the site for the proposed land use, or otherwise provide recommendations on requirements to enable such conclusions to be drawn. This ESA has been prepared with consideration to guidance produced or endorsed by the NSW Environment Protection Authority including EPA (1995¹), NEPC (2013²), EPA (2020³), EPA (2017⁴) and *State Environmental Planning Policy (Resilience and Hazards) 2021* (R&H SEPP), which has replaced SEPP 55⁵. Sampling and analysis data to support this ESA has been utilised from a range of previous investigations as referenced in **Section 1.1**.

The objective of the ESA was to assess the potential for contamination based on current and historical site activities and to assess the suitability of the site for the proposed medium density residential land use, or to make recommendations to enable such conclusions to be made in the future such that the site can be demonstrated as suitable for the proposed land use as required by R&H SEPP (2021).

Based on the scope of work undertaken for this assessment (and subject to the limitations in **Section 9**), the following conclusions were made:

- Review of currently available previous site assessment documents has identified that there is sufficient existing data to characterise soil conditions within the area of the proposed development in order to establish a CSM.
- Each of the environmental data sets (as sourced from Environ (2013) and JBS&G (2021)) were found to be reliable for the purposes of making decisions as part of this assessment. It is noted that data summarised in Environ (2013) was generated several years ago. However, from a review of the site history since 2013, the site use has remained relatively unchanged and therefore the data is considered to be sufficiently representative of current conditions for the purposes of developing the CSM.
- Stockpiled material currently placed at the site has generally been sourced from within the broader Landcom development precinct, however it is acknowledged that there remains the potential that some material may have been added from other locations. Specific assessment of these stockpiles in JBS&G (2021) has identified the material to meet the adopted human health and ecological criteria under the development scenario.
- Based on the results and CSM presented herein, there were no potential unacceptable health risks identified with respect to the proposed development. The material stockpiles as present at the site are considered suitable for beneficial reuse within the development lots during future development activities.

¹ *Contaminated Sites: Sampling Design Guidelines*. NSW Environment Protection Authority 1995 (EPA 1995)

² *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)*. National Environment Protection Council (NEPC 2013)

³ *Consultants Reporting on Contaminated Lands, Contaminated Land Guidelines*, NSW EPA, 2020 (EPA 2020)

⁴ *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition)*. NSW EPA, 2017 (EPA 2017)

⁵ *Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land*. Department of Urban Affairs and Planning, Environment Protection Authority, August 1998 (DUAP 1998)

- On the basis of the available historical data and with regard to the scope of the current investigation, it is considered that the site is suitable for residential with accessible soil land uses, including gardens and accessible soil, day care centre, pre-school, primary and secondary school and park, recreational open space, playing fields.

As a conservative measure, it is recommended that an unexpected finds protocol (UFP) should be prepared as part of the construction phase Environmental Management Plan (EMP) to establish a framework for management of any small scale unexpected conditions, whereby any isolated unexpected occurrences could be identified and disposed of appropriately during construction works.

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by UPG Edmondson Parkland Pty Ltd (Urban Property Group, the client) to provide a site development application (DA) stage site contamination assessment for the proposed development of Sites 1 to 5 at Buchan Avenue, Edmondson Park, NSW (the site) as shown in **Figure 1 (Attachment 2)**. The site is legally identified as part Lots 2 DP1264963 and Lot 3 DP1257105. The site has an area of approximately 5.16 hectares (ha).

It is understood that Landcom will complete subdivision of the current lots prior to the commencement of the proposed development works, which is the subject of a separate process. The proposed subdivision will result in subdivision of the site into 5 development lots, being Lots 1 to 5 as identified in **Figure 2**, together comprising, for the purposes of this assessment, 'the Site'.

It is understood the current UPG concept plan will result in the submission of three development applications as outlined following for residential development of each lot as follows:

- DA 1: Lot 5 (266 apartments)
- DA 2: Lot2 4A/4B (130 apartments and 30 terraces)
- DA 3: Lots 1-3 (179 terraces).

The site is a portion of a greater area formerly used by Department of Defence as a training facility and previously known as the Ingleburn Army Camp. Historical investigation of the greater site area identified military objects (concertina wire, weapons pits, etc.), waste material on the ground surface and buried in pits and trenches, unexploded ordnance (UXO), exploded ordnance waste (EOW) and small arms ammunition (SAA) from military training exercises, and lead impacted material used to form tracks. Remediation of the site was undertaken by Landcom to remove waste material, UXO, EOW and SAA, asbestos and lead impacted material with all identified materials and contaminated soil from the Landcom site portion to the north of the railway.

The site, as part of the broader Landcom subdivision parcel has previously been the subject of environmental assessment, remediation and validation activities (JBS 2013⁶) and a subsequent site audit (Environ 2013⁷) that identified the site as being suitable for the purposes of 'residential with gardens and accessible soil' and other less sensitive uses including schools, open space and commercial, subject to compliance with the Site Environmental Management Plan (SEMP) relevant to the proposed open space areas within RZNRA (JBS&G 2013⁸). No portions of this current assessment site fall within the area the subject of the ongoing open space areas SEMP.

Groundwater within the site and in the greater site area was assessed prior to and following remediation. Heavy metals concentrations in groundwater exceeded the adopted ecological criteria, however were considered indicative of background conditions associated with the regional geology, comprising the Wianamatta Group shale formation. As such, no further consideration of potential contamination concerns was required with regard to groundwater underlying the site.

Since the finalisation of the remediation/validation works and issue of the final site audit statement (Environ 2013), the site has been managed by Landcom, or an appointed principal contractor as

⁶ Validation Report – RZNRA, prepared for Landcom, Zouch Road, Edmondson Park. JBS Environmental. 24 September 2013 (JBS 2013)

⁷ Site Audit Report – Residential Zone North of Rail Alignment, Zouch Road Edmondson Park NSW, prepared for Landcom, ENVIRON Australia Pty Ltd. October 2013 (Environ 2013)

⁸ Urban Growth, Public Open Space, Site Environmental Management Plan, Residential Zone North of Rail Alignment, Zouch Road, Edmondson Park, NSW', JBS&G (NSW & WA) Pty Ltd. 2 September 2013 (JBS&G 2013)

associated with subdivision construction activities nearby to the site. This resulted in use of the site at times as a stockpiling yard for broader site generated excess fill material.

Additional stockpiled material was previously located in an adjacent part of Lots 1 and 2 on DP 1257105 and was subsequently assessed (JBS&G 2018a⁹, 2020a¹⁰, 2020b¹¹ and 2020c¹²) as suitable for beneficial reuse as part of subdivision and road construction works. The remainder of this material was moved from its original location and placed in Lot 2 DP1264963, and identified as **Stockpile 6 in Figure 4**.

Additional material from a separate source within the Ingleburn Army Camp (IAC) was classified as Virgin Excavated Material (VENM) and has been temporarily placed as **Stockpile 1 in Figure 4**. The assessment of this VENM material was presented in JBS&G (2018c¹³).

To support a proposed development application to Liverpool Council, Urban Property Group has requested JBS&G review current site conditions and provide confirmation of the current suitability of the site for the proposed land use, or otherwise provide recommendations on requirements to enable such conclusions to be drawn. This ESA has been prepared with consideration to guidance produced or endorsed by the NSW Environment Protection Authority including EPA (1995¹⁴), NEPC (2013¹⁵), EPA (2020¹⁶), EPA (2017¹⁷) and *State Environmental Planning Policy (Resilience and Hazards) 2021 (R&H SEPP)*, which has replaced SEPP 55¹⁸. Sampling and analysis data to support this ESA has been utilised from a range of previous investigations as referenced above.

1.2 Objectives

The objective of the ESA was to assess the potential for contamination based on current and historical site activities and to assess the suitability of the site for the proposed medium density residential land use, or to make recommendations to enable such conclusions to be made in the future such that the site can be demonstrated as suitable for the proposed land use as required by R&H SEPP (2021).

1.3 Scope of Works

The scope of works for the assessment included:

- Desktop review of previous reports, local and regional background environmental information and available historical background information;
- A detailed site inspection of the site and surrounds;
- Development of a conceptual site model (CSM) as specific to the environmental characterisation of the site and the proposed development; and

⁹ *Material Classification – Edmondson Park Precinct 9 Stockpile Assessment, Edmondson Park, NSW*. JBS&G 9 March 2018 (JBS&G 2018a)

¹⁰ *Material Classification – Edmondson Park Precinct 9 Stockpile 1 Assessment Part 2, Buchan Avenue, Edmondson Park NSW*. JBS&G 15 June 2020 (JBS&G 2020a)

¹¹ *Material Classification – Edmondson Park Precinct 9 Stockpile 1 Assessment Part 3, Buchan Avenue, Edmondson Park NSW*. JBS&G 19 June 2020 (JBS&G 2020b)

¹² *Material Classification – Edmondson Park Precinct Fly Tipped Stockpile Assessment, Buchan Avenue, Edmondson Park NSW*. JBS&G 10 July 2020 (JBS&G 2020c)

¹³ *Virgin Excavated Natural Material Assessment – Clay and Shale – Edmondson Park STP*. JBS&G, 28 August 2018 (JBS&G 2018c)

¹⁴ *Contaminated Sites: Sampling Design Guidelines*. NSW Environment Protection Authority 1995 (EPA 1995)

¹⁵ *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)*. National Environment Protection Council (NEPC 2013)

¹⁶ *Consultants Reporting on Contaminated Lands, Contaminated Land Guidelines*, NSW EPA, 2020 (EPA 2020)

¹⁷ *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition)*. NSW EPA, 2017 (EPA 2017)

¹⁸ *Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land*. Department of Urban Affairs and Planning, Environment Protection Authority, August 1998 (DUAP 1998)

- Drawing conclusions with regard to the current suitability of the site from a contamination viewpoint and providing recommendations on issues that will need to be addressed to support the proposed redevelopment of the site.

2. Site Conditions and Surrounding Environment

2.1 Site Identification

The site location and layout are shown in **Figures 1** and **2**, respectively. Site details are summarised in **Table 2.1** and described in detail in the following sections.

The site comprised part of 2 lots on the north eastern boundary of the former Ingleburn Army Camp (IAC) site. Historically, these lots are part of a larger parcel that has been used for Defence purposes and then recently vacant/cleared lots prior to commencement of subdivision activities associated with the Edmondson Park growth area.

Table 2.1: Site Details

Lot/DP Number	Part Lots 2 DP1264963 and Lot 3 DP1257105
Address	Buchan Avenue, Edmondson Park
Local Government Authority	Liverpool Council
Geographic Co-ordinates (GDA 94 – MGA56) (centre of the site)	Easting - 301821.537 Northing - 6239596.672
Current Use	Vacant/Open Space
Previous Use	Defence Training Area
Site Area	Approximately 5.16 ha

2.2 Site Description

A detailed site inspection was completed by an experienced and appropriately qualified JBS&G environmental consultant on 11 July 2022. Photographs of general conditions taken during the inspection are presented in **Appendix B**.

The proposed development site, inclusive of Part Lot 2 DP 1264963 and Lot 3 DP1257105 was secured by relatively recently installed unsecured permanent fencing and accessed from Buchan Avenue, which has been constructed between the development lots, extending from east to west. The part Lot 2 is identified to comprise the northern position of the proposed development site while part Lot 3 is identified to comprise the portion of the site south of Buchan Avenue.

The site encompasses five distinct portions as shown in **Figure 2**, comprising:

- the western portion of part Lot 2 to the north of Buchan Avenue and east and south of Bezantin Ridge Road being proposed Lots 1 to 4. At the time of the inspection this footprint was identified to contain stockpiles of material and open vacant land.
- one lot within the historic IAC to the south of Buchan Avenue, being proposed Lot 5, adjacent to the railway line and the Maxwell Creek riparian/ conservation area. This area comprised vacant open space.

A small area of stockpiled materials, including road base, gravel and sand from the current contractor was observed in the western portion of Lot 2 at the location of the previous site sheds. These materials were considered to comprise engineered construction products and as such, were considered not to be areas of concern requiring further evaluation during this assessment. The entire site was devoid of any substantial trees, with ground vegetation observed as grass cover or shrubbery in the vacant land portions of the site.

There were no indications of discoloured, stained and/or odorous soil conditions with the exposed surface materials. Further, visible indications of anthropogenic inclusions (construction and demolition waste, etc) were observed in the area of Stockpile 5 (as shown on **Figure 4**).

2.3 Surrounding Land Use

The surrounding land uses have been identified as follows:

- North – The site was bound to the north by a combination of McFarlane Road and Bezentin Ridge Rd, with low density residential land uses beyond (previous Landcom development Precinct 4).
- East – To the east of the site was vacant land with end of Learoyd Road beyond in the northern portion and the riparian area of Maxwells Creek in the central site portion and carparking infrastructure associated with Edmondson Park railway station in the south.
- South – The newly constructed Buchan Avenue road reserve, beyond which is the current construction of a school precinct is situated to the south of the northern portion, with the Liverpool to Leppington railway line to the south of the southern portion, beyond which was the Edmondson Regional Park.
- West – Faulkner Way and Bezentin Ridge Road street reserves, beyond which was the balance of the Landcom development Precinct 4 development site, comprising individual low density residential properties and Clermont Park public open space, with the St Francis Catholic College campus beyond toward the north-west.

2.4 Environmental Setting

2.4.1 Topography and Hydrology

A review of regional topographical data via the Spatial Information exchange (SIX Maps¹⁹) indicates the site has an elevation of between 50 m and 70 m AHD with the highest portion of the Site being located at the south-western and north-western boundaries. Ground levels were observed to fall toward the east of the site, beyond which is the unnamed surface water drainage channel (tributary of Maxwells Creek) riparian zone. Maxwells Creek ultimately flows into Cabramatta Creek, located approximately 6.5 km north-east of the site. Cabramatta Creek flows into the Georges River at Chipping Norton Lake.

Rainfall is anticipated to infiltrate unsealed soils at the site, and following saturation surface water run-off is expected to follow the local topography of the land and flow into the unnamed tributary of Maxwells Creek, or associated roadway drainage infrastructure and ultimately flow towards the creek.

2.4.2 Geology and Soils

Based on review of the Penrith 1:100,000 Geological Sheet Edition (1991) the site is located in an area underlain by Bringelly Shale which is found within the Wianamatta Group formation. Typical geological characteristics of the Bringelly Shale are fine to medium grained shale, carbonaceous claystone and claystone.

Based on eSPADE²⁰ Soil Landscape information, soils at the site and surrounding area are part of the Blacktown landscape characterised by gently undulating rises on Wianamatta Group shales. With local relief to 30 m and slopes usually less than 5%. Landforms can include broad rounded crests and ridges with gently inclined slopes. Vegetation is usually cleared eucalypt woodland and tall open-forest. Soils tend to be shallow to moderately deep hard setting mottled texture contrast soils, with red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and in drainage lines. Limitations of this soil type include localised seasonal waterlogging, water erosion hazard, moderately reactive highly plastic subsoils, localised soils surface movement potential.

¹⁹ Spatial Information Exchange Viewer, NSW Land and Property Information, Accessed 15/07/2022, <https://maps.six.nsw.gov.au/>;

²⁰ eSPADE 2.2 <https://www.environment.nsw.gov.au/eSpade2WebApp> (Accessed 15/07/2022)

As summarised in Environ (2013) subsurface conditions at the site and surrounds were generally characterised by the presence of clayey silt/silty clay topsoil to depths of 0.05 – 0.5 m below ground level (bgl), with isolated areas of fill material overlying residual silty clay soil and shale bedrock at depths of between 0.2 m to 3.2 m bgl.

2.4.3 Acid Sulfate Soils

Based on a review of the NSW Office of Environment and Heritage Acid Sulfate Soils Risk database (2011 Revision) there is “no known occurrence” of acid sulfate soils identified for the site or the surrounding areas. As such, no further consideration of potential requirements for acid sulfate soils management is considered necessary.

2.4.4 Hydrogeology

A post-remediation groundwater monitoring event was completed across the 12619 Project site using the available wells (JBS 2013b²¹). Groundwater monitoring in October 2012 reported standing water levels of between 1.6 m and 7.1 m bgl. This corresponds to standing water elevations of between 46.75 m AHD to the west outside of current site boundaries and 51.28 m AHD in the east section outside of the current site boundaries.

Based on local topography and geology, regional groundwater is expected to be present in cracks and fissures within the underlying Bringelly Shale. Regional groundwater is anticipated to flow in an easterly to north-easterly direction toward the Georges River.

Based on review of eSPADE, the site exists within the Upper South Creek Variant A Hydrogeological Landscape. Aquifers in this landscape are reportedly characterised as follows:

- Unconfined in unconsolidated alluvial sediments (adjoining surface water drainage lines);
- unconfined to semi-confined along structures (bedding, joints, faults) in the fractured bedrock;
- Lateral flow occurs through alluvial sediments on slopes and plains;
- Local perching above clay-rich layers (seasonal);
- Hydraulic conductivity is moderate: 10^{-2} to 10 m/day;
- Hydraulic transmissivity if low to moderate: $<2 - 20 \text{ m}^2/\text{day}$;
- Hydraulic gradient is gentle: $<10 \%$;
- Groundwater is generally brackish 1.6 – $>4.8 \text{ dS/m}$; and
- Depth to groundwater is between 2 and 6 m bgl.

2.4.5 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location Badgery's Creek AWS (BOM, 2021²²) indicates the site is located within the following meteorological setting:

- Mean maximum temperature ranges from 17.5°C in July to 30.3°C in January, while mean minimum temperature ranges from 4.1°C in July to 17.3°C in January; and

²¹ Post-remediation Groundwater Monitoring Event Results Landcom Project 12619 Zouch Road, Edmondson Park, JBS Environmental, 25 February 2013 (JBS 2013b)

²² Commonwealth of Australia, 2021 Bureau of Meteorology, http://www.bom.gov.au/climate/averages/tables/cw_067108.shtml prepared on 15 July 2022

- The average annual rainfall is approximately 675 mm. On average, July received the least amount of rain with a mean rainfall of 24.5 mm, while March was identified to receive the most rain, with a mean of 112.4 mm.

3. Summary Site History and Previous Site Investigations

A number of previous environmental site investigations have been undertaken which provide relevant environmental data for the site. The works and findings of the relevant assessments available to JBS&G are summarised in the following sections.

3.1 Environmental Validation Report – RZNRA (JBS, 2013)

JBS Environmental Pty Ltd (JBS) was engaged by Landcom to act as remediation consultant during redevelopment of the land known as Landcom Project 12619 located at Zouch Road, Edmondson Park, NSW which comprised the land formally identified as Part Lot 7 and Lot 8 in DP1127652.

The site had formerly been part of the IAC training grounds, prior to be transferred to Landcom for future residential development. Contamination issues identified as requiring remediation and/or management to render the broader site (of which the current site is a minor portion) suitable for the propose residential with accessible soil use included:

- Stockpiled excavated materials placed across the site during historical activities;
- Lead particulate impacted material placed during the construction of an access road (located north of the subject site);
- The potential for asbestos containing materials (ACM) impacts on the ground surface and buried in waste pits in various areas of the site;
- Timber, general waste and steel materials buried in weapons pits/trenches in addition to concrete slabs that required removal prior to the commencement of residential development activities; and
- Clearance of residual UXO, EXO, and SAA items across the site.

Remediation of the RZNRA site, of which the current assessment site is a small portion, was undertaken in 2012 to remove the waste material, UXO, EOW and SAA, and lead or asbestos impacted material. Waste material, UXO, EOW and SAA was generally disposed off-site. Asbestos containing material, contaminated stockpiled material and lead impacted material were placed in an encapsulation area located within the greater site area.

Following completion of remedial works, RZNRA site validation was successfully achieved for the removal of UXO and ACM. In addition, validation inspections and the analysis of samples representative of soils retained on site have confirmed contaminant concentrations were less than the adopted validation criteria.

JBS concluded that the Site has been remediated and validated in general accordance with the site specific Remedial Action Plan (Golder 2011²³). The Site was therefore suitable for the proposed residential use with accessible soils. It is noted that an area of proposed public open space within the RZNRA boundaries required the application of the SEMP (JBS&G 2013). This was required as a result of vegetation retention requirements within the relevant portion of the site which prevented application of a full instrumental search for buried UXO/EXO/SAA and associated buried waste. As such there was a residual risk that such items may be encountered during future vegetation management and/or development activities. At the time of issue, the area covered by the SEMP comprised the riparian zone surrounding the tributary of Maxwells Creek to the east of the current subject site and the footprint of Clermont Park situated to the north of Buchan Avenue and west of Bezentin Ridge Road (to the north west of the current subject site). As such, the requirements of the SEMP do not apply to the current site assessment footprint.

²³ Landcom Project 12619 – Zouch Road, Edmondson Park, NSW, Remediation Action Plan. Golder Associates Pty Ltd (Golder 2011)

3.2 Site Audit Report – RZNRA (Environ, 2013)

On the basis of JBS (2013) and JBS&G (2013), a site audit report was prepared for the site by Graeme Nyland, a NSW EPA Accredited Site Auditor (9808). The audit was commissioned by Landcom to assess the suitability of the greater site area for its proposed use including residential and riparian/conservation areas.

The following reports were reviewed as part of the SAR (not all available to JBS&G at the time of reporting):

- Report “Stage 1 Preliminary Contamination Investigation. Zouch Road Ingleburn 92 Ha Site”. September 2000 by Milsearch.
- Report “Final Stage 2 Munitions Contamination Investigations. Landcom 92 Ha Site, Zouch Road, Ingleburn (Former Army Infantry Centre). 21 January – 6 April 2002”. Footer date 30 June 2002 (and earlier draft) by Milsearch.
- Report “Stage 2 Munitions Contamination Investigations, Additional Investigations. Landcom 92 Ha Site, Zouch Road, Ingleburn (Former Army Infantry Centre)”, 14-16 January & 9 February 2003, 30 April-2 May 2003, 21-22 May 2003. Footer date 10 June 2003 by Milsearch.
- Report “SAQP, Detailed Site Assessment, Zouch Road, Ingleburn”. May 2004 (and drafts dated March and April 2004) by PB.
- Report “Final Report, UXO Investigation Ex-Infantry Training Area, Zouch Road, Edmondson Park, NSW”. February 2005 by BACTEC.
- Report “Detailed Contamination Site Investigation, Landcom Project No: 12619, Zouch Road, Edmondson Park, NSW”. August 2005 (and draft dated May 2005) by Golder.
- Report “Remediation Action Plan, Landcom Project No: 12619, Zouch Road, Edmondson Park, NSW”. December 2005 (and draft dated October 2005) by Golder.
- Report “Environmental Management Plan (EMP), Proposed Remediation Works, Regional Park Zone, Part Lot 7 and 8 in DP1127653, Edmondson Park, NSW”, included as Appendix E of RAP. 10 December 2010 (and draft 26 August 2010) by Golder.
- Report “Remediation Action Plan, Landcom Project 12619 – Zouch Road, Edmondson Park, NSW”. 11 February 2011 (and drafts dated 26 August and 10 December 2010) by Golder.
- Report “Final Report, UXO Remediation of the SW Rail Link Alignment, Former Defence Training Area – Ingleburn”. July 2011 by BACTEC.
- Report “Validation Sampling, Analysis and Quality Plan, Landcom Project 12619, Zouch Road, Edmondson Park, NSW”. 3 February 2012 by JBS.
- Letter Report “Environmental & Occupational Health Management Plan for Asbestos Management at Zouch Road Edmondson Park Former Bardia Barracks Redevelopment Site for TRN Group”. February 2012 by Pacific Environmental.
- Letter Report “Stockpile Characterisation Advice, Landcom Project 12619 Zouch Road, Edmondson Park”. 5 April 2012 (and draft dated 23 March 2012) by JBS.
- Letter Report “Pre-remediation Groundwater Monitoring Event Results, Landcom Project 12619 Zouch Road, Edmondson Park”. 13 April 2012 by JBS.
- Letter Report “Explosive Ordnance Clearance Certificate in Respect of UXO Clearance of the Former Defence Training Area, Ingleburn, NSW, SW Rail Link Corridor for John Holland Group”. 17 September 2012 by BACTEC.

- Letter Report “Post-remediation Groundwater Monitoring Event Results, Landcom Project 12619 Zouch Road, Edmondson Park”. 25 February 2013 by JBS.
- Report “Data Quality Indicator Compliance Assessment, Validation Assessment Works, Landcom Project 12619, Zouch Road, Edmondson Park, NSW”. 28 February 2013 by JBS.
- Report “Urban Growth, Public Open Space, Site Environmental Management Plan, Residential Zone North of Rail Alignment, Zouch Road, Edmondson Park, NSW (Rev 0)”. 2 September 2013 (and Rev B dated 28 August 2013) by JBS&G.
- Report “Post Activity Report – Unexploded Ordnance Search and Clearance, Edmondson Park, NSW (Version 1.2)”. 3 September 2013 (and version 1.1 dated 24 January 2013) by G-tek.
- Report “Validation Report – RZNRA, Landcom, Zouch Rd, Edmondson Park, NSW (Rev 0)”. 24 September 2013 (and Rev A dated March 2013) by JBS.

