Doyalson Wyee RSL Club Limited

care of
Urbis Pty Ltd

Remedial Action Plan
49-65 Wentworth Avenue and
80, 90, 100 and 110 Pacific Highway
Doyalson, NSW

3 October 2019

56387/124948(Rev B)

JBS&G Australia Pty Ltd

www.jbsg.com.au

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Abbreviations

Term	Definition
ABC	Average Background Concentrations
ACL	Added Contaminant Limit
ACM	Asbestos Containing Materials
AF/FA	Asbestos fines and fibrous asbestos
AEC	Areas of Potential Environmental Concern
AHD	Australian Height Datum
ASS	Acid Sulfate Soils
ASSMP	Acid Sulfate Soils Management Plan
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CLM Act	Contaminated Land Management Act 1997
CEC	Cation Exchangeable Capacity
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DA	Development Application
DCP	Development Control Plan
DP	Deposited Plan
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DNAPL	Dense Non Aqueous Phase Liquid
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EIL	Ecological Investigation Levels
EPA	NSW Environment Protection Authority
ESLs	Ecological Screening Levels
GILs	Groundwater Investigation Levels
ha	Hectare
HILs	Health Investigation Levels
HSLs	Health Screening Levels
IP	Interface Probe
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
LOR	Limit of Reporting
LNAPL	Light Aqueous Phase Liquid
MGA	Map Grid of Australia
NATA	National Accreditation Testing Authority
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
OCP	Organochlorine Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness and Sensitivity
PASS	Potential Acid Sulfate Soil
PCB	Polychlorinated Biphenyls
PID	Photoionisation Detector
POEO Act	Protection of Environment Operations Act 1997
PFAS	Polyfluorinated Alkyl Substances
PCR	Primary Contact Recreation
PSI	Preliminary site Investigation
QA/QC	Quality Assurance/Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
VOC	Volatile Organic Compounds

1. Introduction

1.1 Introduction and Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Doyalson Wyee RSL Club Limited (the client) via Urbis Pty Ltd (Urbis) to prepare a Remedial Action Plan (RAP) associated with the proposed development located at 49-65 Wentworth Avenue and 80, 90, 100 and 110 Pacific Highway, Doyalson, NSW (the site). The site is legally defined as Lots 1 to 9 Deposited Plan (DP) 215875, Lot 1 DP 503655, Lot 11 DP 240685, Lot 49 DP 707586 and Lot 7 DP 240685. The site location and layout are shown on **Figures 1** and **2** respectively.

The site is currently used for commercial (RSL Club and amenities) and recreational (sports fields and endurance course) land uses. Historically the site has been used for light agricultural/horticultural and forestry. The site is proposed to be redeveloped for mixed (residential, retail/commercial, potentially including a childcare centre and recreational/open space) land uses, as shown on **Figure 3**.

The site has been the subject of previous environmental investigations (GHD 2018[1] and JBS&G 2019[2]), which identified an isolated area of non-friable (bonded) asbestos containing materials (ACM) (analytical summary tables, **Appendix A**) and aesthetic impacted fill material (**Appendix B**, historical field logs) requiring remediation/management.

This document outlines the extent of remedial works required, that when completed, will make the site suitable for suitable for the proposed development.

This RAP has been prepared with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of NEPC (2013[3]) and also the requirements of SEPP 55[4].

1.2 Objectives

The objectives of this RAP are to:

- Characterise and document the known extent of environmental impact within the site via presentation of a conceptual site model (CSM);
- Identify the remedial strategy(ies) to be adopted, by an assessment of remedial options and development objectives; and
- Document the procedures and standards to be followed in order to remove the risks posed by contaminated soils and materials representing an aesthetics issue to make the site suitable for suitable for the proposed development, while ensuring the protection of human health and the surrounding environment.

1 *Urbis Pty Ltd Doyalson Wyee RSL Structure Plan Preliminary Site Investigation Final Report*. GHD Pty Ltd dated May 2018 (GHD 2018)
2 *R001 (DSI 49-68 Wentworth Ave and 80, 90, 100 and 110 Pacific HWY, Doyalson, NSW)* – JBSG Australia Pty Ltd dated 6 September 2019 (JBS&G 2019)
3 *National Environment Protection (Assessment of Site Contamination) Measure, Amendment No 1 (2013).* National Environment Protection Council (NEPC 2013)
4 *Managing Land Contamination – Planning Guidelines SEPP 55 Remediation of Land*. Department of Urban Affairs and Planning. Environment Protection Authority 1998 (DUAP 1998)

2. Site Condition and Surrounding Environment

2.1 Site Identification

The location of the site is shown on **Figure 1**, with the site layout shown in **Figure 2**. The proposed development layout is shown on **Figure 3**. Details of the site are shown in **Table 2.1** and discussed in detail in the following section.

