

Published on DES Disclosure Log
RTI Act 2009

Dunland Property Pty Ltd
Asbestos in Soil (ASBINS) Assessment

60 Bridge Street, Woolloowin, QLD

18 June 2021

60829_137,718_Rev0 (FINAL)

JBS&G

Table of Contents

1.	Introduction and Background	5
1.1	Introduction	5
1.2	Objectives	5
1.3	Scope of Works	6
2.	Summary of Site Conditions	7
2.1	Site Details	7
2.2	Current Site Condition	7
2.3	Surrounding Land Uses	7
2.4	Previous Investigations	8
2.4.1	Butler Partners CLID	8
2.4.2	SAES Asbestos Fibre Identification Report and Butler Partners Site Inspection	8
2.4.3	EP Risk Asbestos in Soil Assessment	9
2.5	Summary of Identified Asbestos Contamination Issues	9
3.	Methodology	11
3.1	Field Personnel	11
3.2	Grid-Based Test Pitting	11
3.2.1	General	11
3.2.2	Sampling for ACM and FA	11
3.2.3	Sampling for AF	11
3.3	Stockpile Sampling	11
4.	Adopted Assessment Criteria	13
4.1	General	13
4.2	Fibrous Asbestos and Asbestos Fines	13
4.3	Asbestos Containing Material	13
5.	Data Reliability	14
5.1	General	14
5.2	Laboratory Selection	14
5.3	Quality Control	14
5.4	Sample Collection and Documentation	14
5.4.1	Sample Collection	14
5.4.2	Holding Times	15
5.4.3	Sample Documentation	15
5.5	Laboratory Analysis	15
5.6	Data Reliability Summary	15

6.	Results.....	16
6.1	Site Observations.....	16
6.2	ACM Sampling Results.....	16
6.3	AF Sampling Results.....	17
6.4	Stockpile Sampling Results.....	17
7.	Discussion	19
7.1	General	19
7.2	Ash	19
7.3	North-western Area 1.....	20
7.4	Central-western Area 2	20
7.5	Central-eastern Area 3	20
7.6	Southern Area 4.....	21
8.	Conceptual Site Model	22
9.	Conclusions and Recommendations.....	24
9.1	Conclusions.....	24
9.2	Recommendations.....	24
10.	Limitations	25

List of Tables

Table 2.1: Summary of Site Details	7
Table 2.2: Surrounding Land Use	8
Table 3.1: ASC NEPM Minimum Number of Samples Recommended for Initial Assessment of Stockpiles.....	12
Table 5.1 : Summary of Data Quality Indicators	14
Table 6.1: Bonded ACM Concentrations.....	16
Table 6.2: Stockpile Classification	17
Table 8.1: Conceptual Site Model	22

List of Figures

Figure 1 – Site Location Plan
Figure 2 – Soil Investigation Locations
Figure 3 – Stockpile Investigaiton Locations
Figure 4 – Butler (2019) Investigation Locations
Figure 5 – Butler (2019) Remediation Areas
Figure 6 – ACM Impacted Fill Material
Figure 7 – Ash Locations

Appendices

- Appendix A DES EMR Removal Notification
- Appendix B Photograph Log
- Appendix C Laboratory Documentation
- Appendix D Test Pit Logs

Published on DES Disclosure Log
RTI Act 2009

1. Introduction and Background

1.1 Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Dunland Property Pty Ltd (the Client) to undertake an Asbestos in Soil (ASBINS) Assessment for the site located at 60 Bridge Street, Woolloowin, QLD (the site), associated with earthworks proposed for Stage 1 and 4 of the proposed development (development envelope). The site location and development envelope are shown on **Figure 1**.

The following information was provided by the Client in relation to the site:

- The site is legally defined as Lot 1 SP291387 and is approximately 3.69 ha in area, although the development envelope is approximately 2.51 ha;
- The site formerly housed the Holy Cross Laundry, which was owned and operated by the Sisters of Mercy. Historical structures including underground services (now removed as part of preparatory work for site development) were known to contain asbestos containing material (ACM);
- The site has been remediated over a number of years including the removal of underground tanks and contaminated soil (impacted with ACM, metals and hydrocarbons). It is understood that demolition works associated with the former site structures has occurred over many years (since at least 1946¹), by a number of demolition contractors. All structures within the development envelope (other than those remaining onsite) were understood to have been removed prior to the remediation works undertaken on the site;
- The site was removed from the Environmental Management Register (EMR) on 3 October 2019 (**Appendix A**), following completion of a Contaminated Land Investigation Document (CLID) prepared by Butler Partners (Butler)² and the Auditor Summary Certification Report prepared by Mach1 Environmental Pty Ltd which was accepted by the Department of Environment and Science (DES);
- The site is currently being redeveloped for residential purposes;
- Preliminary earthworks by civil contractor Golding Contractors Pty Ltd (Golding) identified the presence of unexpected finds within the development envelope, including suspected potential ACM; and
- Consultants were engaged by the client and others to undertake a preliminary assessment to confirm the presence/absence of ACM. These assessments confirmed the presence of asbestos contamination, but did not confirm the extents.

A summary of completed investigations and findings is included in **Section 2.4**. The client has requested that JBS&G provides advice in relation to the points above (see **Section 1.3**).

1.2 Objectives

The objective of this investigation is to:

- Undertake an ASBINS Assessment to assess the nature and extent of remaining asbestos impacts in accordance with guidance made or approved by the Department of Environment and Science (DES), inclusive of the Queensland Auditor Handbook for Contaminated Land and the National Environmental Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (the ASC NEPM); and

¹ Refer Section 2.1 *Heritage Reports* of Butler (2019), which states the original 1916 boiler house was demolished in 1946

² Butler (2019), *Site Investigation, Remediation and Validation Report, Lot 1 on SP291387*, 22 August 2019 (Version 1)

- Assess whether the nature and extent of asbestos contamination warrants notification to DES.

This assessment and subsequent report has not considered other contaminants of concern identified by Butler, nor has it consider portions of the site outside the development envelope. Additional work may be required to address these data gaps and the current contamination status of groundwater, in order to adequately assess the suitability of the site from a contamination perspective.

This document does not represent a Contaminated Land Investigation Document (CLID) which is intended to be certified by a Contaminated Land Auditor (CLA) and submitted to DES as part of managing land on the Contaminated Land Register (CLR) or Environmental Management Register (EMR).

1.3 Scope of Works

The following scope of works has been completed in order to meet the project objectives:

- Advancement of 70 test pits across the site to facilitate:
 - The identification and quantification of ACM in soil; and
 - Collection of soil samples for laboratory analysis of asbestos fines (AF) and fibrous asbestos (FA).
- Classification of stockpiles previously generated on site for the presence of asbestos materials to inform potential end-uses including on-site reuse or disposal to an off-site waste disposal facility;
- Comparison of field and laboratory data against relevant assessment criteria, from a contamination perspective, to assess future land use suitability; and
- Preparation of this report.

2. Summary of Site Conditions

2.1 Site Details

The site details are summarised in **Table 2.1** and described in detail in the following sections.

Table 2.1: Summary of Site Details

Item	Detail
Site Address	60 Bridge Street, Woolloowin, QLD
Lot / Plan ³	Lot 1 on SP291387
Easting/Northing ⁴ (site centre)	E: 504078.08/ N: 6966659.98 Coordinate System: GDA2020 MGA Zone 56
Local Government Authority	Brisbane City Council
Site Zoning ⁵	Community facilities (Major health care & Education purposes)
Area of Site	Entire site: 3.69 ha Development Envelope: 2.51 ha

2.2 Current Site Condition

The following presents a summary of site observations made by JBS&G on 6 May 2021. Photographic logs are provided within **Appendix B**:

- The development envelope was completely cleared of structures, with the majority of vegetation stripped to facilitate topsoil removal in preparation for bulk earthworks;
- Topsoil was stockpiled in a series of windrows within the south eastern portion of the site. Intermixed topsoil and fill material was also stockpiled in a number of locations, while recently placed fill material was located within the northern portion of the site. In addition, clean concrete/asphalt and 7/10mm drainage aggregate stockpiles were located within the very southern and north western portion of the site. Stockpiles present at the time of the assessment are presented in **Figure 3**;
- The southern portion of the site was elevated above the northern portion, with a moderate slope within the central portion grading down to the north;
- The site was entirely fenced with either temporary fencing (southern boundary), wooden hoarding (eastern and northern boundary) or permanent chain link fence (western boundary). It is assumed that the site shall remain fenced and inaccessible to the public for the immediate future, pending appropriate asbestos remediation / removal works.

2.3 Surrounding Land Uses

Table 2.2 presents a summary of surrounding land use observations at the time of the site inspection. In brief, the surrounding land uses indicate no evidence of offsite asbestos contamination sources.

³ Queensland Globe, accessed 23 April 2021

⁴ Queensland Globe, accessed 23 April 2021

⁵ Brisbane City Plan 2014

Table 2.2: Surrounding Land Use

Location	Land Use	Detail
North	Residential	The site borders Chalk Street to the north, followed by low density residential houses.
East	Transport corridor / residential	The site borders Bridge Street to the east, followed by the North Coast Railway Line. Beyond the railway line, land uses include
South	Residential	The site borders Merehay Street to the south, followed by low density residential houses.
West	Religious / educational	The site borders the Holy Cross Catholic Primary School to the south west and the Holy Cross Catholic Parish to the north west. Further to the west is Morris Street followed by low density residential houses.

2.4 Previous Investigations

2.4.1 Butler Partners CLID

Butler completed a detailed site investigation which formed the CLID which supported removal of the site from the EMR. The following pertinent information was obtained from the report:

- ACM and ACM pipe were understood to have historically been present within the former site structures and soil profile;
- In excess of 70 soil investigation locations were installed as part of the intrusive investigation phase, including at least 38 soil bores and at least 33 test pits across the development area and wider lot extent;
- Bonded chrysotile, amosite and crocidolite asbestos was reported at surface and within fill material at numerous investigation locations, typically co-located with a defined ash layer, although examples were observed where ACM was observed within fill layers that were not observed to contain ash;
- Asbestos fibres (AF) were observed at numerous locations, including at TP109, TP200-2, TP216, GRAB01, GRAB02, GRAB11 and validation sample WVA6-N1.5;
- Butler stated that asbestos impacted soil appeared to be predominantly limited to the brick building footprints. Further discussion relating to this statement is provided within **Section 6.2** and **Section 6.3**;
- Subsequent to the investigation, soil identified during the remediation to be impacted with contaminants of potential concern (including ACM) was excavated, removed and transported as asbestos impacted soil to Cleanaway's New Chum facility under a soil disposal permit. The Butler investigation locations are shown on **Figure 4** (taken directly from Butler [2019]);
- Remedial excavations were reported to have been validated by Butler to confirm that unacceptable material (including ACM) had been appropriately remediated. The final remedial excavation extents are shown on **Figure 5** (taken directly from Butler [2019]); and
- The site was subsequently removed from the EMR.

JBS&G notes that Butler (2019) references the potential for historical uncontrolled general filling across the site. While delineated via infield visual and laboratory validation, it is possible that the ash layer extends beyond the limit of investigation and remediation by Butler. Further, it is possible that ACM material exists within these respective fill horizons, if still present onsite.

2.4.2 SAES Asbestos Fibre Identification Report and Butler Partners Site Inspection

Safe Air Environmental Services (SAES) completed laboratory analysis of five independent samples of ACM collected on 23 February 2021 on behalf of Rosenlund Contractors Pty Ltd (demolition

contractor). No map was provided to identify the sampling locations, however descriptions provided within the laboratory report (J06227.01) confirm the presence of ACM at numerous locations, including the windrows and soil stockpiles onsite.

Butler completed a site inspection on 26 February 2021 following confirmation of the presence of ACM onsite by SAES, at the request of Golding. Based on the observations made during the site inspection, Butler indicated the samples came from the three windrows located in the south western portion of the site⁶.

2.4.3 EP Risk Asbestos in Soil Assessment

EP Risk Management Pty Ltd (EP Risk) undertook an asbestos in soil assessment⁷ of the southern portion of the site. It is noted that field works were undertaken by HazSure Consultants.

The following presents pertinent information from the assessment:

- In excess of 100 pieces of suspected ACM (approximately 5cm x 5cm) were observed during the initial site walk over;
- A total of 25 test pits were installed within the southern and central portions of the site;
- Bonded asbestos was identified at 16 locations, either at the surface or within fill located at varying depths within the soil profile. Maximum fill depth was 1 m reported at investigation location TP02. ACM was identified within fill material exceeding 0.1 m in depth at investigation location TP02, TP08, TP09, TP10 and TP12; and
- AF were reported in surface soil at TP02 above the ASC NEPM criteria of 0.001% w/w. No other AF or FA was reported within soil samples collected.

2.5 Summary of Identified Asbestos Contamination Issues

Conceptually, the information summarised in the previous sections indicates that fill material onsite may contain friable and/or non-friable asbestos.

Friable asbestos is defined by WHSQ 2021a as being “...material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos”. Further to this, ASC NEPM classifies friable asbestos as being asbestos forms that are fibrous in nature, such as insulation material and severely weathered ACM (FA), and asbestos fines, such as loose asbestos fibres, asbestos fibre bundles and ACM fragments that pass through a 7mm x 7mm sieve (AF).

Non-friable ACM is defined by WHSQ 2021a as being “...material containing asbestos that is not friable asbestos. Including materials containing asbestos fibres reinforced with a bonding compound”. ASC NEPM classifies non-friable ACM as ACM that is in sound condition, cannot pass through a 7mm x 7mm sieve and does not meet the definition of friable asbestos.

Mechanical disturbance of ACM fragments and disturbance of soils may result in the release of fibres and therefore, such activities should be managed to prevent any fibres becoming airborne. The health effects of asbestos are detailed in enHealth (2005) *Management of Asbestos in the Non-Occupational Environment*.

The primary issue associated with the identified friable and non-friable asbestos hazards at the site is managing the risk of inhalation of respirable fibres to current site workers during removal works, such that the ACM can be removed to achieve the current development objectives.

⁶ Mike Melles (Butler) to Mitch Jackson and Justin Sham (Golding), RE: CWP01340 - Greville Stages 1 & 4 - Asbestos Investigation, 1 March 2021

⁷ EP Risk (2021) Asbestos In Soil (ASBINS) Assessment, 5 May 2021

A secondary issue associated with the identified friable and non-friable asbestos hazards at the site is the appropriate disposal of excavated ACM impacted material if the Client is seeking to removal the material (i.e. as opposed to capping the material in situ).

Published on DES Disclosure Log
RTI Act 2009

3. Methodology

3.1 Field Personnel

It is recognised that the Western Australian Department of Health (DoH) *Guidelines for the Assessment, Remediation and Management of Asbestos – Contaminated Sites in Western Australia, 2009* (DoH 2009), adopted as part of the ASC NEPM, states that environmental consultants employed to investigate and manage asbestos contamination should be supervised by a lead consultant with asbestos credentials.

All field works were completed by trained and competent JBS&G personnel with suitable experience in asbestos contamination. A photograph log of selected photographs is presented in **Appendix B**.

3.2 Grid-Based Test Pitting

3.2.1 General

Based on the status of asbestos contamination within all areas of the site being either 'likely' or 'known', a sampling regime of 2 x the density listed in Table 1 of DoH (2009) was completed. As such, 70 individual test pits were completed at locations shown within **Figure 2**.

The vertical extent of the investigation varied across the site and was determined by the depth of fill material, whereby the test pit was completed at 0.3 m into natural materials.

The observed soils during test pitting were logged in accordance with the Unified Soil Classification System, and observations of visual/olfactory indicators of potential soil contamination (i.e. discolouration, odour, presence of anthropogenic material etc.) were recorded.

Where applicable samples were collected directly into appropriate sample containers supplied by the laboratory from the face of the test pit excavation. Where the excavation extended beyond 0.5 m bgl depth, samples were collected into appropriate sample containers directly from the excavator bucket, taking care to select material not in contact with the excavator itself. Following sampling, the test pits were reinstated in the order which they were excavated.

3.2.2 Sampling for ACM and FA

The following methodology was completed for ACM and FA sampling:

- A minimum of 1 x 10L sample was collected from each identified fill material layer;
- Samples were screened manually through a ≤ 7 mm sieve; and
- Fragments of suspected ACM and FA, where identified, were weighed to enable the calculation of asbestos soil concentrations for individual samples.

3.2.3 Sampling for AF

The following methodology was completed for AF sampling:

- One wetted 500 mL sample was collected from soil material which passed through the ≤ 7 mm sieve; and
- The whole sample was transferred to laboratory supplied zip-lock bags and submitted for laboratory quantification of asbestos.