The audit report presented site contamination characterisation data in soil from the broader RZNRA site, including the current investigation site and surrounds. This included approximately 479 soil investigation locations comprising test pits, hand augered holes and drilled boreholes, completed on a grid of approximately 32 m spacing with additional targeted locations associated with drainage lines, stockpiles and observed contaminant conditions. The summarised site characterisation data as presented in Environ (2013) have been compiled as **Table 3.1** following.

Table 3.1: Environ (2013) Site Soil Characterisation Contaminant Analytical Results Summary

Analyte	n	Detections	Maximum	n > EPA(1994)	n > SIL Column 1 (DEC 2006)	n > SIL Column 5 (DEC 2006)
pH	6	Min-5.1	6.2	-	-	-
Arsenic	641	563	28	-	0	1
Cadmium	641	0	<0.5	-	0	0
Total Chromium	641	641	42	-	0	641 ¹
Chromium VI	6	0	<1	-	0	0
Copper	641	640	55	-	0	0
Lead	641	641	210	0	0	0
Mercury (inorganic)	641	74	0.14	-	0	0
Nickel	641	641	40	-	0	0
Zinc	641	641	810	-	0	3
TPH (C ₆ -C ₉)	105	0	<20	0	-	-
TPH (C ₁₀ -C ₃₆)	105	2	800	0	-	-
BTEX	105	0	<0.5	0	-	-
Phenols	6	0	<0.5	-	0	-
VCH	5	0	<0.5	-	-	-
Total PAHs	105	1	0.1	-	0	-
Benzo(a)pyrene	105	0	<0.1	-	0	-
OCP/ OPP	83	0	<0.1	-	0	-
PCBs	83	0	<0.1	-	0	-
Explosives	101	0	<1	-	-	-
Asbestos	125	1	-	-	-	-

n number of samples

- No criteria available/used

1 Chromium VI criterion used

VCH Volatile Chlorinated Hydrocarbons OCP Organophosphorous Pesticides

PCB Polychlorinated Biphenyls

The Auditor concluded that at the time of issue of the Site Audit Statement, the site was suitable for the purposes of ‘residential with gardens and accessible soil’ and other less sensitive uses including schools, open space and commercial, subject to the application of the SEMP in specific areas of the audit site, including the riparian zone.

3.3 Detailed Site Investigation – Western Lots Precinct 9 (JBS&G, 2021)

JBS&G Australia Pty Ltd was engaged by Landcom to undertake a supplementary environmental site assessment of a portion of Precinct 9 of the Edmondson Park development site located at Buchan Avenue, Edmondson Park, NSW. Precinct 9 comprises the area from Bezentin Ridge road in the north-west, McFarlane Road and Learoyd Rd in the north, Soldiers Parade in the east, the railway line and Edmondson Park station and shopping centre in the south, excluding the proposed school lot in the south-west.

Prior to the sampling works being conducted at the site, a detailed inspection was conducted by a JBS&G consultant to identify the potential occurrence of surface asbestos, staining/discolouration and potential areas of fill. The northern portion of Stockpile 1 was identified as a separate material type to the VENM comprising stockpile, and therefore was included in the investigation. Stockpiles 2, 3 4 and 5, were identified on-site to have been from unknown origins with no material tracking data available from Landcom and therefore required additional investigation to establish the potential for this material to be a contamination risk at the site.

Stockpile 6 was identified as placed excess material from the stockpile moved from the adjacent Lot 2 (with pre-movement classification provided in JBS&G 2018a, 2020a, 2020b and 2020c). According to the on-site contractor, the northern portion of this stockpile was utilised on-site as temporary fill, with the material returned to the stockpile post use. Due to this interim use of material, the identified northern portion of Stockpile 6 was included in the investigation to confirm that no additional contamination had been included.

JBS&G completed a stockpile characterisation activities comprising a total of 35 test pit locations completed via excavator on 29 & 30 September 2021. The stockpiled area was identified to comprise exposed soil stockpiles and vegetated stockpiles, with exposed clay access roads running throughout as shown in **Figure 3**. Beyond the stockpile footprints, the ground surface comprised exposed clay, and vegetation (grass, shrubs and weeds) in good condition.

Based on the scope of work undertaken for this assessment, the following conclusions were made:

- Review of the historical aerial imagery indicated that the stockpiled material was generally placed during the time period of construction works completed within Precinct 4 and as such it is highly likely the material originated from this area to the west of the site. However, there remains the potential that some of the stockpiled material may have been added from other sources given the absence of material tracking records.
- The material within each of the assessed stockpiles was found to meet both the human health and ecological criteria under the proposed “residential with access to soils” scenario adopted for this investigation.
- Given the absence of indications of chemical contamination, the material stockpiles are considered suitable for beneficial reuse within the Landcom subdivision site during future development activities, pending removal of construction waste.
- On-going application of the SEMP (JBS&G 2013) is required to address the residual risk of buried items of military origin within the riparian zone (beyond the current assessment site).
- As a conservative measure, the procedures documented in the existing Stockpiled Material Management Plan (JBS&G 2018²⁴) should continue to be applied during future movement and placement of the stockpiled material at the final proposed use location.

²⁴ *Stockpiled Material Management Plan*, Edmondson Park Precinct 9, Gallipoli Drive, Edmondson Park, NSW. JBS&G Australia Pty Ltd. 31 August 2018. Ref: 5449/117394 (Rev 0) (JBS&G 2018)

3.4 EPA Records

A search of the NSW EPA database was undertaken for the site and surrounding properties. EPA records are provided in **Appendix C**. The search was done through the following public registers:

- NSW EPA Protection of the Environment Operations Act 1997 (POEO Act) public register of licences, applications and notices (maintained under Section 308 of the POEO Act).
 - No prevention, clean-up or prohibitions notices has been issued under the POEO Act for the site.
- NSW EPA contaminated land public register of record of notices (under Section 58 of the Contaminated Land Management Act 1997 (CLM Act)).
 - No notices have been issued under the CLM Act for the site and immediate surroundings.
- NSW contaminated sites notified to the EPA (under Section 60 of the CLM Act).
 - The site or immediate surrounding are not on the list of NSW contaminated sites notified to the EPA.
- The closest contaminated site is a service station in Casula, 3.4 km north-east of the site. The service station was listed as not required to be regulated under the CLM Act.

3.5 Australian and NSW Heritage Register

A search of the Australian Heritage and the NSW Heritage database did not identify any heritage listed items at the site.

The closest NSW Heritage listed item, Horningsea Park, is located at Camden Valley Way, Horningsea Park, is approximately 2 km south-west of the site.

The closest Australian Heritage listed item, Ingleburn Army Camp, located at Campbelltown Road, is approximately 1 km south-west of the site.

Both Australian Heritage Trust and NSW Heritage information are included in **Appendix D**.

3.6 Current Land Title Records

A copy of the site current title documentation was obtained from the client and is provided in **Appendix E**. These documents confirm that both lots are currently owned by Landcom.

3.7 Per- and polyfluoroalkyl substances (PFAS) Investigation Program

The site is not listed by the EPA on the NSW Government PFAS Investigation program. The closest PFAS investigation area identified by the EPA is the Holsworthy Barracks (Macarthur Drive, Holsworthy, NSW 2173) approximately 9.3 km east of the site.

The site comprises land formerly known as the Ingleburn Army Camp (IAC) site. Specifically, former barracks areas were located to the south of what is now the Edmondson Park Railway Station, whilst the site and land extending to the west and south of the site comprises former training grounds. The IAC land has not been identified as having an elevated risk of PFAS compounds, given the land was primarily ground infantry training grounds and has not formally been nominated for inclusion on the NSW Government Investigation Program, and as such, is considered not to present a concern with regard to potential site contamination, including migrations sources.

3.8 Aerial Photographs

Historical aerial photographs provided by the Land and Property Information Division of the Department of Finances, Services and Innovation or Near-Map Imagery were reviewed for this

assessment (**Appendix F**). The aerial photograph review identified the following features in relation to historical use of the site:

1961 – The site appeared to be part of an area of undeveloped cleared land with sparse vegetation and no established paved roads. A drainage line with surrounding larger vegetation was evident in the eastern boundary of the site. No structures were visible on site or surrounding the site. An unpaved vehicle track was observed to be present to the east outside of the site boundaries, and continue within Lot 2, and further to the east along the northern boundary. Additional unpaved vehicle tracks were identified cutting through Lots 2 and 3 and along the western boundary. Buildings associated with the Ingleburn Army Camp were apparent to the south-east of the site, whilst land to the north appeared vacant.

1970 – The site appeared largely similar to the 1961 image.

Residential structures were visible to the north and south of surrounding properties, including established paved roads associated with the army camp. The remainder of the surrounding lands appeared to remain vacant/cleared agricultural/defence land.

1979 – The site appeared largely similar to the 1970 image.

Additional residential structures were evident to the north of the site boundary with the remainder of the site appearing largely similar to the 1970 image. Circular vehicular tracks were apparent in the north and the east of the site.

1986 – The site and the surrounding land appeared largely similar to the 1979 image.

Unpaved vehicle tracks appear to have been widened and were more evident along the northern and eastern boundaries, with several smaller tracks crossing through the site.

Additional low density rural-residential structures were evident to the north and east of the site boundary, with the streets to the north appearing to have been paved. A large area of ground disturbance consistent with the known IAC waste burial pits were apparent to the south-west of the subject site. The balance of the surrounding land appeared similar to the 1979 image.

1994 – The site appeared largely similar to the 1986 image, with increased vegetation observed across the site. Internal unpaved roads were not a highly visible.

Additional residential structures were evident in the northern and eastern portions of the surrounds. The former areas of ground disturbance to the south-west of the site appeared to have been backfilled and the area revegetated, apart from a coal stockpile at the west most extent of this area. The remainder of the surrounding land appeared largely similar to the 1986 image.

2002 – The area comprising the army camp appeared to have been the subject of regeneration works with patterns of possible mowing and small eucalypt plant regrowth on a broad scale (the red brown tint to the vegetation), with increased mature vegetation surrounding Maxwells Creek.

The surrounds appeared largely similar to the 1994 image apart from development of several large (likely green house/agricultural shed) buildings to the north of the site.

2009 – The site appeared largely similar to the 2002 image.

Significant water was apparent within the riparian zone channel of Maxwell's Creek and there also appeared to be a surface water body south of the site boundary. Residential buildings in the surrounding area to south-east of site had been removed since the 2002 image, whilst land to the north of the site appeared to be occupied by several market garden operations.

2014 – The site appeared largely similar to the 2009 image, with the addition of a paved access road in the eastern portion of the southern lot 5 boundary

The riparian zone appeared to have been separately fenced from the remainder of the site and vegetation within this area appeared to be more dense than in previous images.

The Edmondson Park Railway line and associated car parks had been established immediately south-east of the site. The main roadway of Soldiers Parade had been established further to the east of the site. Earthworks were in progress to the west of the site (associated with Precinct 4 residential subdivision works). Land uses to the north of the site appeared similar to the 2009 image.

2021 – Buchan Avenue had been established across the central portion of the site, running in an east/west orientation.

Large stockpiles of material were observed in the area north of Buchan Avenue, with vacant open space grassed areas surrounding the material. A number of the stockpiles had been vegetated, whilst the remainder appeared to be exposed fill and/or shale material. The area to the south of Buchan Avenue was also vacant and had, prior to the image date, been the subject of ground disturbance activities, comprising a mixture of exposed soil, compacted haul road and vegetated grassed areas. The former access track along the edge of the riparian zone appeared to have become disused and partially overgrown.

The surrounding area to the south was characterised by recent continued construction of the Edmondson Park Railway and associated Town Centre, including a shopping centre. Residential properties have been established to the north and west of the site, with the St Francis Catholic College campus beyond toward the north-west. New residential developments were also apparent to the north and north-east of the site. Increased vegetation was present along riparian corridor to the east of the site.

2022 - The site appeared largely similar to the 2021 image, with addition vegetation covering the stockpiles and added imported material stockpiles evident outside the proposed development site boundary, located north of Buchan Avenue.

Changes to the surrounding area were characterised by additional construction to the south of Buchan Avenue, comprising the school site and continued construction of the Edmondson Park Town Centre. The remainder of the surrounding areas remained unchanged from the 2021 image.

3.9 Landcom Development Information

Construction of the Buchan Avenue road reserve and associated bulk filling activities were undertaken as per Liverpool City Council Development Consent DA-509/2018. This consent incorporated conditions associated with ensuring the suitability of the site, from a contamination viewpoint, including works associated with addressing any historical impacts and the use of suitably validated fill material sourced from within the Edmondson Park precinct, or otherwise imported to the site as virgin excavated natural material (VENM), excavated natural material (ENM) or similar exemption demonstrating the material as fit for purpose.

Stockpiled materials, previously identified in an adjacent Lot 2 were assessed (JBS&G 2018a, 2020a, 2020b and 2020c) as suitable for use prior to movement and placement of the material for beneficial reuse as part of subdivision and road construction works. It is understood that a portion of this material was used in generation of construction levels within Buchan Avenue and the surrounding road reserves.

3.10 Integrity Assessment

The amount of data in addition to the comprehensive analytical suite completed for previous investigations is deemed sufficient to have appropriately characterised the potential nature of in-situ contamination at the site such that a conceptual site model (CSM) could be appropriately presented in the following sections.

4. Potential for Contamination

4.1 Areas of Potential Concern

Areas of Potential Environmental Concern (APEC) and Constituents of Potential Concern (COPC) have been identified for the site on the basis of the identified former and current sites uses. Constituents of Potential Concern have been identified in general accordance with DUAP (1998)²⁵ with consideration of the history of the site. APECs and COPCs are presented in **Table 4.1**.

Table 4.1: Site APECs and COPCs

Area of Potential Environmental Concern (APECs)	Constituents of Potential Concern (COPCs)
Soil impacts from historical stockpiling and general site contractor area use since issue of the 2013 SAS	Heavy metals, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs) and asbestos

The site history indicates that there have been potentially contaminating activities mostly from historical stockpiling of materials of unknown origin and use of the area as a construction staging yard.

If fill materials are present to depth, or soils have been disturbed, there is a potential that environmental impact may be present at depths consistent with the depth of the disturbance. Anthropogenic materials are commonly present in impacted fill materials and can be used as an indication of the depth of disturbance. Where fill materials impacted with chemical based contaminants are identified, there is the potential that the impact may have migrated laterally and/or vertically below the fill material.

Given the broader historical activities associated with the military training grounds, there is the potential that PFAS may be present at the site as associated with surface soils. Given its known ability to migrate within the environment, in addition to surface soils, activities within the site and broader surrounds may also have resulted in PFAS impacts to subsurface natural soils and/or groundwater at the site. However, based on the available information it is considered unlikely that such impacts would have resulted in contamination conditions that will prevent future use of the site.

More broadly, groundwater is considered to be a potentially impacted media given the proximity to the historical activities of the site as a Defence training facility. There is also potential for contamination of groundwater to have occurred from historical land uses of the site. However, it is noted that historical site assessment of groundwater has not identified the presence of impacts such that further consideration is required with regard to the proposed landuse(s).

4.2 Potentially Impacted Media

Each of the APECs and corresponding COPCs identified in **Section 4.1** have the potential to impact:

- Soils;
- Groundwater; and
- Surface water.

²⁵ *Managing Land Contamination: Planning Guidelines, SEPP 55 – Remediation of Land*. Department of Urban Affairs and Planning, 1998 (DUAP 1998)

5. Data Quality Objectives

Data quality objectives (DQOs) were developed for the investigation, as discussed in the following sections.

5.1 State the Problem

The site, part of a historical army camp, located at Edmondson Park is proposed to be redeveloped for a new medium density residential development. Site validation activities (JBS 2013) were completed to enable a subsequent Site Audit Statement (SAS) (Environ 2013). The SAS was completed in 2013 and site construction activities have since had the potential to impact contamination conditions, including stockpiling of materials assumed to be generated from the civil construction adjacent to the site.

A conceptual site model (CSM) requires to be developed for the assessment of the environmental contamination status of the land and potential human and ecological interactions that may occur with the proposed development. Through a review of the site environmental status and development of the CSM potentially unacceptable health impacts to users of the proposed development, or otherwise exacerbation of potential ecological effects to ecological receptors within and in proximity of the development, require to be identified. The mitigation of these potential impacts (if any) would require to be detailed within a Remedial Action Plan (RAP) to address R&H (2021) requirements.

Potential data gaps to the characterisation of the site will also require to be identified and an assessment made as to whether they are able to be reasonably dealt with in the execution of a future RAP.

5.2 Identify the Decision

To address the stated objectives of the investigation, the following decisions are considered appropriate for this investigation:

- Is sufficient existing data available in previous assessments to characterise soil conditions in the area of the site boundaries?
- Is the data available in the previous assessments considered reliable?
- By comparison to published assessment criteria, are any of the levels of environmental constituents measured at a concentration that may pose a potential health or ecological risk?
- What are the potential exposure routes to contaminants associated with the proposed development?
- On the basis of levels of constituents and potential exposure pathways, are there any potentially unacceptable health risks present with regard to the proposed development?
- Where a potentially unacceptable health risk and/or a potential exacerbation of an ecological risk are identified, what measures are required to be implemented with the development to mitigate the risk(s)?

5.3 Identify Inputs to the Decision

Inputs identified to provide sufficient data to make the decisions nominated above include:

- Desktop review of the client supplied reports previously prepared for the site (summarised in **Section 3**) to identify AECs and COPCs;
- Historical site information and inspection of the site to identify and/or confirm potential AECs and COPCs at the site;

- Detailed site inspection/walkover;
- Previous environmental data as collected and presented in the validation of the site (JBS 2013) and subsequent site audit as completed on the greater IAC area (Environ (2013)), and JBS&G (2021);
- The proposed use of the site as detailed in site plans provided to JBS&G; and
- Assessment criteria made or approved by the NSW EPA.

Specifically, sufficient data needs to be collected from each of the identified potentially impacted media in the identified AECs for the associated COPCs (**Table 4.1**).

5.4 Define the Study Boundaries

The study boundaries have been defined laterally as the extent of parts Lots 2 and 3 on DP 1257105 as shown in **Figure 2**. The depth of the JBS&G (2021) assessment has been restricted to the stockpiles of fill identified across the site.

The temporal study boundaries were limited to the period of assessment works previously undertaken from approximately 2012 to 2021 in addition to the current site inspection activities completed 11 July 2022.

5.5 Develop a Decision Rule

The following decision rules have been adopted in the completion of the assessment for potential human health effects:

- As a conservative measure, for the proposed development of medium density residential terraces and proposed apartments, soil data collected on site has been compared to:
 - Health screening levels for Residential with garden/accessible soils, childcare centres, preschools and primary school land-uses (HIL-A) as provided to National Environment Protection (Assessment of Site Contamination) Measure, 1999 Amendment No 1, National Environment Protection Council (NEPC 2013);
 - Generic ecological investigation and screening levels for Residential with garden/accessible soils, childcare centres, preschools and primary school land-uses (EIL) as provided to NEPC (2013); and
 - Aesthetic impacts have been interpreted by on-site observations of indicators of soil staining and/or ACM.

The following decision rules have been adopted in the completion of the assessment of potential ecological impacts:

- Soil data collected on the site has been compared to the Ecological investigation levels for areas of residential with garden/accessible soils, childcare centres, preschools and primary school land-use as provided to NEPC (2013);

A qualitative assessment of the whole of the data set has been made on the basis of the project objectives (**Section 1.2**) and conceptual site model (prepared as **Section 7**). This has not considered strict decision rules, but instead a consideration of an acceptable level of risk to human and ecological receptors.

5.6 Specific Limits on Decision Error

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data. Data generated during this project must be appropriate to allow decisions to be made with confidence.

There are two types of decision error identified in Australia Standards (AS) 4482.1-2005 '*Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds.*' This includes:

- a) Deciding that the site is acceptable when it actually is not; and
- b) Deciding that the site unacceptable when it is.

Limits are required to be set on each type of error presented here. AS4482.1-2005 nominates that a 5% probability of (a) and 20% probability of (b). It is noted that the application of this relationship assumes a uniform distribution of impact over the site area.

5.7 Develop a Sampling Plan

The following sampling and analysis works have been documented in JBS (2013) and summarised in the SAS (Environ 2013) and JBS&G (2021), and premise this assessment:

- Environ (2013) audit report summarised site contamination characterisation data in soil from the broader RZNRA site, including the current investigation site and surrounds. This included approximately 479 soil investigation locations comprising test pits, hand augered holes and drilled boreholes, completed on a grid of approximately 32 m spacing with additional targeted locations associated with drainage lines, stockpiles and observed contaminant conditions; and
- JBS&G (2021) completed soil sampling at 22 locations across five stockpiles within the proposed site boundary. The soil samples were analysed for heavy metals, PAHs, TPH, BTEX, OCPs, PCBs, PFAS and asbestos.

5.8 Assessment Methodology

Environ (2013) indicate that soil samples were collected from stockpiles by shovel, hand trowel, hand auger or excavator bucket. Samples from stockpile footprints and lead particulate excavation were collected by hand trowel or excavator bucket. Groundwater wells were purged and sampled using low flow Micropurge pump system. Wells purged dry were sampled using disposable bailers. All laboratory analysis was conducted at a NATA accredited laboratory for the required analysis.

Soil sampling in JBS&G (2021) was undertaken by test pitting via backhoe in the identified stockpiles to a maximum depth of 4.2 m bgl.

All laboratory analysis was conducted at NATA accredited laboratory for the required analysis.

5.9 Assessment Criteria

The following guidelines are applicable to this investigation:

- *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*, National Environment Protection Council (NEPC 2013);
- *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme*, 3rd Edition. NSW EPA, 2017 (EPA 2017);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995); and
- *Consultants Reporting on Contaminated Lands, Contaminated Land Guidelines*, NSW EPA, 2020 (EPA 2020).

5.9.1 Soil Assessment Criteria

The proposed development and ongoing use of the site is equivalent to a NEPC (2013) land use scenario of residential with gardens/accessible soils. Concentrations of contaminants in soil were compared against Health Investigation/Screening Levels (HILs/HSLs), and Ecological Investigation/Screening Levels (EILs/ESLs), as outlined below:

- HILs: HIL A – Residential;
- HSLs: HSL A – Residential (Sand - fine textured soils) – as the most conservative option based on soil type;
- EILs and ESLs: Residential;
- Management Levels for Residential/Parkland (Fine Soil) (NEPC 2013); and;
- Aesthetic considerations as per NEPC (2013).

Where there were no NSW EPA endorsed thresholds for individual contaminants of concern the laboratory limit of reporting (LOR) was adopted as an initial screening value for the purposes of this assessment.

Asbestos analysis was undertaken in general accordance with NEPC (2013) including WA DOH (2009²⁶) guidance with regard to the adopted sampling methodology.

Aesthetics were also considered in the assessment of site suitability consistent with EPA (2017) and NEPC (2013).

5.10 Data Reliability

Data reliability has been assessed in Environ (2013) and JBS&G (2021). A summary of the JBS&G (2021) data is presented in environmental data sets as prepared and summarised in **Appendix A** are found to be reliable for the purposes of this assessment. It is noted that this area was used as a stockpiling area in the period post the 2013 SAS.

²⁶ *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. Department of Health. May 2009 (WA DOH 2009)

6. Investigation Results

6.1 Soils

6.2 Field Observations

The lithology encountered at the site during intrusive programs within the site is summarised below with test pit logs of the stockpiled materials from the JBS&G (2021) investigations included in **Appendix G**. Soil investigation works were as follows:

- A total of 479 soil investigation locations across the greater RZNRA site, including the current investigation site and surrounds as part of the Environ (2013) audit; and
- 22 test pit locations completed through test pitting into 5 identified stockpiles as part of JBS&G (2021).

As summarised in Environ (2013) subsurface conditions at the site and surrounds were generally characterised by the presence of clayey silt/silty clay topsoil to depths of 0.05 – 0.5 m bgl, with isolated areas of fill material overlying residual silty clay soil and shale bedrock at depths of between 0.2 m to 3.2 m bgl.

To the depth of the investigation, JBS&G (2021) identified the stockpile lithology to generally comprise fill described as light brown/orange/brown/red silty clay to silty sandy clay, with inclusions of roots, bark, brick, concrete and glass fragments and sandstone gravel to a maximum depth of 4.0 m below stockpile surface at TP06. The underlying natural clay soils observed to be red to red/grey stiff clay across the site. No further odours, staining or asbestos was observed in the non-vegetated areas at the site.

6.2.1 Soil Analysis, Environ (2013)

The audit report presented site contamination characterisation data in soil from the broader RZNRA site, including the current investigation site and surrounds. The summarised site characterisation data as presented in Environ (2013) have been compiled as **Table 6.1** following.

Table 6.1 Environ (2013) Site Soil Characterisation Contaminant Analytical Results Summary
(All units in mg/kg)

Analyte	n	Detections	Maximum	n > Health Based Assessment Criteria	n > Ecological Based Criteria
pH	6	Min-5.1	6.2	-	-
Arsenic	641	563	28	0	0
Cadmium	641	0	<0.5	0	-
Total Chromium	641	641	42	0	0
Chromium VI	6	0	<1	-	-
Copper	641	640	55	0	0
Lead	641	641	210	0	0
Mercury (inorganic)	641	74	0.14	0	-
Nickel	641	641	40	0	0
Zinc	641	641	810	0	3 ¹
TPH (C ₆ -C ₉)	105	0	<20	0	-
TPH (C ₁₀ -C ₃₆)	105	2	800	-	0
BTEX	105	0	<0.5	-	0
Phenols	6	0	<0.5	0	-
VCH	5	0	<0.5	-	-
Total PAHs	105	1	0.1	0	0
Benzo(a)pyrene	105	0	<0.1	0	0
OCP/ OPP	83	0	<0.1	0	-
PCBs	83	0	<0.1	0	-
Explosives	101	0	<1	-	-
Asbestos	125	1	-	-	-

n number of samples

- No criteria available/used

¹ As detailed in Environ (2013) these samples were of natural soil from the surface or near surface from locations near a building footing and in the grenade range. They are identified to be unlikely to affect vegetation growth at the site due to their very infrequent occurrence.