Table 2.1: Summary Site Details

Site Legal Identifier (as shown on **Figure 2** and **3**)	Lots 1 to 9 DP 215875, Lot 1 DP 503655, Lot 11 DP 240685, Lot 49 DP 707586 and Lot 7 DP 240685
Site Address	Lots 1 to 9 DP 215875 – 49-65 Wentworth Avenue, Doyalson, NSW, 2262 Lot 1 DP 503655 – 80 Pacific Highway, Doyalson, NSW, 2262 Lot 11 DP 240685 – 90 Pacific Highway, Doyalson, NSW, 2262 Lot 49 DP 707586 – 100 Pacific Highway, Doyalson, NSW, 2262 Lot 7 DP 240685 – 110 Pacific Highway, Doyalson, NSW, 2262
Site Area	34.78 hectares (ha)
Local Government Authority	Central Coast Council (Council)
County/Parish	Munmorah
Site Geographic Coordinates (MGA 56)	Refer to **Figure 2**
Registered Site Owner	Doyalson Wyee RSL Club Ltd
Current Zoning (Wyong Local Environmental Plan (LEP) 2013)	RE2 (Private Recreation) Lots 1 to 9 DP 215875, Lot 1 DP 503655 and Lot 11 DP 240685 RU6 (Transition) Lot 49 DP 707586 and Lot 7 DP 240685
Previous Land Uses	Agriculture/horticulture, forestry, sports facilities
Current Land Uses	Commercial (RSL club and amenities) and Recreational (sports fields and endurance course)
Proposed Land Uses	Mixed-use Precinct (residential allotments, retail/commercial incl. childcare centre and recreational/open space)

2.2 Site Condition

The following is summarised from the site inspection taken during JBS&G (2019). The site layout and key features at the time of the detailed site inspection are shown on **Figure 2** and discussed herein.

The site comprises a general square shaped parcel of land situated to the west of the Pacific Highway and north of Wentworth Avenue. The site currently hosts the Doyalson Wyee RSL Club and amenities, four full sized sports fields, bushland, two dams and a number of water bodies associated with an endurance course which occupies the majority of 110 Pacific Highway.

With the exception of the sports fields (Lot 11), not significant fill was encountered. Cut and fill activities and suspected importation of fill had occurred within the sports fields areas in order to create the observed three tiers of levelled playing surfaces. It was observed that two distinct fill methods had been used; cut and fill of natural material in the two western sports fields and possible importation of fill in the south and eastern portion of the fields. In the eastern portion of the fields, the fill was observed to be approximately 4.4 m in depth (TP152 and TP153, **Appendix B)**.

A photographic log showing the site layout and features is presented in **Appendix C**.

2.3 Surrounding Land Uses

The current land uses of adjacent properties or properties across adjacent roadways are summarised below.

- North – rural land and horticultural infrastructure, beyond which is an ash /slag disposal area associated with Lake Manning to the north west;
- East – decommissioned coal conveyor system, beyond this is bushland and Colongra Lake;

- South – Wentworth Avenue and residential houses, beyond which are rural residential properties. A Metro Petroleum service station and Doyalson Fire Station are located southwest on Pacific Highway; and
- West – Pacific Highway, beyond which is bushland and Wyee Road.

2.4 Topography

Review of topographic information obtained from the Spatial Information Exchange Viewer (LPI 2019[5]) indicated that the elevation of the site ranges from approximately 20 m Australian Height Datum (AHD) in the south western portion to approximately 10 m AHD at the eastern boundary (see cross section provided as **Figure 6**). The landscape is described as gently undulating rises with slope gradients < 10%.

Regionally, the topography slopes to the north and east, with the Pacific Highway to the immediate west of the site following a ridge between Mannering Lake and Colongra Lake.

2.5 Geology and Soils

Reference to the 1:100,000 Gosford - Lake Macquarie geological map (Och et al, 2015[6]), indicates that the site is predominantly underlain by the Munmorah Conglomerate which forms one of the lower stratigraphic units of the Narrabeen Group. The Munmorah Conglomerate is characterised by the presence of conglomerate, pebbly sandstones and grey-green shales. Quaternary alluvial deposits associated with the present lake system are found to the north-east of the site consisting of sands, silts and gravels. The site lies within a mining subsidence district indicating potential for the land subsidence due to the historical extraction of coal.

Reference to the eSPADE NSW Soil and Land Information database (OEH 2019[7]) indicates that the site is situated predominantly on the Doyalson (do) soil landscape which consists of a dominant brown loose loamy sand with a coarse-grained texture. The soil profile consists of four main horizons with various properties as described in **Table 2.2**. The soil generally has high permeability but is susceptible to seasonal localised waterlogging.

Table 2.2: Soil Type Summary

Soil Horizon	Typical depth (m)	Soil Description Summary
Do1	0-0.1	Brown loose loamy sand, coarse grained, loose or gravelly, often water repellent
Do2	0.1-0.3	Yellowish brown clayey sand, hard-setting when dry, acidic (pH 4.5- 5.5)
Do3	0.3-0.6	Bright yellow brown sandy clay loam, often orange mottled, porous, conglomerate and sandstone pebbles
Do4	0.6-1.1	Light grey sandy clay, can be acidic (pH 4.5-6.0)

2.6 Hydrology

The topography of the site suggests surface water could enter the site from the south/south-west, however the south-western portion of site consists of an engineered carpark and surface water would likely be channelled into stormwater infrastructure and eventually toward Colongra Lake.