3.3 Stockpile Sampling

Locations of stockpiles identified on site are presented in **Figure 3**.

All identified stockpiles were visually assessed for the presence of bonded ACM. Where no bonded ACM was identified, sampling using the methodology described above in **Section 3.2.2** and **Section 3.2.3** was undertaken to assess for the presence of AF.

In addition, the following measures were adopted:

- Samples were collected a minimum depth of 300 mm from the surface to avoid areas of higher weathering and potential grainsize grading errors;
- Targeted sampling was undertaken towards areas of likely contamination (i.e. areas of high anthropogenic materials) where stockpile heterogeneity was observed.

Sample densities for stockpile sampling was adopted from the ASC NEPM Schedule B2: Guideline on Site Characterisation, as presented in **Table 3.1** below.

Table 3.1: ASC NEPM Minimum Number of Samples Recommended for Initial Assessment of Stockpiles

Stockpile Volume (m ³)	Number of Samples
<75	3
75 - <100	4
100 - <125	5
125 - <150	6
150 - <175	7
175 - <200	8

4. Adopted Assessment Criteria

4.1 General

Guidelines for asbestos have been adopted from ASC NEPM and DoH (2009).

4.2 Fibrous Asbestos and Asbestos Fines

The criterion for fibrous asbestos (FA) and Asbestos Fines (AF) remains consistent for all site uses, as 0.001% w/w.

4.3 Asbestos Containing Material

The ASC NEPM states that for remediation of any contamination, surface soil (top 10 cm) should be made completely free of any visible asbestos.

The soil asbestos investigation criteria for asbestos as ACM for residential land use (includes day care centers, preschools etc.) is:

- 0.01% w/w asbestos for ACM.

Asbestos concentrations in soil should be determined for relevant impacted strata. Inclusion of non-impacted soils in calculations dilutes samples which is not acceptable. Therefore:

- ACM weight should not be averaged across the mass of soil at the site, within a whole remediation zone or across a total bore sample volume; and
- where more than one distinct soil strata are impacted by asbestos, separate asbestos concentration estimates should be made for each.

Concentrations of asbestos in soil attributable to ACM contamination may be estimated as:

$$\% \text{ Soil Asbestos} = \frac{\% \text{ Asbestos Content} \times \text{ACM (kg)}}{\text{Soil Volume(L)} \times \text{Soil Density (kg/L)}}$$

where it is assumed that:

$$\% \text{ Asbestos Content (within asbestos cement materials)} = 15\%$$

$$\text{Soil Density} = 1.65 \text{ kg/L}$$

5. Data Reliability

5.1 General

The investigations previously conducted by others are considered to be suitable for indicative purposes only. JBS&G has referred to previous data solely for the purposes of informing the Conceptual Site Model (CSM). JBS&G has relied upon data it has collected for the purposes of forming overall conclusions and recommendations.

5.2 Laboratory Selection

Eurofins MGT was selected as the primary laboratory and were National Association of Testing Authorities (NATA) accredited for all analysis at the time of sample submission.

5.3 Quality Control

Quality control procedures were adopted during the remedial works in accordance with relevant DWER guidelines where applicable. It is recognised that as the only COPC is asbestos, as such a number of the standard Quality Assurance/ Quality Control (QA/QC) measures were not possible/ applicable, such as inter- and intra-laboratory duplicate samples, rinsate sampling and laboratory internal control measures.

Table 5.1 : Summary of Data Quality Indicators

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	N/A for asbestos sampling	N/A for asbestos sampling
Blind duplicates (inter laboratory)	N/A	N/A
Laboratory Duplicates	N/A	N/A
Accuracy		
Surrogate spikes	N/A	N/A
Laboratory control samples	N/A	N/A
Matrix spikes	N/A	N/A
Representativeness		
Sampling appropriate for media and analytes	All samples	1
Samples extracted and analysed within holding times.	N/A	Indefinite:
Laboratory Blanks	1 per lab batch	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples	NATA accreditation
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples
Limits of reporting appropriate and consistent	All Samples	All samples
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples
Appropriate documentation	All Samples	All samples
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR<= Site assessment criteria

5.4 Sample Collection and Documentation

5.4.1 Sample Collection

The selection of the appropriate sample containers, preservation procedures, sample storage requirements was undertaken in accordance with those recommended by Australian Standard AS/NZS 5667.1:1998 and AS 4482.1 (as appropriate).

All primary samples were shipped to the laboratory within under chain of custody (COC) documentation.

5.4.2 Holding Times

It is recognised that there is no holding time for asbestos analysis.

5.4.3 Sample Documentation

5.4.3.1 Sample Labels

Each sample label included the following information:

- Project number;
- Date;
- Unique sample number; and
- The name/ initials of sampler.

5.4.3.2 Chain of Custody

A COC form was completed to accompany the samples to the laboratory for analysis. In each instance the following will be undertaken and accompany the laboratory documentation provided in **Appendix C**.

5.5 Laboratory Analysis

The following analytical suites were selected as part of the analysis program:

- Asbestos Identification in Soil – ASC NEPM; Laboratory Limit of Reporting (LOR) = 0.001% w/w.

5.6 Data Reliability Summary

The results of the QA/QC program indicate that the analytical data obtained from this assessment met the predetermined DQIs. As such, the data is considered to be of adequate quality to be relied on for the purposes of the investigation.

6. Results

6.1 Site Observations

Bonded ACM was identified at surface across large portions of the site. This broadly aligns with the findings of EP Risk (2021), which reported over 100 ACM fragments on the surface and within shallow soil to a depth of 0.1 m below ground level.

The site geology was observed to be relatively variable, reflective of multiple fill layers and remedial works previously undertaken at the site. Test pit logs are presented in **Appendix D**.

Surface materials comprising natural soil were observed in the south east and north east portions of the site, generally consistent with previously remediated areas.

Fill material at the site was encountered at a majority of test pits, typically comprised of clay or silty clay with variable plasticity, extending to a maximum depth of approximately 0.5 m bgl in most areas of the site.

Anthropogenic material including road base gravels, ACM fragments, concrete, brick, clay pipe, ceramic etc. were encountered at eight pits (refer **Table 6.1**), broadly consistent with the findings of EP Risk (2021). One test pit (TP55) encountered anthropogenic material including ACM fragments to a maximum depth of approximately 1 m bgl and is anticipated to be the location of a former building footprint. Ash was identified at 15 individual locations (TP01, TP02, TP04, TP07, TP08, TP09, TP10, TP11, TP14, TP15, TP16, TP17, TP21, TP22, TP28), exclusively within the southern portion of the site.

Underlying natural soil typically comprised orange with grey mottled clay of medium plasticity.

It is noted that some test pit locations were unable to be excavated due to water inundation or the presence of stockpiles which prohibited the excavator reaching into underlying material. The absence of these test-pits in establishing an overall environmental condition of the site is insignificant given that; test pits were able to be installed at nearby locations; lithology between test pits at either side were comparable; and test pit logs at similar locations as part of previous environmental investigations (EP Risk) were able to be reviewed as part of this investigation which did not identify any unusual or unexpected materials.

6.2 ACM Sampling Results

Suspect ACM fragments >7 mm were encountered in eight of the test pits during the sieving process to a maximum depth of 0.5 m bgl, with the exception of TP55 where ACM was identified to a maximum depth of 1 m.

The concentration of asbestos in soil, where encountered, has been determined in accordance with the calculation provided below taken from the ASC NEPM guidance. Asbestos concentrations at each test pit location where asbestos fragments were identified is provided below in **Table 6.1**. The sample locations where the guidelines have been exceeded are shown on **Figure 2**.

Table 6.1: Bonded ACM Concentrations

Sample ID	Profile Depth	Calculated Asbestos concentrations (%)	Asbestos concentration exceeds the assessment criteria (0.01 % w/w)
TP09	0.25 – 0.5	0.916	Yes
TP11	0.15 – 0.5	0.114	Yes
TP14	0.25 – 0.4	0.035	Yes
TP16	0.05 – 0.3	0.134	Yes
	0.3 – 0.5	0.376	Yes
TP40	0.05 – 0.3	0.087	Yes
TP41	0.0 – 0.2	0.668	Yes
TP46	0.0 – 0.4	0.272	Yes

Sample ID	Profile Depth	Calculated Asbestos concentrations (%)	Asbestos concentration exceeds the assessment criteria (0.01 % w/w)
TP55	0 – 1.0	0.960	Yes

6.3 AF Sampling Results

Of all samples analysed, AF was detected in one sample, from test pit TP32 (TP32_0.05–0.4) along the eastern site boundary with a reported asbestos concentration of 0.036 % (w/w). The reported concentration exceeds the adopted criterion of 0.001%. Though no ACM was observed during test pitting at this location, it is noted that bonded ACM was identified at EP Risk (2021) TP20.

The asbestos detected within the samples was identified to comprise chrysotile, present as weathered fibre cement fragments. The laboratory analytical results are provided in **Appendix C**.

6.4 Stockpile Sampling Results

Stockpiles identified on site during the test pitting activities are presented in **Figure 3**. A general description of stockpiles and presence of either ACM or AF/FA is presented below in **Table 6.2**.

Where bonded ACM was identified, the stockpile was considered to be impacted requiring off-site disposal, as such, no sampling for FA was warranted.

Where no bonded asbestos was identified, sampling for AF was subsequently undertaken to determine the potential presence of AF.

Table 6.2: Stockpile Classification

Stockpile ID	Approx. Volume (m ³)	Description	Bonded ACM Present?	Sample for FA collected?	Concentration above re-use criteria? (0.001 % w/w)
SP01	70	Reworked natural (RN) silty clay material. Inclusions of road base gravels.	No	Yes	No
SP02	6	SAND, white, fine grained, homogeneous	No	Yes	No
SP03	25	RN – clay, brown / red, medium plasticity, inclusions of gravels, rootlets, organic matter and rocks	No	Yes	No
SP04	336	Gravelly clay, brown, medium plasticity, inclusions of road base gravels, bricks, steel	No	Yes	No
SP05	89	RN – clay, brown / red, medium plasticity, inclusions of gravels, rootlets, clay pipe and bricks.	No	Yes	No
SP06	285	RN – clay, brown / red, medium plasticity, inclusions of gravels, rootlets, clay pipe and bricks.	No	Yes	No
SP07	30	RN – clay, brown / red, medium plasticity, inclusions of gravels, rootlets, clay pipe and bricks.	No	Yes	No
SP08	27	RN – clay, brown / red, medium plasticity, inclusions of gravels, rootlets, clay pipe and bricks.	No	Yes	No
SP09	6	RN – clay, brown / red, medium plasticity, inclusions of gravels, rootlets, clay pipe and bricks.	No	Yes	No
SP10	76	RN – organic matter (grass, roots) with red silty clay, minor inclusions such as gravels, bricks and clay pipe.	No	Yes	No
02	202	RN – clay, brown / red, medium plasticity, inclusions of ACM fragments, gravels, rootlets, clay pipe and bricks.	Yes	No	NA

Stockpile ID	Approx. Volume (m ³)	Description	Bonded ACM Present?	Sample for FA collected?	Concentration above re-use criteria? (0.001 % w/w)
03	40	RN – clay, brown / red, medium plasticity, inclusions of ACM fragments, ACM lined concrete pipes, gravels, rootlets, clay pipe and bricks.	Yes	No	NA
09	233	RN – clay, brown / red, medium plasticity, inclusions of ACM fragments, gravels, rootlets, clay pipe and bricks.	Yes	No	NA
11	21	Coarse asphalt	No	No	NA
12	25	Coarse road base gravels	No	No	NA
15	7	Coarse imported blue metal gravel	No	No	NA
18	70	Wood chips	No	No	NA
19	5	RN – clay, brown / red, medium plasticity	No	No	NA
22	61	RN – clay, brown / red, medium plasticity, inclusions of ACM fragments, gravels, rootlets, clay pipe and bricks.	Yes	No	NA
23	220				
24	18				
25	60				
28	23	Wood chips	No	No	NA
29	3	Coarse road base gravels	No	No	NA
30	63	Construction and demolition waste including coarse concrete and steel bar.	No	No	NA
31	300	Windrow material. Grass covered silty clay. Inclusions of ACM fragments, bricks, glass, concrete, clay pipe etc.	Yes	No	NA

1) It is noted that this stockpile investigation targeted asbestos only and that other potential COPCs and geotechnical suitability should be considered in conjunction.

The laboratory analytical results are provided in **Appendix C**.

7. Discussion

7.1 General

Based on the findings of Bulter (2019), EP Risk (2021) and the assessment undertaken by JBS&G, residual bonded ACM has been identified:

- In-situ within fill material at 15 locations, at depths greater than 100 mm;
- At surface or within shallow fill material, at depths less than 100 mm across the majority of the site; and
- Within eight stockpiles of topsoil, located sporadically across the site.

In addition, AF has been detected at two locations (EP Risk [2021] TP02 and JBS&G TP32). These two areas exist in concert with the presence of the deeper fill. The area of impacted fill material is presented on **Figure 6**.

Further discussion is provided below with respect to the spatial distribution of ACM (including AF) within the development envelope, as well as ash as it relates to the presence of ACM within the fill profile.

7.2 Ash

ACM was identified within the ash layer at a number of investigation locations as follows:

- Butler (2019) TP106, TP109, TP200, TP205, TP206, TP208, TP211, TP216, TP220 and TP221;
- EP Risk (2021) (TP23); and
- JBS&G: TP09 (up to 0.75 mbgl), TP11 (up to 0.5 mbgl), TP14 (up to 0.4 mbgl) and TP16 (up to 0.5 mbgl).

It is noted that all Butler (2019) locations with the exception of TP106, TP109 and TP200 were located within Remediation Area 6. TP200, albeit shown outside Remediation Area 5 on **Figure 5** was reported within the text to be remediated as part of Remediation Area 5. TP106 and TP109 fall outside remedial areas and as such, it is unclear if these locations were appropriately remediated by Butler (2019).

There were a significant number of locations where ACM was not observed within the ash layer:

- Bulter (2019)⁸: TP101-TP103, TP107, TP108, TP201, TP203, TP204, TP207, TP209, TP210, TP214, TP215, TP217, TP218, TP222 and TP223;
- EP Risk (2021): TP10 (up to 1 m bgl), TP11 (up to 0.8 mbgl), TP12 (up to 0.9 mbgl); and
- JBS&G: TP01 (up to 0.4 mbgl), TP02 (up to 0.6 mbgl), TP04 (up to 0.8 mbgl), TP07 (up to 0.7 mbgl), TP08 (up to 0.3 mbgl), TP09, TP10 (up to 0.5 mbgl), TP15 (up to 0.4 mbgl), TP17 (up to 0.15 mbgl), TP21 (up to 0.2 mbgl), TP22 (up to 0.2 mbgl) and TP28 (up to 0.35 mbgl) .

JBS&G notes that all of these investigation locations were part of Remediation Area 5 (TP201, 203 and TP204), Remediation Area 6 (TP108, TP207, TP209, TP210, TP214 and TP215) or part of the Southern Area (TP101-103, TP107, TP217, TP218, TP222 and TP223).

On this basis, ash at the site may contain ACM and where identified may require further assessment in the field to determine if onsite retention is a suitable option .

⁸ Does not consider soil bores, noting test pit assessment methodology likely to provide a more appropriate representation of ACM in soil

Figure 7 shows the location of ash, as identified by EP Risk (2021) and JBS&G. It is noted that the majority of ash material is located within the Southern Area 4. Ash thickness varied between isolated less than 100 mm to >0.5 m in thickness.

7.3 North-western Area 1

The northern portion of the Heritage Laundry was upgraded between 1951 and 1964 (refer Photograph 6 and 7 respectively), with an extension to the east from the most northern portion of the building adjacent the circular driveway fronting Chalk Street. Further upgrades were completed between 1980 and 1999 (refer Photograph 11 and 12 respectively).

Impacted fill material appears to be isolated to the footprint of the former eastern wing, noting delineation appears to have been achieved in all directions except in a westerly direction towards the residual heritage building. The maximum depth of ACM impacted fill material within this location was 1 mbgl at JBS&G TP55.

7.4 Central-western Area 2

The site changed significantly between 1976 (Photograph 10) and 1980 (Photograph 11), evidenced by the removal of the tennis court, swimming pool and associated structures east and west of these features. A series of six identical buildings were constructed within this general area.

Impacted fill material appears to be isolated to the footprint of the former pool and tennis court, noting delineation was achieved in all directions except to the north and west. The maximum depth of ACM impacted fill material within this location was 1 mbgl located at EP Risk (2021) TP02. The maximum depth of ACM impacted fill material within this location identified by JBS&G was 0.4 mbgl at TP46.