VCH Volatile Chlorinated Hydrocarbons

OCP Organophosphorous Pesticides

PCB Polychlorinated Biphenyls

6.2.2 JBS&G (2021)

Laboratory analysis results for stockpiled material characterisation samples completed by JBS&G (2021) have been summarised in tables presented in **Appendix A**, with comments discussed below for the various analyte groups. Detailed laboratory reports and chain of custody documentation are provided in **Appendix H**.

Heavy Metals

Concentrations of heavy metals in the analysed samples were reported below the laboratory limit of reporting (LOR) and/ or the adopted human health assessment criteria.

Comparison of the heavy metals data sets with the adopted generic ecological investigation levels identified copper, nickel and zinc exceeding the criteria as follows:

- copper ranging between 69 mg/kg (TP28_0-0.1) and 110 mg/kg (TP06_0-0.1), exceeding the EIL of 60 mg/kg;
- nickel at 33 mg/kg (TP33_1-1.1), exceeding EIL of 30 mg/kg; and
- zinc ranging between 75 mg/kg (TP07_1-1.1) and 170 mg/kg (TP06_0-0.1/ TP33_1-1.1), exceeding EIL of 70 mg/kg.

Calculation of the 95% upper confidence limit (UCL) on the mean concentration was undertaken for copper, nickel and zinc data sets across the stockpiles. The resulting 95% UCL concentrations were within the adopted ecological criteria as follows:

- copper ecological criteria of 60 mg/kg, with 95 % UCL concentrations of 37 mg/kg and the standard deviation of 19 mg/kg;
- nickel ecological criteria of 30 mg/kg, with a 95% UCL concentration of 15 mg/kg and a standard deviation of 7 mg/kg; and
- zinc ecological criteria of 70 mg/kg, with a 95% UCL concentration of 69 mg/kg and a standard deviation of 35 mg/kg.

Details of the 95% UCL calculations are included in **Appendix A**. On the basis of the population statistical criteria, the stockpiled materials as a whole are considered to meet the ecological criteria for each individual heavy metal.

TRH/BTEX

TRH and BTEX concentrations in the analysed samples were reported below the LOR and/ or the adopted assessment criteria.

OCP/PCB

OCP and PCB concentrations in the analysed samples were reported below the LOR and/ or the adopted assessment criteria.

PAH

PAH concentrations including benzo(a)pyrene in the analysed samples were reported below the LOR and/ or the adopted assessment criteria.

Asbestos

Asbestos concentrations in all samples analysed was reported as no asbestos detected at the reporting limit of 0.001% w/w.

7. Conceptual Site Model

NEPC (2013) identifies a CSM as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments.

NEPC (2013) identifies the essential elements of a CSM as including:

- Known and potential sources of contamination and contaminants of concern including the mechanism(s) of contamination;
- Potentially affected media (soil, groundwater and ambient air);
- Human and ecological receptors;
- Potential and complete exposure pathways; and
- Any potential preferential pathways for migration.

The following sections present these elements for the site which when considered together comprise the site CSM for the purposes of this assessment.

7.1 Current Extent of Known Impacts

Soil

The concentration of COPCs within all historical soil samples were below the adopted health based criteria. In addition, the concentration of all COPCs were reported to be below the adopted ecological criteria. These results for the stockpiled material are consistent with those previously summarised for the site in Environ (2013). On this basis, there are no identified impacts to site soils or stockpiled material that require management or remediation with respect to making the site suitable for the proposed development.

Close inspection of the site ground surface (in areas where this was possible due to the presence of vegetation and stockpiled material) did not identify any asbestos fragments, or the indicators of a more widespread issue. If asbestos fragments are identified during the course of material movement, as such occurrences would be best managed under a standard construction period environmental management plan (EMP)/unexpected finds protocol (UFP) framework, whereby any isolated occurrences could be identified and disposed of appropriately.

Groundwater

No additional groundwater assessment was completed as part of the JBS&G (2021) investigation. Previous site characterisation data obtained during previous sampling events and summarised in Environ (2013), identified a range of elevated heavy metals concentrations representative of background geological conditions were reported in groundwater. Given the regional geology and the depth to groundwater below development levels and the absence of beneficial users, no further assessment of potential risks from groundwater is warranted and there is considered no risk to future sensitive site receptors.

7.2 Human and Ecological Receptors

Table 7.1 summarises potential human receptors and associated exposure pathways for the site, based on the range of exposure scenarios that may occur under the proposed residential redevelopment of the site.

Table 7.1: Summary of Potential Human Exposure

Receptor	Location (redeveloped site)	Media	Potential Exposure Pathways
Construction worker or intrusive maintenance worker (short duration)	Construction areas/ Excavations	Soil	Inhalation (vapours and particulates) Oral Dermal
		Groundwater	Inhalation (vapours) Oral (infiltrating seepage water) Dermal (infiltrating seepage water)
Future Site User (adult or child)	Within residential buildings	Soil	Inhalation (vapours)
		Groundwater	Inhalation (vapours) Oral (infiltrating seepage water within basement if present) Dermal (infiltrating seepage water within basement if present)
	Outside areas	Soil	Inhalation (particulates) Oral Dermal
		Surface Water	Inhalation (vapours) Oral Dermal

Potential ecological receptors within the assessment area include existing and/or future flora and fauna species established within open spaces under the proposed medium density land-use scenario. Off-site ecological receptors may potentially be impacted by surface/groundwater and windblown dusts discharged from the site. Surrounding open spaces including the riparian corridor and associated surface water bodies (noting the drainage channel that traverses the site and unnamed tributary to the east of the site) are also environments in which potential ecological receptors will be exposed to site impacts, or the migration thereof (if present).

7.3 Potential and Complete Exposure Pathways

Future human receptors on the site will be potentially exposed to soil contaminants by limited oral, dermal and inhalation pathways.

Soil data was compared to direct contact criteria (where available), whereby all results were identified to be below the adopted criteria under a residential (with accessible soils) use scenario.

Given the depth to groundwater below current ground levels, it is not anticipated that the proposed development works will intersect long resident groundwater underlying the site and the proposed development will therefore have limited impact upon groundwater resources.

Inhalation pathways will only be relevant where asbestos, volatile and/or semi-volatile COPCs are present. The results of soil and groundwater investigations to date indicate concentrations of COPCs are less than relevant screening assessment criteria.

With regard to potentially completed ecological exposure pathways on-site, available data indicates that where this material will be included in landscaped areas, current information indicates there will be no constraints from contamination for the ecological receptors. As such there are considered to be no direct exposure pathways for ecological receptors to soil.

7.4 Potential for Migration from Site

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential contaminants of concern identified as part of the site history review and site inspection are in solid form (e.g. asbestos, metals).

The ground surface of the site is partially grassed with bare areas of exposed underlying soils. As such, there is a moderate potential for windblown soil to migrate from the site, however given that

no contaminant characteristics were identified, the potential for contaminant migration is low. It is considered that exposure pathways are limited to dermal, ingestion and inhalation of potentially impacted soil should the soil at the site be disturbed.

7.5 Summary of Accumulated Data

Representative soil samples of both in-situ soil and stockpiled material were analysed for a range of COPCs identified at the site. The reported soil concentrations of all contaminants were below the adopted residential use with accessible soils criteria applicable to this assessment. On this basis, there were no identified contaminants within site soils that would present an unacceptable risk with respect to the proposed medium density residential land use.

No groundwater samples were collected during the JBS&G (2021) assessment. Previous site characterisation data obtained during previous sampling events and summarised in Environ (2013), identified a range of elevated heavy metals concentrations representative of background geological conditions were reported in groundwater. Given the regional geology and the depth to groundwater below development levels and the absence of beneficial users, no further assessment of potential risks from groundwater is warranted and there is considered no risk to future sensitive site receptors.

On this basis, there are no data gaps identified with respect to the contamination risk to the proposed landuse.

8. Conclusions

Based on the scope of work undertaken for this assessment (and subject to the limitations in **Section 9**), the following conclusions were made:

- Review of currently available previous site assessment documents has identified that there is sufficient existing data to characterise soil conditions within the area of the proposed development in order to establish a CSM.
- Each of the environmental data sets (as sourced from Environ (2013) and JBS&G (2021)) were found to be reliable for the purposes of making decisions as part of this assessment. It is noted that data summarised in Environ (2013) was generated several years ago. However, from a review of the site history since 2013, the site use has remained relatively unchanged and therefore the data is considered to be sufficiently representative of current conditions for the purposes of developing the CSM.
- Stockpiled material currently placed at the site has generally been sourced from within the broader Landcom development precinct, however it is acknowledged that there remains the potential that some material may have been added from other locations. Specific assessment of these stockpiles in JBS&G (2021) has identified the material to meet the adopted human health and ecological criteria under the development scenario.
- Based on the results and CSM presented herein, there were no potential unacceptable health risks identified with respect to the proposed development. The material stockpiles as present at the site are considered suitable for beneficial reuse within the development lots during future development activities.
- On the basis of the available historical data and with regard to the scope of the current investigation, it is considered that the site is suitable for residential with accessible soil land uses, including gardens and accessible soil, day care centre, pre-school, primary and secondary school and park, recreational open space, playing fields.

As a conservative measure, it is recommended that an unexpected finds protocol (UFP) should be prepared as part of the construction phase Environmental Management Plan (EMP) to establish a framework for management of any small scale unexpected conditions, whereby any isolated unexpected occurrences could be identified and disposed of appropriately during construction works.

9. 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 enquiries.

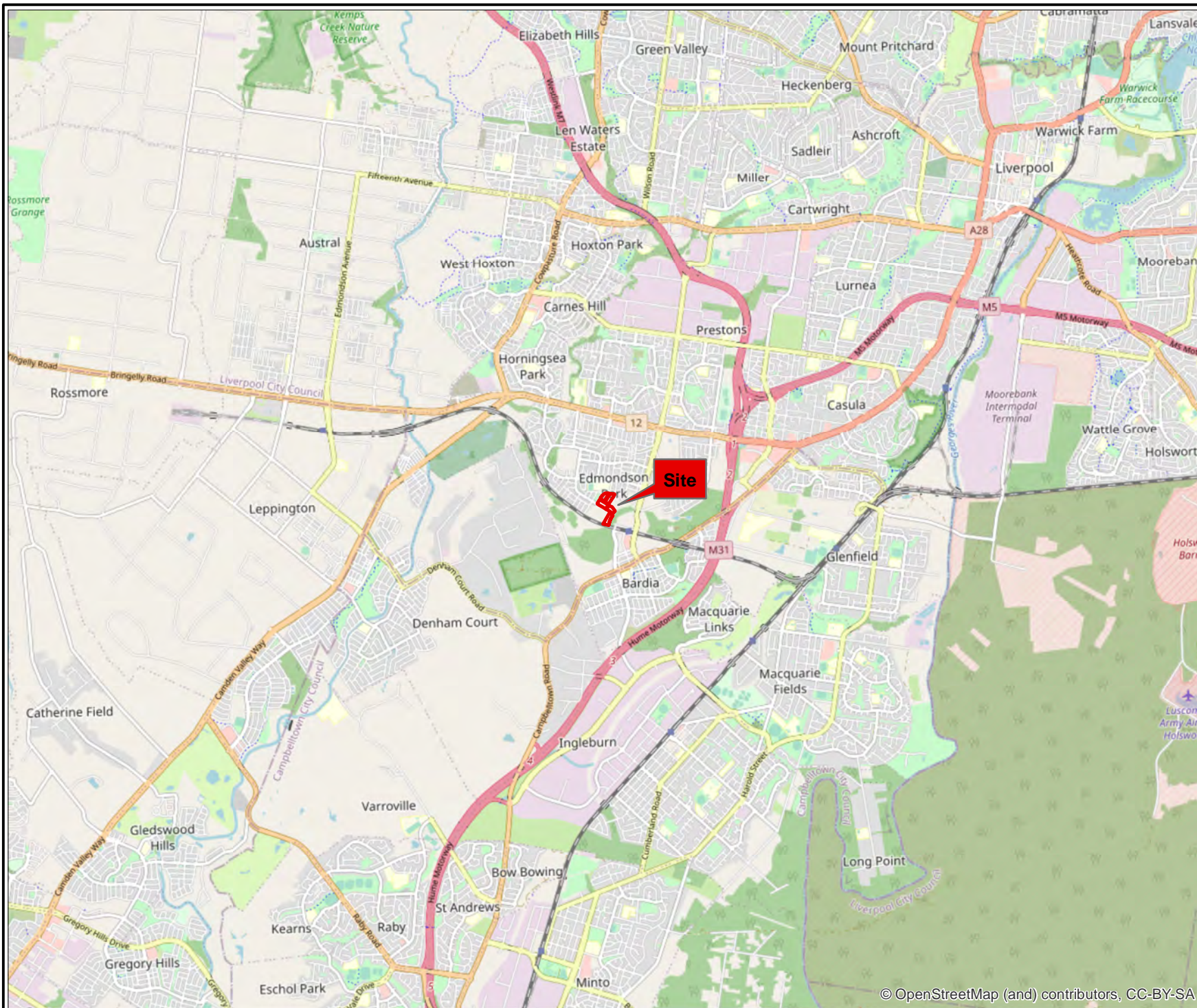
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the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



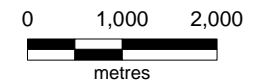
Job No: 63384

Client: Urban Property

Version: R01 Rev A Date 6/07/2022

Drawn By: YY Checked By: MD

Scale 1:80,000



Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

SITE LOCATION

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FIGURE 1



- Legend**
- Approximate Site Boundary
 - NSW Cadastre (DFS, 2021)
 - 4** Proposed Lot Number



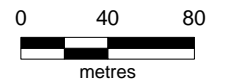
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Client: Urban Property

Version: R01 Rev A Date 6/07/2022

Drawn By: YY Checked By: MD

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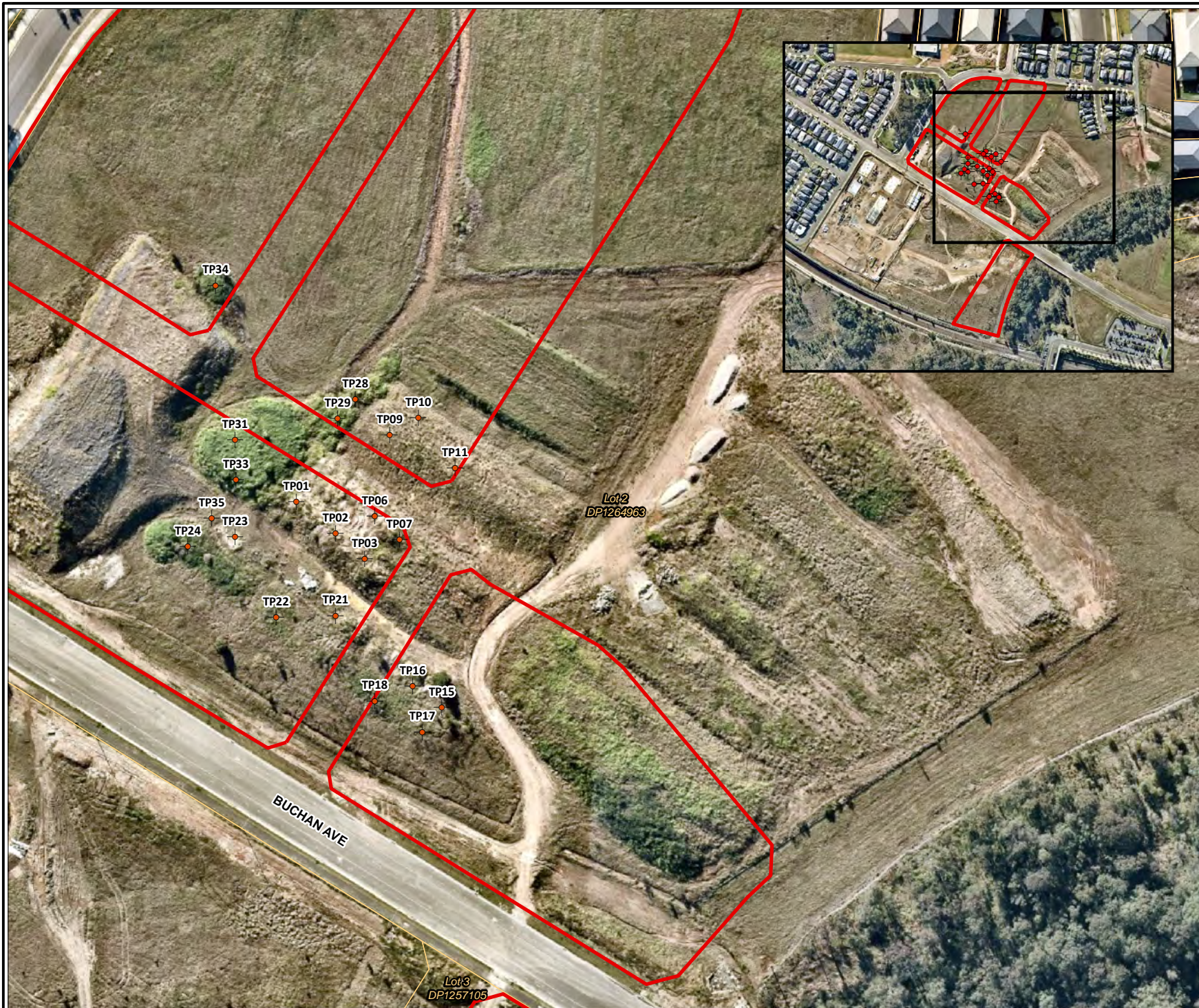


Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

SITE LAYOUT

FIGURE 2



Legend

- ▭ Approximate Site Boundary
- ▭ NSW Cadastre (DFSI, 2021)
- Sample Location**
- Test Pit (JBS&G 2021)



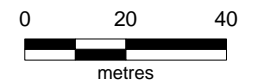
Job No: 63384

Client: Urban Property

Version: R01 Rev A Date 15/07/2022

Drawn By: YY Checked By: MD

Scale 1:1,500



Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

HISTORICAL SAMPLE LOCATIONS

FIGURE 3



Legend

Approximate Site Boundary

Stockpile



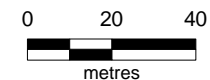
Job No: 63384

Client: Urban Property

Version: R01 Rev A Date 6/07/2022

Drawn By: YY Checked By: MD

Scale 1:1,800



Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

STOCKPILES

FIGURE 4

Appendix A Summary Tables



Field_ID	Location_Code	Sample_Depth_Range	Sampled_Date_Time	Lab_Report_Number	9	<0.4	14	26	18	<0.1	6.5	41	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP01_1-1.1	TP01	1-1.1	29/09/2021	BZ9236	4	<0.4	11	22	13	<0.1	<5	27	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP02_0-0.1	TP02	0-0.1	29/09/2021	BZ9236	6.1	<0.4	13	28	13	<0.1	<5	31	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP02_2-2.1	TP02	2-2.1	29/09/2021	BZ9236	5.2	<0.4	14	26	13	<0.1	7.9	53	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP03_1-1.1	TP03	1-1.1	29/09/2021	BZ9236	12	<0.4	21	25	17	<0.1	5.6	32	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP03_2-2.1	TP03	2-2.1	29/09/2021	BZ9236	4.6	<0.4	8.7	27	15	<0.1	<5	28	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP06_0-0.1	TP06	0-0.1	29/09/2021	BZ9236	6.1	<0.4	14	110	28	<0.1	26	170	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
GQCD2010R29_AM01	TP06_0-0.1		29/09/2021	BZ9236	2.6	<0.4	7.9	30	16	<0.1	5.6	40	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP06_2-2.1	TP06	2-2.1	29/09/2021	BZ9236	8.5	<0.4	13	23	12	<0.1	6.3	40	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP07_1-1.1	TP07	1-1.1	29/09/2021	BZ9236	11	<0.4	24	39	24	<0.1	14	75	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP07_3-3.1	TP07	3-3.1	29/09/2021	BZ9236	12	<0.4	7.3	21	12	<0.1	<5	43	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP09_1-1.1	TP09	1-1.1	29/09/2021	BZ9236	12	<0.4	15	27	19	<0.1	10	48	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP09_2-2.1	TP09	2-2.1	29/09/2021	BZ9236	15	<0.4	33	26	34	<0.1	18	66	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP10_0-0.1	TP10	0-0.1	29/09/2021	BZ9236	9.6	<0.4	13	31	17	<0.1	9	47	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP10_1-1.1	TP10	1-1.1	29/09/2021	BZ9236	11	<0.4	19	37	23	<0.1	11	63	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP11_1-1.1	TP11	1-1.1	29/09/2021	BZ9236	12	<0.4	15	34	16	<0.1	10	54	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP15_0-0.1	TP15	0-0.1	29/09/2021	BZ9236	3.7	<0.4	14	7.5	18	<0.1	<5	19	<20	<20	<50	53	53	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP16_0-0.1	TP16	0-0.1	29/09/2021	BZ9236	3.8	<0.4	8.9	21	16	<0.1	8.7	61	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP17_0-0.1	TP17	0-0.1	29/09/2021	BZ9236	4.3	<0.4	17	24	21	<0.1	8.3	53	<20	<20	<50	65	65	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP18_0-0.1	TP18	0-0.1	29/09/2021	BZ9236	10	<0.4	20	19	28	<0.1	10	56	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP21_0-0.1	TP21	0-0.1	29/09/2021	BZ9236	8.7	<0.4	17	19	18	<0.1	7.6	38	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP22_0-0.1	TP22	0-0.1	29/09/2021	BZ9236	11	<0.4	26	19	30	<0.1	12	58	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP23_0-0.1	TP23	0-0.1	29/09/2021	BZ9236	<2	<0.4	9.2	<5	11	<0.1	<5	18	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP24_0-0.1	TP24	0-0.1	29/09/2021	BZ9236	10	<0.4	25	22	31	<0.1	15	54	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP28_0-0.1	TP28	0-0.1	30/09/2021	B30990	5.1	<0.4	9.2	69	22	<0.1	16	91	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP29_0-0.1	TP29	0-0.1	30/09/2021	B30990	8.2	<0.4	14	33	16	<0.1	5.9	41	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP31_1-1.1	TP31	1-1.1	30/09/2021	B30990	8	<0.4	18	20	26	<0.1	9.1	56	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP31_2-2.1	TP31	2-2.1	30/09/2021	B30990	15	<0.4	16	24	21	<0.1	8.6	47	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP33_0-0.1	TP33	0-0.1	30/09/2021	BZ9236	8.5	<0.4	11	46	19	<0.1	21	100	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
GQCD2010R30_AM03	TP33_0-0.1		30/09/2021	BZ9236	13	<0.4	18	57	22	<0.1	17	93	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP33_1-1.1	TP33	1-1.1	30/09/2021	BZ9236	12	<0.4	11	52	17	<0.1	33	170	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP34_0-0.1	TP34	0-0.1	30/09/2021	BZ9236	7.3	<0.4	14	22	48	<0.1	22	61	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5
TP34_1-1.1	TP34	1-1.1	30/09/2021	BZ9236	7.9	<0.4	21	22	18	<0.1	11	49	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<-0.3	<-0.5

[illegible]

Table A: Soil Analytical Results
Project Number: 63384
Project Name: Proposed Sites 1-5, Edmondson Park Precinct 9