The site makes up part of the Lake Colongra catchment and is predominantly covered in grass and vegetation (trees, scrub). It is anticipated that water infiltration into the subsurface would be low to moderate when precipitation is light. Heavy or prolonged precipitation would quickly waterlog the soils at rates reflective of the Doyalson (do) soil landscape, and then runoff into drainage channels.

[5] *'Spatial Information Exchange Viewer'*, NSW Land and Property Information, Accessed 20 August 2019, https://maps.six.nsw.gov.au/
[6] Och et al. 2015, Gosford-Lake Macquarie 1:100 000 Geological Sheets 9131 & 9231, Geological Survey of New South Wales, Sydney
[7] *'eSPADE NSW Soil and Land Information'*, NSW Office of Environment and Heritage, Accessed 20 August 2019, http://www.environment.nsw.gov.au/eSpade2Webapp

Mannering Lake (0.15 km north west) is unlikely to be directly impacted by water exiting the site as drainage channels are present along Pacific Highway which would capture any surface flow from site.

During the site inspection, two dams and several waterbodies were identified as shown in **Figure 2.**

2.7 Hydrogeology

Licensed groundwater bore information was obtained from the NSW Department of Primary Industries groundwater mapping portal (BOM 2019[8]). A review of the licensed bore information indicated that there are three groundwater wells within 1.5 km of the site. The details of these bores are noted in **Table 2.3** and the locations shown in **Appendix D**.

In addition, bore co-ordinates and water level information from JBS&G's August 2019 detailed site investigation (DSI) are provided in **Table 2.3**.

Table 2.3: Summary of Registered Groundwater Bores

Bore ID	Use	Standing water level (mbgs)	Well Depth	Elevation (m AHD)	Distance from site	Coordinates
Groundwater Mapping Portal						
GW027930	Water supply	Unknown	29.9 m	Unknown	0.55 km South-west of site	E: 362389.00 N: 6325714.00
GW027933	Water supply	Unknown	Unknown	Unknown	0.55 km South-west of site	E: 362415.00 N: 6325653.00
GW027929	Water supply	Unknown	29.3 m	32.21	0.60 km South-west of site	E: 362390.00 N: 6325653.00
JBS&G 2019						
MW01	Environmental	4.139	9.08 m	28.59	South west corner of site	E: 362504.3 N: 6325821.9
MW02	Environmental	3.461	8.8 m	25.305	South west corner of site	E: 362575.9 N: 6325795.7
MW03	Environmental	3.476	7.1 m	20.74	South west portion of site	E: 362692.3 N: 6325857.1
MW04	Environmental	0.704	7.2 m	7.83	South east portion of site	E: 363120.2 N: 6325819.9
MW05	Environmental	4.214	7.4 m	22.73	Western central portion of site	E: 362638.5 N: 6326008.1
MW06	Environmental	2.065	7.0 m	19.22	North western corner of site	E: 362730.4 N: 6326365.9
MW07	Environmental	5.483	10.1 m	11.96	North eastern corner of site	E: 363263.1 N: 6326312.7
MW08	Environmental	1.198	7.3 m	8.27	Eastern central portion of site	E: 363198.2 N: 6325972.8

Groundwater within the site is expected to generally flow east toward Colongra Lake (**Figures 1** and **6**). With the site situated mid-gradient between Mannering Lake and Colongra Lake, it would be expected that groundwater could migrate south-east from Mannering Lake through the northern portion of the site. Groundwater could also enter the site from the south-west consistent with the site topography.

2.8 Acid Sulfate Soils

Acid sulfate soils (ASS) are generally associated with low-lying coastal areas, including estuarine flood plains, rivers and creeks. A review of the eSPADE NSW acid sulphate risk mapping (OEH 2019[9])

[8] Australian Bureau of Meteorology, 2019, Australian Groundwater explorer, http://www.bom.gov.au/water/groundwater/explorer/map.shtml. Accessed 06 August 2019

[9] *'eSPADE NSW Soil and Land Information'*, NSW Office of Environment and Heritage - accessed 20 August 2019, https://www.environment.nsw.gov.au/eSpade2Webapp#

identified that the far south eastern boundary of the site is considered to have a low probability of ASS at >3m depth.

Based on the results of soil analysis and with due consideration to the observed geological and soil characteristics of the site and the proposed development works, it is considered that management of development activities is not required to address the potential for impact relating to ASS.

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring locations for rainfall (Gorokan) and temperature (Norah Head) (BOM, 2019 [10]) indicates the site is located within the following meteorological setting:

- Mean maximum temperature ranges from 17.5°C in July to 26.2°C in January, while mean minimum temperature ranges from 9.7°C in July to 20.0°C in February; and
- The average annual rainfall is approximately 1217 mm. On average, July received the least amount of rain with a mean rainfall of 67.5 mm, while June receives the most rain, with a mean of 139.9 mm.