This area aligns with the former tennis court and pool area, located immediately west of Bulter (2019) Remedial Area 3 (completed up to 1.9 m bgl), Remedial Area 5 (completed up to 1.5 m bgl) and Remedial Area 7 (surface scrape only). These three areas all contained ACM at surface and/or at depth within the fill profile.

7.5 Central-eastern Area 3

The eastern portion of the site changed significantly between 1980 (Photograph 11) and 1999 (Photograph 12), evidenced by the removal of all structures along the eastern site boundary. The 1999 aerial photograph shows an anomalous stockpile associated with the most northerly, former structure. Although the image quality is poor, it is possible that a bonfire (or equivalent) may have been used to dispose of residual waste (this cannot be confirmed) which may reflect the presence of AF at this location.

Impacted fill material appears to be isolated to the footprint of the northern most former structure, noting delineation was achieved in all directions except to the east (noting this represents the site boundary). The maximum depth of ACM impacted fill material within this location was 0.4 mbgl located at EP Risk (2021) TP20, noting AF was also located within JBS&G TP32 at 0.4 mbgl.

This area aligns with the former structures on the eastern boundary, located immediately east of Bulter (2019) Remedial Area 5 (completed up to 1.5 m bgl) and north of Remedial Area 4 (completed up to 0.2 m bgl). ACM was not encountered within Remedial Area 4, noting low level lead (albeit above the low density human health investigation level) was encountered at this location. It is noted that Butler (2019) reported ACM at the surface of this area (GRAB09), although no remediation area was established to assess this further. It is currently assumed that GRAB09 represents the only ACM identified by Butler in this area.

7.6 Southern Area 4

The southern portion of the site forms part of the former sporting ground. This area appeared to be segmented from the rest of the site up until between 1980 (Photograph 11) and 1999 (Photograph 12), when the central fence south of the former tennis court and pool area (south of the Heritage Laundry) was removed. It is possible that this area was formalised as a sporting ground between 1980 (Photograph 11) and 1999 (Photograph 12), based on the removal of an established access track that ran east to west (visible in the 1980 photograph), which has been replaced by established grass and what appears to be a series of bollards delineating the northern central area in the 1999 photograph. This area has been subject to the construction and demolition of numerous structures over the operation of the site.

ACM impacted fill material and ash appears to cover a significant portion of the sporting ground, noting this area may have been used for the disposal of ash and residual ACM building material and impacted fill, over the operation of the site. Butler (2019) assessed ash at numerous locations and it appears that the ash layer is chemically inert (based on concentrations of contaminants of potential concern for ash [metals and polycyclic aromatic hydrocarbons] being less than the low density residential human health investigation levels).

The maximum depth of ACM impacted fill material within this location was 0.5 mbgl located at EP Risk (2021) TP08, as well as JBS&G TP09 and TP11.

This area aligns with the former sporting ground on the southern boundary, located immediately east of Bulter (2019) Remedial Area 4 (completed up to 0.2 m bgl), Remedial Area 8 (completed up to 0.25 m bgl) and Remedial Area 9 (completed up to 0.8 m bgl). ACM was not encountered within Remedial Area 4, noting low level lead was encountered at this location.

8. Conceptual Site Model

In order to evaluate the linkage between human and environmental receptors and identified potential contamination on and from the site, conceptualisation against a source-pathway-receptor model has been undertaken.

For potential contamination to present a risk to receptors, these three components must be present:

- Source: An entity or action that releases contaminants into the environment;
- Pathway: A mechanism by which receptors can become exposed to contaminants; and
- Receptors: Human or ecological component that may experience an adverse response following exposure to a contaminant

If one of these three components is missing from an exposure scenario, then there can be no risk.

Based on the findings of the desktop review within the sections above, the following working conceptual site model (CSM) (see **Table 8.1**) has been developed.

Table 8.1: Conceptual Site Model

CSM Element	Comment
Sources and Mechanisms of Contamination	<p>Identified sources of contamination are presented on Figure 2 and Figure 3, and include:</p> <ul style="list-style-type: none"> • Surficial ACM across significant portions of the site and within stockpiled topsoil, resultant from preliminary earthworks under non-asbestos controlled conditions; • ACM material identified within fill within the four discrete areas identified within Section 7, associated with former building footprints (i.e. ACM packers on footings) and/or poor historical demolition practices (i.e. burying fill as opposed to offsite disposal) up to a maximum depth of 1 m below ground level; • Intermixed ash located predominantly within the southern portion of the site; and • AF in fill material at two discrete locations (including EP Risk [2021] investigation location TP02), resultant from deterioration of bonded ACM.
Contaminants of Concern	<p>The contaminants of concern include:</p> <ul style="list-style-type: none"> • Bonded ACM; and • AF / FA.
Environmental Media of Concern	<p>Soil is the primary environmental media of concern.</p> <p>Surface water may be a secondary environmental media of concern, relating to onsite erosion and sediment control during construction (i.e. accumulation of bonded ACM or AF within sediment basins onsite).</p>
Exposure Pathways of Concern	<p>The exposure pathways of concern include:</p> <ul style="list-style-type: none"> • Inhalation of AF for onsite workers during the proposed development works; • Inhalation of AF for future residents where soil is accessible (i.e. grassed areas of the future development footprints); • Inhalation of AF for future maintenance workers where excavation/trenching is required to facilitate installation and servicing of underground utilities; and • Inhalation of AF by adjacent property occupants <p>All exposure pathways may be complete in the current site setting. However, it is noted that the site is being managed under an Asbestos Management Plan (AMP) to manage risks to onsite and offsite receptors. Future earthworks will be completed in consideration of the AMP and an asbestos removal control plan (ARCP), with residual ACM retained onsite as part of the final design, managed under a site management plan.</p>
Potential Receptors of Concern	<p>The primary receptors of concern include:</p> <ul style="list-style-type: none"> • Site users (including staff, visitors and construction personnel); • Future occupants; • Future maintenance workers; and • Neighbouring site users surrounding the site.

Source-pathway-receptor linkages are considered to be complete based on the current site disposition, noting management measures are in place to manage risks posed by ACM and AF to onsite workers and offsite receptors.

Remediation is required to render the site suitable for the proposed use in a residential capacity, to manage exposure scenarios for future residents and associated maintenance workers. Subject to the remedial method chosen, residual controls may be required where ACM is retained onsite (i.e. implementation of a site management plan).

Risks to onsite workers and offsite receptors during future construction works will be managed via the implementation of an ARCP and AMP.

Published on DES Disclosure Log
RTI Act 2009

9. Conclusions and Recommendations

9.1 Conclusions

Based on the findings of the investigation and subject to the limitations in **Section 10**, it is concluded that:

- An ASBINS assessment has been undertaken for the site in accordance with relevant guidance including the ASC NEPM;
- Asbestos in the form of ACM and AF was identified at the site at concentrations that exceed the adopted assessment criteria, indicating that without appropriate remediation or management, a potentially unacceptable risk is posed to site workers during construction and future residential site users, whereby:
 - Asbestos in the form of bonded ACM exists at the site across the surface (<0.1 m bgl) across the majority of the site surface;
 - Bonded ACM exceeding the ASC NEPM criterion for residential land use to a maximum depth of approximately 1.0 m bgl at four specific locations shown on **Figure 6** and summarised as follows:
 - North-western Area 1 associated with the former Heritage Laundry;
 - Central-western Area 2 associated with the former swimming pool and tennis court;
 - Central-eastern Area 3 associated with the former structures in this area; and
 - The Southern Area 4 associated with the former sports field and potentially within ash identified within the adjacent areas as shown on **Figure 7**.
 - AF was identified in exceedance of the 0.001% health screening criteria at TP32, located within the Central-eastern Area 3.
- Classification of asbestos in the stockpiles identified on site has also been undertaken to inform potential on-site reuse or disposal options based on the presence / absence of bonded ACM and AF, as outlined in **Table 6.2**.

9.2 Recommendations

It is recommended that:

- An asbestos management plan (AMP) be prepared for the site to appropriately remediate or manage the areas of asbestos contamination identified in accordance with the client's preferred long-term strategy (e.g. disposal vs onsite containment); and
- The client provides a notification of contaminated land to DES in accordance with Section 320 of the *Environmental Protection Act 1994*, on the basis that the extent of asbestos contamination will require at least \$5,000 to \$50,000 of work onsite to manage appropriately, noting that costs for offsite removal of all identified asbestos contamination would exceed \$50,000.

10. Limitations

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

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

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

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

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

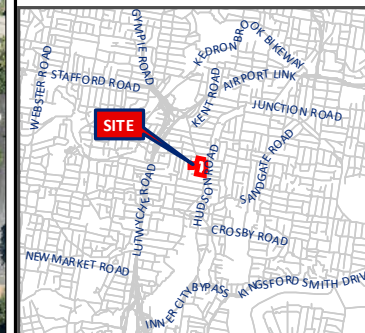
Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of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

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



Legend

Approximate Site Boundary



Job No: 60829

Client: Dunland Property Pty Ltd

Version: Rev 0

Date 29/04/21

Drawn By: PL

Checked By: RP

Scale 1:2,469 & 1:115,936



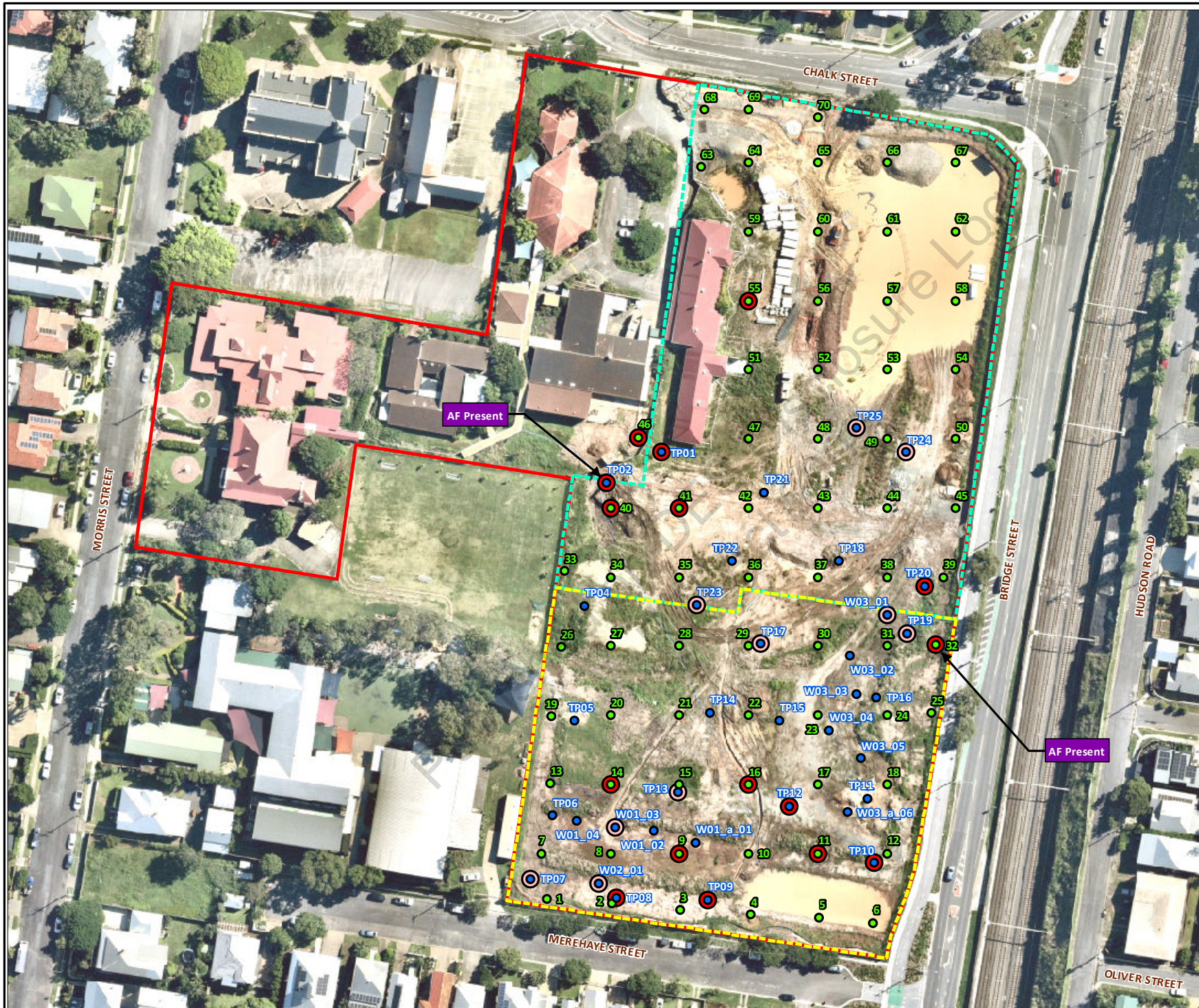
0 20 40 0 750 1,500
m & m

Coord. Sys. GDA 1994 MGA Zone 56

**60 Bridge Street,
Woolloowin, QLD**

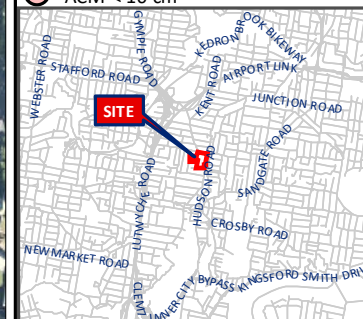
Site Location Plan

FIGURE 1



Legend

- Approximate Site Boundary
- Stage 1 Development Area
- Stage 4 Development Area
- EP Risk Investigation Locations
- JBS&G Investigation Locations
- ACM > 10 cm
- ACM < 10 cm



Job No: 60829

Client: Dunland Property Pty Ltd

Version: Rev 0

Date 15/06/21

Drawn By: PL

Checked By: RP

Scale 1:1,505 & 1:115,628



0 12.5 25 0 750 1,500
m & m

Coord. Sys. GDA 1994 MGA Zone 56

**60 Bridge Street,
Woolloowin, QLD**

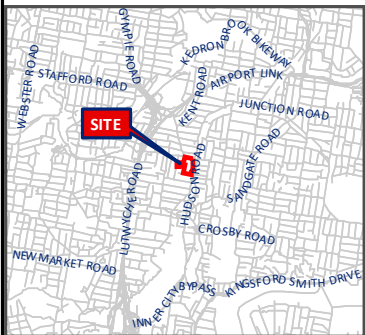
**Investigation Locations &
ACM Presence**

FIGURE 2



Legend

- Approximate Site Boundary
- Stage 1 Development Area
- Stage 4 Development Area
- Stockpile Locations
- Stockpile Locations (ACM Present)



Job No: 60829

Client: Dunland Property Pty Ltd

Version: Rev 0

Date 13/05/21

Drawn By: PL

Checked By: RP

Scale 1:1,442 & 1:115,963



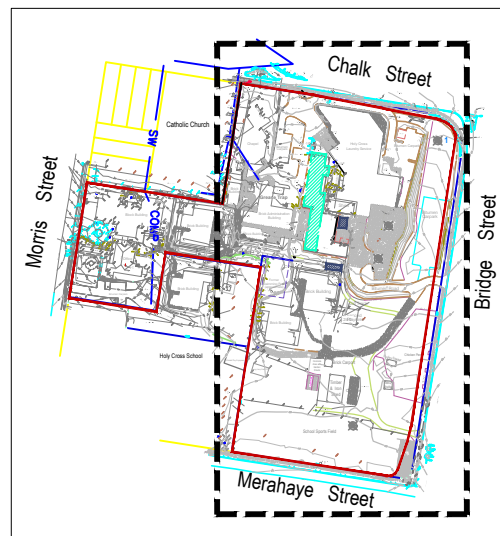
0 12.5 25 0 750 1,500
m & m

Coord. Sys. GDA 1994 MGA Zone 56

**60 Bridge Street,
Woolloowin, QLD**

Stockpile Locations

FIGURE 3



Area of Investigation
Not To Scale

LEGEND

- 1 Monitoring Well
- 2 Bore (Enviro 2017)
- 26 Bore (Enviro, Hand Auger)
- GRAB01 Surface Grab Sample
- TP101 Test Pit (Enviro 2017)
- TP200 Test Pit (Enviro 2019)
- Soil Stockpile
- Lot 1 on SP291387
- Former Lot Boundary
- Heritage Listed Laundry Building
- Visual Confirmation of Asbestos in Test Pit / on Surface

Contamination Results

1	Zn	Analyte
2.5 - 3.0m	465	Analyte Value (mg/kg)
Sample Depth		
Analyte Exceeds HIL-A Guideline Criteria		
Concentration Exceeds NEPM High Density Land Use Criteria		