JBS&G										Polychlorinated Biphenyls										Chlorinated Benzenes										PA VIC - IWRG62										Asbestos - Eurofins										Other
										Arachlor 1016	Arachlor 1221	Arachlor 1232	Arachlor 1242	Arachlor 1248	Arachlor 1254	Arachlor 1260	POL (Sum of total)	Hexachlorobenzene	Organochlorine Pesticides EPA VIC	Other Organochlorine Pesticides EPA VIC	Approximate Sample Mass	Asbestos from AQH in Soil	Asbestos from FA & AF in Soil	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Refractable Fibres - Comment	Synthetic Fibres - Comment	Asbestos Reported Result	Asbestos Content Error @ 10% D																			
										mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	g	% (w/w)	% (w/w)	Comment	Comment	Comment	Comment	Comment	Comment	Comment	Comment	Comment	Comment	%																	
EQ1										0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.05	0.1	0.1													1																	
NEPM 2013 Table 1A(1) HSLs Res A Soil																	10																																	
NEPM 2013 Table 1B(1-5) Generic EL - Urban Residential and Public Open Space																																																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																																		
NEPM 2013 Table 7 Res A Soil HSL for Asbestos in Soil																					0.01	0.001																												
Field_ID	Location_Code	Sample_Depth_Range		Sampled_Date_Time		Lab_Report_Number																																												
TP01_1-1.1	TP01	1-1.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	742	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	8.7																						
TP01_3.0-3.1	TP01	3-3.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	562	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	19																						
TP02_0-0.1	TP02	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	612	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	18																						
TP02_2-2.1	TP02	2-2.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	538	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	18																						
TP03_1-1.1	TP03	1-1.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	573	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	18																						
TP03_2-2.1	TP03	2-2.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	626	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	13																						
TP06_0-0.1	TP06	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	645	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	14																						
QC0210929_AM01	TP06_0-0.1			29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	685	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	13																						
TP06_2-2.1	TP06	2-2.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	525	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	18																						
TP07_1-1.1	TP07	1-1.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	582	0	0	Nil	Nil	Nil	Organic fibres detected	0	Nil	No asbestos detected at the reporting limit of 0.001% w/w	14																						
TP07_3-3.1	TP07	3-3.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	716	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	13																						
TP09_1-1.1	TP09	1-1.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	619	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	18																						
TP09_2-2.1	TP09	2-2.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	439	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	16																						
TP10_0-0.1	TP10	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	563	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	12																						
TP10_1-1.1	TP10	1-1.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	509	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	18																						
TP11_1-1.1	TP11	1-1.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	586	0	0	Nil	Nil	Nil	Nil	Nil	Nil	No asbestos detected at the reporting limit of 0.001% w/w	15																						
TP15_0-0.1	TP15	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	639	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	6.4																						
TP16_0-0.1	TP16	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	761	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	12																						
TP17_0-0.1	TP17	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	671	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	11																						
TP18_0-0.1	TP18	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	514	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	24																						
TP21_0-0.1	TP21	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	641	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	11																						
TP22_0-0.1	TP22	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	463	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	23																						
TP23_0-0.1	TP23	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	899	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	9.5																						
TP24_0-0.1	TP24	0-0.1		29/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	565	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	17																						
TP28_0-0.1	TP28	0-0.1		30/09/2021		830990		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	538	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	13																						
TP29_0-0.1	TP29	0-0.1		30/09/2021		830990		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	635	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	17																						
TP31_1-1.1	TP31	1-1.1		30/09/2021		830990		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	714	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	11																						
TP31_2-2.1	TP31	2-2.1		30/09/2021		830990		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	625	0	0	Nil	Nil	Nil	Organic fibres detected	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	13																						
TP33_0-0.1	TP33	0-0.1		30/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	666	0	0	Nil	Nil	Nil	Nil	-	Nil	No asbestos detected at the reporting limit of 0.001% w/w	8.8																						
QC0210930_AM03	TP33_0-0.1			30/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	596	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	13																						
TP33_1-1.1	TP33	1-1.1		30/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	616	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	14																						
TP34_0-0.1	TP34	0-0.1		30/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	509	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	9.6																						
TP34_1-1.1	TP34	1-1.1		30/09/2021		829236		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	544	0	0	Nil	Nil	Nil	Nil	No trace asbestos detected	Nil	No asbestos detected at the reporting limit of 0.001% w/w	16																						

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			18/07/2022 12:31:34 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Copper											
12												
13	General Statistics											
14	Total Number of Observations				32		Number of Distinct Observations				22	
15							Number of Missing Observations				1	
16	Minimum				7.5		Mean				31.52	
17	Maximum				110		Median				26	
18	SD				18.9		Std. Error of Mean				3.341	
19	Coefficient of Variation				0.6		Skewness				2.728	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.712		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.93		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.23		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.157		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				37.18		95% Adjusted-CLT UCL (Chen-1995)				38.73	
31							95% Modified-t UCL (Johnson-1978)				37.45	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				1.699		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.75		Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.188		Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value				0.156		Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				4.349		k star (bias corrected MLE)				3.962	
42	Theta hat (MLE)				7.247		Theta star (bias corrected MLE)				7.955	
43	nu hat (MLE)				278.3		nu star (bias corrected)				253.6	
44	MLE Mean (bias corrected)				31.52		MLE Sd (bias corrected)				15.83	
45						Approximate Chi Square Value (0.05)				217.7		
46	Adjusted Level of Significance				0.0416		Adjusted Chi Square Value				215.9	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))				36.71		95% Adjusted Gamma UCL (use when n<50)				37.01	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.908		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.93		Data Not Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.175		Lilliefors Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L	
55	5% Lilliefors Critical Value					0.157	Data Not Lognormal at 5% Significance Level						
56	Data Not Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data					2.015	Mean of logged Data					3.331	
60	Maximum of Logged Data					4.7	SD of logged Data					0.472	
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL					36.76	90% Chebyshev (MVUE) UCL					39.25	
64	95% Chebyshev (MVUE) UCL					42.93	97.5% Chebyshev (MVUE) UCL					48.02	
65	99% Chebyshev (MVUE) UCL					58.04							
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data do not follow a Discernible Distribution (0.05)												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL					37.01	95% Jackknife UCL					37.18	
72	95% Standard Bootstrap UCL					36.86	95% Bootstrap-t UCL					41.13	
73	95% Hall's Bootstrap UCL					59.45	95% Percentile Bootstrap UCL					37.72	
74	95% BCA Bootstrap UCL					39.06							
75	90% Chebyshev(Mean, Sd) UCL					41.54	95% Chebyshev(Mean, Sd) UCL					46.08	
76	97.5% Chebyshev(Mean, Sd) UCL					52.38	99% Chebyshev(Mean, Sd) UCL					64.76	
77													
78	Suggested UCL to Use												
79	95% Student's-t UCL					37.18	or 95% Modified-t UCL					37.45	
80													
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.												
84	For additional insight the user may want to consult a statistician.												
85													

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			18/07/2022 12:32:50 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Nickel											
12												
13	General Statistics											
14	Total Number of Observations				27		Number of Distinct Observations				23	
15							Number of Missing Observations				6	
16	Minimum				5.6		Mean				12.41	
17	Maximum				33		Median				10	
18	SD				6.763		Std. Error of Mean				1.301	
19	Coefficient of Variation				0.545		Skewness				1.51	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.846		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.923		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.212		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.171		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				14.63		95% Adjusted-CLT UCL (Chen-1995)				14.96	
31							95% Modified-t UCL (Johnson-1978)				14.69	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.661		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.748		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.164		Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value				0.169		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				4.358		k star (bias corrected MLE)				3.899	
42	Theta hat (MLE)				2.848		Theta star (bias corrected MLE)				3.183	
43	nu hat (MLE)				235.3		nu star (bias corrected)				210.5	
44	MLE Mean (bias corrected)				12.41		MLE Sd (bias corrected)				6.286	
45						Approximate Chi Square Value (0.05)				178		
46	Adjusted Level of Significance				0.0401		Adjusted Chi Square Value				176	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50)				14.68		95% Adjusted Gamma UCL (use when n<50)				14.84	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.952		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.923		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.135		Lilliefors Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L	
55	5% Lilliefors Critical Value					0.171	Data appear Lognormal at 5% Significance Level						
56	Data appear Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data					1.723	Mean of logged Data					2.4	
60	Maximum of Logged Data					3.497	SD of logged Data					0.481	
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL					14.87	90% Chebyshev (MVUE) UCL					15.86	
64	95% Chebyshev (MVUE) UCL					17.47	97.5% Chebyshev (MVUE) UCL					19.7	
65	99% Chebyshev (MVUE) UCL					24.09							
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data appear to follow a Discernible Distribution at 5% Significance Level												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL					14.55	95% Jackknife UCL					14.63	
72	95% Standard Bootstrap UCL					14.5	95% Bootstrap-t UCL					15.38	
73	95% Hall's Bootstrap UCL					15.3	95% Percentile Bootstrap UCL					14.5	
74	95% BCA Bootstrap UCL					14.99							
75	90% Chebyshev(Mean, Sd) UCL					16.32	95% Chebyshev(Mean, Sd) UCL					18.08	
76	97.5% Chebyshev(Mean, Sd) UCL					20.54	99% Chebyshev(Mean, Sd) UCL					25.36	
77													
78	Suggested UCL to Use												
79	95% Adjusted Gamma UCL					14.84							
80													
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.												
84	For additional insight the user may want to consult a statistician.												
85													

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			18/07/2022 12:33:34 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Zinc											
12												
13	General Statistics											
14	Total Number of Observations				33		Number of Distinct Observations				25	
15							Number of Missing Observations				0	
16	Minimum				18		Mean				58.27	
17	Maximum				170		Median				53	
18	SD				34.6		Std. Error of Mean				6.023	
19	Coefficient of Variation				0.594		Skewness				2.154	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.766		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.931		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.234		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.154		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				68.48		95% Adjusted-CLT UCL (Chen-1995)				70.59	
31							95% Modified-t UCL (Johnson-1978)				68.85	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.903		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.751		Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.161		Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value				0.154		Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				3.998		k star (bias corrected MLE)				3.655	
42	Theta hat (MLE)				14.57		Theta star (bias corrected MLE)				15.94	
43	nu hat (MLE)				263.9		nu star (bias corrected)				241.2	
44	MLE Mean (bias corrected)				58.27		MLE Sd (bias corrected)				30.48	
45						Approximate Chi Square Value (0.05)				206.3		
46	Adjusted Level of Significance				0.0419		Adjusted Chi Square Value				204.6	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))				68.15		95% Adjusted Gamma UCL (use when n<50)				68.7	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.956		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.931		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.127		Lilliefors Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L
55	5% Lilliefors Critical Value				0.154	Data appear Lognormal at 5% Significance Level						
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				2.89	Mean of logged Data						3.935
60	Maximum of Logged Data				5.136	SD of logged Data						0.502
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				68.88	90% Chebyshev (MVUE) UCL						73.59
64	95% Chebyshev (MVUE) UCL				80.76	97.5% Chebyshev (MVUE) UCL						90.71
65	99% Chebyshev (MVUE) UCL				110.3							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				68.18	95% Jackknife UCL						68.48
72	95% Standard Bootstrap UCL				68.09	95% Bootstrap-t UCL						74.73
73	95% Hall's Bootstrap UCL				81.56	95% Percentile Bootstrap UCL						69.15
74	95% BCA Bootstrap UCL				71.18							
75	90% Chebyshev(Mean, Sd) UCL				76.34	95% Chebyshev(Mean, Sd) UCL						84.53
76	97.5% Chebyshev(Mean, Sd) UCL				95.89	99% Chebyshev(Mean, Sd) UCL						118.2
77												
78	Suggested UCL to Use											
79	95% H-UCL				68.88							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												
86	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
87	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
88	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
89	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
90												

Appendix B Photographic Log

PHOTO 1: STOCKPILED MATERIAL, NORTHERN AREA



PHOTO 2: OPEN SPACE NORTH SITE



PHOTO 3: PREVIOUS SITE SHED LOCATION – ADJACENT BUCHAN AVENUE AND BEZENTIN RIDGE ROAD



PHOTO 4: PART SOUTHERN LOT 3



Job No: 63384

Client: UPG Edmondson Park Pty Ltd

Version: R01 (Rev A) Date: 15/07/2022

Drawn By: MD Checked By: JR

Not to Scale

Coord. Sys n/a

PHOTOGRAPHIC LOG

Proposed Development Sites 1-5

Buchan Avenue, Edmondson Park

APPENDIX: B

Appendix C NSW EPA Records

Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (<https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management>).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (<https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities>).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

- regulation under the CLM Act, POEO Act, or both
- notifying the relevant planning authority for management under the planning and development process
- managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or <i>Protection of the Environment Operations Act 1997</i> .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the <i>Contaminated Land Management Act 1997</i> , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the <i>Contaminated Land Management Act 1997</i> is not required.

Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> . A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the <i>Protection of the Environment Operations Act 1997</i> (POEO Act).

Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
EDENSOR PARK	7-Eleven (former Mobil) Service Station	615-621 Cowpasture Road, corner Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.88326139	150.865591
EDGECLIFF	BP-branded (former Coles Express) Service Station	73-85A New South Head ROAD	Service Station	Regulation under CLM Act not required	-33.8769602	151.2311617
EDGEWORTH	Caltex Service Station	662 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92566329	151.6278888
EDGEWORTH	Caltex-Woolworths Branded Service Station Edgeworth	738-742 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92455492	151.6202897
EMERALD BEACH	Shell Coles Express Woolgoolga Service Station	1850 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.16450856	153.1826673
EMERTON	7-Eleven Emerton	135-137 Popondetta ROAD	Service Station	Regulation under CLM Act not required	-33.74463908	150.8102251
EMPIRE BAY	Empire Bay Marina	16B Sorrento ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.49305196	151.3643119
EMU HEIGHTS	7-Eleven Service Station	126 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.74299098	150.6547098
EMU HEIGHTS	Woolworths Service Station	132 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.7429739	150.6559655
EMU PLAINS	Woolworths Service Station	283 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.75371349	150.6530165
ENGADINE	Former Caltex Service Station	995 Old Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.06413459	151.0155734
ENGADINE	BP Service Station	1234 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.07735416	151.01121
ENGADINE	BP Branded Service Station	963 Old Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.06428454	151.0167121
EPPING	7-Eleven (former Mobil) Service Station	246 Beecroft ROAD	Service Station	Regulation under CLM Act not required	-33.77073552	151.080581
ERINA	Coles Express Service Station Erina	211 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43547804	151.3850522

Search results

Your search for:Suburb: Edmondson Park

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register:[POEO public register](#)

Search Again

Refine Search

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... [more search tips](#)

17 July 2022

For business and industry ^

For local government ^

Contact us

131 555 (tel:131555)

Online (<https://yoursay.epa.nsw.gov.au/epa-website-feedback>)

info@epa.nsw.gov.au (<mailto:info@epa.nsw.gov.au>)

EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
[Disclaimer \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
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in

(<https://au.l>

environmer

protection-

authori-

ty-

(<https://au.l>

epa.gov.au

Find us on

[Home](#) [Public registers](#) [POEO Public Register](#) [Licences, applications and notices search](#)

Search results

Your search for: **General Search** with the following criteria

Suburb - Edmondson Park

returned 0 result

Search Again

For business and industry ^

For local government ^

Contact us

131 555 (tel:131555)

Online (<https://yoursay.epa.nsw.gov.au/epa-website-feedback>)

info@epa.nsw.gov.au (<mailto:info@epa.nsw.gov.au>)

EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

[Disclaimer \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

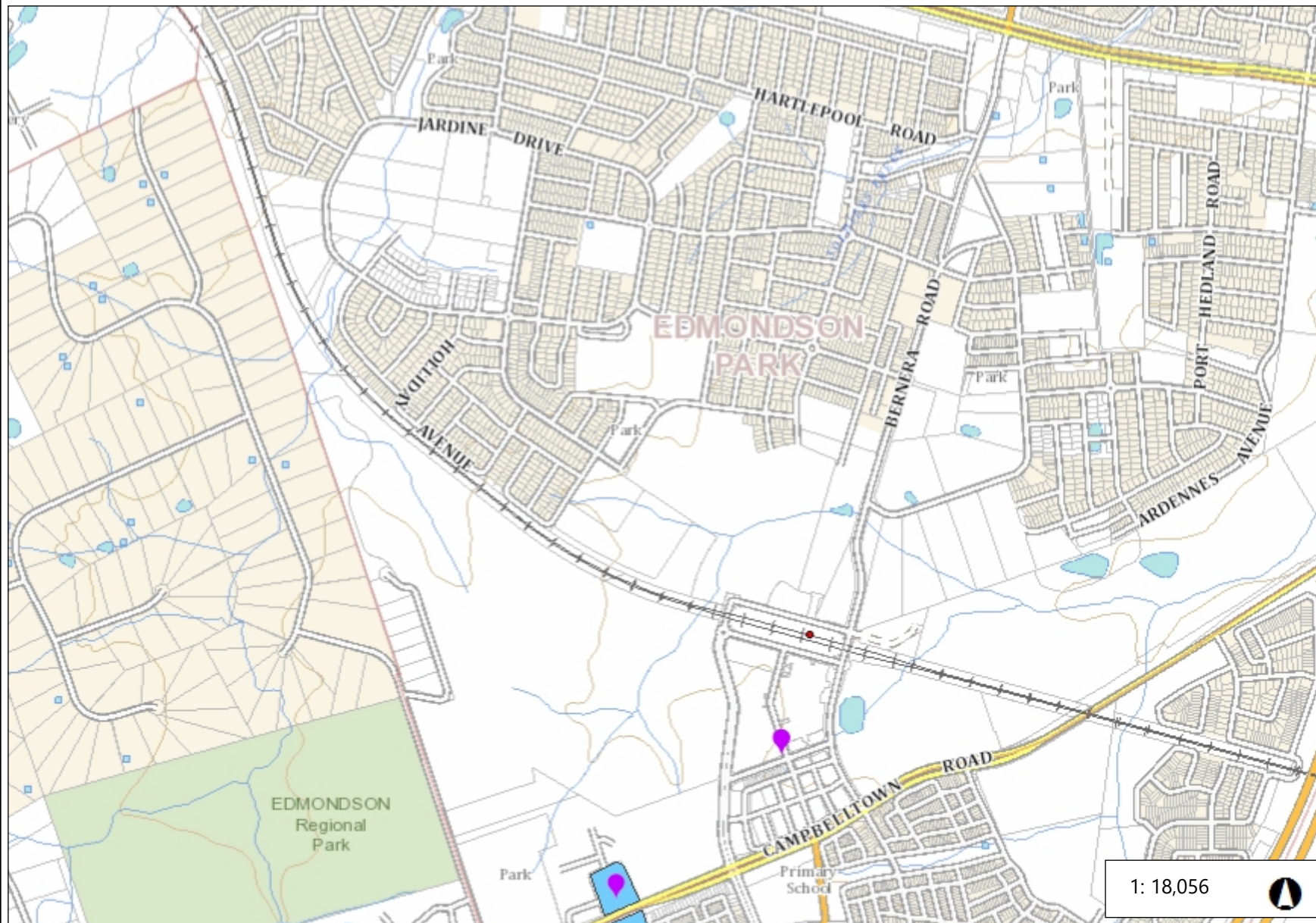
[Privacy \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)

[Copyright \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)













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(<https://au.l>
epa)

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Appendix D Australian and NSW Heritage Records



Legend

-  World Heritage Areas NSW
-  SEPP
-  State Heritage Register
-  Aboriginal Place
-  State Heritage Register
 -  Cluster (label denotes number)
-  Local Environmental Plan
 -  Cluster (label denotes number)
-  Aboriginal Place
 -  Cluster (label denotes number)
-  Interim Heritage Order
 -  Cluster (label denotes number)

1: 18,056



917.2 0 458.62 917.2 Meters

Notes

Notes



Item Name	Location	LGA	SHR Id	Item Type	Record Owner
Horningsea Park	Camden Valley Way HORNINGSEA PARK NSW 2171	Liverpool	00255	Built	HNSW
Horningsea Park House	Horningsea Park Drive HORNINGSEA PARK NSW 2171	Liverpool		Built	LGOV

Search Results

2 results found.

Ingleburn Army Camp Campbelltown Rd	Ingleburn Village, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Ingleburn Army Camp Campbelltown Rd	Ingleburn Village, NSW, Australia	(Place removed from CHL) Commonwealth Heritage List

Report Produced: Sun Jul 17 21:45:42 2022

Appendix E Current Titles



FOLIO: 2/1264963

SEARCH DATE	TIME	EDITION NO	DATE
-----	----	-----	----
5/7/2022	9:54 AM	1	3/7/2020

LAND

LOT 2 IN DEPOSITED PLAN 1264963
AT EDMONDSON PARK
LOCAL GOVERNMENT AREA LIVERPOOL
PARISH OF MINTO COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1264963

FIRST SCHEDULE

LANDCOM

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: PP DP1275478 PE DP1275550 PP DP1278302.

*** END OF SEARCH ***

edmondson park

PRINTED ON 5/7/2022



FOLIO: 3/1257105

SEARCH DATE	TIME	EDITION NO	DATE
10/12/2021	3:11 PM	1	14/2/2020

LAND

LOT 3 IN DEPOSITED PLAN 1257105
AT EDMONDSON PARK
LOCAL GOVERNMENT AREA LIVERPOOL
PARISH OF MINTO COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1257105

FIRST SCHEDULE

LANDCOM

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP1191360 RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND
NUMBERED (7) IN THE S.88B INSTRUMENT

NOTATIONS

UNREGISTERED DEALINGS: PP DP1275478 PP DP1278301.


*** END OF SEARCH ***

50571

PRINTED ON 10/12/2021

Appendix F Historical Aerial Photographs

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

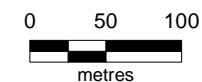
Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000




Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 1961**

AERIAL 1961

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

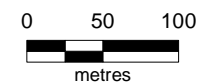
Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000

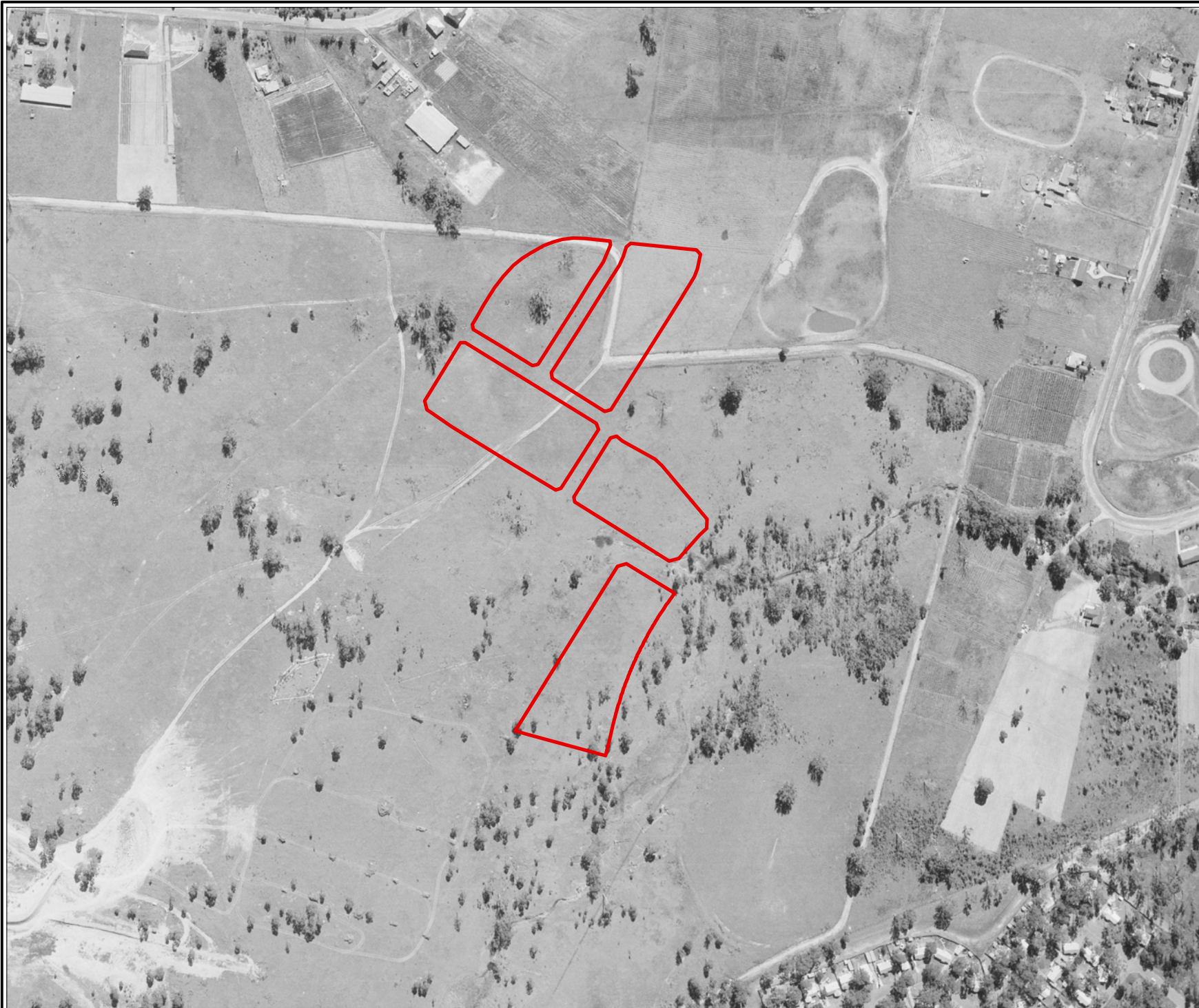



Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 1970**

AERIAL 1970

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

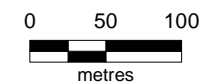
Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000




Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 1979**

AERIAL 1979

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

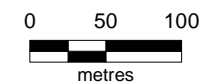
Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000




Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 1986**

AERIAL 1986

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

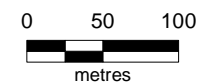
Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000




Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 1994**

AERIAL 1994

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

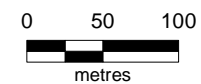
Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000




Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 2002**

AERIAL 2002

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000



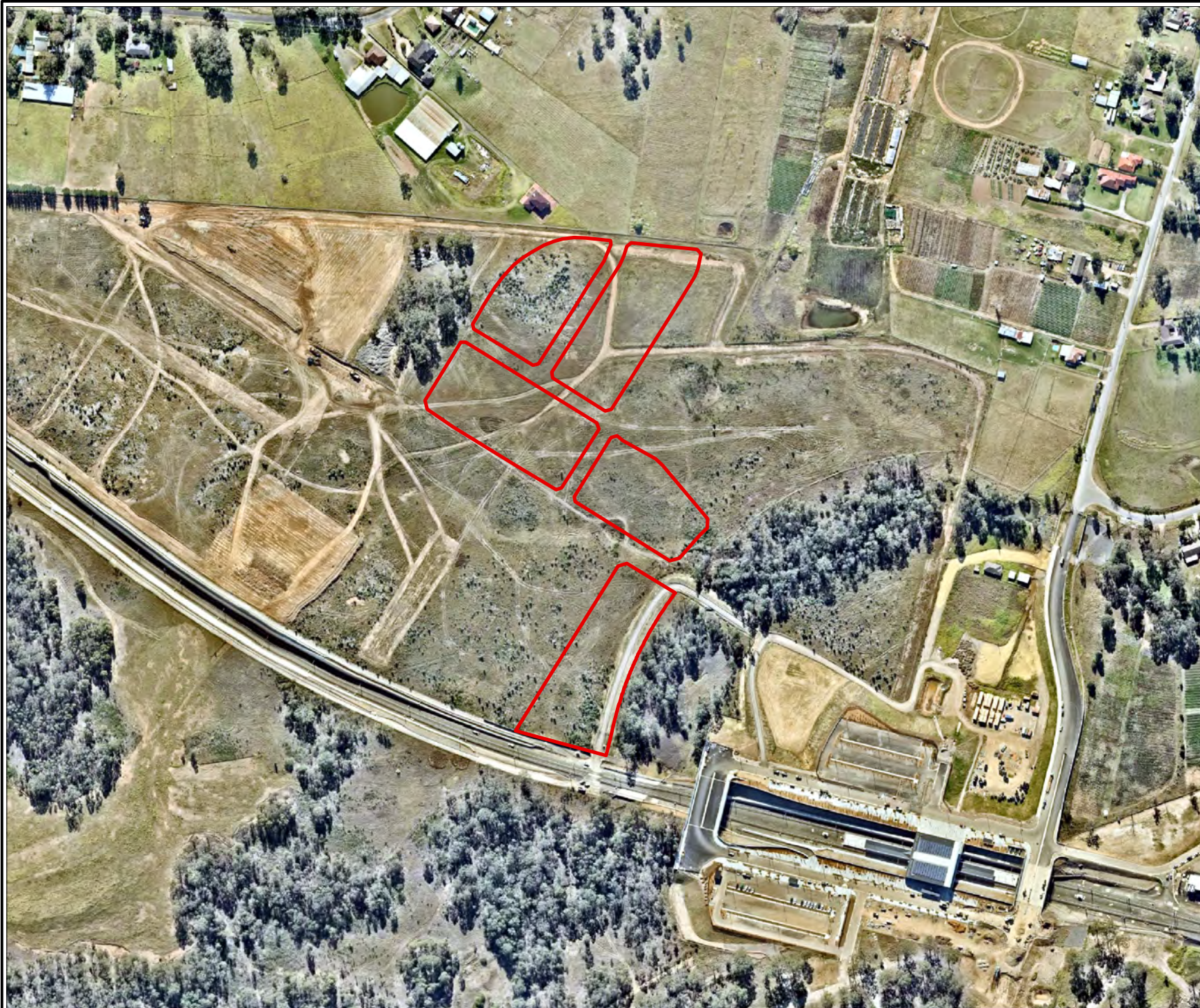
0 50 100
metres


Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 2009**

AERIAL 2009

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000



0 50 100
metres


Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 2014**

AERIAL 2014

**Legend**

 Approximate Site Boundary



Job No: 63384

Client: Urban Property

Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000



0 50 100
metres

Coord. Sys. GDA 1994 MGA Zone 56

Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 2021**

AERIAL 2021



Legend

Approximate Site Boundary



Job No: 63384

Client: Urban Property

Version: Aerials

Date 6/07/2022

Drawn By: YY

Checked By: MD

Scale 1:5,000



0 50 100
metres

Coord. Sys. GDA 1994 MGA Zone 56




Edmondson Park, NSW

**HISTORICAL AERIAL
PHOTOGRAPH - 2022**

AERIAL 2022




Appendix G Test Pit Logs

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-SC	Fill - Sandy CLAY, Brown, heterogeneous, dry, medium plasticity, soft, with inclusions of sandstone gravels, terracotta, brick and concrete fragments.	DR	TP01_0.0-0.1		No Odours, Staining or Abestos Observed
		0.4		SC		DR			No Odours, Staining or Abestos Observed
		0.6			Fill - Clayey SAND, Red / Brown: heterogeneous, dry, medium plasticity, soft, with inclusions of concrete fragments and sandstone gravels. Grading to red colour at 1.5m BGS				
		0.8							
		1					TP01_1-1.1		
		1.2							
		1.4							
		1.6							
		1.8							
		2					TP01_2.0-2.1		
		2.2							
		2.4							
		2.6							
		2.8							No Odours, Staining or Abestos Observed
		3		CH-MH	Natural - Silty CLAY, Red / Brown / Grey, homogeneous, dry, high plasticity, firm	DR	TP01_3.0-3.1		
		3.2			Termination Depth at: 3.20 m.				
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Red / Grey / Brown, heterogeneous, dry, medium plasticity, firm, with sandstone gavels and concrete. Grading to red at 0.5m. Inclusions of plastic and concrete fragments at 1.5m.	DR	TP02_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1							
		1.2							
		1.4							
		1.6							
		1.8							
		2							
		2.2					TP02_1.0-1.1		
		2.4							
		2.6							
		2.8							
		3					TP02_2-2.1		
		3.2							
		3		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, firm, with some sandstone at 3m.	DR	TP02_3.0-3.1		No Odours, Staining or Abestos Observed
		3.2							
		3.4			Termination Depth at: 3.20 m.				
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							




Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-SC	Fill - Silty, sandy CLAY, Dark brown / black, heterogeneous, dry, low plasticity, soft, with inclusions of sandstone gravels.	DR	TP03_0.0-0.1		No Odours, Staining or Abestos Observed
		0.4							No Odours, Staining or Abestos Observed
		0.6		CH-MH	Fill - Silty CLAY, Red, heterogeneous, dry, medium plasticity, soft, with inclusions of ash and sandstone gravels.	DR			
		0.8							
		1					TP03_1-1.1		
		1.2							
		1.4							
		1.6							
		1.8							No Odours, Staining or Abestos Observed
		2		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard	DR	TP03_2-2.1		
		2.2							
		2.4							
		2.6							
		2.8							
		3					TP03_3.0-3.1		
		3.2							No Odours, Staining or Abestos Observed
		3.4							
		3.6					TP03_3.5-3.6		
		3.8							
		4			Termination Depth at: 3.80 m.				
		4.2							
		4.4							
		4.6							
		4.8							



Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty, sandy CLAY, Brown / Grey, heterogeneous, dry, medium plasticity, firm, with shale gravels, concrete, sandstone fragments.	DR	TP06_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1							
		1.2					TP06_1.0-1.1		
		1.4							
		1.6		CH-MH	Fill - Silty CLAY, Red / Grey, heterogeneous, dry, high plasticity, stiff, with shales and ash	DR			No Odours, Staining or Abestos Observed
		1.8							
		2					TP06_2-2.1		
		2.2							
		2.4							
		2.6							
		2.8							
		3					TP06_3.0-3.1		
		3.2							
		3.4							
		3.6							
		3.8							
		4		CL	Natural - CLAY, Grey / Red, homogeneous, dry, high plasticity, hard,	DR	TP06_4.0-4.1		No Odours, Staining or Abestos Observed
		4.2							
		4.4			Termination Depth at: 4.20 m.				
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		Fill	Fill - Silty CLAY, Red / Brown, heterogeneous, dry, low plasticity, soft, with inclusions of sandstone and shale gravels, pebbles. Inclusion of clay mottles at 1.5m. Inclusions of roots and woodchips at 3m.	DR	TP07_0.0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1							
		1.2					TP07_1-1.1		
		1.4							
		1.6							
		1.8							
		2							
		2.2					TP07_2.0-2.1		
		2.4							
		2.6							
		2.8							
		3							
		3.2					TP07_3-3.1		
		3.4							No Odours, Staining or Abestos Observed
		3.6		CL	Natural - CLAY, Red / Brown / Grey, homogeneous, dry, high plasticity, hard,	DR			
		3.8							
		4					TP07_4.0-4.1		
		4.2							
		4.4			Termination Depth at: 4.20 m.				
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Orange / Brown, heterogeneous, dry, medium plasticity, soft, with gravels, sandstones. Black soil layer at 1.5m. Increased grey colour at 2m.	DR	TP09_0.0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1							
		1.2							
		1.4							
		1.6							
		1.8							
		2							
		2.2					TP09_2-2.1		
		2.4		CL	Natural - CLAY, Grey / Orange, homogeneous, dry, high plasticity, hard,	DR			No Odours, Staining or Abestos Observed
		2.6					TP09_2.5-2.6		
		2.8							
		3			Termination Depth at: 2.80 m.				
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Red / Brown, heterogeneous, dry, medium plasticity, soft, with shales, sandstones, clay mottles. Black band at 1m - damp.	DR	TP10_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1							
		1.2					TP10_1-1.1		
		1.4							
		1.6							
		1.8							
		2							No Odours, Staining or Abestos Observed
		2.2		CL	Natural - CLAY, Grey / Orange, homogeneous, dry, high plasticity, hard,	DR	TP10_2.0-2.1		
		2.4			Termination Depth at: 2.30 m.				
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Red / Brown: heterogeneous, dry, medium plasticity, hard, with sandstones gravel	DR	TP11_0.0-0.1		No Odours, Staining or Abestos Observed
		0.4							No Odours, Staining or Abestos Observed
		0.6		CL	Fill - CLAY, Red / Grey, heterogeneous, dry, high plasticity, stiff, with sandstone gravels.	DR			
		0.8							
		1							
		1.2					TP11_1-1.1		
		1.4							
		1.6							
		1.8							
		2							No Odours, Staining or Abestos Observed
		2.2		CL	Natural - CLAY, Orange / Red / Grey, homogeneous, dry, high plasticity, stiff,	DR	TP11_2.0-2.1		
		2.4			Termination Depth at: 2.30 m.				
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

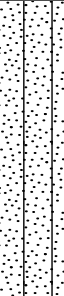

Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Light brown, heterogeneous, dry, low plasticity, hard, with inclusions of shale and concrete fragments.	DR	TP15_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red, homogeneous, dry, high plasticity, hard,	DR	TP15_1.0-1.1		No Odours, Staining or Abestos Observed
		1.2			Termination Depth at: 1.20 m.				
		1.4							
		1.6							
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		SM	Fill - Silty SAND, Grey / Light brown.: heterogeneous, dry, poorly graded, medium sand, loose, with inclusions of concrete, shale and sandstone.	DR	TP16_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red, homogeneous, dry, high plasticity, hard,	DR	TP16_1.0-1.1		No Odours, Staining or Abestos Observed
		1.2							
		1.4							
		1.6							
		1.8			Termination Depth at: 1.20 m.				
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							



Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		SM	Fill - Silty SAND, Black / Grey, heterogeneous, dry, poorly graded, medium sand, loose, with gravels, clay mottles, sandstones.	DR	TP17_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8		CL	Natural - CLAY, Red, homogeneous, dry, high plasticity, hard,	DR			No Odours, Staining or Abestos Observed
		1					TP17_1.0-1.1		
		1.2			Termination Depth at: 1.20 m.				
		1.4							
		1.6							
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							



Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Black, heterogeneous, dry, medium plasticity, soft, with roots.	DR	TP18_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red, homogeneous, dry, high plasticity, hard,	DR	TP18_1.0-1.1		No Odours, Staining or Abestos Observed
		1.2							
		1.4							
		1.6							
		1.8			Termination Depth at: 1.20 m.				
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty, sandy CLAY, Light grey, heterogeneous, dry, medium plasticity, soft, with gravels, sandstone	DR	TP21_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard,	DR			No Odours, Staining or Abestos Observed
		1.2							
		1.4					TP21_1.5-1.6		
		1.6							
		1.8			Termination Depth at: 1.80 m.				
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

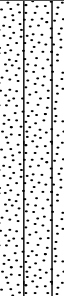

Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-SC	Fill - Silty, sandy CLAY, Black / Brown, heterogeneous, dry, medium plasticity, soft, with roots, clay mottles, shale.	DR	TP22_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard,	DR	TP22_1.0-1.1		No Odours, Staining or Abestos Observed
		1.2			Termination Depth at: 1.20 m.				
		1.4							
		1.6							
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							



Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		SM	Fill - Silty SAND, Light grey, heterogeneous, dry, medium sand, loose, with concrete, rootlets, shales, clay mottles.	DR	TP23_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red / Black, homogeneous, Dry, high plasticity, hard,	DR	TP23_1.0-1.1		No Odours, Staining or Abestos Observed
		1.2							
		1.4			Termination Depth at: 1.20 m.				
		1.6							
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 29-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Black, heterogeneous, dry, medium plasticity, soft,	DR	TP24_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1		CL	Natural - CLAY, Red / Black, homogeneous, dry, high plasticity, hard,	DR	TP24_1.0-1.1		No Odours, Staining or Abestos Observed
		1.2							
		1.4							
		1.6							
		1.8			Termination Depth at: 1.20 m.				
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							



Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 30-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CL-ML	Fill - Silty CLAY, Brown, heterogeneous, dry, medium plasticity, soft, with grassed surface, roots, some sandstones.	DR	TP28_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							No Odours, Staining or Abestos Observed
		1.0		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard,	DR	TP28_1.0-1.1		
		1.2							
		1.4							
		1.6							
		1.8			Termination Depth at: 1.50 m.				
		2.0							
		2.2							
		2.4							
		2.6							
		2.8							
		3.0							
		3.2							
		3.4							
		3.6							
		3.8							
		4.0							
		4.2							
		4.4							
		4.6							
		4.8							

Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 30-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Silty CLAY, Black, heterogeneous, dry, medium plasticity, loose, with clay mottles, roots	DR	TP29_0-0.1		No Odours, Staining or Abestos Observed
		0.4							No Odours, Staining or Abestos Observed
		0.6		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard,	DR			
		0.8							
		1					TP29_1.0-1.1		
		1.2			Termination Depth at: 1.20 m.				
		1.4							
		1.6							
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

Comments: Bucket Excavation



Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 04 Nov 2021

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 30-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		CH-MH	Fill - Sandy, silty CLAY, Light brown, heterogeneous, dry, medium plasticity, soft, with some sandstones, gravels.	DR	TP33_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1							No Odours, Staining or Abestos Observed
		1.2		RWN	Fill - Silty CLAY, Orange / Red, heterogeneous, Dry, medium plasticity, firm, with some sandstones, gravels.	DR	TP33_1-1.1		
		1.4							
		1.6							
		1.8							
		2							No Odours, Staining or Abestos Observed
		2.2		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard,	DR	TP33_2.0-2.1		
		2.4			Termination Depth at: 2.20 m.				
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							


Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 30-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.2		MH-CH	Fill - Clayey SILT, Light brown / grey, homogeneous, dry, low plasticity, soft, loose, with inclusions of rootlets, bark	DR	TP34_0-0.1		No Odours, Staining or Abestos Observed
		0.4							
		0.6							
		0.8							
		1					TP34_1-1.1		No Odours, Staining or Abestos Observed
		1.2							
		1.4		CL	Natural - CLAY, Red / Grey, homogeneous, dry, high plasticity, hard,	DR	TP34_1.3-1.4		
		1.6			Termination Depth at: 1.50 m.				
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

Comments: Bucket Excavation

Project Number 61681	Contractor Ken Coles Excavation	Easting N/A
Client Landcom	Date 30-Sep-21	Northing N/A
Project Name Edmondson Park Precinct 9	Plant Excavator	Coordinate System GDA94_MGA_zone_56
Address Precinct 9, Edmondson Park, NSW	Method Excavation	Logged By Annabel McDermott

Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
HE				SW	Fill - SAND, Yellow, heterogeneous, Dry, medium sand, sub-angular, loose, with some roots. Termination Depth at: 0.10 m.		TP35_0.0-0.1		No Odours, Staining or Abestos Observed
		0.2							
		0.4							
		0.6							
		0.8							
		1							
		1.2							
		1.4							
		1.6							
		1.8							
		2							
		2.2							
		2.4							
		2.6							
		2.8							
		3							
		3.2							
		3.4							
		3.6							
		3.8							
		4							
		4.2							
		4.4							
		4.6							
		4.8							

Comments: Bucket Excavation

Appendix H Laboratory Results and Chain of Custody

014794

CHAIN OF CUSTODY



PROJECT NO.: 61681				LABORATORY BATCH NO.:				
PROJECT NAME: Edmondson Park				SAMPLERS: AM Dermott				
DATE NEEDED BY: Standard				QC LEVEL: NEPM (2013)				
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688								
SEND REPORT & INVOICE TO: (1) admin@jbsg.com.au; (2) madeleine@jbsg.com.au ; (3) amedermott@jbsg.com.au								
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:								
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	IDENTIFICATION	TYPE OF ANALYSIS	NOTES
TP01-0-0.1	Soil	29.9.21		Jar + Bag + Ice		JB2A		
TP01-1-1.1		29.9.21						
TP01-2-2.1		29.9.21						
TP01-3-3.1		29.9.21						
TP02-0-0.1		29.9.21						
TP02-1-1.1		29.9.21						
TP02-2-2.1		29.9.21						
TP02-3-3.1		29.9.21						
TP03-0-0.1		29.9.21						
TP03-1-1.1		29.9.21						
TP03-2-2.1		29.9.21						
TP03-3-3.1		29.9.21						
TP03-3-3.6		29.9.21						
TP04-0-0.1		29.9.21						
TP04-1-1.1		29.9.21						
TP04-2-2.1		29.9.21						
TP05-0-0.1		29.9.21						
TP05-1-1.1		29.9.21						
TP05-2-2.1		29.9.21						
RELINQUISHED BY: Am DATE: 30.9.21				METHOD OF SHIPMENT:				
NAME: Am OF: JBS&G DATE: 30.9.21				CONSIGNMENT NOTE NO.				
NAME: Am OF: JBS&G DATE: 30.9.21				CONSIGNMENT NOTE NO.				
OF: Am				TRANSPORT CO				
RECEIVED BY: Am DATE: 30.9.21				NAME: Am OF: JBS&G DATE: 30.9.21				
FOR RECEIVING LAB USE ONLY:				COOLER SEAL - Yes..... No..... Intact..... Broken.....				
				COOLER TEMP deg C				
				COOLER SEAL - Yes..... No..... Intact..... Broken.....				
				COOLER TEMP deg C				
				COOLER SEAL - Yes..... No..... Intact..... Broken.....				
				COOLER TEMP deg C				

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Presv.; C = Sodium Hydroxide Presv.; VC = Hydrochloric Acid Presv Vial; VS = Sulfuric Acid Presv Vial; S = Sulfuric Acid Presv; Z = Zinc Presv.; E = EDTA Presv; ST = Sterile Bottle; O = Other

IMSO Form SO13 - Chain of Custody - Generic

829226

014795

CHAIN OF CUSTODY



PROJECT NO.: 61681				LABORATORY BATCH NO.:								
PROJECT NAME: Edmonson Park				SAMPLERS: Anabel McDermott								
DATE NEEDED BY: Standard				QC LEVEL: NEPM (2013)								
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688												
SEND REPORT & INVOICE TO: (1) admin@jbsg.com.au; (2) mcd@mcdmatt.com.au; (3) amcd@mcdmatt.com.au												
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:												
SAMPLE ID				MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	IDENTIFICATION		TYPE OF ASBESTOS ANALYSIS	NOTES:
TP05-3-3.1				Soil	29.9.21		Bag + Jar + Ice		X	JB2A		
TP05-3.8-3.9					29.9.21							
TP06-0-0.1					29.9.21				X			
TP06-1-1.1					29.9.21				X			
TP06-2-2.1					29.9.21				X			
TP06-3-3.1					29.9.21				X			
TP06-4-4.1					29.9.21				X			
TP07-0-0.1					29.9.21				X			
TP07-1-1.1					29.9.21				X			
TP07-2-2.1					29.9.21				X			
TP07-3-3.1					29.9.21				X			
TP07-4-4.1					29.9.21				X			
TP08-0-0.1					29.9.21				X			
TP08-1-1.1					29.9.21				X			
TP08-2-2.1					29.9.21				X			
TP09-0-0.1					29.9.21				X			
TP09-1-1.1					29.9.21				X			
TP09-2-2.1					29.9.21				X			
TP09-2-6-2-6					29.9.21				X			
NAME: Anabel McDermott		DATE: 30.9.21	RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:			
NAME: OF: JBS&G		DATE:	TRANSPORT CO.		CONSIGNMENT NOTE NO.		NAME: OF:		DATE:		COOLER SEAL - Yes: No: Intact: Broken:	
NAME: OF:		DATE:	TRANSPORT CO.		CONSIGNMENT NOTE NO.		NAME: OF:		DATE:		COOLER SEAL - Yes: No: Intact: Broken:	
NAME: OF:		DATE:	TRANSPORT CO.		CONSIGNMENT NOTE NO.		NAME: OF:		DATE:		COOLER SEAL - Yes: No: Intact: Broken:	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Presv; C = Sodium Hydroxide Presv; VC = Hydrochloric Acid Presv Vial; VS = Sulfuric Acid Presv Vial; S = Sulfuric Acid Presv; Z = Zinc Presv; E = EDTA Presv; ST = Sterile Bottle; O = Other

829236

014796

CHAIN OF CUSTODY



PROJECT NO.:	61681	LABORATORY BATCH NO.:	
PROJECT NAME:	Edmondson Park	SAMPLERS:	Annabel McDermott
DATE NEEDED BY:	Standard	QC LEVEL:	NEPM (2013)
PHONE:	Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688		
SEND REPORT & INVOICE TO: (1)	adminnsw@jbsg.com.au; (2)	Madeline	@jbsg.com.au; (3) andersdermott
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:			@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:					
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH
TP09-2.5-2.6	Soil	29.9.21		Jar + Bag + Ice	
TP10-0-0-1		29.9.21			
TP10-1-1-1		29.9.21			
TP10-2-0-2.1		29.9.21			
TP11-0-0-1		29.9.21			
TP11-1-1-1		29.9.21			
TP11-2-2-1		29.9.21			
TP12-0-0-1		29.9.21			
TP12-1-1-1		29.9.21			
TP12-2-2-1		29.9.21			
TP13-0-0-1		29.9.21			
TP13-1-1-1		29.9.21			
TP13-1.5-1.6		29.9.21			
TP13-2-2-1		29.9.21			
TP14-0-0-1		29.9.21			
TP14-1-1-1		29.9.21			
TP14-1.7-1.8		29.9.21			
TP15-0-0-1		29.9.21			
TP15-1-1-1		29.9.21			

JB2A

</

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 30.9.21	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....
OF:	TRANSPORT CO	OF:	COOLER TEMP deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Presv; C = Sodium Hydroxide Presv; VC = Hydrochloric Acid Presv Vial; VS = Sulfuric Acid Presv Vial; S = Sulfuric Acid Presv; Z = Zinc Presv; E = EDTA Presv; ST = Sterile Bottle; O = Other

IMSO Form SO13 - Chain of Custody - Generic

829236

014797

CHAIN OF CUSTODY



PROJECT NO.: 61681				LABORATORY BATCH NO.:			
PROJECT NAME: Edmondson Park				SAMPLERS: Anabel McDermott			
DATE NEEDED BY: Standard				QC LEVEL: NEPM (2013)			
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688							
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) maddalanda@jbsg.com.au; (3) amcdermott@jbsg.com.au							
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:							
SAMPLE ID		MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	TYPE OF ASBESTOS ANALYSIS
TP16-0-0-1		Soil	29.9.21		bag + jar + ice		NEPM/WA
TP16-1-1-1			29.9.21				
TP17-0-0-1			29.9.21				
TP17-1-1-1			29.9.21				
TP18-0-0-1			29.9.21				
TP18-1-1-1			29.9.21				
TP19-0-0-1			29.9.21				
TP19-1-1-1			29.9.21				
TP20-0-0-1			29.9.21				
TP20-1-1-1			29.9.21				
TP21-0-0-1			29.9.21				
TP21-1.5-1.6			29.9.21				
TP22-0-0-1			29.9.21				
TP22-1-1-1			29.9.21				
TP23-0-0-1			29.9.21				
TP23-1-1-1			29.9.21				
TP24-0-0-1			29.9.21				
TP24-1-1-1			29.9.21				
TP25-0-0-1			29.9.21				
RELINQUISHED BY:		DATE: 30.9.21		METHOD OF SHIPMENT:		RECEIVED BY:	
NAME: An		DATE: 30.9.21		CONSIGNMENT NOTE NO.		NAME: DATE:	
OF: JBS&G		DATE:		TRANSPORT CO.		OF: NAME: DATE:	
NAME:		DATE:		CONSIGNMENT NOTE NO.		OF: NAME: DATE:	
OF:		TRANSPORT CO		NAME: DATE:		COOLER SEAL - Yes..... No Intact Broken	
Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Presv'd; C = Sodium Hydroxide Presv'd; VC = Hydrochloric Acid Presv'd Vial; VS = Sulfuric Acid Presv'd Vial; S = Sulfuric Acid Presv'd; Z = Zinc Presv'd; E = EDTA Presv'd; ST = Sterile Bottle; O = Other		NAME: DATE:		CONSIGNMENT NOTE NO.		COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO		NAME: DATE:		COOLER SEAL - Yes..... No Intact Broken	
IMSO Form 3013 - Chain of Custody - Generic		NAME: DATE:		CONSIGNMENT NOTE NO.		COOLER SEAL - Yes..... No Intact Broken	

829236

014799

CHAIN OF CUSTODY



PROJECT NO.: 61681

PROJECT NAME: Edmondson Park

DATE NEEDED BY: 30/9/21

PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688

SEND REPORT & INVOICE TO: (1) admin@jbsg.com.au; (2) m.deleat@jbsg.com.au; (3) am.sdelmet@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	LABORATORY BATCH NO.:	TYPE OF ASBESTOS ANALYSIS	IDENTIFICATION	NOTES:
TP33-0-0.1	Soil	30.9.21		Bag + Jar + Ice		JB2A	NEPM/WA		
TP33-1-1.1		30.9.21				TRH/BTEX			
TP33-2-2.1		30.9.21							
TP34-0-0.1		30.9.21							
TP34-01-1.1		30.9.21							
TP34-1.3-1.4		30.9.21							
QA20210929-AM01		29.9.21							
QC20210929-AM01		29.9.21							
QA20210929-AM02		29.9.21							
QC20210929-AM02		29.9.21							
QA20210930-AM03		30.9.21							
QC20210930-AM03		30.9.21							
QA20210930-AM04		30.9.21							
QC20210930-AM04		30.9.21							
TP35-0-0.1		30.9.21							
TS/TB	Water			2 x Vials.					

REINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: 30-9-21	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....
OF:	TRANSPORT CO	OF:	COOLER TEMP deg C

IMSO Form SO13 - Chain of Custody - Generic

829236

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

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16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane

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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle

4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth

46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

Auckland

35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch

43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name: JBS & G Australia (NSW) P/L
Contact name: Annabel McDermott
Project name: EDMONSON PARK
Project ID: 61681
Turnaround time: 5 Day
Date/Time received: Sep 30, 2021 2:24 PM
Eurofins reference: 829236

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 10.8 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

EXTRAS TP25_1-1.1, TP26_0-0.1, TP26_1-1.1, TP26_2-2.1, TP27_0-0.1, TP27_1.5-1.6, TP28_0-0.1, TP28_1-1.1, TP29_0-0.1, TP29_1-1.1, TP30_0-0.1, TP30_1-1.1, TP30_2-2.1, TP31_0-0.1, TP31_1-1.1, TP31_2-2.1, TP31_3-3.1, TP32_0-0.1, TP32_1.5-1.6

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Annabel McDermott - amcdermott@jbsg.com.au.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited

Accreditation Number 1261

Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: Annabel McDermott
Report 829236-AID
Project Name EDMONSON PARK
Project ID 61681
Received Date Sep 30, 2021
Date Reported Oct 12, 2021

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name EDMONSON PARK
Project ID 61681
Date Sampled Sep 29, 2021 to Sep 30, 2021
Report 829236-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01_1-1.1	21-Oc04019	Sep 29, 2021	Approximate Sample 742g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP01_3-.1	21-Oc04020	Sep 29, 2021	Approximate Sample 562g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP02_0-0.1	21-Oc04021	Sep 29, 2021	Approximate Sample 612g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP02_2-2.1	21-Oc04022	Sep 29, 2021	Approximate Sample 538g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP03_1-1.1	21-Oc04023	Sep 29, 2021	Approximate Sample 573g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP03_2-2.1	21-Oc04024	Sep 29, 2021	Approximate Sample 626g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP04_0-0.1	21-Oc04025	Sep 29, 2021	Approximate Sample 556g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP04_2-2.1	21-Oc04026	Sep 29, 2021	Approximate Sample 504g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP05_0-0.1	21-Oc04027	Sep 29, 2021	Approximate Sample 715g Sample consisted of: Brown fine-grained clayey soil, cement, sand stone and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP05_3-3.1	21-Oc04028	Sep 29, 2021	Approximate Sample 662g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP06_0-0.1	21-Oc04029	Sep 29, 2021	Approximate Sample 645g Sample consisted of: Brown fine-grained clayey soil, shale fragments and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP06_2-2.1	21-Oc04030	Sep 29, 2021	Approximate Sample 525g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP07_1-1.1	21-Oc04031	Sep 29, 2021	Approximate Sample 582g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP07_3-3.1	21-Oc04032	Sep 29, 2021	Approximate Sample 716g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP08_0-0.1	21-Oc04033	Sep 29, 2021	Approximate Sample 594g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP08_1-1.1	21-Oc04034	Sep 29, 2021	Approximate Sample 715g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP09_1-1.1	21-Oc04035	Sep 29, 2021	Approximate Sample 619g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP09_2-2.1	21-Oc04036	Sep 29, 2021	Approximate Sample 439g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10_0-0.1	21-Oc04037	Sep 29, 2021	Approximate Sample 563g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10_1-1.1	21-Oc04038	Sep 29, 2021	Approximate Sample 509g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP11_1-1.1	21-Oc04039	Sep 29, 2021	Approximate Sample 586g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP12_0-0.1	21-Oc04040	Sep 29, 2021	Approximate Sample 486g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP12_1-1.1	21-Oc04041	Sep 29, 2021	Approximate Sample 407g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13_0-0.1	21-Oc04042	Sep 29, 2021	Approximate Sample 602g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13_1.5-1.6	21-Oc04043	Sep 29, 2021	Approximate Sample 531g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP14_1-1.1	21-Oc04044	Sep 29, 2021	Approximate Sample 533g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP15_0-0.1	21-Oc04045	Sep 29, 2021	Approximate Sample 639g Sample consisted of: Brown fine-grained clayey soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP16_0-0.1	21-Oc04046	Sep 29, 2021	Approximate Sample 761g Sample consisted of: Brown coarse-grained sandy soil, sand stone, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17_0-0.1	21-Oc04047	Sep 29, 2021	Approximate Sample 671g Sample consisted of: Brown coarse-grained sandy soil, sand stone, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP18_0-0.1	21-Oc04048	Sep 29, 2021	Approximate Sample 514g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP19_0-0.1	21-Oc04049	Sep 29, 2021	Approximate Sample 523g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP20_0-0.1	21-Oc04050	Sep 29, 2021	Approximate Sample 578g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP21_0-0.1	21-Oc04051	Sep 29, 2021	Approximate Sample 641g Sample consisted of: Brown fine-grained clayey soil, sand stone and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP22_0-0.1	21-Oc04052	Sep 29, 2021	Approximate Sample 463g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP23_0-0.1	21-Oc04054	Sep 29, 2021	Approximate Sample 899g Sample consisted of: Brown coarse-grained sandy soil, sand stone and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP24_0-0.1	21-Oc04055	Sep 29, 2021	Approximate Sample 565g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP25_0-0.1	21-Oc04056	Sep 30, 2021	Approximate Sample 571g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP33_0-0.1	21-Oc04057	Sep 30, 2021	Approximate Sample 666g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP33_1-1.1	21-Oc04058	Sep 30, 2021	Approximate Sample 616g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP34_0-0.1	21-Oc04059	Sep 30, 2021	Approximate Sample 509g Sample consisted of: Brown fine-grained clayey soil, bitumen, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP34_1-1.1	21-Oc04060	Sep 30, 2021	Approximate Sample 544g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC20210929_AM01	21-Oc04061	Sep 29, 2021	Approximate Sample 685g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC20210929_AM02	21-Oc04062	Sep 29, 2021	Approximate Sample 550g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC20210930_AM03	21-Oc04063	Sep 30, 2021	Approximate Sample 596g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Oct 02, 2021	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Oct 02, 2021	Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: EDMONSON PARK
Project ID: 61681

Order No.:
Report #: 829236
Phone: 02 8245 0300
Fax:

Received: Sep 30, 2021 2:24 PM
Due: Oct 7, 2021
Priority: 5 Day
Contact Name: Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	TP01_1-1.1	Sep 29, 2021		Soil	M21-Oc04019	X		X	X		
2	TP01_3-.1	Sep 29, 2021		Soil	M21-Oc04020	X		X	X		
3	TP02_0-0.1	Sep 29, 2021		Soil	M21-Oc04021	X		X	X		
4	TP02_2-2.1	Sep 29, 2021		Soil	M21-Oc04022	X		X	X		
5	TP03_1-1.1	Sep 29, 2021		Soil	M21-Oc04023	X		X	X		
6	TP03_2-2.1	Sep 29, 2021		Soil	M21-Oc04024	X		X	X		
7	TP04_0-0.1	Sep 29, 2021		Soil	M21-Oc04025	X		X	X		
8	TP04_2-2.1	Sep 29, 2021		Soil	M21-Oc04026	X		X	X		
9	TP05_0-0.1	Sep 29, 2021		Soil	M21-Oc04027	X		X	X		

Company Name: JBS & G Australia (NSW) P/L
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Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
10	TP05_3-3.1	Sep 29, 2021		Soil	M21-Oc04028	X		X	X		
11	TP06_0-0.1	Sep 29, 2021		Soil	M21-Oc04029	X		X	X		
12	TP06_2-2.1	Sep 29, 2021		Soil	M21-Oc04030	X		X	X		
13	TP07_1-1.1	Sep 29, 2021		Soil	M21-Oc04031	X		X	X		
14	TP07_3-3.1	Sep 29, 2021		Soil	M21-Oc04032	X		X	X		
15	TP08_0-0.1	Sep 29, 2021		Soil	M21-Oc04033	X		X	X		
16	TP08_1-1.1	Sep 29, 2021		Soil	M21-Oc04034	X		X	X		
17	TP09_1-1.1	Sep 29, 2021		Soil	M21-Oc04035	X		X	X		
18	TP09_2-2.1	Sep 29, 2021		Soil	M21-Oc04036	X		X	X		
19	TP10_0-0.1	Sep 29, 2021		Soil	M21-Oc04037	X		X	X		
20	TP10_1-1.1	Sep 29, 2021		Soil	M21-Oc04038	X		X	X		

Company Name: JBS & G Australia (NSW) P/L
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Due: Oct 7, 2021
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Contact Name: Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
21	TP11_1-1.1	Sep 29, 2021		Soil	M21-Oc04039	X		X	X		
22	TP12_0-0.1	Sep 29, 2021		Soil	M21-Oc04040	X		X	X		
23	TP12_1-1.1	Sep 29, 2021		Soil	M21-Oc04041	X		X	X		
24	TP13_0-0.1	Sep 29, 2021		Soil	M21-Oc04042	X		X	X		
25	TP13_1.5-1.6	Sep 29, 2021		Soil	M21-Oc04043	X		X	X		
26	TP14_1-1.1	Sep 29, 2021		Soil	M21-Oc04044	X		X	X		
27	TP15_0-0.1	Sep 29, 2021		Soil	M21-Oc04045	X		X	X		
28	TP16_0-0.1	Sep 29, 2021		Soil	M21-Oc04046	X		X	X		
29	TP17_0-0.1	Sep 29, 2021		Soil	M21-Oc04047	X		X	X		
30	TP18_0-0.1	Sep 29, 2021		Soil	M21-Oc04048	X		X	X		
31	TP19_0-0.1	Sep 29, 2021		Soil	M21-Oc04049	X		X	X		

Company Name:	JBS & G Australia (NSW) P/L	Order No.:		Received:	Sep 30, 2021 2:24 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	Report #:	829236	Due:	Oct 7, 2021
Project Name:	EDMONSON PARK	Phone:	02 8245 0300	Priority:	5 Day
Project ID:	61681	Fax:		Contact Name:	Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
32	TP20_0-0.1	Sep 29, 2021		Soil	M21-Oc04050	X		X	X		
33	TP21_0-0.1	Sep 29, 2021		Soil	M21-Oc04051	X		X	X		
34	TP22_0-0.1	Sep 29, 2021		Soil	M21-Oc04052	X		X	X		
35	TP23_0-0.1	Sep 29, 2021		Soil	M21-Oc04054	X		X	X		
36	TP24_0-0.1	Sep 29, 2021		Soil	M21-Oc04055	X		X	X		
37	TP25_0-0.1	Sep 30, 2021		Soil	M21-Oc04056	X		X	X		
38	TP33_0-0.1	Sep 30, 2021		Soil	M21-Oc04057	X		X	X		
39	TP33_1-1.1	Sep 30, 2021		Soil	M21-Oc04058	X		X	X		
40	TP34_0-0.1	Sep 30, 2021		Soil	M21-Oc04059	X		X	X		
41	TP34_1-1.1	Sep 30, 2021		Soil	M21-Oc04060	X		X	X		
42	QC20210929_	Sep 29, 2021		Soil	M21-Oc04061	X		X	X		

Company Name:	JBS & G Australia (NSW) P/L	Order No.:		Received:	Sep 30, 2021 2:24 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	Report #:	829236	Due:	Oct 7, 2021
Project Name:	EDMONSON PARK	Phone:	02 8245 0300	Priority:	5 Day
Project ID:	61681	Fax:		Contact Name:	Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
42	QC20210929_AM01	Sep 29, 2021		Soil	M21-Oc04061						
43	QC20210929_AM02	Sep 29, 2021		Soil	M21-Oc04062	X		X	X		
44	QC20210930_AM03	Sep 30, 2021		Soil	M21-Oc04063	X		X	X		
45	TS	Sep 29, 2021		Soil	M21-Oc04064						X
46	TB	Sep 29, 2021		Soil	M21-Oc04065					X	
47	TP01_0-0.1	Sep 29, 2021		Soil	M21-Oc04066		X				
48	TP01_2-2.1	Sep 29, 2021		Soil	M21-Oc04067		X				
49	TP02_1-1.1	Sep 29, 2021		Soil	M21-Oc04068		X				
50	TP02_3-3.1	Sep 29, 2021		Soil	M21-Oc04069		X				

Company Name: JBS & G Australia (NSW) P/L
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Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
51	TP03_0-0.1	Sep 29, 2021		Soil	M21-Oc04070		X				
52	TP03_3-3.1	Sep 29, 2021		Soil	M21-Oc04071		X				
53	TP03_3.5-3.6	Sep 29, 2021		Soil	M21-Oc04072		X				
54	TP04_1-1.1	Sep 29, 2021		Soil	M21-Oc04073		X				
55	TP05_1-1.1	Sep 29, 2021		Soil	M21-Oc04074		X				
56	TP05_2-2.1	Sep 29, 2021		Soil	M21-Oc04075		X				
57	TP05_3.8-3.9	Sep 29, 2021		Soil	M21-Oc04076		X				
58	TP06_1-1.1	Sep 29, 2021		Soil	M21-Oc04077		X				
59	TP06_3-3.1	Sep 29, 2021		Soil	M21-Oc04078		X				
60	TP06_4-4.1	Sep 29, 2021		Soil	M21-Oc04079		X				
61	TP07_0-0.1	Sep 29, 2021		Soil	M21-Oc04080		X				

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: EDMONSON PARK
Project ID: 61681

Order No.:
Report #: 829236
Phone: 02 8245 0300
Fax:

Received: Sep 30, 2021 2:24 PM
Due: Oct 7, 2021
Priority: 5 Day
Contact Name: Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
62	TP07_2-2.1	Sep 29, 2021		Soil	M21-Oc04081		X				
63	TP07_4-4.1	Sep 29, 2021		Soil	M21-Oc04082		X				
64	TP08_2-2.1	Sep 29, 2021		Soil	M21-Oc04083		X				
65	TP09_0-0.1	Sep 29, 2021		Soil	M21-Oc04084		X				
66	TP09_2.5-2.6	Sep 29, 2021		Soil	M21-Oc04085		X				
67	TP10_2.0-2.1	Sep 29, 2021		Soil	M21-Oc04086		X				
68	TP11_0-0.1	Sep 29, 2021		Soil	M21-Oc04087		X				
69	TP11_2-2.1	Sep 29, 2021		Soil	M21-Oc04088		X				
70	TP12_2-2.1	Sep 29, 2021		Soil	M21-Oc04089		X				
71	TP13_1-1.1	Sep 29, 2021		Soil	M21-Oc04090		X				
72	TP13_2-2.1	Sep 29, 2021		Soil	M21-Oc04091		X				

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Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
73	TP14_0-0.1	Sep 29, 2021		Soil	M21-Oc04092		X				
74	TP14_1.7-1.8	Sep 29, 2021		Soil	M21-Oc04093		X				
75	TP15_1-1.1	Sep 29, 2021		Soil	M21-Oc04094		X				
76	TP16_1-1.1	Sep 29, 2021		Soil	M21-Oc04095		X				
77	TP17_1-1.1	Sep 29, 2021		Soil	M21-Oc04096		X				
78	TP18_1-1.1	Sep 29, 2021		Soil	M21-Oc04097		X				
79	TP19_1-1.1	Sep 29, 2021		Soil	M21-Oc04098		X				
80	TP20_1-1.1	Sep 29, 2021		Soil	M21-Oc04099		X				
81	TP21_1.5-1.6	Sep 29, 2021		Soil	M21-Oc04100		X				
82	TP22_1-1.1	Sep 29, 2021		Soil	M21-Oc04101		X				
83	TP23_1-1.1	Sep 29, 2021		Soil	M21-Oc04103		X				

Company Name: JBS & G Australia (NSW) P/L
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Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
84	TP24_1-1.1	Sep 29, 2021		Soil	M21-Oc04104		X				
85	TP33_2-2.1	Sep 30, 2021		Soil	M21-Oc04105		X				
86	TP34_1.3-1.4	Sep 30, 2021		Soil	M21-Oc04106		X				
87	QC20210930_AM04	Sep 30, 2021		Soil	M21-Oc04107		X				
88	TP35_0-0.1	Sep 30, 2021		Soil	M21-Oc04108		X				
89	TP25_1-1.1	Sep 30, 2021		Soil	M21-Oc04109		X				
90	TP26_0-0.1	Sep 30, 2021		Soil	M21-Oc04110		X				
91	TP26_1-1.1	Sep 30, 2021		Soil	M21-Oc04111		X				
92	TP26_2-2.1	Sep 30, 2021		Soil	M21-Oc04112		X				
93	TP27_0-0.1	Sep 30, 2021		Soil	M21-Oc04113		X				

Company Name:	JBS & G Australia (NSW) P/L	Order No.:		Received:	Sep 30, 2021 2:24 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	Report #:	829236	Due:	Oct 7, 2021
Project Name:	EDMONSON PARK	Phone:	02 8245 0300	Priority:	5 Day
Project ID:	61681	Fax:		Contact Name:	Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
94	TP27_1.5-1.6	Sep 30, 2021		Soil	M21-Oc04114		X				
95	TP28_0-0.1	Sep 30, 2021		Soil	M21-Oc04115		X				
96	TP28_1-1.1	Sep 30, 2021		Soil	M21-Oc04116		X				
97	TP29_0-0.1	Sep 30, 2021		Soil	M21-Oc04117		X				
98	TP29_1-1.1	Sep 30, 2021		Soil	M21-Oc04118		X				
99	TP30_0-0.1	Sep 30, 2021		Soil	M21-Oc04119		X				
100	TP30_1-1.1	Sep 30, 2021		Soil	M21-Oc04120		X				
101	TP30_2-2.1	Sep 30, 2021		Soil	M21-Oc04121		X				
102	TP31_0-0.1	Sep 30, 2021		Soil	M21-Oc04122		X				
103	TP31_1-1.1	Sep 30, 2021		Soil	M21-Oc04123		X				
104	TP31_2-2.1	Sep 30, 2021		Soil	M21-Oc04124		X				

Company Name: JBS & G Australia (NSW) P/L
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Phone: 02 8245 0300
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Received: Sep 30, 2021 2:24 PM
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Contact Name: Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
105	TP31_3-3.1	Sep 30, 2021		Soil	M21-Oc04125		X				
106	TP32_0-0.1	Sep 30, 2021		Soil	M21-Oc04126		X				
107	TP32_1.5-1.6	Sep 30, 2021		Soil	M21-Oc04127		X				
Test Counts						44	61	44	44	1	1

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration:
$$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$$

Asbestos Content (as asbestos):
$$\% w/w = \frac{(m \times P_A)}{M}$$

Weighted Average (of asbestos):
$$\%_{wA} = \frac{\sum (m \times P_A) \times x}{x}$$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (PA)</i> .
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% _{wA}).

Comments

Oc04036, Oc04040, Oc04041, Oc04052: Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: **Annabel McDermott**

Report **829236-S**
Project name **EDMONSON PARK**
Project ID **61681**
Received Date **Sep 30, 2021**

Client Sample ID			TP01_1-1.1	TP01_3-1	TP02_0-0.1	TP02_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04019	M21-Oc04020	M21-Oc04021	M21-Oc04022
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	59	58	97	52
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP01_1-1.1	TP01_3-1	TP02_0-0.1	TP02_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04019	M21-Oc04020	M21-Oc04021	M21-Oc04022
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	124	116	119	116
p-Terphenyl-d14 (surr.)	1	%	97	102	108	102
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	97	94	116	81
Tetrachloro-m-xylene (surr.)	1	%	112	130	116	120
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	97	94	116	81
Tetrachloro-m-xylene (surr.)	1	%	112	130	116	120

Client Sample ID			TP01_1-1.1	TP01_3-1	TP02_0-0.1	TP02_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04019	M21-Oc04020	M21-Oc04021	M21-Oc04022
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	9.0	4.0	6.1	5.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	11	13	14
Copper	5	mg/kg	26	22	28	26
Lead	5	mg/kg	18	13	13	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.5	< 5	< 5	7.9
Zinc	5	mg/kg	41	27	31	53
% Moisture	1	%	8.7	19	18	18

Client Sample ID			TP03_1-1.1	TP03_2-2.1	TP04_0-0.1	TP04_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04023	M21-Oc04024	M21-Oc04025	M21-Oc04026
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	54	53	57	91
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP03_1-1.1	TP03_2-2.1	TP04_0-0.1	TP04_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04023	M21-Oc04024	M21-Oc04025	M21-Oc04026
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	117	118	116	80
p-Terphenyl-d14 (surr.)	1	%	103	112	104	83
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	96	93	85	113
Tetrachloro-m-xylene (surr.)	1	%	122	120	73	107
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP03_1-1.1	TP03_2-2.1	TP04_0-0.1	TP04_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04023	M21-Oc04024	M21-Oc04025	M21-Oc04026
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	96	93	85	113
Tetrachloro-m-xylene (surr.)	1	%	122	120	73	107
Heavy Metals						
Arsenic	2	mg/kg	12	4.6	13	22
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	8.7	20	21
Copper	5	mg/kg	25	27	26	21
Lead	5	mg/kg	17	15	19	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.6	< 5	6.9	< 5
Zinc	5	mg/kg	32	28	38	22
% Moisture	1	%	18	13	20	16

Client Sample ID			TP05_0-0.1	TP05_3-3.1	TP06_0-0.1	TP06_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04027	M21-Oc04028	M21-Oc04029	M21-Oc04030
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	71	52	112	115
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP05_0-0.1	TP05_3-3.1	TP06_0-0.1	TP06_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04027	M21-Oc04028	M21-Oc04029	M21-Oc04030
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	63	76	61
p-Terphenyl-d14 (surr.)	1	%	64	86	105	85
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	98	117	77	80
Tetrachloro-m-xylene (surr.)	1	%	52	77	127	67

Client Sample ID			TP05_0-0.1	TP05_3-3.1	TP06_0-0.1	TP06_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04027	M21-Oc04028	M21-Oc04029	M21-Oc04030
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	98	117	77	80
Tetrachloro-m-xylene (surr.)	1	%	52	77	127	67
Heavy Metals						
Arsenic	2	mg/kg	5.5	6.6	6.1	8.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.3	13	14	13
Copper	5	mg/kg	41	25	110	23
Lead	5	mg/kg	15	18	28	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.6	6.1	26	6.3
Zinc	5	mg/kg	51	34	170	40
% Moisture	1	%	11	13	14	18

Client Sample ID			TP07_1-1.1	TP07_3-3.1	TP08_0-0.1	TP08_1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04031	M21-Oc04032	M21-Oc04033	M21-Oc04034
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	58	146	59

Client Sample ID			TP07_1-1.1	TP07_3-3.1	TP08_0-0.1	TP08_1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04031	M21-Oc04032	M21-Oc04033	M21-Oc04034
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	56	80	66	60
p-Terphenyl-d14 (surr.)	1	%	90	84	85	86
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	86	83	115	115
Tetrachloro-m-xylene (surr.)	1	%	112	72	86	81

Client Sample ID			TP07_1-1.1	TP07_3-3.1	TP08_0-0.1	TP08_1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04031	M21-Oc04032	M21-Oc04033	M21-Oc04034
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	86	83	115	115
Tetrachloro-m-xylene (surr.)	1	%	112	72	86	81
Heavy Metals						
Arsenic	2	mg/kg	11	12	12	6.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	7.3	19	18
Copper	5	mg/kg	39	21	24	25
Lead	5	mg/kg	24	12	20	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	< 5	5.7	5.1
Zinc	5	mg/kg	75	43	36	30
% Moisture	1	%	14	13	17	14