[10] Commonwealth of Australia, 2019 Bureau of Meteorology, http://www.bom.gov.au/climate/data/ Product IDCJCM0028 prepared on 16 August 2019 - accessed by JBS&G on 20 August 2019

6 Australian Soil Resource Information System http://maps.six.nsw.gov.au/ - accessed 20 August 2019

3. Site History

3.1 Aerial Photographs

A review of historical aerial photographs was undertaken by JBS&G (2019). Historical aerials are presented in **Appendix E**.

The overall site originally comprised of pastoral/agricultural and forestry. Several buildings have been present on site and subsequently removed, specifically residential buildings in the carpark north of the RSL, and in central western portion of 110 Pacific Highway approximately 50 m from the road. Potentially there were also buildings of an industrial nature adjacent to the residence in 110 Pacific Highway. It appears that in 1966, along the north-eastern boundary of the site, a staging area for the construction of the coal conveyor system running along the eastern boundary, was present.

From 1976, the beginning of the construction of the RSL facilities and some sports fields began at 80 and 90 Pacific Highway. During this time evaporation trenches for treatment of sewage/wastewater were dug (pre 1976) and subsequently filled (pre 1994). Further improvements have occurred to the facilities in the following years including two distinct periods of cut and fill and importation of fill activities to create the sports fields (1976 and 2005). Stockpiling of various materials has occurred at 100 Pacific Highway since the early 2000s. Dams have been present on the site since 1954, and additional water bodies associated with the endurance course were excavated in the mid-2010s.

3.2 Historical Land Titles

Historical land title information has been summarised from the GHD (2018) and is as follows;

- Lots 1 to 9 DP 215875 (49 – 65 Wentworth Avenue): from 1964 to 1975 Lots 1 and 2 were owned by a mechanic, and from 1973-1974 Lot 9 was owned by a carpenter. Review of the historical aerials from these periods show no structures present on these Lots, indicating no workshops or facilities associated with the owner's professions were constructed during this time;
- Lot 1 DP 503655 (80 Pacific Highway): Historical titles for this property do not indicate potential contaminating activities;
- Lot 11 DP 240685 (90 Pacific Highway): Historical titles for this property do not indicate potential contaminating activities;
- Lot 49 DP 707586 (100 Pacific Highway): Historical titles for this property do not indicate potential contaminating activities; and
- Lot 7 DP 240685 (110 Pacific Highway): Historical titles for this property do not indicate potential contaminating activities.

3.3 EPA Records

Search of the NSW EPA's public register under the *Protection of the Environment Operations Act 1997* (POEO Act) was undertaken (**Appendix F**). The search for the site identified there were:

- No prevention, clean-up or prohibition notices; and
- No transfer, variation, suspension, surrender or revocation of an environmental protection licence.

A search for environment protection licences in the vicinity of the site revealed that three licences have been issued. Details of which are found in **Appendix F** and are summarised in **Table 3.1**.

Table 3.1: POEO Licenses in Area

Licence Number	Name	Location	Purpose	Status	Issue date	Distance from site
5022	Fulton Hogan Industries Pty Ltd	2-4 David street, Doyalson	Bitumen pre-mix or hot-mix production	No longer in force	04-03-2003	0.7 km South-West of site
191	Centennial Munmorah Pty Ltd	Scenic Drive, Doyalson	Coal works	Surrender of a licence	03-05-2011	2 km South-east of site
759	Delta Electricity, Munmorah Power station	Scenic Drive, Doyalson	Miscellaneous licence discharge to waters (at any time)	s.58 Licence variation	26-03-2019	2 km South-east of site

The site has not been notified to the EPA under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) with regards to contamination. Three sites nearby have been notified to the EPA, as listed in **Table 3.2** and attached in **Appendix F**.

Table 3.2: Nearby Sites Notified to the EPA under Section 60

Name	Address	Distance from site (km)	Direction	Contaminating Activity Type
Munmorah Power Station	Central Coast Highway, Scenic Drive	1.3	Southeast	Unclassified
Mannering Colliery	Rutleys Road	1.5	North	Other Industry
Lot 3 DP 259306	2-4 David Street, Doyalson	0.8	Southwest	Former Brickworks

A search was also undertaken through the EPA's public contaminated land register (**Appendix F**). The search identified that there have been no notices issued under the CLM Act for the site and immediate surrounds.

3.4 EPA Per and Poly – Fluoroalkyl Substances (PFAS) Register

A search of the EPA's public per-and polyfluorinated alkyl substances (PFAS) register indicated that the nearby Munmorah and Colongra Power Stations, 2 km to the south-east are currently subject to a PFAS investigation as shown in **Appendix G**. Further information from previous investigations (GHD 2018) as discussed in **Section 4.1** indicates that the boundary of the PFAS investigation area abuts the eastern portion of the subject site and extends to an area south of the subject site. No PFAS was reported in fill or natural material at the subject site. The PFAS occurrences in groundwater at MW01 and MW04 (**Figure 4**) were attributed to regional background levels, particularly as areas to the south and immediately east of site are designated PFAS investigation areas.