34	Zn
0.0 - 0.2m	948

35	B(a)P	B(a)PTEQ
0.2 - 0.5m	6.3	9.4

37	Zn
0.5 - 1.0m	444

TP109	Asbestos
1.0 - 1.2m	CH(Sheeting Fragment)

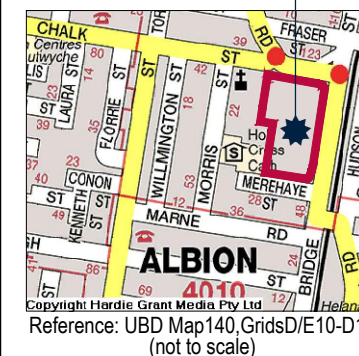
GRAB01	Asbestos
Surface	Ch, Am

GRAB03	Asbestos
Surface	Ch, Am



Butler Partners Pty Ltd
ABN 14 816 574 868
22 Corunna Street
Albion, Queensland 4010
P.O. Box 2267
Fortitude Valley BC
Queensland 4006
Ph: 61 7 3256 2900
Fx: 61 7 3256 2901
enquiries@butlerpartners.com.au

Area Investigated



Residential Subdivision & Development

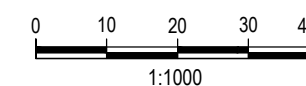
60 Bridge Street, Woollooin

Test Locations and Soil Exceedances

Dunland Property Pty Ltd

CLIENT:

SCALE AT A3:



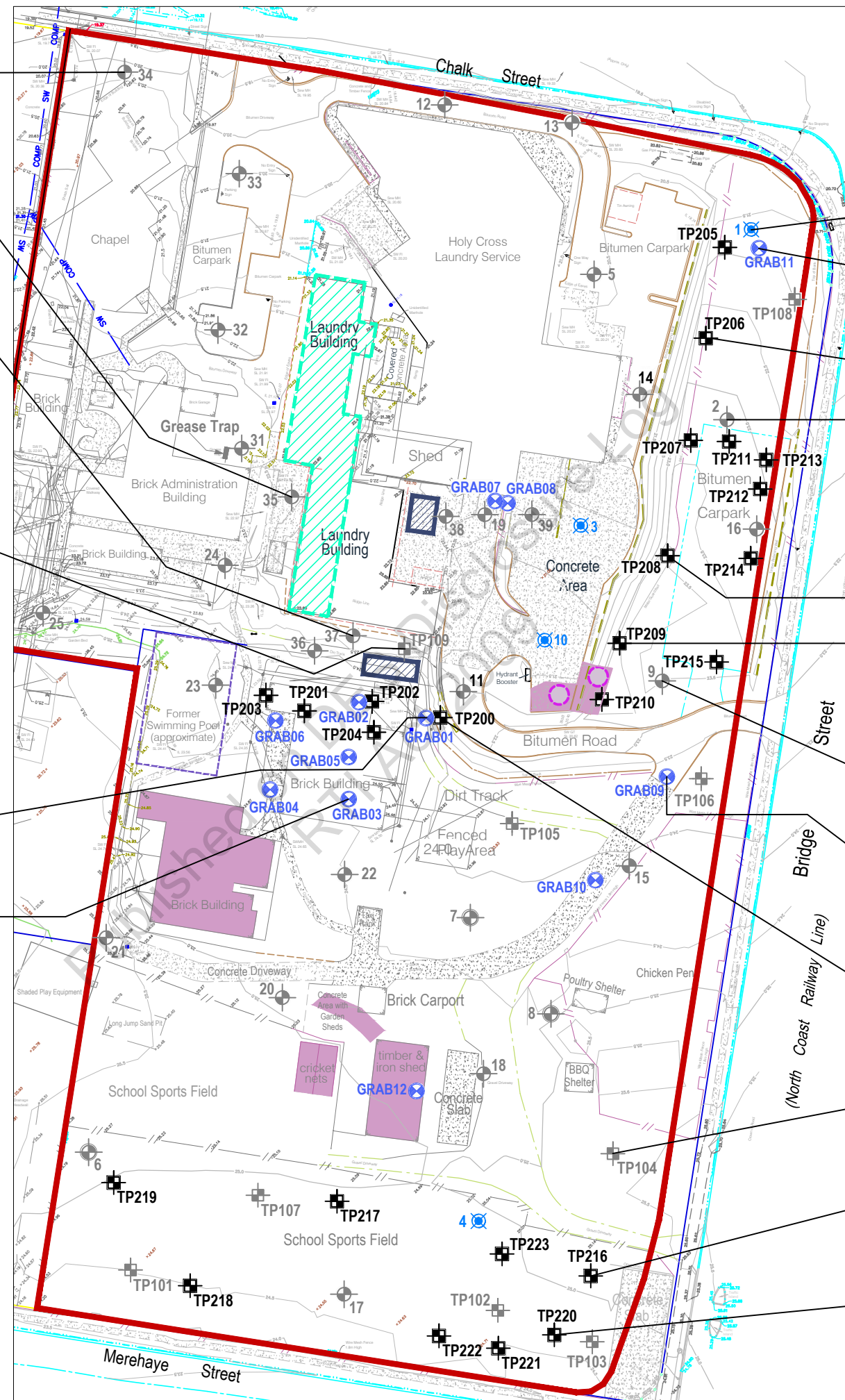
DATE: JULY 2019

DRAWN: FD/LA

APPROVED:

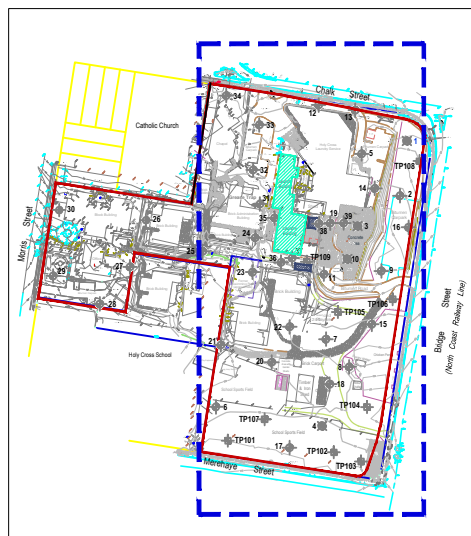
PROJECT No: 017-149A RPT: Env

DRAWING No: 4 REV: A



Sampling Locations

Scale: 1:1000



Area of Investigation
Scale 1:5000

LEGEND

- 1 Monitoring Well
- 2 Bore (Enviro 2017)
- 26 Bore (Enviro, Hand Auger)
- 1 Surface Grab Sample
- TP107 Test Pit (Enviro 2017)
- TP107 Test Pit (Enviro 2019)
- Lot 1 on SP291387
- Former Lot Boundary
- Heritage Listed Laundry Building

Likely Landfill Classifications:

- Contaminated Soil for Unlined Landfill Disposal
- Asbestos Impacted Soil
- Tank Validation Area

REMEDIAION AREA 1
Approx. 0.2-0.5m depth

REMEDIAION AREA 2
Tank Validation
Estimated 3m depth excavation

REMEDIAION AREA 3
Approx. 0.0-1.9m depth
and Tank Validation

REMEDIAION AREA 7
Surface impacted only

REMEDIAION AREA 8
Approx. 0.0-0.25m depth

REMEDIAION AREA 6
Approx. 0.2-3.0m depth

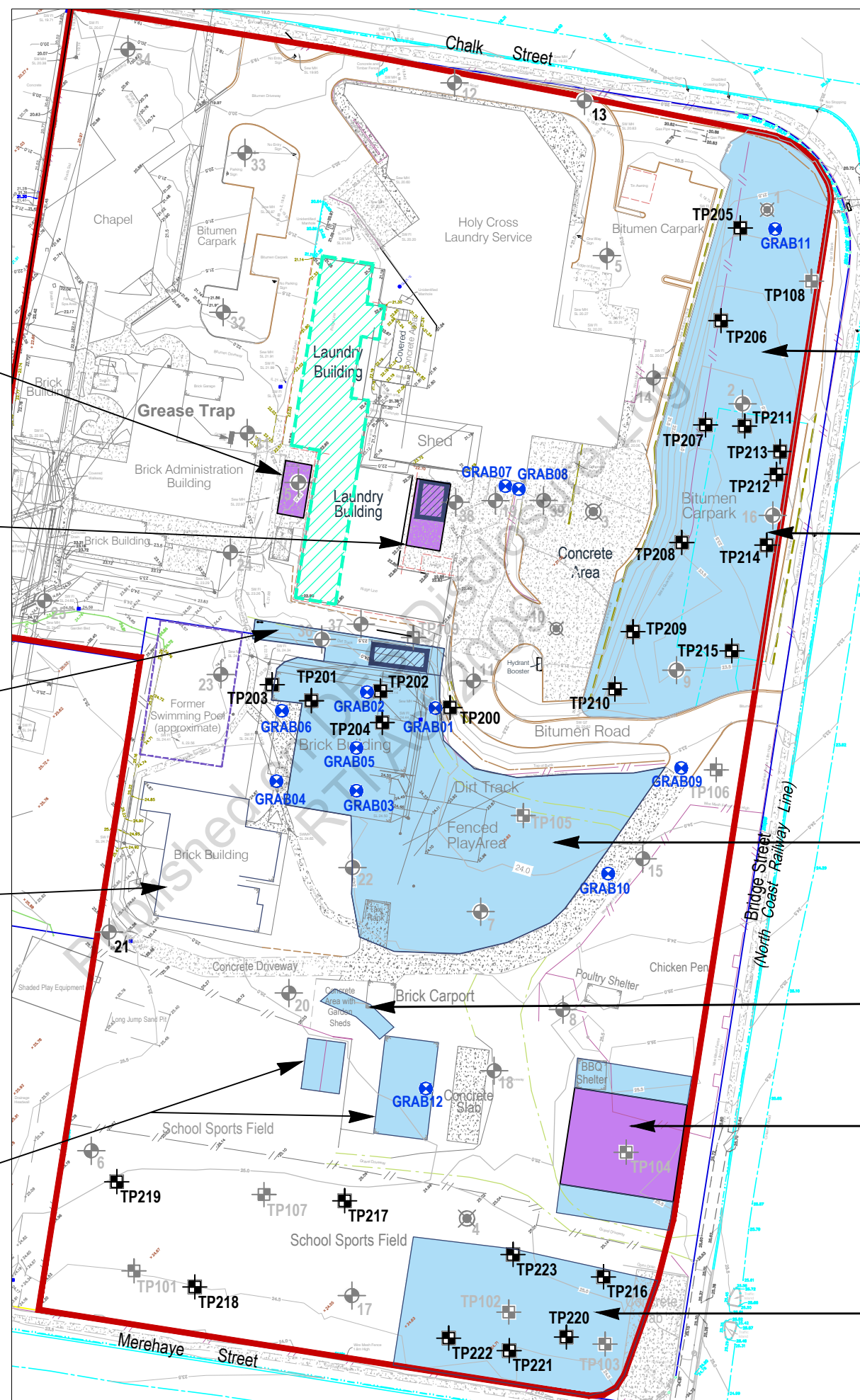
ASBESTOS PIPE
Remediation

REMEDIAION AREA 5
Approx. 0.0-1.5m depth

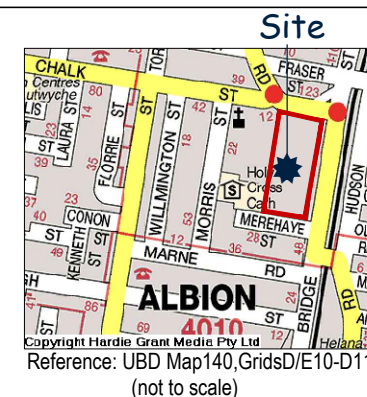
ASBESTOS PIPE
Remediation

REMEDIAION AREA 4
Approx. 0.0-0.2m depth

REMEDIAION AREA 9
Approx. 0.1-0.8m depth



Butler Partners Pty Ltd
ABN 14 816 574 868
22 Corunna Street
Albion, Queensland 4010
P.O. Box 2267
Fortitude Valley BC
Queensland 4006
Ph: 61 7 3256 2900
Fx: 61 7 3256 2901
enquiries@butlerpartners.com.au



Residential Subdivision & Development

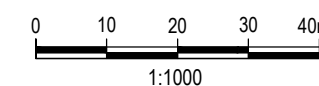
60 Bridge Street, Woolloowin

Contamination Areas and Landfill Disposal Classifications

Dunland Property Pty Ltd

CLIENT:

SCALE AT A3:



DATE: JULY 2019

DRAWN: FD/LA

APPROVED:

PROJECT No: 017-149A RPT: RP

DRAWING No: 5 REV: A



Legend

- Approximate Site Boundary
- Stage 1 Development Area
- Stage 4 Development Area
- Proposed Remedial Areas
- Remediation Areas (Butler Partners)
- EP Risk Investigation Locations
- JBS&G Investigation Locations
- ACM > 10 cm
- ACM < 10 cm

Job No: 60829

Client: Dunland Property Pty Ltd

Version: Rev 0	Date 21/06/21
Drawn By: PL	Checked By: RP

Scale 1:1,452 & 1:114,502

0 12.5 25 0 750 1,500 m

Coord. Sys. GDA 1994 MGA Zone 56

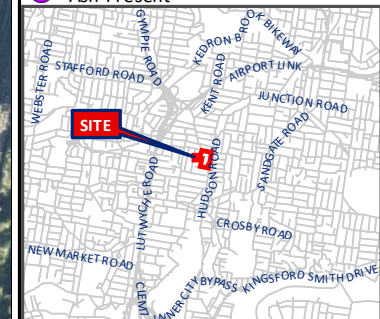
60 Bridge Street, Woolloowin, QLD

ACM Impacted Fill Material

FIGURE 6



- Legend**
- Approximate Site Boundary
 - Stage 1 Development Area
 - Stage 4 Development Area
 - Ash Present Area
 - EP Risk Locations
 - JBS&G Investigation Locations
 - Ash Present



Job No: 60829

Client: Dunland Property Pty Ltd

Version: Rev 0

Date 21/06/21

Drawn By: PL

Checked By: RP

Scale 1:1,504 & 1:114,502

0 12.5 25 0 750 1,500
m & m

Coord. Sys. GDA 1994 MGA Zone 56

**60 Bridge Street,
Woolloowin, QLD**

Ash Present

FIGURE 7

Appendix A DES EMR Removal Notification

Published on DES Disclosure Log
RTI Act 2009



Queensland
Government

Department of Environment and Science (DES)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
Email: EMR.CLR.Registry@des.qld.gov.au

03 October 2019

Site ID: 169359
File Number: 101/28373
Enquiries to: emr.clr.registry@des.qld.gov.au

RECEIVED
14 OCT 2019

BUTLER PARTNERS PTY LTD
LEVEL 1, 112 BARRY PARADE
FORTITUDE VALLEY QLD 4006

BY:

NOTICE OF REMOVAL OF LAND FROM THE ENVIRONMENTAL MANAGEMENT REGISTER

In accordance with Part 8 of the *Environmental Protection Act 1994*, notice is given that the parcel of land described below has been removed from the Environmental Management Register (EMR).

Lot: 1 Plan: SP291387
Brisbane City Council

60 BRIDGE STREET
WOOLLOOWIN QLD 4030

PETROLEUM PRODUCT OR OIL STORAGE - storing petroleum products or oil -

- (a) in underground tanks with more than 200L capacity; or
- (b) in above ground tanks with -
 - (i) for petroleum products or oil in class 3 in packaging groups 1 and 2 of the dangerous goods code - more than 2, 500L capacity; or
 - (ii) for petroleum products or oil in class 3 in packaging groups 3 of the dangerous goods code - more than 5, 000L capacity; or
 - (iii) for petroleum products that are combustible liquids in class C1 or C2 in Australian Standard AS1940, 'The storage and handling of flammable and combustible liquids' published by Standards Australia - more than 25, 000L capacity.

The parcel of land has been investigated and a contaminated land investigation document has been submitted and certified by an approved auditor under the *Environmental Protection Act 1994*, stating that the land is not contaminated land and is suitable for any use. The land therefore has been removed from the EMR.

Following removal from the EMR any information relating to this site will NOT be available to the public via a search of the EMR or the Contaminated Land Register (CLR).