Client Sample ID			TP09_1-1.1	TP09_2-2.1	TP10_0-0.1	TP10_1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04035	M21-Oc04036	M21-Oc04037	M21-Oc04038
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	53	51	58	57

Client Sample ID			TP09_1-1.1	TP09_2-2.1	TP10_0-0.1	TP10_1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04035	M21-Oc04036	M21-Oc04037	M21-Oc04038
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	66	59	53
p-Terphenyl-d14 (surr.)	1	%	90	91	65	92
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	145	120	113	81
Tetrachloro-m-xylene (surr.)	1	%	113	121	88	75

Client Sample ID			TP09_1-1.1	TP09_2-2.1	TP10_0-0.1	TP10_1-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04035	M21-Oc04036	M21-Oc04037	M21-Oc04038
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	145	120	113	81
Tetrachloro-m-xylene (surr.)	1	%	113	121	88	75
Heavy Metals						
Arsenic	2	mg/kg	12	15	9.6	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	33	13	19
Copper	5	mg/kg	27	26	31	37
Lead	5	mg/kg	19	34	17	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	10	18	9.0	11
Zinc	5	mg/kg	48	66	47	63
% Moisture	1	%	18	16	12	18

Client Sample ID			TP11_1-1.1	TP12_0-0.1	TP12_1-1.1	TP13_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04039	M21-Oc04040	M21-Oc04041	M21-Oc04042
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	52	54	51	52

Client Sample ID			TP11_1-1.1	TP12_0-0.1	TP12_1-1.1	TP13_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04039	M21-Oc04040	M21-Oc04041	M21-Oc04042
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	113	61	62	67
p-Terphenyl-d14 (surr.)	1	%	107	88	85	97
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	98	144	140	96
Tetrachloro-m-xylene (surr.)	1	%	107	94	96	86

Client Sample ID			TP11_1-1.1	TP12_0-0.1	TP12_1-1.1	TP13_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04039	M21-Oc04040	M21-Oc04041	M21-Oc04042
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	98	144	140	96
Tetrachloro-m-xylene (surr.)	1	%	107	94	96	86
Heavy Metals						
Arsenic	2	mg/kg	12	9.9	11	8.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	16	13	17
Copper	5	mg/kg	34	28	62	39
Lead	5	mg/kg	16	17	25	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	10	9.1	80	18
Zinc	5	mg/kg	54	44	160	62
% Moisture	1	%	15	12	16	14

Client Sample ID			TP13_1.5-1.6	TP14_1-1.1	TP15_0-0.1	TP16_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04043	M21-Oc04044	M21-Oc04045	M21-Oc04046
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	53	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	53	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	51	60	61	59

Client Sample ID			TP13_1.5-1.6	TP14_1-1.1	TP15_0-0.1	TP16_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04043	M21-Oc04044	M21-Oc04045	M21-Oc04046
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	66	96	61	61
p-Terphenyl-d14 (surr.)	1	%	93	94	90	83
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	134	91	139	89
Tetrachloro-m-xylene (surr.)	1	%	146	97	146	126

Client Sample ID			TP13_1.5-1.6	TP14_1-1.1	TP15_0-0.1	TP16_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04043	M21-Oc04044	M21-Oc04045	M21-Oc04046
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	134	91	139	89
Tetrachloro-m-xylene (surr.)	1	%	146	97	146	126
Heavy Metals						
Arsenic	2	mg/kg	17	10	3.7	3.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	41	19	14	8.9
Copper	5	mg/kg	32	46	7.5	21
Lead	5	mg/kg	36	26	18	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	22	11	< 5	8.7
Zinc	5	mg/kg	120	70	19	61
% Moisture	1	%	16	17	6.4	12

Client Sample ID			TP17_0-0.1	TP18_0-0.1	TP19_0-0.1	TP20_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04047	M21-Oc04048	M21-Oc04049	M21-Oc04050
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	65	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	65	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	54	59	54	88

Client Sample ID			TP17_0-0.1	TP18_0-0.1	TP19_0-0.1	TP20_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04047	M21-Oc04048	M21-Oc04049	M21-Oc04050
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	66	65	100	100
p-Terphenyl-d14 (surr.)	1	%	87	88	109	108
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	112	101	149	101
Tetrachloro-m-xylene (surr.)	1	%	100	82	94	144

Client Sample ID			TP17_0-0.1	TP18_0-0.1	TP19_0-0.1	TP20_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04047	M21-Oc04048	M21-Oc04049	M21-Oc04050
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	112	101	149	101
Tetrachloro-m-xylene (surr.)	1	%	100	82	94	144
Heavy Metals						
Arsenic	2	mg/kg	4.3	10	8.5	5.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	20	20	6.2
Copper	5	mg/kg	24	19	19	20
Lead	5	mg/kg	21	28	29	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.3	10	12	< 5
Zinc	5	mg/kg	53	56	68	24
% Moisture	1	%	11	24	26	14

Client Sample ID			TP21_0-0.1	TP22_0-0.1	TP23_0-0.1	TP24_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04051	M21-Oc04052	M21-Oc04054	M21-Oc04055
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	57	90	51	75

Client Sample ID			TP21_0-0.1	TP22_0-0.1	TP23_0-0.1	TP24_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04051	M21-Oc04052	M21-Oc04054	M21-Oc04055
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	99	84	75	82
p-Terphenyl-d14 (surr.)	1	%	110	98	90	90
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	96	137	64	75
Tetrachloro-m-xylene (surr.)	1	%	79	137	101	138

Client Sample ID			TP21_0-0.1	TP22_0-0.1	TP23_0-0.1	TP24_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04051	M21-Oc04052	M21-Oc04054	M21-Oc04055
Date Sampled			Sep 29, 2021	Sep 29, 2021	Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	96	137	64	75
Tetrachloro-m-xylene (surr.)	1	%	79	137	101	138
Heavy Metals						
Arsenic	2	mg/kg	8.7	11	< 2	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	26	9.2	25
Copper	5	mg/kg	19	19	< 5	22
Lead	5	mg/kg	18	30	11	31
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.6	12	< 5	15
Zinc	5	mg/kg	38	58	18	54
% Moisture	1	%	11	23	9.5	17

Client Sample ID			TP25_0-0.1	TP33_0-0.1	TP33_1-1.1	TP34_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04056	M21-Oc04057	M21-Oc04058	M21-Oc04059
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	54	59	60	54

Client Sample ID			TP25_0-0.1	TP33_0-0.1	TP33_1-1.1	TP34_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04056	M21-Oc04057	M21-Oc04058	M21-Oc04059
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	63	76	100	99
p-Terphenyl-d14 (surr.)	1	%	95	117	116	114
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	53	87	146	127
Tetrachloro-m-xylene (surr.)	1	%	96	85	113	149

Client Sample ID			TP25_0-0.1	TP33_0-0.1	TP33_1-1.1	TP34_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04056	M21-Oc04057	M21-Oc04058	M21-Oc04059
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	53	87	146	127
Tetrachloro-m-xylene (surr.)	1	%	96	85	113	149
Heavy Metals						
Arsenic	2	mg/kg	13	15	12	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	25	11	11	14
Copper	5	mg/kg	25	46	52	22
Lead	5	mg/kg	22	19	17	48
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.8	21	33	22
Zinc	5	mg/kg	39	100	170	61
% Moisture	1	%	17	8.8	14	9.6

Client Sample ID			TP34_1-1.1	QC20210929_A	QC20210929_A	QC20210930_A
Sample Matrix			Soil	M01	M02	M03
Eurofins Sample No.			M21-Oc04060	M21-Oc04061	M21-Oc04062	M21-Oc04063
Date Sampled			Sep 30, 2021	Sep 29, 2021	Sep 29, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP34_1-1.1	QC20210929_A M01	QC20210929_A M02	QC20210930_A M03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04060	M21-Oc04061	M21-Oc04062	M21-Oc04063
Date Sampled			Sep 30, 2021	Sep 29, 2021	Sep 29, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
BTEX						
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	65	52	73	52
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83	66	51	103
p-Terphenyl-d14 (surr.)	1	%	94	87	94	88
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP34_1-1.1	QC20210929_A M01	QC20210929_A M02	QC20210930_A M03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc04060	M21-Oc04061	M21-Oc04062	M21-Oc04063
Date Sampled			Sep 30, 2021	Sep 29, 2021	Sep 29, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	101	123	93	90
Tetrachloro-m-xylene (surr.)	1	%	80	76	80	79
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	101	123	93	90
Tetrachloro-m-xylene (surr.)	1	%	80	76	80	79
Heavy Metals						
Arsenic	2	mg/kg	7.9	2.6	9.0	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	7.9	15	18
Copper	5	mg/kg	22	30	36	57
Lead	5	mg/kg	18	16	27	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	5.6	10	17
Zinc	5	mg/kg	49	40	53	93
% Moisture	1	%	16	13	16	13

Client Sample ID			TS	TB
Sample Matrix			Soil	Soil
Eurofins Sample No.			M21-Oc04064	M21-Oc04065
Date Sampled			Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	-	< 20
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20
BTEX				
Benzene	0.1	mg/kg	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	67

Client Sample ID			TS	TB
Sample Matrix			Soil	Soil
Eurofins Sample No.			M21-Oc04064	M21-Oc04065
Date Sampled			Sep 29, 2021	Sep 29, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
Naphthalene	1	%	96	-
TRH C6-C10	1	%	83	-
TRH C6-C9	1	%	84	-
BTEX				
Benzene	1	%	77	-
Ethylbenzene	1	%	79	-
m&p-Xylenes	1	%	81	-
o-Xylene	1	%	81	-
Toluene	1	%	80	-
Xylenes - Total	1	%	81	-
4-Bromofluorobenzene (surr.)	1	%	77	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Oct 05, 2021	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Oct 05, 2021	14 Days
Total Recoverable Hydrocarbons - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Oct 02, 2021	14 Days
BTEX - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Oct 05, 2021	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Oct 05, 2021	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Oct 05, 2021	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Oct 05, 2021	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Oct 05, 2021	28 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Oct 05, 2021	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Oct 02, 2021	14 Days

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Phone: 02 8245 0300
Fax:

Received: Sep 30, 2021 2:24 PM
Due: Oct 7, 2021
Priority: 5 Day
Contact Name: Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	TP01_1-1.1	Sep 29, 2021		Soil	M21-Oc04019	X		X	X		
2	TP01_3-.1	Sep 29, 2021		Soil	M21-Oc04020	X		X	X		
3	TP02_0-0.1	Sep 29, 2021		Soil	M21-Oc04021	X		X	X		
4	TP02_2-2.1	Sep 29, 2021		Soil	M21-Oc04022	X		X	X		
5	TP03_1-1.1	Sep 29, 2021		Soil	M21-Oc04023	X		X	X		
6	TP03_2-2.1	Sep 29, 2021		Soil	M21-Oc04024	X		X	X		
7	TP04_0-0.1	Sep 29, 2021		Soil	M21-Oc04025	X		X	X		
8	TP04_2-2.1	Sep 29, 2021		Soil	M21-Oc04026	X		X	X		
9	TP05_0-0.1	Sep 29, 2021		Soil	M21-Oc04027	X		X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
10	TP05_3-3.1	Sep 29, 2021		Soil	M21-Oc04028	X		X	X		
11	TP06_0-0.1	Sep 29, 2021		Soil	M21-Oc04029	X		X	X		
12	TP06_2-2.1	Sep 29, 2021		Soil	M21-Oc04030	X		X	X		
13	TP07_1-1.1	Sep 29, 2021		Soil	M21-Oc04031	X		X	X		
14	TP07_3-3.1	Sep 29, 2021		Soil	M21-Oc04032	X		X	X		
15	TP08_0-0.1	Sep 29, 2021		Soil	M21-Oc04033	X		X	X		
16	TP08_1-1.1	Sep 29, 2021		Soil	M21-Oc04034	X		X	X		
17	TP09_1-1.1	Sep 29, 2021		Soil	M21-Oc04035	X		X	X		
18	TP09_2-2.1	Sep 29, 2021		Soil	M21-Oc04036	X		X	X		
19	TP10_0-0.1	Sep 29, 2021		Soil	M21-Oc04037	X		X	X		
20	TP10_1-1.1	Sep 29, 2021		Soil	M21-Oc04038	X		X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
21	TP11_1-1.1	Sep 29, 2021		Soil	M21-Oc04039	X		X	X		
22	TP12_0-0.1	Sep 29, 2021		Soil	M21-Oc04040	X		X	X		
23	TP12_1-1.1	Sep 29, 2021		Soil	M21-Oc04041	X		X	X		
24	TP13_0-0.1	Sep 29, 2021		Soil	M21-Oc04042	X		X	X		
25	TP13_1.5-1.6	Sep 29, 2021		Soil	M21-Oc04043	X		X	X		
26	TP14_1-1.1	Sep 29, 2021		Soil	M21-Oc04044	X		X	X		
27	TP15_0-0.1	Sep 29, 2021		Soil	M21-Oc04045	X		X	X		
28	TP16_0-0.1	Sep 29, 2021		Soil	M21-Oc04046	X		X	X		
29	TP17_0-0.1	Sep 29, 2021		Soil	M21-Oc04047	X		X	X		
30	TP18_0-0.1	Sep 29, 2021		Soil	M21-Oc04048	X		X	X		
31	TP19_0-0.1	Sep 29, 2021		Soil	M21-Oc04049	X		X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
32	TP20_0-0.1	Sep 29, 2021		Soil	M21-Oc04050	X		X	X		
33	TP21_0-0.1	Sep 29, 2021		Soil	M21-Oc04051	X		X	X		
34	TP22_0-0.1	Sep 29, 2021		Soil	M21-Oc04052	X		X	X		
35	TP23_0-0.1	Sep 29, 2021		Soil	M21-Oc04054	X		X	X		
36	TP24_0-0.1	Sep 29, 2021		Soil	M21-Oc04055	X		X	X		
37	TP25_0-0.1	Sep 30, 2021		Soil	M21-Oc04056	X		X	X		
38	TP33_0-0.1	Sep 30, 2021		Soil	M21-Oc04057	X		X	X		
39	TP33_1-1.1	Sep 30, 2021		Soil	M21-Oc04058	X		X	X		
40	TP34_0-0.1	Sep 30, 2021		Soil	M21-Oc04059	X		X	X		
41	TP34_1-1.1	Sep 30, 2021		Soil	M21-Oc04060	X		X	X		
42	QC20210929_	Sep 29, 2021		Soil	M21-Oc04061	X		X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
42	QC20210929_AM01	Sep 29, 2021		Soil	M21-Oc04061						
43	QC20210929_AM02	Sep 29, 2021		Soil	M21-Oc04062	X		X	X		
44	QC20210930_AM03	Sep 30, 2021		Soil	M21-Oc04063	X		X	X		
45	TS	Sep 29, 2021		Soil	M21-Oc04064						X
46	TB	Sep 29, 2021		Soil	M21-Oc04065					X	
47	TP01_0-0.1	Sep 29, 2021		Soil	M21-Oc04066		X				
48	TP01_2-2.1	Sep 29, 2021		Soil	M21-Oc04067		X				
49	TP02_1-1.1	Sep 29, 2021		Soil	M21-Oc04068		X				
50	TP02_3-3.1	Sep 29, 2021		Soil	M21-Oc04069		X				

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Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
51	TP03_0-0.1	Sep 29, 2021		Soil	M21-Oc04070		X				
52	TP03_3-3.1	Sep 29, 2021		Soil	M21-Oc04071		X				
53	TP03_3.5-3.6	Sep 29, 2021		Soil	M21-Oc04072		X				
54	TP04_1-1.1	Sep 29, 2021		Soil	M21-Oc04073		X				
55	TP05_1-1.1	Sep 29, 2021		Soil	M21-Oc04074		X				
56	TP05_2-2.1	Sep 29, 2021		Soil	M21-Oc04075		X				
57	TP05_3.8-3.9	Sep 29, 2021		Soil	M21-Oc04076		X				
58	TP06_1-1.1	Sep 29, 2021		Soil	M21-Oc04077		X				
59	TP06_3-3.1	Sep 29, 2021		Soil	M21-Oc04078		X				
60	TP06_4-4.1	Sep 29, 2021		Soil	M21-Oc04079		X				
61	TP07_0-0.1	Sep 29, 2021		Soil	M21-Oc04080		X				

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Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
62	TP07_2-2.1	Sep 29, 2021		Soil	M21-Oc04081		X				
63	TP07_4-4.1	Sep 29, 2021		Soil	M21-Oc04082		X				
64	TP08_2-2.1	Sep 29, 2021		Soil	M21-Oc04083		X				
65	TP09_0-0.1	Sep 29, 2021		Soil	M21-Oc04084		X				
66	TP09_2.5-2.6	Sep 29, 2021		Soil	M21-Oc04085		X				
67	TP10_2.0-2.1	Sep 29, 2021		Soil	M21-Oc04086		X				
68	TP11_0-0.1	Sep 29, 2021		Soil	M21-Oc04087		X				
69	TP11_2-2.1	Sep 29, 2021		Soil	M21-Oc04088		X				
70	TP12_2-2.1	Sep 29, 2021		Soil	M21-Oc04089		X				
71	TP13_1-1.1	Sep 29, 2021		Soil	M21-Oc04090		X				
72	TP13_2-2.1	Sep 29, 2021		Soil	M21-Oc04091		X				

Company Name:	JBS & G Australia (NSW) P/L	Order No.:		Received:	Sep 30, 2021 2:24 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	Report #:	829236	Due:	Oct 7, 2021
Project Name:	EDMONSON PARK	Phone:	02 8245 0300	Priority:	5 Day
Project ID:	61681	Fax:		Contact Name:	Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
73	TP14_0-0.1	Sep 29, 2021		Soil	M21-Oc04092		X				
74	TP14_1.7-1.8	Sep 29, 2021		Soil	M21-Oc04093		X				
75	TP15_1-1.1	Sep 29, 2021		Soil	M21-Oc04094		X				
76	TP16_1-1.1	Sep 29, 2021		Soil	M21-Oc04095		X				
77	TP17_1-1.1	Sep 29, 2021		Soil	M21-Oc04096		X				
78	TP18_1-1.1	Sep 29, 2021		Soil	M21-Oc04097		X				
79	TP19_1-1.1	Sep 29, 2021		Soil	M21-Oc04098		X				
80	TP20_1-1.1	Sep 29, 2021		Soil	M21-Oc04099		X				
81	TP21_1.5-1.6	Sep 29, 2021		Soil	M21-Oc04100		X				
82	TP22_1-1.1	Sep 29, 2021		Soil	M21-Oc04101		X				
83	TP23_1-1.1	Sep 29, 2021		Soil	M21-Oc04103		X				

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: EDMONSON PARK
Project ID: 61681

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Phone: 02 8245 0300
Fax:

Received: Sep 30, 2021 2:24 PM
Due: Oct 7, 2021
Priority: 5 Day
Contact Name: Annabel McDermott

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
84	TP24_1-1.1	Sep 29, 2021		Soil	M21-Oc04104		X				
85	TP33_2-2.1	Sep 30, 2021		Soil	M21-Oc04105		X				
86	TP34_1.3-1.4	Sep 30, 2021		Soil	M21-Oc04106		X				
87	QC20210930_AM04	Sep 30, 2021		Soil	M21-Oc04107		X				
88	TP35_0-0.1	Sep 30, 2021		Soil	M21-Oc04108		X				
89	TP25_1-1.1	Sep 30, 2021		Soil	M21-Oc04109		X				
90	TP26_0-0.1	Sep 30, 2021		Soil	M21-Oc04110		X				
91	TP26_1-1.1	Sep 30, 2021		Soil	M21-Oc04111		X				
92	TP26_2-2.1	Sep 30, 2021		Soil	M21-Oc04112		X				
93	TP27_0-0.1	Sep 30, 2021		Soil	M21-Oc04113		X				

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Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
94	TP27_1.5-1.6	Sep 30, 2021		Soil	M21-Oc04114		X				
95	TP28_0-0.1	Sep 30, 2021		Soil	M21-Oc04115		X				
96	TP28_1-1.1	Sep 30, 2021		Soil	M21-Oc04116		X				
97	TP29_0-0.1	Sep 30, 2021		Soil	M21-Oc04117		X				
98	TP29_1-1.1	Sep 30, 2021		Soil	M21-Oc04118		X				
99	TP30_0-0.1	Sep 30, 2021		Soil	M21-Oc04119		X				
100	TP30_1-1.1	Sep 30, 2021		Soil	M21-Oc04120		X				
101	TP30_2-2.1	Sep 30, 2021		Soil	M21-Oc04121		X				
102	TP31_0-0.1	Sep 30, 2021		Soil	M21-Oc04122		X				
103	TP31_1-1.1	Sep 30, 2021		Soil	M21-Oc04123		X				
104	TP31_2-2.1	Sep 30, 2021		Soil	M21-Oc04124		X				

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Sample Detail						Asbestos - WA guidelines	HOLD	Moisture Set	JBS&G Suite 2A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X			X		
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
105	TP31_3-3.1	Sep 30, 2021		Soil	M21-Oc04125		X				
106	TP32_0-0.1	Sep 30, 2021		Soil	M21-Oc04126		X				
107	TP32_1.5-1.6	Sep 30, 2021		Soil	M21-Oc04127		X				
Test Counts						44	61	44	44	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs..