The power stations subject to the investigation are situated downgradient of the site so hydrologically transported PFAS is unlikely.

The Doyalson Fire Station is situated 150 m upgradient to the south west of site, however it has not been subject to any PFAS investigations (**Appendix G**) and is noted to be of modern construction.

3.5 Australian and NSW Heritage Register

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

3.6 Planning Certificates

Copies of the Planning Certificates for the site are included in **Appendix H**. Relevant information is summarised below:

- The Council has not been notified that the site is contaminated, and the site has not been identified as triggering any of the matters prescribed by Section 59(2) of the *CLM Act 1997*. Council has not been provided a site audit statement in relation to the site.
- The site has been proclaimed to be within a mine subsidence district.
- The site is not in a conservation area, does not include critical habitat, does not contain an item of environment heritage, is not affected by road widening/alignment, and there are no notices under the *Coastal Protection Act 1979*.
- The land is not biodiversity certified land as defined by Part 7AA of the *Threatened Species Conservation Act 1995*.

4. Previous Investigations

4.1 Preliminary Site Investigation (GHD 2018)

GHD Pty Ltd (GHD) completed a preliminary site investigation (PSI) for a parcel of land including the current site boundaries in May 2018. The aim of the non-sampling investigation was to assist the client in the development approval process.

A review of the site history indicated that the site appeared to be utilised for agricultural purposes prior to 1966 as inferred by numerous cultivated fields and farming structures. Post-1966 the site was inferred to contain a suspected quarry area in the north east portion of site based on surface scaring, a wastewater treatment pond and sporting fields. Based on the findings of the desktop study and site inspections by GHD (2018), potential sources of on/offsite contamination, both historical and active, were identified as follows.

80-100 Pacific Highway Doyalson;

- Historic wastewater treatment area;
- Uncontrolled fill used for land-forming including backfill of wastewater treatment facilities and construction of sports fields;
- Storage of motor oils, liquid and solid chemicals in un-bunded areas;
- Staining from motor oils and/or potential seepage from motor oil sump;
- Uncontrolled dumping/stockpiling of unknown materials (including demolition waste); and
- Structures currently onsite site which may contain ACM.

110 Pacific Highway Doyalson;

- Uncontrolled fill used for land-forming activities including backfilling of creek beds;
- Potential industrial buildings pre-1970;
- Potential market-gardens;
- Potential quarried area; and
- Structures currently onsite site which may contain ACM.

External;

- Manning Lake, which serves as an ash disposal area for the Mannering Power Station and is potentially up-gradient of the site; and
- A PFAS investigation area to the east of the site associated with the Munmorah and Colongra Power Stations.

4.2 Detailed Site Investigation (JBS&G 2019)

JBS&G (2019) conducted a DSI to further characterise the site and to draw conclusions regarding the suitability of the site for mixed land uses. The investigation comprised a review of previous investigations, obtained/updated previous EPA/heritage searches, development of a conceptual site model (CSM) including identified areas of environmental concern (AECs), and involved implementation of a systematic and targeted soil/sediment sampling program comprising 165 test pits/boreholes, conversion of eight boreholes to monitoring wells and sampling of groundwater and surface water and analysis of selected samples at a National Association of Testing Authority (NATA) accredited laboratory for a range of contaminants of potential concern (COPC). Sample locations are shown on **Figure 4**.

Based on the findings of this investigation the following conclusions were made:

- Total of 165 soil sample locations were advanced across the site. With the exception of isolated areas of filling in the carpark around the RSL amenities building, the sports fields and stockpiles in the central portion of the site, the site is generally underlain by natural soil described as sandy clays to clayey sands. Field logs are provided in **Appendix B**;
- Analysis of selected samples of surficial and sub-surface soils and sediment for a broad range of COPCs including, but not limited to, heavy metals, polycyclic aromatic hydrocarbons (PAH), total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylene (BTEX) compounds, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), PFAS, asbestos and biological impacts. All concentrations were below the adopted land use criteria (residential with accessible soil) with the exception of:
    - Non-friable asbestos fragments at sample locations TP35, TP35, TP36, and BH153. This material is considered to represent an aesthetic issue and a potential human health issue requiring remediation or management;
    - Isolated anthropogenic materials in fill at sample locations TP08, TP10, TP23, TP24, TP35, TP36, TP144 and TP146. This material is confined to a limited area within the eastern and southern portions of the sports field. This material is considered to represent an aesthetic issue requiring remediation or management;
    - It is noted that, while asbestos containing material was identified in isolated samples, observations of inert waste and other building-material related inclusions were noted, indicating the potential for more widespread asbestos impact within the discrete fill profile at the southern and eastern parts of the sports fields; and
    - The impacted fill material is isolated to a soil horizon described as dry to wet dark grey, orange and brown sandy gravelly clay / sandy clay material and associated with the importation of fill to extend the sports fields between 1994 and 2005.
    - As noted in **Section 3.4**, no PFAS was reported in fill or natural material at the site. The PFAS occurrences in groundwater at MW01 and MW04 (**Figure 4**) were attributed to regional background levels, particularly as areas to the south and immediately east of site are designated PFAS investigation areas. For due diligence purposes, as part of this RAP, JBS&G propose to undertake supplemental PFAS characterisation of fill material and groundwater within the vicinity of the southern and eastern sports field (refer to **Section 4.3.1 and 4.3.2**).
- Carcinogenic PAHs were reported at a concentration that exceeded the adopted residential with accessible soil criteria in shallow fill just below the asphalt pavement of a car park at location BH001. This occurrence was considered attributed to the asphalt pavement of the car park and would be removed as part of pavement demolition during future redevelopment works. It was concluded this material does not represent an unacceptable risk to current or future site users.
- Analysis of selected samples of groundwater for a broad range of COPCs including heavy metals, PAHs, TRH/VOCs, OCPs, PCBs, PFAS and nutrients. All concentrations were below the health-based assessment criteria with the exception of:
    - Copper and lead at MW07; and
    - PFAS at MW01 and MW04;
- Heavy metal concentrations in groundwater were considered to represent background concentrations of the area.

- PFAS was reported in groundwater at monitoring wells MW01 and MW04. PFHxS+PFOS exceeded the adopted drinking water criterion (0.07 ug/L) at MW01 and MW04. PFHxS+PFOS exceeded the adopted recreational water criterion (10 x drinking water) at MW04. .
    - No PFAS was reported in soil at the site. Areas to the south and immediately east of site are designated PFAS investigation areas. It is considered that these PFAS occurrences in groundwater can be attributed to regional background levels. There is a reticulated drinking water supply and there is no known beneficial use of groundwater at or in the vicinity of the site. Given this, remediation/management of groundwater on site is was considered not to be necessary. As noted above, additional characterisation is proposed as part the RAP **(Section 4.3**);
- Analysis of selected samples of surface water for a broad range of potential COPCs including heavy metals, PAHs, TRH/VOCs, OCPs, PCBs, PFAS, ammonia and nutrients. All concentrations were below the health-based assessment criteria with the exception of;
    - Copper at SW01/QA01_SW;
    - Lead at SW01, SW02, SW05 and SW04 (0.012 mg/L);
    - Zinc at SW01, SW02, SW03, SW04 and SW05; and
    - Ammonia at SW02 and SW03;
- Heavy metal and ammonia concentrations in surface water have exceeded the adopted site criteria, on this basis, during future redevelopment works, management will be required;
- Based on the findings of the investigations it is concluded the site can be made suitable for the proposed land use subject to remediation/management of non-friable (bonded) asbestos and aesthetic impacts in soil.

In addition, given the presence of asbestos in soils at three locations in a section of the site that is currently being used for recreational purposes (sports fields) it was recommended that a human health risk assessment be undertaken to determine whether the risk to site users under current land use is not unacceptable.

4.3 Supplemental Characterisation

JBS&G consider that sufficient data has been collected to characterise the site and detail the remedial works/framework required to make the site suitable for proposed land uses.

However, for due diligence purposes to further refine the extent of remediation and/or management, and concurrently with Asbestos Quantification (AQ) works, supplemental soil samples are proposed to be collected and submitted for analysis of PFAS in soil (**Section 4.3.1**).

Also, for due diligence purposes to support the DSI (JBS&G 2019) findings, allowance has been made to install an additional six monitoring wells (**Section 4.3.2**) to supplement the existing groundwater monitoring well network, sample existing and new wells and submit groundwater samples for PFAS analysis.

The soil characterisation activities will target the soil horizon identified as dark grey and brown sandy /sandy gravelly clays within the eastern and southern portion of the sports fields (remedial extent shown in **Figure 5**) to supplement the existing data set.

4.3.1 PFAS in Soil

During AQ works (**Section 7.4.1**) soil samples for PFAS analysis will be taken at a density of one per 1000 m^3 (a total of 114 soil samples) and analysed for PFAS in soil as per **Section 9.2.7.** QA/QC samples will be taken at 1/20 frequency.

4.3.2 PFAS in Groundwater

During remediation works six groundwater monitoring wells are to be installed (two up gradient, one down-gradient and three within the eastern and southern sports field fill profile – **Figure 5**) with the following method:

- A solid flight auger shall be used to target perched water at the fill/natural interface by advancing a borehole through fill material to 2 m below groundwater if encountered;
- The wells will be constructed from 50 mm unplasticised polyvinyl chloride (UPVC) screen and casing, with appropriate gravel packs, bentonite seals, and lockable caps to complete the wells. The wells will then be completed with steel gatic covers, PVC stand pipe or raised steel casing as appropriate for the site conditions;
- The wells will be developed on the same day as installation with a steel bailer or a foot pump to ensure adequate connection to the aquifer and remove sediment disturbed during well installation. During development, the bores will be rapidly purged and then allowed to recharge. All wells will then be clearly identified with a fixed permanent label.; and
- Existing groundwater monitoring wells will be developed prior to sampling.