For further information about contaminated land matters visit www.qld.gov.au, and search for "contaminated land".

sch4p4(6) Personal information

Scott Blanchard
Department of Environment and Science
Delegate of the Administering Authority
Environmental Protection Act 1994



Queensland
Government

Department of Environment and Science (DES)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
Email: EMR.CLR.Registry@des.qld.gov.au

SUITABILITY STATEMENT

APPLICANT

BUTLER PARTNERS PTY LTD
LEVEL 1, 112 BARRY PARADE
FORTITUDE VALLEY QLD 4006

DATE OF ISSUE : 3 October 2019

PROPERTY DESCRIPTION

LOT : 1 PLAN : SP291387
60 BRIDGE STREET
WOOLLOOWIN QLD 4030

Brisbane City Council
EMR Site ID: 169359 FILE REFERENCE: 101/28373

STUDIES UNDERTAKEN BY APPLICANT OR REQUESTED BY DIRECTOR

Auditor Summary Certification Report for the Site Investigation of 60 Bridge Street, Woolloowin QLD prepared for the Department of Environment and Science by MACH1 Environmental Pty Ltd Report No. 017-002-056 on 26 August 2019.

Butler Partners Pty Ltd Site Investigation Report Lot 1 SP291387 60 Bridge Street, Woolloowin QLD on 22 August 2019 Project No. 017-149A.

STATEMENT OF SUITABILITY

On the basis of the information supplied to this Department, the subject site is suitable for any use.

ENVIRONMENTAL MANAGEMENT REGISTER

LOT : 1 PLAN : SP291387

There is no requirement to record this site on the Environmental Management Register or the Contaminated Land Register.

sch4p4(6) Personal information

Scott Blanchard
Department of Environment and Science
Delegate of the Administering Authority
Environmental Protection Act 1994

Appendix B Photograph Log

Published on DES Disclosure Log
RTI Act 2009

TP01



TP03 - COULD NOT COMPLETE TEST PIT



TP02



TP04



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP07



TP09



TP08



TP10



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP11



TP13



TP12



TP14



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP15



TP18



TP16



TP20



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP22



TP25



TP23



TP26



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

Asbestos in Soil (ASBINS) Assessment

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP27



TP30



TP28



TP31



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP33



TP37



TP34



TP38



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP39



TP42



TP40



TP44



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP45



TP46



TP46



TP47



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP48



TP50



TP49



TP51



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP52



TP54



TP53



TP55



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP56



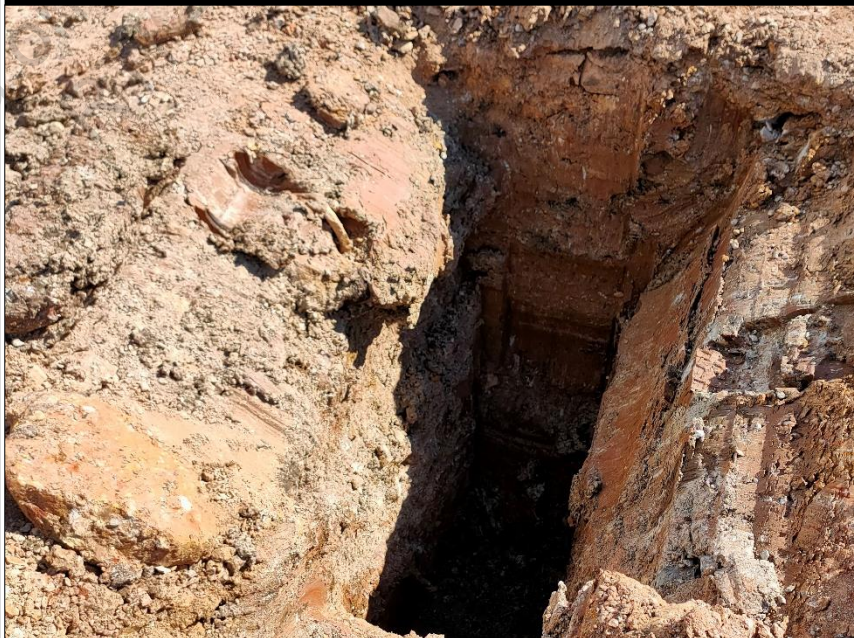
TP59



TP58



TP60



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

Asbestos in Soil (ASBINS) Assessment

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP61



TP64



TP63



TP64



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

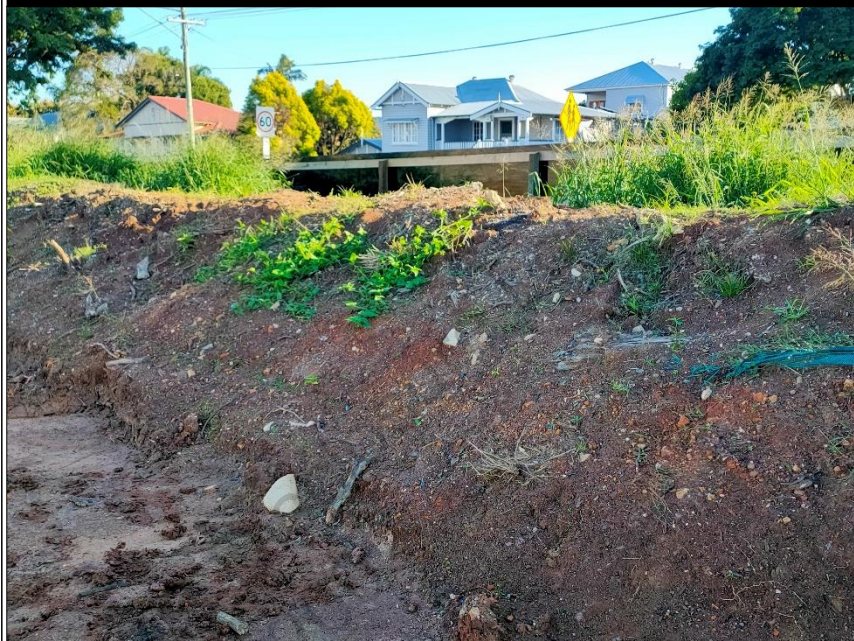
**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

TP65



TP 67 WINDROW



TP66



TP67 WINDROW



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

Asbestos in Soil (ASBINS) Assessment

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

MOUND BORDERING CHALK STREET



MOUND BORDERING CHALK STREET



MOUND BORDERING CHALK STREET



SURFACE ACM



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

SURFACE ACM



SURFACE ACM



SURFACE ACM



WESTERN BOUNDARY BORDERING SCHOOL



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By:

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

ASBESTOS CONTAINING PIPE LOCATED IN SMALL SP, PLAN
ID 03



Job No: 60829

Client: Dunland Property Pty Ltd

Version: A

Date: 13-05-2021

Drawn By: RS

Checked By: RP

Not to Scale

Coord. Sys n/a

**Asbestos in Soil (ASBINS)
Assessment**

**60 Bridge Street
Woolloowin
QLD**

APPENDIX A

Appendix C Laboratory Documentation

Published on DES Disclosure Log
RTI Act 2009

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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 (QLD) P/L
Contact name: sch4p4(6) Pe
Project name: WOOLLOOWIN AMP
Project ID: 60829
Turnaround time: 2 Day
Date/Time received: May 10, 2021 2:00 PM
Eurofins reference: 793803

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 : 20 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

QA20210506_01 TO SEND TO ENVIROLAB. RECEIVED ADDITIONAL SAMPLE TP01 0.4-0.55 & TP21_0.00-0.05; LOGGED ON HOLD. DID NOT RECEIVE SAMPLE 'TP33_0.0-0.3'.

Contact

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

sch4p4(6) Pe on phone : or by email: sch4p4(6) Pe@eurofins.com

Results will be delivered electronically via email to sch4p4(6) Personal@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (QLD) P/L email address.

JBS & G Australia (QLD) P/L
Level 3, Turbot Street
Brisbane
QLD 4000



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 and proficiency testing scheme providers
 reports.

Attention: sch4p4(6) Person
Report 793803-AID
Project Name WOOLLOOWIN AMP
Project ID 60829
Received Date May 10, 2021
Date Reported May 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 WOOLLOOWIN AMP
Project ID 60829
Date Sampled May 06, 2021 to May 07, 2021
Report 793803-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01_0.0-0.1	21-My16178	May 06, 2021	Approximate Sample 568g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP01_0.1-0.4	21-My16179	May 06, 2021	Approximate Sample 527g Sample consisted of: Brown coarse-grained clayey-sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP02_0.0-0.4	21-My16180	May 06, 2021	Approximate Sample 599g Sample consisted of: Red-brown coarse-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_0.4-0.6	21-My16181	May 06, 2021	Approximate Sample 552g Sample consisted of: Brown coarse-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.
TP04_0.1-0.45	21-My16182	May 06, 2021	Approximate Sample 527g Sample consisted of: Brown coarse-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP04_0.55-0.8	21-My16183	May 06, 2021	Approximate Sample 619g Sample consisted of: Brown coarse-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.
TP07_0.0-0.2	21-My16184	May 06, 2021	Approximate Sample 519g Sample consisted of: Brown coarse-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_0.0-0.1	21-My16185	May 06, 2021	Approximate Sample 518g Sample consisted of: Brown coarse-grained clayey-sandy 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
TP08_0.1-0.3	21-My16186	May 06, 2021	Approximate Sample 541g Sample consisted of: Brown coarse-grained clayey-sandy soil, plaster like material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP08_0.3-0.4	21-My16187	May 06, 2021	Approximate Sample 514g Sample consisted of: Brown coarse-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.
TP09_0.0-0.25	21-My16188	May 06, 2021	Approximate Sample 738g Sample consisted of: Red-brown coarse-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_0.25-0.5	21-My16189	May 06, 2021	Approximate Sample 541g Sample consisted of: Brown coarse-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.
TP09_0.5-0.75	21-My16190	May 06, 2021	Approximate Sample 526g Sample consisted of: Brown coarse-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_0.0-0.15	21-My16191	May 06, 2021	Approximate Sample 692g Sample consisted of: Red-brown coarse-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10_0.15-0.25	21-My16192	May 06, 2021	Approximate Sample 429g Sample consisted of: Brown coarse-grained clayey-sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10_0.25-0.5	21-My16193	May 06, 2021	Approximate Sample 607g Sample consisted of: Brown coarse-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_0.5-0.75	21-My16194	May 06, 2021	Approximate Sample 624g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP11_0.0-0.15	21-My16195	May 06, 2021	Approximate Sample 478g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP11_0.15-0.5	21-My16196	May 06, 2021	Approximate Sample 650g Sample consisted of: Brown coarse-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_0.0-0.15	21-My16197	May 06, 2021	Approximate Sample 605g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13_0.0-0.1	21-My16198	May 06, 2021	Approximate Sample 521g Sample consisted of: Brown coarse-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
TP14_0.0-0.15	21-My16199	May 07, 2021	Approximate Sample 610g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP14_0.15-0.25	21-My16200	May 07, 2021	Approximate Sample 554g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP14_0.25-0.4	21-My16201	May 07, 2021	Approximate Sample 638g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP15_0.0-0.2	21-My16202	May 07, 2021	Approximate Sample 697g Sample consisted of: Brown coarse-grained clayey-sandy soil, plaster like material, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP15_0.2-0.4	21-My16203	May 07, 2021	Approximate Sample 566g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP16_0.05-0.3	21-My16204	May 07, 2021	Approximate Sample 635g Sample consisted of: Brown coarse-grained sandy soil, plaster like material, organic debris, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP16_0.3-0.5	21-My16205	May 07, 2021	Approximate Sample 721g Sample consisted of: Brown coarse-grained clayey-sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17_0.05-0.15	21-My16206	May 07, 2021	Approximate Sample 650g Sample consisted of: Brown coarse-grained clayey-sandy soil, plaster like material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17_0.15-0.25	21-My16207	May 07, 2021	Approximate Sample 692g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP18_0.0-0.3	21-My16208	May 07, 2021	Approximate Sample 408g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP19_0.0-0.2	21-My16209	May 07, 2021	Approximate Sample 697g Sample consisted of: Brown coarse-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_0.0-0.3	21-My16210	May 07, 2021	Approximate Sample 465g Sample consisted of: Brown coarse-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_0.05-0.2	21-My16211	May 07, 2021	Approximate Sample 446g Sample consisted of: Brown coarse-grained clayey-sandy 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
TP22_0.0-0.2	21-My16212	May 07, 2021	Approximate Sample 538g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP22_0.2-0.3	21-My16213	May 07, 2021	Approximate Sample 611g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP23_0.05-0.2	21-My16214	May 07, 2021	Approximate Sample 748g Sample consisted of: Brown coarse-grained clayey-sandy soil, bitumen, plaster like material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP24_0.0-0.3	21-My16215	May 07, 2021	Approximate Sample 548g Sample consisted of: Brown coarse-grained clayey-sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP25_0.0-0.3	21-My16216	May 07, 2021	Approximate Sample 500g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP26_0.0-0.2	21-My16217	May 07, 2021	Approximate Sample 717g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP27_0.05-0.3	21-My16218	May 07, 2021	Approximate Sample 611g Sample consisted of: Brown coarse-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_0.0-0.15	21-My16219	May 07, 2021	Approximate Sample 776g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP28_0.15-0.25	21-My16220	May 07, 2021	Approximate Sample 771g Sample consisted of: Brown coarse-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_0.25-0.35	21-My16221	May 07, 2021	Approximate Sample 519g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP30_0.0-0.05	21-My16222	May 07, 2021	Approximate Sample 716g Sample consisted of: Brown coarse-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_0.0-0.4	21-My16223	May 07, 2021	Approximate Sample 621g Sample consisted of: Brown coarse-grained clayey soil, organic debris 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_0.05-0.4	21-My16224	May 07, 2021	Approximate Sample 406.3g Sample consisted of: Brown coarse-grained clayey soil and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 0.97g Total estimated asbestos content in ACM = 0.15g* Total estimated asbestos concentration in ACM = 0.036% w/w* Organic fibre detected. No trace asbestos detected.
TP34_0.0-0.4	21-My16226	May 07, 2021	Approximate Sample 641g Sample consisted of: Brown coarse-grained clayey-sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP35_0.0-0.2	21-My16227	May 07, 2021	Approximate Sample 556g Sample consisted of: Brown coarse-grained clayey-sandy soil, organic debris, plaster like material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP36_0.0-0.2	21-My16228	May 07, 2021	Approximate Sample 637g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP37_0.0-0.15	21-My16229	May 07, 2021	Approximate Sample 624g Sample consisted of: Brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP38_0.0-0.15	21-My16230	May 07, 2021	Approximate Sample 633g Sample consisted of: Brown coarse-grained clayey-sandy soil 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	May 10, 2021	Indefinite

Published on DES Disclosure Log
RTI Act 2009

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

Auckland
35 O'Rourke 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

Company Name:	JBS & G Australia (QLD) P/L	Order No.:		Received:	May 10, 2021 2:00 PM
Address:	Level 3, Turbot Street Brisbane QLD 4000	Report #:	793803	Due:	May 12, 2021
Project Name:	WOOLOOWIN AMP	Phone:	07 3181 5738	Priority:	2 Day
Project ID:	60829	Fax:		Contact Name:	sch4p4(6) Person
				Eurofins Analytical Services Manager	sch4p4(6) Person

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X		X
Brisbane Laboratory - NATA Site # 20794							X	
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	TP01 0.0-0.1	May 06, 2021		Soil	B21-My16178	X		
2	TP01 0.1-0.4	May 06, 2021		Soil	B21-My16179	X		
3	TP02 0.0-0.4	May 06, 2021		Soil	B21-My16180	X		
4	TP02 0.4-0.6	May 06, 2021		Soil	B21-My16181	X		
5	TP04 0.1-0.45	May 06, 2021		Soil	B21-My16182	X		
6	TP04 0.55-0.8	May 06, 2021		Soil	B21-My16183	X		
7	TP07 0.0-0.2	May 06, 2021		Soil	B21-My16184	X		
8	TP08 0.0-0.1	May 06, 2021		Soil	B21-My16185	X		
9	TP08 0.1-0.3	May 06, 2021		Soil	B21-My16186	X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 793803
Phone: 07 3181 5738
Fax:

Received: May 10, 2021 2:00 PM
Due: May 12, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Person

Eurofins Analytical Services Manager sch4p4(6) Person

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X		X
Brisbane Laboratory - NATA Site # 20794							X	
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
10	TP08_0.3-0.4	May 06, 2021		Soil	B21-My16187	X		
11	TP09_0.0-0.25	May 06, 2021		Soil	B21-My16188	X		
12	TP09_0.25-0.5	May 06, 2021		Soil	B21-My16189	X		
13	TP09_0.5-0.75	May 06, 2021		Soil	B21-My16190	X		
14	TP10_0.0-0.15	May 06, 2021		Soil	B21-My16191	X		
15	TP10_0.15-0.25	May 06, 2021		Soil	B21-My16192	X		
16	TP10_0.25-0.5	May 06, 2021		Soil	B21-My16193	X		
17	TP10_0.5-0.75	May 06, 2021		Soil	B21-My16194	X		
18	TP11_0.0-0.15	May 06, 2021		Soil	B21-My16195	X		
19	TP11_0.15-0.5	May 06, 2021		Soil	B21-My16196	X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 793803
Phone: 07 3181 5738
Fax:

Received: May 10, 2021 2:00 PM
Due: May 12, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Person

Eurofins Analytical Services Manager : sch4p4(6) Pers

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X		X
Brisbane Laboratory - NATA Site # 20794							X	
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
20	TP12_0.0-0.15	May 06, 2021		Soil	B21-My16197	X		
21	TP13_0.0-0.1	May 06, 2021		Soil	B21-My16198	X		
22	TP14_0.0-0.15	May 07, 2021		Soil	B21-My16199	X		
23	TP14_0.15-0.25	May 07, 2021		Soil	B21-My16200	X		
24	TP14_0.25-0.4	May 07, 2021		Soil	B21-My16201	X		
25	TP15_0.0-0.2	May 07, 2021		Soil	B21-My16202	X		
26	TP15_0.2-0.4	May 07, 2021		Soil	B21-My16203	X		
27	TP16_0.05-0.3	May 07, 2021		Soil	B21-My16204	X		
28	TP16_0.3-0.5	May 07, 2021		Soil	B21-My16205	X		
29	TP17_0.05-	May 07, 2021		Soil	B21-My16206	X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

Auckland
35 O'Rourke 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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 793803
Phone: 07 3181 5738
Fax:

Received: May 10, 2021 2:00 PM
Due: May 12, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Pers

Eurofins Analytical Services Manager : sch4n4(6) Pe

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X		X
Brisbane Laboratory - NATA Site # 20794							X	
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
	0.15							
30	TP17_ 0.15-0.25	May 07, 2021		Soil	B21-My16207	X		
31	TP18_ 0.0-0.3	May 07, 2021		Soil	B21-My16208	X		
32	TP19_ 0.0-0.2	May 07, 2021		Soil	B21-My16209	X		
33	TP20_ 0.0-0.3	May 07, 2021		Soil	B21-My16210	X		
34	TP21_ 0.05-0.2	May 07, 2021		Soil	B21-My16211	X		
35	TP22_ 0.0-0.2	May 07, 2021		Soil	B21-My16212	X		
36	TP22_ 0.2-0.3	May 07, 2021		Soil	B21-My16213	X		
37	TP23_ 0.05-0.2	May 07, 2021		Soil	B21-My16214	X		
38	TP24_ 0.0-0.3	May 07, 2021		Soil	B21-My16215	X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 793803
Phone: 07 3181 5738
Fax:

Received: May 10, 2021 2:00 PM
Due: May 12, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Pers

Eurofins Analytical Services Manager : sch4p4(6) Pers

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X		X
Brisbane Laboratory - NATA Site # 20794							X	
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
39	TP25_0.0-0.3	May 07, 2021		Soil	B21-My16216	X		
40	TP26_0.0-0.2	May 07, 2021		Soil	B21-My16217	X		
41	TP27_0.05-0.3	May 07, 2021		Soil	B21-My16218	X		
42	TP28_0.0-0.15	May 07, 2021		Soil	B21-My16219	X		
43	TP28_0.15-0.25	May 07, 2021		Soil	B21-My16220	X		
44	TP28_0.25-0.35	May 07, 2021		Soil	B21-My16221	X		
45	TP30_0.0-0.05	May 07, 2021		Soil	B21-My16222	X		
46	TP31_0.0-0.4	May 07, 2021		Soil	B21-My16223	X		
47	TP32_0.05-0.4	May 07, 2021		Soil	B21-My16224	X		

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 793803
Phone: 07 3181 5738
Fax:

Received: May 10, 2021 2:00 PM
Due: May 12, 2021
Priority: 2 Day
Contact Name: sch4p4(6) P

Eurofins Analytical Services Manager: sch4p4(6) Perso

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X		X
Brisbane Laboratory - NATA Site # 20794							X	
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory - NATA Site # 25079								
External Laboratory								
48	TP34_0.0-0.4	May 07, 2021		Soil	B21-My16226	X		
49	TP35_0.0-0.2	May 07, 2021		Soil	B21-My16227	X		
50	TP36_0.0-0.2	May 07, 2021		Soil	B21-My16228	X		
51	TP37_0.0-0.15	May 07, 2021		Soil	B21-My16229	X		
52	TP38_0.0-0.15	May 07, 2021		Soil	B21-My16230	X		
53	TP21_0.00-0.05	May 07, 2021		Soil	B21-My16231			X
54	TP01_0.4-0.55	May 06, 2021		Soil	B21-My18364		X	
Test Counts						52	2	2

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 blue colour, indicates data provided by customer, that may have an impact on the results.
5. 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 Sample Receipt Advice.

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: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to "non-bonded / friable".
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
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.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

My16192, My16195, My16208, My16210, My16211, My16224: 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	No
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:

sch4p4(6) Pe Senior Analyst-Asbestos (NSW)

Authorised by:

sch4p4(6) Personal info Senior Analyst-Asbestos (NSW)

sch4p4(6) Personal informa

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](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Chain of Custody



PROJECT NO.: 60829						LABORATORY BATCH NO.:														
PROJECT NAME: Woolloowin AMP						SAMPLERS: RS / SC														
DATE NEEDED BY: 48 Hr TAT						QC LEVEL: NEPM (2013)														
PHONE: Sydney 02 8245 0300 Perth 08 9488 0100 Brisbane 07 3112 2688 Melbourne 03 9642 0599 Adelaide 08 8431 7113																				
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) sch4p4@jbsg.com.au; (3) sch4p4@jbsg.com.au																				
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						<div> <div>ACM NEPM 0.001%</div> <div>TYPE OF ASBESTOS ANALYSIS</div> <div>IDENTIFICATION</div> <div>NEPM/NA</div> </div>														
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH															NOTES:
TP01_0.0-0.1	S	6/5/21				X														
TP01_0.1-0.4	S	6/5/21				X														
TP02_0.0-0.4	S	6/5/21				X														
TP02_0.4-0.6	S	6/5/21				X														
TP04_0.1-0.45	S	6/5/21				X														
TP04_0.55-0.8	S	6/5/21				X														
TP07_0.0-0.2	S	6/5/21				X														
TP08_0.0-0.1	S	6/5/21				X														
TP08_0.1-0.3	S	6/5/21				X														
TP08_0.3-0.4	S	6/5/21				X														
TP09_0.0-0.25	S	6/5/21				X														
TP09_0.25-0.5	S	6/5/21				X														
TP09_0.5-0.75	S	6/5/21				X														
TP10_0.0-0.15	S	6/5/21				X														
TP10_0.15-0.25	S	6/5/21				X														
TP10_0.25-0.5	S	6/5/21				X														
TP10_0.5-0.75	S	6/5/21				X														
TP11_0.0-0.15	S	6/5/21				X														
TP11_0.15-0.5	S	6/5/21				X														
TP12_0.0-0.15	S	6/5/21				X														
QA20210506_01	S	6/5/21				X														
TP13_0.0-0.1	S	6/5/21				X														
TP14_0.0-0.15	S	7/5/21				X														
TP14_0.15-0.25	S	7/5/21				X														
TP14_0.25-0.4	S	7/5/21				X														

#793803

[illegible]

NAME: sch4p4(6) Perso 2021	DATE: 6 and 7 May	CONSIGNMENT NOTE NO. Pick up (sch4p	NAME: sch4p4(6) DATE: 10/5/21 OF: 2 PM	COOLER SEAL – Yes..... No Intact Broken
OF: JBS&G		TRANSPORT CO.		COOLER TEMP 20 deg C
NAME:	DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No Intact Broken
OF:		TRANSPORT CO	OF:	COOLER TEMP deg C

Chain of Custody



Please Forward to Envirolab

PROJECT NO.: 60829										LABORATORY BATCH NO.:												
PROJECT NAME: Woolwin AMP										SAMPLERS: RS												
DATE NEEDED BY: 48 Hr TAT										QC LEVEL: NEPM (2013)												
PHONE: Sydney 02 8245 0300 Perth 08 9488 0100 Brisbane 07 3112 2688 Melbourne 03 9642 0599 Adelaide 08 8431 7113																						
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) sch4p4@jbsg.com.au; (3) sch4p4(6)@jbsg.com.au																						
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																				TYPE OF ASBESTOS ANALYSIS		NOTES:
																				IDENTIFICATION	NEPM/WA	
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE		pH																
QA20210506_01	S	06/05/21		Asbestos bag			X															
RELINQUISHED BY:				METHOD OF SHIPMENT:				RECEIVED BY:				FOR RECEIVING LAB USE ONLY:										
NAME:		DATE:		CONSIGNMENT NOTE NO.				NAME:				COOLER SEAL – Yes..... No Intact Broken										
OF: JBS&G				TRANSPORT CO.				DATE:				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 Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other																						

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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 (QLD) P/L
Contact name: sch4p4(6)
Project name: WOOLLOOWIN AMP
Project ID: 60829
Turnaround time: 2 Day
Date/Time received: May 11, 2021 5:32 PM
Eurofins reference: 794333

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 : 20 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

1x extra sample not on COC was received: TP33_0.0-0.3. It has been placed on hold - please advise if analysis is required.
Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

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

sch4p4(6) Person phone : or by email: sch4p4(6) Person@eurofins.com

Results will be delivered electronically via email to sch4p4(6) Person@eurofins.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (QLD) P/L email address.

JBS & G Australia (QLD) P/L
Level 3, Turbot Street
Brisbane
QLD 4000



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 and proficiency testing scheme providers
 reports.

Attention: sch4p4(6) Person
Report 794333-AID
Project Name WOOLLOOWIN AMP
Project ID 60829
Received Date May 11, 2021
Date Reported May 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 WOOLLOOWIN AMP
Project ID 60829
Date Sampled May 10, 2021 to May 11, 2021
Report 794333-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP39_0.0-0.1	21-My20331	May 10, 2021	Approximate Sample 559g 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.
TP39_0.1-0.4	21-My20332	May 10, 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.
TP40_0.05-0.3	21-My20333	May 10, 2021	Approximate Sample 610g 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.
TP41_0.0-0.2	21-My20334	May 10, 2021	Approximate Sample 412g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP44_0.0-0.3	21-My20335	May 10, 2021	Approximate Sample 792g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP45_0.0-0.5	21-My20336	May 10, 2021	Approximate Sample 714g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP46_0.0-0.4	21-My20337	May 10, 2021	Approximate Sample 406g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP49_0.0-0.2	21-My20338	May 10, 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.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP50_0.0-0.3	21-My20339	May 10, 2021	Approximate Sample 633g 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.
TP55_0.0-1.0	21-My20340	May 10, 2021	Approximate Sample 559g 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.
TP59_0.0-0.2	21-My20341	May 10, 2021	Approximate Sample 788g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP60_0.0-0.2	21-My20342	May 10, 2021	Approximate Sample 517g 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.
TP61_0.0-0.5	21-My20343	May 10, 2021	Approximate Sample 684g 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.
SP01_01	21-My20344	May 10, 2021	Approximate Sample 577g 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.
SP01_02	21-My20345	May 10, 2021	Approximate Sample 573g 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.
SP01_03	21-My20346	May 10, 2021	Approximate Sample 519g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP63_0.0-0.3	21-My20347	May 11, 2021	Approximate Sample 613g 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.
TP63_0.5-1.0	21-My20348	May 11, 2021	Approximate Sample 598g 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.
TP64_0.0-0.4	21-My20349	May 11, 2021	Approximate Sample 593g 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.
TP67_0.0-0.5	21-My20350	May 11, 2021	Approximate Sample 446g 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.
SP02_01	21-My20351	May 11, 2021	Approximate Sample 659g Sample consisted of: Brown coarse-grained sandy soil	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
SP02_02	21-My20352	May 11, 2021	Approximate Sample 747g Sample consisted of: Brown coarse-grained sandy soil	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP02_03	21-My20353	May 11, 2021	Approximate Sample 644g Sample consisted of: Brown coarse-grained sandy soil	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP03_01	21-My20354	May 11, 2021	Approximate Sample 461g 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.
SP03_02	21-My20355	May 11, 2021	Approximate Sample 506g 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.
SP03_03	21-My20356	May 11, 2021	Approximate Sample 397g 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.
SP04_01	21-My20357	May 11, 2021	Approximate Sample 747g 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.
SP04_02	21-My20358	May 11, 2021	Approximate Sample 520g 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.
SP04_03	21-My20359	May 11, 2021	Approximate Sample 600g 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.
SP04_04	21-My20360	May 11, 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.
SP04_05	21-My20361	May 11, 2021	Approximate Sample 581g 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.
SP04_06	21-My20362	May 11, 2021	Approximate Sample 667g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP04_07	21-My20363	May 11, 2021	Approximate Sample 652g 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.
SP04_08	21-My20364	May 11, 2021	Approximate Sample 524g 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
SP05_01	21-My20365	May 11, 2021	Approximate Sample 609g 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.
SP05_02	21-My20366	May 11, 2021	Approximate Sample 628g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP05_03	21-My20367	May 11, 2021	Approximate Sample 420g 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.
SP05_04	21-My20368	May 11, 2021	Approximate Sample 613g 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.
SP06_01	21-My20369	May 11, 2021	Approximate Sample 707g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP06_02	21-My20370	May 11, 2021	Approximate Sample 673g Sample consisted of: Brown fine-grained clayey soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP06_03	21-My20371	May 11, 2021	Approximate Sample 720g Sample consisted of: Brown fine-grained clayey soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP06_04	21-My20372	May 11, 2021	Approximate Sample 717g 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.
SP06_05	21-My20373	May 11, 2021	Approximate Sample 743g 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.
SP06_06	21-My20374	May 11, 2021	Approximate Sample 627g 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.
SP06_07	21-My20375	May 11, 2021	Approximate Sample 746g Sample consisted of: Brown coarse-grained soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP06_08	21-My20376	May 11, 2021	Approximate Sample 724g 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.
SP07_01	21-My20377	May 11, 2021	Approximate Sample 702g 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
SP07_02	21-My20378	May 11, 2021	Approximate Sample 605g Sample consisted of: Brown coarse-grained soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP07_03	21-My20379	May 11, 2021	Approximate Sample 659g 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.
SP08_01	21-My20380	May 11, 2021	Approximate Sample 680g Sample consisted of: Brown fine-grained clayey soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP08_02	21-My20381	May 11, 2021	Approximate Sample 605g 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.
SP08_03	21-My20382	May 11, 2021	Approximate Sample 563g Sample consisted of: Brown fine-grained clayey soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP09_01	21-My20383	May 11, 2021	Approximate Sample 817g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP09_02	21-My20384	May 11, 2021	Approximate Sample 795g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP09_03	21-My20385	May 11, 2021	Approximate Sample 759g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP10_01	21-My20386	May 11, 2021	Approximate Sample 698g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP10_02	21-My20387	May 11, 2021	Approximate Sample 648g Sample consisted of: Brown coarse-grained soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP10_03	21-My20388	May 11, 2021	Approximate Sample 552g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP10_04	21-My20389	May 11, 2021	Approximate Sample 411g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SP10_05	21-My20390	May 11, 2021	Approximate Sample 516g Sample consisted of: Brown coarse-grained soil, coal 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	May 12, 2021	Indefinite

Published on DES Disclosure Log
RTI Act 2009

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

Auckland
35 O'Rourke 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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000

Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 794333
Phone: 07 3181 5738
Fax:

Received: May 11, 2021 5:32 PM
Due: May 14, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Person

Eurofins Analytical Services Manager : sch4p4(6) Person

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	
Brisbane Laboratory - NATA Site # 20794							X
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	TP39 0.0-0.1	May 10, 2021		Soil	B21-My20331	X	
2	TP39 0.1-0.4	May 10, 2021		Soil	B21-My20332	X	
3	TP40 0.05-0.3	May 10, 2021		Soil	B21-My20333	X	
4	TP41 0.0-0.2	May 10, 2021		Soil	B21-My20334	X	
5	TP44 0.0-0.3	May 10, 2021		Soil	B21-My20335	X	
6	TP45 0.0-0.5	May 10, 2021		Soil	B21-My20336	X	
7	TP46 0.0-0.4	May 10, 2021		Soil	B21-My20337	X	
8	TP49 0.0-0.2	May 10, 2021		Soil	B21-My20338	X	
9	TP50 0.0-0.3	May 10, 2021		Soil	B21-My20339	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

Auckland
35 O'Rourke 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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 794333
Phone: 07 3181 5738
Fax:

Received: May 11, 2021 5:32 PM
Due: May 14, 2021
Priority: 2 Day
Contact Name: sch4p4(6) P

Eurofins Analytical Services Manager: sch4p4(6) Perso

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	
Brisbane Laboratory - NATA Site # 20794							X
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
10	TP55_0.0-1.0	May 10, 2021		Soil	B21-My20340	X	
11	TP59_0.0-0.2	May 10, 2021		Soil	B21-My20341	X	
12	TP60_0.0-0.2	May 10, 2021		Soil	B21-My20342	X	
13	TP61_0.0-0.5	May 10, 2021		Soil	B21-My20343	X	
14	SP01_01	May 10, 2021		Soil	B21-My20344	X	
15	SP01_02	May 10, 2021		Soil	B21-My20345	X	
16	SP01_03	May 10, 2021		Soil	B21-My20346	X	
17	TP63_0.0-0.3	May 11, 2021		Soil	B21-My20347	X	
18	TP63_0.5-1.0	May 11, 2021		Soil	B21-My20348	X	
19	TP64_0.0-0.4	May 11, 2021		Soil	B21-My20349	X	
20	TP67_0.0-0.5	May 11, 2021		Soil	B21-My20350	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000

Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 794333
Phone: 07 3181 5738
Fax:

Received: May 11, 2021 5:32 PM
Due: May 14, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Per

Eurofins Analytical Services Manager : sch4p4(6) Per

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	
Brisbane Laboratory - NATA Site # 20794							X
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
21	SP02_01	May 11, 2021		Soil	B21-My20351	X	
22	SP02_02	May 11, 2021		Soil	B21-My20352	X	
23	SP02_03	May 11, 2021		Soil	B21-My20353	X	
24	SP03_01	May 11, 2021		Soil	B21-My20354	X	
25	SP03_02	May 11, 2021		Soil	B21-My20355	X	
26	SP03_03	May 11, 2021		Soil	B21-My20356	X	
27	SP04_01	May 11, 2021		Soil	B21-My20357	X	
28	SP04_02	May 11, 2021		Soil	B21-My20358	X	
29	SP04_03	May 11, 2021		Soil	B21-My20359	X	
30	SP04_04	May 11, 2021		Soil	B21-My20360	X	
31	SP04_05	May 11, 2021		Soil	B21-My20361	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 794333
Phone: 07 3181 5738
Fax:

Received: May 11, 2021 5:32 PM
Due: May 14, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Per

Eurofins Analytical Services Manager : sch4p4(6) Perso

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	
Brisbane Laboratory - NATA Site # 20794							X
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
32	SP04_06	May 11, 2021		Soil	B21-My20362	X	
33	SP04_07	May 11, 2021		Soil	B21-My20363	X	
34	SP04_08	May 11, 2021		Soil	B21-My20364	X	
35	SP05_01	May 11, 2021		Soil	B21-My20365	X	
36	SP05_02	May 11, 2021		Soil	B21-My20366	X	
37	SP05_03	May 11, 2021		Soil	B21-My20367	X	
38	SP05_04	May 11, 2021		Soil	B21-My20368	X	
39	SP06_01	May 11, 2021		Soil	B21-My20369	X	
40	SP06_02	May 11, 2021		Soil	B21-My20370	X	
41	SP06_03	May 11, 2021		Soil	B21-My20371	X	
42	SP06_04	May 11, 2021		Soil	B21-My20372	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 794333
Phone: 07 3181 5738
Fax:

Received: May 11, 2021 5:32 PM
Due: May 14, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Pe

Eurofins Analytical Services Manager sch4p4(6) Pers

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	
Brisbane Laboratory - NATA Site # 20794							X
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
43	SP06_05	May 11, 2021		Soil	B21-My20373	X	
44	SP06_06	May 11, 2021		Soil	B21-My20374	X	
45	SP06_07	May 11, 2021		Soil	B21-My20375	X	
46	SP06_08	May 11, 2021		Soil	B21-My20376	X	
47	SP07_01	May 11, 2021		Soil	B21-My20377	X	
48	SP07_02	May 11, 2021		Soil	B21-My20378	X	
49	SP07_03	May 11, 2021		Soil	B21-My20379	X	
50	SP08_01	May 11, 2021		Soil	B21-My20380	X	
51	SP08_02	May 11, 2021		Soil	B21-My20381	X	
52	SP08_03	May 11, 2021		Soil	B21-My20382	X	
53	SP09_01	May 11, 2021		Soil	B21-My20383	X	

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: JBS & G Australia (QLD) P/L
Address: Level 3, Turbot Street
Brisbane
QLD 4000
Project Name: WOOLLOOWIN AMP
Project ID: 60829

Order No.:
Report #: 794333
Phone: 07 3181 5738
Fax:

Received: May 11, 2021 5:32 PM
Due: May 14, 2021
Priority: 2 Day
Contact Name: sch4p4(6) Pers

Eurofins Analytical Services Manager : sch4p4(6) Pers

Sample Detail						Asbestos - WA guidelines	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	
Brisbane Laboratory - NATA Site # 20794							X
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
54	SP09_02	May 11, 2021		Soil	B21-My20384	X	
55	SP09_03	May 11, 2021		Soil	B21-My20385	X	
56	SP10_01	May 11, 2021		Soil	B21-My20386	X	
57	SP10_02	May 11, 2021		Soil	B21-My20387	X	
58	SP10_03	May 11, 2021		Soil	B21-My20388	X	
59	SP10_04	May 11, 2021		Soil	B21-My20389	X	
60	SP10_05	May 11, 2021		Soil	B21-My20390	X	
61	TP33_0.0-0.3	May 11, 2021		Soil	B21-My20391		X
Test Counts						60	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 blue colour, indicates data provided by customer, that may have an impact on the results.
5. 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 Sample Receipt Advice.

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: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to "non-bonded / friable".
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
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.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

My20334, My20337, My20350, My20354, My20356, My20367, My20389: 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:

sch4p4(6) Personal Senior Analyst-Asbestos (NSW)

Authorised by:

sch4p4(6) Personal info Senior Analyst-Asbestos (NSW)

sch4p4(6) Personal i

General Manager

Final Report – this report replaces any previously issued Report

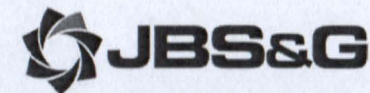
- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

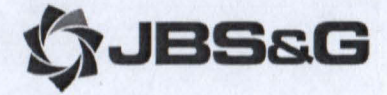
Chain of Custody



PROJECT NO.: 60829						LABORATORY BATCH NO.:													
PROJECT NAME: Wooloowin AMP						SAMPLERS: JY / RS													
DATE NEEDED BY: 48 Hr TAT						QC LEVEL: NEPM (2013)													
PHONE: Sydney 02 8245 0300 Perth 08 9488 0100 Brisbane 07 3112 2688 Melbourne 03 9642 0599 Adelaide 08 8431 7113																			
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) sch4p4@jbsg.com.au; (3) sch4p4(6)@jbsg.com.au																			
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						<div style="display: flex; justify-content: space-between;"> <div> <p>TP33:0.0-0.3 - EXTRA</p> </div> <div> <p>ACM NEPM 0.001%</p> </div> <div> <p>TYPE OF ASBESTOS ANALYSIS</p> </div> </div>													
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH														
TP39_0.0-0.1	S	10.05.21				X													
TP39_0.1-0.4	S	10.05.21				X													
TP40_0.05-0.3	S	10.05.21				X													
TP41_0.0-0.2	S	10.05.21				X													
TP44_0.0-0.3	S	10.05.21				X													
TP45_0.0-0.5	S	10.05.21				X													
TP46_0.0-0.4	S	10.05.21				X													
TP49_0.0-0.2	S	10.05.21				X													
TP50_0.0-0.3	S	10.05.21				X													
TP55_0.0-1.0	S	10.05.21				X													
TP59_0.0-0.2	S	10.05.21				X													
TP60_0.0-0.2	S	10.05.21				X													
TP61_0.0-0.5	S	10.05.21				X													
SP01_01	S	10.05.21				X													
SP01_02	S	10.05.21				X													
SP01_03	S	10.05.21				X													
RELINQUISHED BY:		METHOD OF SHIPMENT:				RECEIVED BY:				FOR RECEIVING LAB USE ONLY:									
NAME: Rebecca Schofield DATE: 11 May 2021		CONSIGNMENT NOTE NO. Pick up (Ryan)				NAME: sch4p4(6) Pe				COOLER SEAL - Yes..... No Intact Broken									
OF: JBS&G		TRANSPORT CO.				DATE: 11/5/21 5:21pm				COOLER TEMP 20 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 Prsrd.; C = Sodium Hydroxide Prsrd; VC = Hydrochloric Acid Prsrd Vial; VS = Sulfuric Acid Prsrd Vial; S = Sulfuric Acid Prsrd; Z = Zinc Prsrd; E = EDTA Prsrd; ST = Sterile Bottle; O = Other																			

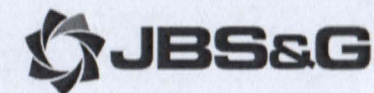
794333

Chain of Custody



PROJECT NO.: 60829						LABORATORY BATCH NO.:													
PROJECT NAME: Woolloowin AMP						SAMPLERS: JY / RS													
DATE NEEDED BY: 48 Hr TAT						QC LEVEL: NEPM (2013)													
PHONE: Sydney 02 8245 0300 Perth 08 9488 0100 Brisbane 07 3112 2688 Melbourne 03 9642 0599 Adelaide 08 8431 7113																			
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) sch4p4@jbsg.com.au; (3) sch4p4(6)@jbsg.com.au																			
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						<div>ACM NEPM 0.001%</div> <div>TYPE OF ASBESTOS ANALYSIS</div> <div>IDENTIFICATION NEPM/WA</div> <div>NOTES:</div>													
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH														
TP63_0.0-0.3	S	11.05.21				X													
TP63_0.5-1.0	S	11.05.21				X													
TP64_0.0-0.4	S	11.05.21				X													
TP67_0.0-0.5	S	11.05.21				X													
SP02_01	S	11.05.21				X													
SP02_02	S	11.05.21				X													
SP02_03	S	11.05.21				X													
SP03_01	S	11.05.21				X													
SP03_02	S	11.05.21				X													
SP03_03	S	11.05.21				X													
SP04_01	S	11.05.21				X													
SP04_02	S	11.05.21				X													
SP04_03	S	11.05.21				X													
SP04_04	S	11.05.21				X													
SP04_05	S	11.05.21				X													
SP04_06	S	11.05.21				X													
SP04_07	S	11.05.21				X													
SP04_08	S	11.05.21				X													
SP05_01	S	11.05.21				X													
SP05_02	S	11.05.21				X													
SP05_03	S	11.05.21				X													
SP05_04	S	11.05.21				X													
SP06_01	S	11.05.21				X													
SP06_02	S	11.05.21				X													
SP06_03	S	11.05.21				X													

Chain of Custody

[illegible]

Appendix D Test Pit Logs

Published on DES Disclosure Log
RTI Act 2009

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,043.24
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,535.83
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	CLAY, MP, soft, brown with red/grey mottling, inclusions of sand, gravel and fine roots				No Staining or odours observed
		0.2		Fill	ASH, with red/grey/black clay, firm, LP, inclusions of sand, gravel, roots and ASH, resin or tar matrix through soil				Potential ACM-needs washing
		0.3							
		0.4		Fill	CLAY, LP, soft, brown with grey				No ACM observed
		0.5							
		0.6		CL	CLAY, LP, stiff, orange with red/grey mottles				
		0.6			Termination Depth at: 0.6 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.95
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,534.4
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CL-SC	Sandy CLAY, HP, red with orange/grey mottles, inclusions of gravel and fine roots	M			No Staining or odours observed throughout
		0.2							
		0.3							
		0.4							
		0.5		Fill	ASH, with clay, gravel and sand, MP, soft, very moist, black/grey, inclusions of fine roots	M			Trace anthropogenic glass observed
		0.6							
		0.7		CL	CLAY, LP, stiff, orange with red/grey mottles				
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.85
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,532.47
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1			N/A				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2			Termination Depth at: 0.1 m.				
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,102.08
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,531.13
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	CLAY, with sand and gravel, MP, soft-med, very moist, inclusions of organics and grass roots	M			No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4							
		0.5		Concrete	Concrete Slab				
		0.6		Fill	ASH, with sand and clay, MP, soft, black with red/orange mottles, inclusions of rounded river rock pebbles				
		0.7							
		0.8		CL	CLAY, LP, stiff, orange with red/grey mottles				
		0.9							
		1			Termination Depth at: 1.0 m.				
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21 Excavator	EASTING 504,041.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,548.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty CLAY, with sand/gravel/ash, inclusions of roots				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL-ML	Silty CLAY, with sand, LP, stiff, red/orange with light brown mottling				
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,548.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		SC-SM	Silty Sandy CLAY, brown with orange mottles, inclusions of fine roots and gravel				No Staining, odours or ACM observed throughout
		0.2		Fill	Clayey Sandy Gravely ASH, inclusions of small gravel and fine roots				
		0.3		Fill	Silty CLAY, orange with grey mottles, inclusion of small gravel and fine roots				
		0.4		CL-ML	Silty CLAY, with sand, LP, stiff, red/orange with light brown mottling				
		0.5							
		0.6							
		0.7			Termination Depth at: 0.7 m.				
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,548.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CH-SC	Sandy CLAY, HP, brown with orange mottles, inclusions of fine roots, gravel, sand, river rock, rock				No Staining or odours observed throughout
		0.2							
		0.3		Fill	CLAY, MP, medium, light brown with orange/red/grey mottles, inclusions of fine roots and gravel				ACM observed 0.25-0.5 mbgl
		0.4							
		0.5		Fill	ASH, with sand and clay, coarse grained, LP, soft, inclusions of fine roots and gravel				No ACM observed
		0.6							
		0.7							
		0.8		CL	CLAY, LP, stiff, orange with red/grey mottles				
		0.9			Termination Depth at: 0.9 m.				
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,548.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CL-ML	Silty CLAY, MP, brown with orange mottles, inclusions of fine roots, gravel, sand, river rock and large gravel				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		Fill	ASH, LP, soft, very moist, black/grey, inclusions of coarse sand, large sub-angular gravel and fine rootlets	M			
		0.3		Fill	CLAY, light brown, reworked with ash and gravel, red/light brown/brown/black				
		0.4							
		0.5		Fill	CLAY, with sand and gravel, LP, soft, inclusions of rootlets				
		0.6							
		0.7							
		0.8		CL	CLAY, LP, stiff, orange with red/grey mottles Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,548.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty Sandy CLAY, med grained, MP, black, inclusions of glass, tree roots and bone				No Staining or odours observed throughout
		0.2		Fill	ASH, LP, soft, black/grey, very moist, inclusions of coarse sand, large sub-angular gravel and fine rootlets	M			ACM observed
		0.3							
		0.4							
		0.5		CL-ML	Silty CLAY, with sand, LP, stiff, red/orange with light brown mottling				
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,548.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		SC-SM	Silty Sandy CLAY, dense, MP, brown, heterogeneous, inclusions of grass roots, coal and glass				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL-ML	Silty CLAY, red/orange mottles, homogeneous				
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,044.27
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,569.08
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	CLAY, LP, hard, brown, inclusions of coal and rootlets				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, LP, hard, light brown with orange mottles, inclusions of rootlets and coal				
		0.3							
		0.4			Termination Depth at: 0.4 m.				
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,568.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		SC-SM	Silty Sandy CLAY, med grained, LP, soft, brown, inclusions of gravel and ash				No Staining or odours observed throughout
		0.2		Fill	ASH with sand and gravel, LP, soft, black/grey, inclusions of gravel and ash				
		0.3		RWN	CLAY, LP, firm, light grey/brown with orange/red mottles, inclusions of fine roots, ash and pebbles				Possible ACM/Trace anthropogenic small pieces of plastic observed
		0.4		CL	CLAY, LP, hard, light brown with light orange mottles, inclusion of fine rootlets				
		0.5							
		0.6			Termination Depth at: 0.6 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,568.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		SC-SM	Silty Sandy CLAY, m grained, LP, soft, brown, inclusions of gravel, pebbles and rocks				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		Fill	Sandy Gravelly Clayey ASH, NP, very soft, black/grey, inclusions of pebbles				
		0.3							
		0.4		CL	CLAY, LP, very stiff, orange with light grey mottles, homogeneous				
		0.5							
		0.6							
		0.7			Termination Depth at: 0.7 m.				
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,568.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Roadbase/Gravel				No Staining, odours
		0.2		Fill	Silty Sandy CLAY, LP, soft, brown with red/grey clay chunks, inclusions of gravel, rocks and rootlets				ACM observed material observed throughout
		0.3		Fill	Silty Sandy CLAY, LP, soft, brown with red/grey clay chunks, inclusions of gravel, rocks, rootlets and soft clay ASH chunks				ACM observed
		0.4							
		0.5		CL	CLAY, LP, very stiff, orange with light grey mottles, homogeneous				
		0.6			Termination Depth at: 0.6 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,568.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Roadbase/Gravel				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		SC	Clayey SAND, brown/black with light brown/grey mottled clay chunks, inclusions of Ash, gravel, rocks and bark				
		0.3		SC	Clayey SAND, brown/black with light brown/grey mottled clay chunks, inclusions of gravel, rocks and bark				
		0.4		CL	CLAY, LP, hard, red, homogeneous, inclusions of roots				
		0.5			Termination Depth at: 0.4 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,568.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	Silty Gravelly CLAY, orange-red with some grey, wet, inclusions of fine gravels and organics	W			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2							
		0.3							
		0.4		CL	CLAY, HP, red to brown, inclusions of some roots				
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,044.51
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,588.6
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CH-MH	Silty CLAY, LP, soft, brown, inclusions of small-large gravels				No Staining, odours or ACM observed throughout
		0.2		CL	CLAY, LP, hard, light brown with orange mottles, inclusions of rootlets and coal				
		0.3							
		0.4			Termination Depth at: 0.4 m.				
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,588.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations	
		0.1		CH-MH	Silty CLAY, LP, brown with red/white inclusions, wet, inclusions of trace brick fragments	W			No Staining, odours, Anthropogenic material or ACM observed throughout	
		0.2								
		0.3								
		0.4		CL	CLAY, HP, cream brown, moist	SM				
		0.5			Termination Depth at: 0.5 m.					
		0.6								
		0.7								
		0.8								
		0.9								
		1								
		1.1								
		1.2								
		1.3								
		1.4								
		1.5								
		1.6								
		1.7								
		1.8								
		1.9								
		2								
		2.1								
		2.2								
		2.3								
		2.4								
		2.5								