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	91			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
Naphthalene	%	84			70-130	Pass	
TRH C6-C10	%	84			70-130	Pass	
TRH >C10-C16	%	96			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	86			70-130	Pass	
Toluene	%	80			70-130	Pass	
Ethylbenzene	%	82			70-130	Pass	
m&p-Xylenes	%	86			70-130	Pass	
Xylenes - Total*	%	85			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	109			70-130	Pass	
Benz(a)anthracene	%	73			70-130	Pass	
Benzo(a)pyrene	%	91			70-130	Pass	
Benzo(b&j)fluoranthene	%	80			70-130	Pass	
Benzo(g,h,i)perylene	%	90			70-130	Pass	
Benzo(k)fluoranthene	%	107			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chrysene			%	99			70-130	Pass	
Dibenz(a,h)anthracene			%	86			70-130	Pass	
Fluoranthene			%	97			70-130	Pass	
Fluorene			%	99			70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	82			70-130	Pass	
Naphthalene			%	94			70-130	Pass	
Phenanthrene			%	90			70-130	Pass	
Pyrene			%	96			70-130	Pass	
LCS - % Recovery									
Organochlorine Pesticides									
Chlordanes - Total			%	84			70-130	Pass	
4,4'-DDD			%	77			70-130	Pass	
4,4'-DDE			%	77			70-130	Pass	
4,4'-DDT			%	71			70-130	Pass	
a-HCH			%	73			70-130	Pass	
Aldrin			%	83			70-130	Pass	
b-HCH			%	92			70-130	Pass	
d-HCH			%	74			70-130	Pass	
Dieldrin			%	92			70-130	Pass	
Endosulfan I			%	83			70-130	Pass	
Endosulfan II			%	86			70-130	Pass	
Endosulfan sulphate			%	76			70-130	Pass	
Endrin			%	86			70-130	Pass	
Endrin aldehyde			%	81			70-130	Pass	
Endrin ketone			%	85			70-130	Pass	
g-HCH (Lindane)			%	98			70-130	Pass	
Heptachlor			%	77			70-130	Pass	
Heptachlor epoxide			%	85			70-130	Pass	
Hexachlorobenzene			%	78			70-130	Pass	
Methoxychlor			%	85			70-130	Pass	
LCS - % Recovery									
Polychlorinated Biphenyls									
Aroclor-1260			%	87			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	102			80-120	Pass	
Cadmium			%	98			80-120	Pass	
Chromium			%	102			80-120	Pass	
Copper			%	106			80-120	Pass	
Lead			%	106			80-120	Pass	
Mercury			%	107			80-120	Pass	
Nickel			%	102			80-120	Pass	
Zinc			%	103			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	B21-Se60271	NCP	%	88			70-130	Pass	
Aroclor-1260	B21-Se60271	NCP	%	114			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M21-Oc03545	NCP	%	94			70-130	Pass	
4,4'-DDD	M21-Oc03545	NCP	%	103			70-130	Pass	
4,4'-DDE	M21-Oc03545	NCP	%	87			70-130	Pass	
4,4'-DDT	M21-Oc03545	NCP	%	99			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-HCH	M21-Oc03545	NCP	%	92			70-130	Pass	
Aldrin	M21-Oc03545	NCP	%	85			70-130	Pass	
b-HCH	M21-Oc03545	NCP	%	110			70-130	Pass	
d-HCH	M21-Oc03545	NCP	%	117			70-130	Pass	
Dieldrin	M21-Oc03545	NCP	%	105			70-130	Pass	
Endosulfan I	M21-Oc03545	NCP	%	103			70-130	Pass	
Endosulfan II	M21-Oc03545	NCP	%	101			70-130	Pass	
Endosulfan sulphate	M21-Oc03545	NCP	%	92			70-130	Pass	
Endrin	M21-Oc03545	NCP	%	101			70-130	Pass	
Endrin aldehyde	M21-Oc03545	NCP	%	83			70-130	Pass	
Endrin ketone	M21-Oc03545	NCP	%	120			70-130	Pass	
g-HCH (Lindane)	M21-Oc03545	NCP	%	98			70-130	Pass	
Heptachlor	M21-Oc03545	NCP	%	88			70-130	Pass	
Heptachlor epoxide	M21-Oc03545	NCP	%	113			70-130	Pass	
Hexachlorobenzene	M21-Oc03545	NCP	%	107			70-130	Pass	
Methoxychlor	M21-Oc03545	NCP	%	78			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-Oc04028	CP	%	71			70-130	Pass	
Naphthalene	M21-Oc04028	CP	%	75			70-130	Pass	
TRH C6-C10	M21-Oc04028	CP	%	74			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M21-Oc04028	CP	%	84			70-130	Pass	
Toluene	M21-Oc04028	CP	%	80			70-130	Pass	
Ethylbenzene	M21-Oc04028	CP	%	82			70-130	Pass	
m&p-Xylenes	M21-Oc04028	CP	%	74			70-130	Pass	
o-Xylene	M21-Oc04028	CP	%	76			70-130	Pass	
Xylenes - Total*	M21-Oc04028	CP	%	75			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M21-Oc05021	NCP	%	104			75-125	Pass	
Cadmium	M21-Oc05021	NCP	%	104			75-125	Pass	
Chromium	M21-Oc05021	NCP	%	107			75-125	Pass	
Copper	M21-Oc05021	NCP	%	110			75-125	Pass	
Lead	M21-Oc05021	NCP	%	110			75-125	Pass	
Mercury	M21-Oc05021	NCP	%	115			75-125	Pass	
Nickel	M21-Oc05021	NCP	%	106			75-125	Pass	
Zinc	M21-Oc05021	NCP	%	104			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	M21-Oc04051	CP	%	110			70-130	Pass	
TRH >C10-C16	M21-Oc04051	CP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-Oc04059	CP	%	81			70-130	Pass	
Naphthalene	M21-Oc04059	CP	%	80			70-130	Pass	
TRH C6-C10	M21-Oc04059	CP	%	72			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M21-Oc04059	CP	%	83			70-130	Pass	
Toluene	M21-Oc04059	CP	%	94			70-130	Pass	
Ethylbenzene	M21-Oc04059	CP	%	78			70-130	Pass	
m&p-Xylenes	M21-Oc04059	CP	%	84			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	M21-Oc04059	CP	%	87			70-130	Pass	
Xylenes - Total*	M21-Oc04059	CP	%	85			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M21-Oc04063	CP	%	88			70-130	Pass	
Acenaphthylene	M21-Oc04063	CP	%	101			70-130	Pass	
Anthracene	M21-Oc04063	CP	%	84			70-130	Pass	
Benz(a)anthracene	M21-Oc04063	CP	%	118			70-130	Pass	
Benzo(a)pyrene	M21-Oc04063	CP	%	99			70-130	Pass	
Benzo(b&j)fluoranthene	M21-Oc04063	CP	%	118			70-130	Pass	
Benzo(g,h,i)perylene	M21-Oc04063	CP	%	90			70-130	Pass	
Benzo(k)fluoranthene	M21-Oc04063	CP	%	119			70-130	Pass	
Chrysene	M21-Oc04063	CP	%	85			70-130	Pass	
Dibenz(a,h)anthracene	M21-Oc04063	CP	%	126			70-130	Pass	
Fluoranthene	M21-Oc04063	CP	%	119			70-130	Pass	
Fluorene	M21-Oc04063	CP	%	95			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M21-Oc04063	CP	%	109			70-130	Pass	
Naphthalene	M21-Oc04063	CP	%	98			70-130	Pass	
Phenanthrene	M21-Oc04063	CP	%	108			70-130	Pass	
Pyrene	M21-Oc04063	CP	%	80			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Heptachlor epoxide	M21-Oc03592	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-Oc04022	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M21-Oc04022	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M21-Oc04022	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-Oc04022	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M21-Oc04022	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M21-Oc04022	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M21-Oc04022	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M21-Oc04022	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M21-Oc04022	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M21-Oc04024	CP	%	13	12	11	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M21-Oc05021	NCP	mg/kg	2.6	2.6	1.0	30%	Pass	
Cadmium	M21-Oc05021	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M21-Oc05021	NCP	mg/kg	11	11	<1	30%	Pass	
Copper	M21-Oc05021	NCP	mg/kg	7.4	7.3	2.0	30%	Pass	
Lead	M21-Oc05021	NCP	mg/kg	17	17	1.0	30%	Pass	
Mercury	M21-Oc05021	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M21-Oc05021	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	M21-Oc05021	NCP	mg/kg	50	57	12	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-Oc04032	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M21-Oc04032	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M21-Oc04032	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate								
BTX				Result 1	Result 2	RPD		
Benzene	M21-Oc04032	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M21-Oc04032	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M21-Oc04032	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M21-Oc04032	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M21-Oc04032	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total*	M21-Oc04032	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M21-Oc04034	CP	%	14	15	5.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M21-Oc04044	CP	%	17	17	2.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M21-Oc04049	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M21-Oc04049	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M21-Oc04049	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M21-Oc04049	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M21-Oc04049	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M21-Oc04049	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Endrin ketone	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M21-Oc04049	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M21-Oc04049	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M21-Oc04049	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M21-Oc04055	CP	%	17	16	6.0	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Ursula Long	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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RE: Eurofins Test Results - Report 829236 : Site EDMONSON PARK (61681)

Michelle Delandro <MDelandro@jbsg.com.au>

Mon 11/10/2021 9:20 AM

To: Ursula Long <UrsulaLong@eurofins.com>; Annabel McDermott <amcdermott@jbsg.com.au>;
 #AU_CAU001_EnviroSampleVic <EnviroSampleVic@eurofins.com>

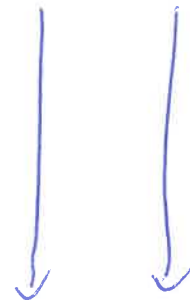
EXTERNAL EMAIL*

Hi Ursula,

Can you please arrange to have the following samples analysed for JB2A (asbestos WA guidelines) on a 3 day
 TAT?

90	TP26_0-0.1	Sep 30, 2021		Soil	M21-Oc04110
93	TP27_0-0.1	Sep 30, 2021		Soil	M21-Oc04113
95	TP28_0-0.1	Sep 30, 2021		Soil	M21-Oc04115
97	TP29_0-0.1	Sep 30, 2021		Soil	M21-Oc04117
99	TP30_0-0.1	Sep 30, 2021		Soil	M21-Oc04119
100	TP30_1-1.1	Sep 30, 2021		Soil	M21-Oc04120
103	TP31_1-1.1	Sep 30, 2021		Soil	M21-Oc04123
104	TP31_2-2.1	Sep 30, 2021		Soil	M21-Oc04124
106	TP32_0-0.1	Sep 30, 2021		Soil	M21-Oc04126

-HT600 - A201



Catherine EF

11/10 9.20a

830990

Regards,

Michelle



Michelle Delandro | Senior Project Manager | JBS&G

Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Newcastle |

Darwin | Wollongong | Bunbury | Hobart

Level 1, 50 Margaret Street, Sydney NSW 2000

T: 02 8245 0300 | M: 0417 287 561 | E: mldelandro@jbsg.com.au | W: www.jbsg.com.au

Contaminated Land | Groundwater Remediation | Approvals and Assessments | Auditing and Compliance | Hygiene
 and Hazardous Materials | Due Diligence and Liability | Fire Management Planning | Stakeholder and Risk
 Management

JBS&G acknowledges the Traditional Owners and custodians on the land we walk, work and live. We pay respect to their cultures, Elders past and
 present, and in the spirit of reconciliation, we commit to working together for our shared future.

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From: UrsulaLong@eurofins.com <UrsulaLong@eurofins.com>**Sent:** Friday, 8 October 2021 6:55 PM**To:** Annabel McDermott <amcdermott@jbsg.com.au>**Cc:** Michelle Delandro <MDelandro@jbsg.com.au>**Subject:** Eurofins Test Results - Report 829236 : Site EDMONSON PARK (61681)

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Please find attached updated draft results for your project in the subject header.

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IANZ # 1290

Sample Receipt Advice

Company name: JBS & G Australia (NSW) P/L
Contact name: Michelle Delandro
Project name: EDMONSON PARK
Project ID: 61681
Turnaround time: 3 Day
Date/Time received: Oct 11, 2021 9:20 AM
Eurofins reference: 830990

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 10.8 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Michelle Delandro - MDelandro@jbsg.com.au.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited

Accreditation Number 1261

Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: Michelle Delandro
Report 830990-AID
Project Name EDMONSON PARK
Project ID 61681
Received Date Oct 11, 2021
Date Reported Oct 14, 2021

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name EDMONSON PARK
Project ID 61681
Date Sampled Sep 30, 2021
Report 830990-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP26_0-0.1	21-Oc19561	Sep 30, 2021	Approximate Sample 629g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP27_0-0.1	21-Oc19562	Sep 30, 2021	Approximate Sample 662g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP28_0-0.1	21-Oc19563	Sep 30, 2021	Approximate Sample 538g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP29_0-0.1	21-Oc19564	Sep 30, 2021	Approximate Sample 635g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP30_0-0.1	21-Oc19565	Sep 30, 2021	Approximate Sample 657g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP30_1-1.1	21-Oc19566	Sep 30, 2021	Approximate Sample 681g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP31_1-1.1	21-Oc19567	Sep 30, 2021	Approximate Sample 714g Sample consisted of: Brown fine-grained clayey soil, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP31_2-2.1	21-Oc19568	Sep 30, 2021	Approximate Sample 625g Sample consisted of: Brown fine-grained clayey soil, brick, ceramic material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP32_0-0.1	21-Oc19569	Sep 30, 2021	Approximate Sample 634g Sample consisted of: Brown fine-grained clayey soil, brick, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Oct 11, 2021	Indefinite

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: EDMONSON PARK
Project ID: 61681

Order No.:
Report #: 830990
Phone: 02 8245 0300
Fax:

Received: Oct 11, 2021 9:20 AM
Due: Oct 14, 2021
Priority: 3 Day
Contact Name: Michelle Delandro

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - W/A guidelines	Moisture Set	JBS&G Suite 2
Melbourne Laboratory - NATA # 1261 Site # 1254							X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X		
Brisbane Laboratory - NATA # 1261 Site # 20794								
Mayfield Laboratory - NATA # 1261 Site # 25079								
Perth Laboratory - NATA # 2377 Site # 2370								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	TP26_0-0.1	Sep 30, 2021		Soil	M21-Oc19561	X	X	X
2	TP27_0-0.1	Sep 30, 2021		Soil	M21-Oc19562	X	X	X
3	TP28_0-0.1	Sep 30, 2021		Soil	M21-Oc19563	X	X	X
4	TP29_0-0.1	Sep 30, 2021		Soil	M21-Oc19564	X	X	X
5	TP30_0-0.1	Sep 30, 2021		Soil	M21-Oc19565	X	X	X
6	TP30_1-1.1	Sep 30, 2021		Soil	M21-Oc19566	X	X	X
7	TP31_1-1.1	Sep 30, 2021		Soil	M21-Oc19567	X	X	X
8	TP31_2-2.1	Sep 30, 2021		Soil	M21-Oc19568	X	X	X
9	TP32_0-0.1	Sep 30, 2021		Soil	M21-Oc19569	X	X	X

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: EDMONSON PARK
Project ID: 61681

Order No.:
Report #: 830990
Phone: 02 8245 0300
Fax:

Received: Oct 11, 2021 9:20 AM
Due: Oct 14, 2021
Priority: 3 Day
Contact Name: Michelle Delandro

Eurofins Analytical Services Manager : Ursula Long

Sample Detail			
	Asbestos - WA guidelines	Moisture Set	JBS&G Suite 2
Melbourne Laboratory - NATA # 1261 Site # 1254		X	X
Sydney Laboratory - NATA # 1261 Site # 18217	X		
Brisbane Laboratory - NATA # 1261 Site # 20794			
Mayfield Laboratory - NATA # 1261 Site # 25079			
Perth Laboratory - NATA # 2377 Site # 2370			
External Laboratory			
Test Counts	9	9	9

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/ld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration:
$$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$$

Asbestos Content (as asbestos):
$$\% w/w = \frac{(m \times P_A)}{M}$$

Weighted Average (of asbestos):
$$\%_{WA} = \frac{\sum (m \times P_A) \times x}{x}$$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (PA)</i> .
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% _{WA}).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias Senior Analyst-Asbestos (NSW)

Authorised by:

Sayed Abu Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: **Michelle Delandro**

Report **830990-S**
Project name **EDMONSON PARK**
Project ID **61681**
Received Date **Oct 11, 2021**

Client Sample ID			TP26_0-0.1	TP27_0-0.1	TP28_0-0.1	TP29_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc19561	M21-Oc19562	M21-Oc19563	M21-Oc19564
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	69	115	88	57
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP26_0-0.1	TP27_0-0.1	TP28_0-0.1	TP29_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc19561	M21-Oc19562	M21-Oc19563	M21-Oc19564
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	71	74	77	76
p-Terphenyl-d14 (surr.)	1	%	121	118	121	118
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	76	141	141	130
Tetrachloro-m-xylene (surr.)	1	%	84	86	93	89
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	76	141	141	130
Tetrachloro-m-xylene (surr.)	1	%	84	86	93	89

Client Sample ID			TP26_0-0.1	TP27_0-0.1	TP28_0-0.1	TP29_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc19561	M21-Oc19562	M21-Oc19563	M21-Oc19564
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	14	7.1	5.1	8.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	27	12	9.2	14
Copper	5	mg/kg	21	33	69	33
Lead	5	mg/kg	26	19	22	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.6	13	16	5.9
Zinc	5	mg/kg	36	58	91	41
% Moisture	1	%	18	12	13	17

Client Sample ID			TP30_0-0.1	TP30_1-1.1	TP31_1-1.1	TP31_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc19565	M21-Oc19566	M21-Oc19567	M21-Oc19568
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	127	146	87	100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP30_0-0.1	TP30_1-1.1	TP31_1-1.1	TP31_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc19565	M21-Oc19566	M21-Oc19567	M21-Oc19568
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	75	83	77	106
p-Terphenyl-d14 (surr.)	1	%	109	117	110	123
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	124	129	109	109
Tetrachloro-m-xylene (surr.)	1	%	87	92	88	117
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP30_0-0.1	TP30_1-1.1	TP31_1-1.1	TP31_2-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M21-Oc19565	M21-Oc19566	M21-Oc19567	M21-Oc19568
Date Sampled			Sep 30, 2021	Sep 30, 2021	Sep 30, 2021	Sep 30, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	124	129	109	109
Tetrachloro-m-xylene (surr.)	1	%	87	92	88	117
Heavy Metals						
Arsenic	2	mg/kg	8.4	10	8.0	8.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	22	18	16
Copper	5	mg/kg	19	23	20	24
Lead	5	mg/kg	26	25	26	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.1	10	9.1	8.6
Zinc	5	mg/kg	53	58	56	47
% Moisture	1	%	11	13	11	13

Client Sample ID			TP32_0-0.1
Sample Matrix			Soil
Eurofins Sample No.			M21-Oc19569
Date Sampled			Sep 30, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	148
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5

Client Sample ID			TP32_0-0.1
Sample Matrix			Soil
Eurofins Sample No.			M21-Oc19569
Date Sampled			Sep 30, 2021
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	102
p-Terphenyl-d14 (surr.)	1	%	120
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05
α-HCH	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
β-HCH	0.05	mg/kg	< 0.05
δ-HCH	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
γ-HCH (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	0.5	mg/kg	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchloroendate (surr.)	1	%	108
Tetrachloro-m-xylene (surr.)	1	%	124

Client Sample ID			TP32_0-0.1
Sample Matrix			Soil
Eurofins Sample No.			M21-Oc19569
Date Sampled			Sep 30, 2021
Test/Reference	LOR	Unit	
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchloroendate (surr.)	1	%	108
Tetrachloro-m-xylene (surr.)	1	%	124
Heavy Metals			
Arsenic	2	mg/kg	7.1
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	14
Copper	5	mg/kg	25
Lead	5	mg/kg	22
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	8.7
Zinc	5	mg/kg	62
% Moisture	1	%	14

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
JBS&G Suite 2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Oct 11, 2021	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Metals M8	Melbourne	Oct 11, 2021	28 Days
- Method:			
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Oct 11, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: EDMONSON PARK
Project ID: 61681

Order No.:
Report #: 830990
Phone: 02 8245 0300
Fax:

Received: Oct 11, 2021 9:20 AM
Due: Oct 14, 2021
Priority: 3 Day
Contact Name: Michelle Delandro

Eurofins Analytical Services Manager : Ursula Long

Sample Detail

Asbestos - W/A guidelines

Moisture Set

JBS&G Suite 2

Melbourne Laboratory - NATA # 1261 Site # 1254

Sydney Laboratory - NATA # 1261 Site # 18217

Brisbane Laboratory - NATA # 1261 Site # 20794

Mayfield Laboratory - NATA # 1261 Site # 25079

Perth Laboratory - NATA # 2377 Site # 2370

External Laboratory

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	TP26_0-0.1	Sep 30, 2021		Soil	M21-Oc19561	X	X	X
2	TP27_0-0.1	Sep 30, 2021		Soil	M21-Oc19562	X	X	X
3	TP28_0-0.1	Sep 30, 2021		Soil	M21-Oc19563	X	X	X
4	TP29_0-0.1	Sep 30, 2021		Soil	M21-Oc19564	X	X	X
5	TP30_0-0.1	Sep 30, 2021		Soil	M21-Oc19565	X	X	X
6	TP30_1-1.1	Sep 30, 2021		Soil	M21-Oc19566	X	X	X
7	TP31_1-1.1	Sep 30, 2021		Soil	M21-Oc19567	X	X	X
8	TP31_2-2.1	Sep 30, 2021		Soil	M21-Oc19568	X	X	X
9	TP32_0-0.1	Sep 30, 2021		Soil	M21-Oc19569	X	X	X

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: EDMONSON PARK
Project ID: 61681

Order No.:
Report #: 830990
Phone: 02 8245 0300
Fax:

Received: Oct 11, 2021 9:20 AM
Due: Oct 14, 2021
Priority: 3 Day
Contact Name: Michelle Delandro

Eurofins Analytical Services Manager : Ursula Long

Sample Detail			
	Asbestos - WA guidelines	Moisture Set	JBS&G Suite 2
Melbourne Laboratory - NATA # 1261 Site # 1254		X	X
Sydney Laboratory - NATA # 1261 Site # 18217	X		
Brisbane Laboratory - NATA # 1261 Site # 20794			
Mayfield Laboratory - NATA # 1261 Site # 25079			
Perth Laboratory - NATA # 2377 Site # 2370			
External Laboratory			
Test Counts	9	9	9

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs..

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	115			70-130	Pass	
TRH C10-C14	%	112			70-130	Pass	
Naphthalene	%	114			70-130	Pass	
TRH C6-C10	%	106			70-130	Pass	
TRH >C10-C16	%	112			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	105			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	116			70-130	Pass	
m&p-Xylenes	%	125			70-130	Pass	
Xylenes - Total*	%	116			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	82			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	
Anthracene	%	89			70-130	Pass	
Benz(a)anthracene	%	74			70-130	Pass	
Benzo(a)pyrene	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	%	102			70-130	Pass	
Benzo(g,h,i)perylene	%	95			70-130	Pass	
Benzo(k)fluoranthene	%	123			70-130	Pass	
Chrysene	%	105			70-130	Pass	
Dibenz(a,h)anthracene	%	102			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoranthene			%	105			70-130	Pass	
Fluorene			%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene			%	81			70-130	Pass	
Naphthalene			%	98			70-130	Pass	
Phenanthrene			%	79			70-130	Pass	
Pyrene			%	71			70-130	Pass	
LCS - % Recovery									
Organochlorine Pesticides									
Chlordanes - Total			%	114			70-130	Pass	
4.4'-DDD			%	88			70-130	Pass	
4.4'-DDE			%	95			70-130	Pass	
4.4'-DDT			%	99			70-130	Pass	
a-HCH			%	91			70-130	Pass	
Aldrin			%	98			70-130	Pass	
b-HCH			%	82			70-130	Pass	
d-HCH			%	102			70-130	Pass	
Dieldrin			%	86			70-130	Pass	
Endosulfan I			%	96			70-130	Pass	
Endosulfan II			%	98			70-130	Pass	
Endosulfan sulphate			%	76			70-130	Pass	
Endrin			%	96			70-130	Pass	
Endrin aldehyde			%	90			70-130	Pass	
Endrin ketone			%	78			70-130	Pass	
g-HCH (Lindane)			%	90			70-130	Pass	
Heptachlor			%	86			70-130	Pass	
Heptachlor epoxide			%	112			70-130	Pass	
Hexachlorobenzene			%	72			70-130	Pass	
Methoxychlor			%	115			70-130	Pass	
LCS - % Recovery									
Polychlorinated Biphenyls									
Aroclor-1260			%	81			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	83			80-120	Pass	
Cadmium			%	98			80-120	Pass	
Chromium			%	85			80-120	Pass	
Copper			%	87			80-120	Pass	
Lead			%	86			80-120	Pass	
Mercury			%	105			80-120	Pass	
Nickel			%	83			80-120	Pass	
Zinc			%	83			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	M21-Oc18215	NCP	%	111			70-130	Pass	
TRH >C10-C16	M21-Oc18215	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M21-Oc22122	NCP	%	99			70-130	Pass	
4.4'-DDD	M21-Oc22122	NCP	%	98			70-130	Pass	
4.4'-DDE	M21-Oc22122	NCP	%	87			70-130	Pass	
4.4'-DDT	M21-Oc22122	NCP	%	99			70-130	Pass	
a-HCH	M21-Oc22122	NCP	%	105			70-130	Pass	
Aldrin	M21-Oc22122	NCP	%	90			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-HCH	M21-Oc22122	NCP	%	100			70-130	Pass	
d-HCH	M21-Oc22122	NCP	%	116			70-130	Pass	
Dieldrin	M21-Oc22122	NCP	%	117			70-130	Pass	
Endosulfan I	M21-Oc22122	NCP	%	88			70-130	Pass	
Endosulfan II	M21-Oc22122	NCP	%	100			70-130	Pass	
Endosulfan sulphate	M21-Oc22122	NCP	%	94			70-130	Pass	
Endrin	M21-Oc22122	NCP	%	103			70-130	Pass	
Endrin aldehyde	M21-Oc22122	NCP	%	109			70-130	Pass	
Endrin ketone	M21-Oc22122	NCP	%	107			70-130	Pass	
g-HCH (Lindane)	M21-Oc22122	NCP	%	107			70-130	Pass	
Heptachlor	M21-Oc22122	NCP	%	93			70-130	Pass	
Heptachlor epoxide	M21-Oc22122	NCP	%	102			70-130	Pass	
Hexachlorobenzene	M21-Oc22122	NCP	%	88			70-130	Pass	
Methoxychlor	M21-Oc22122	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B21-Oc10195	NCP	%	118			75-125	Pass	
Cadmium	B21-Oc10195	NCP	%	118			75-125	Pass	
Chromium	B21-Oc10195	NCP	%	114			75-125	Pass	
Copper	B21-Oc10195	NCP	%	119			75-125	Pass	
Lead	B21-Oc10195	NCP	%	118			75-125	Pass	
Mercury	B21-Oc10195	NCP	%	114			75-125	Pass	
Nickel	B21-Oc10195	NCP	%	120			75-125	Pass	
Zinc	B21-Oc10195	NCP	%	110			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-Oc19562	CP	%	90			70-130	Pass	
Naphthalene	M21-Oc19562	CP	%	117			70-130	Pass	
TRH C6-C10	M21-Oc19562	CP	%	79			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M21-Oc19562	CP	%	76			70-130	Pass	
Toluene	M21-Oc19562	CP	%	86			70-130	Pass	
Ethylbenzene	M21-Oc19562	CP	%	78			70-130	Pass	
m&p-Xylenes	M21-Oc19562	CP	%	90			70-130	Pass	
o-Xylene	M21-Oc19562	CP	%	73			70-130	Pass	
Xylenes - Total*	M21-Oc19562	CP	%	84			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M21-Oc19569	CP	%	110			70-130	Pass	
Aroclor-1260	M21-Oc19569	CP	%	116			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-Oc19561	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M21-Oc19561	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M21-Oc19561	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-Oc19561	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M21-Oc19561	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M21-Oc19561	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M21-Oc19561	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M21-Oc19561	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M21-Oc19561	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M21-Oc15180	NCP	mg/kg	2.9	2.6	13	30%	Pass
Cadmium	M21-Oc15180	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M21-Oc15180	NCP	mg/kg	71	70	2.0	30%	Pass
Copper	M21-Oc15180	NCP	mg/kg	19	18	5.0	30%	Pass
Lead	M21-Oc15180	NCP	mg/kg	16	15	6.0	30%	Pass
Mercury	M21-Oc15180	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	M21-Oc15180	NCP	mg/kg	67	67	<1	30%	Pass
Zinc	M21-Oc15180	NCP	mg/kg	30	29	4.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M21-Oc19567	CP	%	11	11	2.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M21-Oc19568	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M21-Oc19568	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M21-Oc19568	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M21-Oc19568	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M21-Oc19568	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M21-Oc19568	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
g-HCH (Lindane)	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M21-Oc19568	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M21-Oc19568	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M21-Oc19568	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Ursula Long	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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Document Status

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