Supplemental groundwater samples for PFAS analysis shall be taken from all existing wells on site (JBS&G 2019) and newly installed wells by the following method:

- Prior to sampling all non-disposable equipment (i.e. HydraSleeve weights and clips), shall be decontaminated in line with project/PFAS-specific wash-down procedures (Liquinox, a PFAS free detergent);
- The HydraSleeve sampler shall be lowered into the well to the prescribed sampling depth (i.e. within the screened interval) and left for at least one hour to allow the water column to re-equilibrate following the minor disturbance that occurs during deployment;
- Following re-equilbration, samples shall be collected by pulling the HydraSleeve up through the water column, to the surface. The recovered water sample will then be decanted into an appropriate (non-Teflon lined) laboratory supplied sample bottle(s). Groundwater samples shall be obtained in a manner that ensured no headspace remained in the bottles;
- Each of the sample bottles shall be labelled using ball point pens with the project ID, date, sampler's initials and unique monitoring well ID (or QC sample name); and
- In order to minimise cross contamination sample bottles shall immediately be placed into a separate pre-chilled esky, for transport to the testing laboratories.

A chain-of-custody form will be completed and forwarded with the samples. Samples will be analysed at a NATA accredited laboratory in accordance with **Table 9.2.7**.

5. Contamination Status and Conceptual Site Model

5.1 Overview

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

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

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

5.2 Areas of Environmental Concern and Contaminates of Potential Concern

Based on the available site history information, review of previous investigations and with consideration to proposed end land uses, AECs, associated COPC and effected media have been identified and are presented in **Table 5.1** and shown on **Figure 5**.

Table 5.1: Areas of Environmental Concern, Contaminants of Potential Concern and Media

AECs	COPC	Contaminated Media	Comment
AEC 1: Bonded ACM Impacted Fill (approximately 113,000 m^3 - discrete horizon and soil type comprising a brown sandy clay fill)	Asbestos (bonded ACM fragments)	Fill	Bonded ACM Impacted Fill (a discrete soil/fill horizon within eastern sports field - Sandy Clay)
AEC 2: Anthropogenic Materials within Fill (sub-surface within the sports field imported fill extent)	Aesthetic Impacts (foreign materials/ building rubble)	Fill	Anthropogenic Materials within Fill (sub-surface within the eastern sports field).
AEC 3: Waste oil separator, Underground Storage Tank (USTs) and associated infrastructure	Heavy metals, TRH/BTEX, PAH, VOCs and phenols	Fill Natural Soil Groundwater Soil Vapour	Waste oil separator and associated UST/infrastructure located within the vehicle wash bay in the south west of the site

AEC 1 and **AEC 2** are considered to be co-mingled in one distinct fill horizon associated with historic importation of fill (**Section 4.2**). Due to the non-leachable properties of asbestos and anthropogenic materials identified, JBS&G consider the potential contamination within these areas to be constrained to fill material. The approximate lateral extent of the fill horizon is shown on **Figure 5**. The lateral extent will be further refined by asbestos quantification described in **Section 7.4.1.** No AF/FA impacted material has been identified on site, however this will require verification as part asbestos quantification, during remediation and for validation.

Based on the presence of petroleum waste storage containers, an oil separator and UST (**AEC 3**) in the south western portion of the site, there is the potential for mobile media to have impacted fill material underlying natural soils, groundwater and soil vapour at the site.

5.3 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified as part of the site area history review and previous investigations are generally in either a solid form (e.g. heavy metals, asbestos, etc.) and liquid form (e.g. fuel, lubricants, etc.). Dependent upon concentrations, there is the potential for volatile compound impacts to occur in a vapour form in soils underlying the site.

As the site is primarily surfaced with grass cover and/or thick/dense vegetation, the potential for windblown dust migration of contamination from the site is generally low. The potential for contamination migration via surface water movement and infiltration of water and subsequent migration through the soil profile is considered generally to be low given the nature of the primary contaminant (asbestos).

Natural soils at the site comprise relatively impermeable sandy clays overlying fractured more permeable sandstone bedrock. Migration of potentially impacted groundwater may occur over moderate to long time periods. Migration of contaminants from the site via infiltration into groundwater is considered to be a potential pathway if there is significant liquid or liquid soluble (e.g. hydrocarbon) COPCs.

If petroleum hydrocarbon contamination occurs in soil or groundwater, there is the potential for these impacts to also occur in soil vapour underlying the site. Vapour movement in proximity to buildings can be highly influenced by potential advective effects as caused by local pressure gradients associated with the extent of the building footprint.

5.4 Potential Exposure Pathways

Based on the COPC identified in various media as discussed above, the exposure pathways anticipated for the site include:

- Dermal;
- Ingestion;
- Inhalation; and
- Uptake by current/future vegetation.