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,588.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1	RWN	Grass covering surface					No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2	Fill	CLAY, HP, soft, brown with grey/orange mottles, inclusions of rootlets, gravel and sand					
		0.3	CL	Sandy Clayey Gravelly ASH, black/grey, inclusions of rootlets					
		0.4		CLAY, MP, firm, grey with orange mottles, inclusions of rootlets					
		0.5		Termination Depth at: 0.4 m.					
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,588.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CH-GM-MH	Silty Gravelly CLAY, HP, brown with some black, wet, inclusions of some intermixed waste (ceramic, glass) and ash present	W			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		GC	Clayey GRAVEL, LP, firm, orange, moist, inclusions of some organics	SM			
		0.3		CL	CLAY, HP, orange/brown				
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,588.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Roadbase/Gravel				
		0.2		SC	Clayey SAND, coarse grained, grey/brown, dry, inclusions of hard orange/grey clay, gravel and rocks	D			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.3		CL	CLAY, dense (compacted under area where vehicles drive), LP, soft, brown with grey, dry				
		0.4			Termination Depth at: 0.3 m.				
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,588.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Mixed Fill CLAY, LP-MP, firm, orange/black/grey, inclusions of sand, gravel, rootlets and tree roots				No Staining, odours or ACM observed throughout
		0.2							
		0.3		CL	CLAY, LP, soft, grey with orange/red mottles, inclusions of rootlets and sand				Anthropogenic ceramic pipe at 0.2 mbgl with water coming out
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,154.59
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,589.49
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty Sandy CLAY, MP, soft, black/brown, very moist, inclusions of grass on surface, gravel, light grey/orange mottles clay chunks and rootlets	M			No Staining, odours or ACM observed throughout
		0.2							
		0.3		CL	CLAY, LP, hard, red, homogeneous, inclusions of roots				
		0.4							
		0.5							
		0.6							
		0.7			Termination Depth at: 0.6 m.				
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,047.41
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,608.6
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CH-SC	Sandy CLAY, MP, soft, homogeneous, inclusion of fine roots				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		RWN	CLAY, MP, soft, grey with red mottles, inclusion of roots				
		0.3							
		0.4							
		0.5							
		0.6			Termination Depth at: 0.6 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,608.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	GRAVEL, grey, inclusions of small-med sized sub angular gravel across surface	M			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		GC-GS	Sandy Clayey GRAVEL, orange, moist, inclusions of coarse grained sand and small-large subangular gravel				
		0.3		CL-ML	Silty CLAY, MP, stiff, grey with orange mottles				
		0.4			Termination Depth at: 0.4 m.				
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,608.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	CLAY, HP, stiff, brown with red/grey mottles, inclusions of gravel, roots and grass on surface				No Staining, odours or ACM observed throughout
		0.2		Fill	Clayey Gravelly SAND, coarse grained, orange, inclusions of small-large subangular gravel, fine roots and rocks				
		0.3		Fill	Gravelly CLAY, MP, black, very moist, inclusions of ash, coal and fine rocks	M			
		0.4		CL	CLAY, LP, stiff, grey with orange mottles, inclusions of tree roots				
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,608.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		GW	GRAVEL and rubble on surface overlaying natural				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, LP, stiff, grey with orange mottles, inclusions of tree roots				
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,608.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Gravelly ROADBASE				No Staining, odours, Anthropogenic material or ACM observed throughout
				Fill	Silty Clayey SAND, fine-med grained, LP, stiff, with gravelly roadbase				
				CL	CLAY, LP, stiff, red with orange/grey mottling				
		0.2			Termination Depth at: 0.1 m.				
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,608.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CH-GS	Sandy Gravelly CLAY, coarse grained sand, LP, soft, inclusions of fine roots				No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4		RWN	CLAY, MP, soft, inclusions of small gravel and rootlets				
		0.5							
		0.6							
		0.7							
		0.8		CL	CLAY, LP, firm, grey with red mottles				
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,155.86
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,609.18
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1	PT	SC-SG	Grass covering surface	M			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2	CH		Clayey Gravelly SAND, coarse grained, grey, inclusions of pebbles, rocks and rootlets				
		0.3			CLAY, HP, soft, dark grey, very moist, inclusions of gravel, sand and rootlets				
		0.4		CL-ML	Silty CLAY, HP, soft, red/orange, very moist	M			
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,048.51
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,630.67
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		GS	Sandy GRAVEL, moist-wet, inclusions of fine-coarse cobbles, fine to coarse sand and some clay chunks	M			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2							
		0.3							
		0.4		CL	CLAY, HP, orange, homogeneous, moist	SM			
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,628.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Clayey Sandy GRAVEL, LP, orange, moist, inclusions of fine to coarse gravel and fine-coarse sand	SM			No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4							
		0.5		CL	CLAY, HP, orange with some grey mottling, homogeneous, moist	SM			
		0.6							
		0.7							
		0.8			Termination Depth at: 0.7 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,628.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty Gravelly CLAY, LP, brown, moist, inclusions of fine grained gravels and trace brick fragments	SM			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, HP, orange/brown, homogeneous, moist	SM			
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,628.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	CLAY, HP, cream to orange, moist, inclusions of fine-med grained gravels, (possible reworked natural)	SM			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, HP, orange, homogeneous, moist	SM			
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,628.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CH-MH	Silty CLAY, LP, cream brown, moist, inclusions of fine grained gravel	SM			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, HP, orange/brown with grey mottling, moist, inclusions of trace fine-med grained concrete fragments	SM			
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,628.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Sandy Gravelly CLAY, LP, brown, moist, inclusions of fine grained sand and fine-med grained gravel	SM			No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, MP, orange, dry, inclusions of some silt fines	D			
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,157.98
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,628.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1	Fill	Fill	ROADBASE, inclusions of gravel and rocks on surface				No Staining, odours or ACM observed throughout
		0.2	Fill	Fill	Gravelly CLAY, MP, firm, red/grey, heterogeneous, inclusions of rootlets				
		0.3			Sandy CLAY, LP, very soft, brown, inclusions of rootlets, silt and gravel				
		0.4		CL-ML	Silty CLAY, LP, soft, orange with red mottles, homogeneous, inclusions of rootlets				
		0.5							
		0.6			Termination Depth at: 0.6 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,061.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,648.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	Gravelly CLAY, MP, soft, grey/red/orange, inclusions of small-large grained gravel				No Staining, odours
		0.2		Fill	Silty Gravelly CLAY, NP, soft, inclusions of rootlets and small-med grained gravel				AMC observed material observed throughout
		0.3		RWN	Silty CLAY, MP, stiff, grey/orange with red mottles, homogeneous				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1			Termination Depth at: 1.1 m.				
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,081.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,648.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	Gravelly CLAY, MP, soft, grey/red/orange, inclusions of small-large grained gravel				No Staining or odours observed throughout
		0.2		CL-ML	Silty CLAY, MP, stiff, grey/orange with red mottles, homogeneous				
		0.3							
		0.4							
		0.5							
		0.6			Termination Depth at: 0.5 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,648.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1 0.2 0.3		CL-ML	Silty CLAY, MP, stiff, grey/orange with red mottles, homogeneous				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2 2.1 2.2 2.3 2.4 2.5			Termination Depth at: 0.3 m.				

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,648.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	ROADBASE inclusions of gravel on surface				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL-ML	Silty CLAY, MP, stiff, grey with red mottles, inclusions of rootlets				
		0.3							
		0.4			Termination Depth at: 0.3 m.				
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Wooloowin ACM Validation		NORTHING 6,966,648.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Wooloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty CLAY, grey, inclusions of small-large subangular roadbase gravel				No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.5			Termination Depth at: 0.4 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,648.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty Gravelly CLAY, very soft clay, inclusions of roadbase gravel and sand				No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1		CL-ML	Silty CLAY, MP, hard, orange/grey, homogeneous				Perched water above clay later
		1.2							
		1.3							
		1.4			Termination Depth at: 1.3 m.				
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,069.7
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,669.28
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations	
		0.1		PT Fill	Grass covering surface CLAY, LP, very soft, black, inclusions of rootlets, roots, gravel and rocks				No Staining or odours observed throughout	
		0.2								
		0.3								
		0.4								
		0.5		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets					
		0.6								
		0.7								
		0.8			Termination Depth at: 0.7 m.					
		0.9								
		1								
		1.1								
		1.2								
		1.3								
		1.4								
		1.5								
		1.6								
		1.7								
		1.8								
		1.9								
		2								
		2.1								
		2.2								
		2.3								
		2.4								
		2.5								

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,668.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of gravel on surface				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2							
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,668.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	ROADBASE				No Staining, odours or ACM observed throughout
		0.2		Fill	Silty Gravelly CLAY, very soft clay, inclusions of roadbase gravel and sand				
		0.2		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.3			Termination Depth at: 0.2 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,668.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		PT CL	Grass covering surface CLAY, LP, soft, black, inclusions of rootlets and gravel				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,668.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		PT	Grass covering surface				No Staining, odours or ACM observed throughout
		0.2		CL	CLAY, LP, soft, black, inclusions of rootlets and gravel				
		0.3		RWN	CLAY, LP, firm, orange with grey/red mottled clay throughout, inclusions of gravel				
		0.4							
		0.5							
		0.6		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.7							
		0.8							
		0.9			Termination Depth at: 0.9 m.				
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,688.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1 0.2 0.3		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets and gravel at surface				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2 2.1 2.2 2.3 2.4 2.5			Termination Depth at: 0.3 m.				

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,688.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets and gravel at surface				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2							
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,688.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		CL CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets and gravel at surface CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets, fine tree roots and organic matter Termination Depth at: 0.1 m.				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2							
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,688.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1 0.2 0.3 0.4 0.5 0.6		CL	CLAY, LP, firm, red with grey mottles				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2 2.1 2.2 2.3 2.4 2.5			Termination Depth at: 0.6 m.				

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,708.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	CLAY, red with orange/grey mottling, inclusions of gravel and rootlets				No Staining or odours observed throughout
		0.2							
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		1.2			Termination Depth at: 1.2 m.				
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Wooloowin ACM Validation		NORTHING 6,966,708.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Wooloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	REWORKED NATURAL with inclusions of roadbased gravel				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,708.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	ROADBASE				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,708.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	ROADBASE				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets and gravel				
		0.3			Termination Depth at: 0.3 m.				
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,728.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Gravelly CLAY, LP, soft, light grey with orange mottling, inclusions of sand, silt and rootlets				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2		Asphalt	ASHPHALT				
		0.3		CL	CLAY, LP, very stiff, brown with grey/orange mottles				
		0.4			Termination Depth at: 0.3 m.				
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,728.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	Gravelly CLAY, LP, soft, inclusions of rocks and roadbase gravel				No Staining, odours or ACM observed throughout
		0.2		RWN	CLAY, LP, stiff, compact, inclusions of gravel				
		0.3							
		0.4							Anthropogenic brick observed at 0.4 mbgl
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5			Termination Depth at: 2.5 m.				

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,141.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,728.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations	
		0.1		Fill	Silty Clayey GRAVEL, NP, soft, brown				No Staining, odours, Anthropogenic material or ACM observed throughout	
		0.2								
		0.3								
		0.4								
		0.5								
		0.5		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets					
		0.6			Termination Depth at: 0.6 m.					
		0.7								
		0.8								
		0.9								
		1								
		1.1								
		1.2								
		1.3								
		1.4								
		1.5								
		1.6								
		1.7								
		1.8								
		1.9								
		2								
		2.1								
		2.2								
		2.3								
		2.4								
		2.5								

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,728.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Silty Clayey GRAVEL, NP, soft, brown, inclusions of small-large subangular grained gravel and roadbase gravel				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.2							
		0.3							
		0.4		CL	CLAY, MP, firm, orange with grey/red mottles, inclusions of rootlets				
		0.5							
		0.6			Termination Depth at: 0.6 m.				
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,087.76
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,747.47
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	ROADBASE, inclusions of gravel and rocks on surface				No Staining, odours or ACM observed throughout
		0.2			Gravelly CLAY, LP, soft, light grey, inclusions of small-large grained gravel, rocks and rootlets				
		0.3		Fill	Silty Gravelly CLAY, inclusions of roadbase gravel, small-large grained gravel and rocks				Anthropogenic metal wires, structural wires, construction and demolition waste, resbar observed
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4		CL-ML	Silty CLAY, HP, stiff, red with grey mottles				
		1.5							
		1.6			Termination Depth at: 1.6 m.				
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,101.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,748.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		Fill	Clayey SAND, small-coarse grained, light brown, inclusions of gravel				No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6			Termination Depth at: 1.5 m.				
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,121.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,748.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	Gravelly CLAY, LP, soft, inclusions of rocks and roadbase gravel				No Staining, odours or ACM observed throughout
		0.2		RWN	CLAY, LP, stiff, compact, inclusions of gravel				
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							PVC pipe at 1.5 mbgl
		1.6							
		1.7							
		1.8							
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5			Termination Depth at: 2.5 m.				

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,748.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1 0.2 0.3 0.4 0.5		CL	CLAY, MP, firm, brown/red with grey mottles, inclusions of gravel on surface				No Staining, odours, Anthropogenic material or ACM observed throughout
		0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2 2.1 2.2 2.3 2.4 2.5			Termination Depth at: 0.5 m.				

PROJECT NUMBER 60829	EXCAVATION DATE 6-10/5/21	EASTING 504,161.61
PROJECT NAME Woolloowin ACM Validation		NORTHING 6,966,748.84
CLIENT Dunland Property Group	EXCAVATION METHOD Excavator	COORD SYS GDA94 MGA Zone 56
ADDRESS 60 Bridge Street, Woolloowin, QLD	DIMENSIONS 1 x 1 m	LOGGED BY RS/SC/MD

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
		0.1		RWN	CLAY, LP, soft, brown/red, inclusions of tree roots, rootlets and small-med grained gravel				No Staining, odours or ACM observed throughout
		0.2							
		0.3							
		0.4							
		0.5							
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8			Termination Depth at: 1.8 m.				
		1.9							
		2							
		2.1							
		2.2							
		2.3							
		2.4							
		2.5							

© JBS&G Australia Pty Ltd

This document is and shall remain the property of JBS&G. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Document Distribution

Rev No.	Copies	Recipient	Date
A (Draft)	1 x electronic	Dunland Property Group	18 June 2021
0 Final	1 x electronic	Dunland Property Group	22 June 2021

Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A (Draft)	sch4p4(6) Personal information			Draft for review	18 June 2021
0 (Final)				sch4p4(6) Personal informati	22 June 2021

Published on DES Disclosure Log
RTI Act 2009