Due to the potential presence of impacted soil/fill on ground surfaces in areas of the site that may be accessed by current and/or future users of the site, dermal contact and subsequent ingestion must be considered a potential exposure pathway. In the event that dust is generated, ingestion and inhalation are also considered to be potential exposure pathways. Further, inhalation of COPC vapour migration or accumulating in current and future voids, from impacted fill, natural soils and groundwater resulting from historical leaks or migration of contaminants.

5.5 Receptors

Potential human populations who may be exposed to site impacts in the future (if impacts are not remediated or appropriate management is not implemented prior to or during development) include:

- Potential future occupants of residential developments;
- Future worker/occupants of commercial premises;
- Current and future recreational users of public open spaces;

- Future construction and site maintenance workers; and
- Future and current sub-surface excavation and intrusive workers.

Potential ecological receptors within the assessment area also include existing/future flora species established within future open spaces that may occur with the redevelopment of the assessment area. Off-site ecological receptors may potentially be impacted by, surface water and windblown dusts discharged from the assessment area.

5.6 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPC as either liquids, gases or fibres.

Man-made preferential pathways are present throughout the assessment area, generally associated with fill materials, and at near surface depths over the site. Fill materials are anticipated to have a high permeability.

Sub-surface services will be present as part of site redevelopment, throughout the site. Preferential pathways can be created by the generally higher permeability backfill used to re-instate these trenches.

Preferential pathways are also important in the assessment of potential off-site sources of COPC. Preferential pathways are potentially present in the adjoining road network, as associated with service easements.

6. Remedial Options

6.1 Extent of Remediation

As discussed in **Section 4** and **Section 5**, asbestos impacted fill and anthropogenic materials have been identified in a portion of the site (**AEC 1** and **AEC 2**) (**Figure 4**). An UST and associated infrastructure/waste oil containers have been identified within the south western portion of the site (**AEC 3**).

Remediation is required for the site to be made suitable for proposed development. The most sensitive land use of the proposed development is equivalent to NEPC (2013) residential with access to soil (**Section 9.4.1**).

The impacts have been confined to the eastern and southern portion of the sports fields in a distinct fill profile (**Figures 5 and 6**) consisting of dry to wet dark grey, orange and brown sandy gravelly clay/sandy clay that was likely imported to site between 1994 and 2005 (**Sections 3.3, 4.2**) to expand the sports fields.

6.2 Remedial Objectives

The remediation objectives are as follows:

- Removal of potential unacceptable risks to human health associated with bonded asbestos impacted fill;
- Removal of anthropogenic materials representing an aesthetic issue; and
- Removal and/or management of potentially unacceptable risks to human health and the environment associated with site UST/infrastructure relevant to the proposed use of the site (mixed use, commercial, public open space and residential)

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

- *Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land*. Department of Urban Affairs and Planning 1998 (DUAP 1998);
- *Sampling Design Guidelines*, NSW EPA 1995 (EPA 1995);
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*. NSW Office of Environment and Heritage 2011 (OEH 2011);
- *Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia*, May 2009, Western Australian Department of Health (WA DoH, 2009).
- *Model Code of Practice for Management and Control of Asbestos in Workplaces*, October 2018, Safe Work Australia (SWA 2018a);
- *Model Code of Practice How to Safely Remove Asbestos*, October 2018, Safe Work Australia (October 2018) (SWA 2018b);
- *Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008, Department of Environment, Climate Change and Water NSW, September 2009 (DECC 2009).*
- *Contaminated Land Management: Guidelines for NSW Site Auditor Scheme (3rd Edition)*, NSW Environment Protection Authority 2017 (EPA 2017); and
- *Work Health and Safety Act 2011 (WHS 2011) and Work Health and Safety Regulation 2017 (WHS 2017).*

- *National Environment Protection (Assessment of Site Contamination Measure) Measure 1999 (As Amended 2013)*, National Environment Protection Council (NEPC 2013).

6.3 Consideration of Possible Remedial Options

NEPC 2013 (Vol 1, s6 (16)) presents the following hierarchy of options for soil remediation and management approaches. This hierarchy is followed in NSW (EPA 2017, s4.3.2):

- *On-site treatment of the contamination so that it is either destroyed or the associated risk is reduced to an acceptable level; or,*
- *Off-site treatment of excavated soil so that the contaminant is destroyed, or the associated risk is reduced to an acceptable level, after which the soil is returned to the site; or*
- *If the above are not practicable,*
    - Consolidation and isolation of the soil on site by containment with a properly designed barrier; or,
    - Removal of contaminated material to an approved facility, followed, where necessary, by replacement with appropriate material; or,
    - Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

Consideration of each of the approaches, is presented in **Table 6.1.**

Table 6.1: Remedial Options Assessment Matrix

Remedial Option	Applicability	Assessment
1. On-site Treatment (so that the contaminants are either destroyed or the associated hazards are reduced to an acceptable level)	<u>AF/FA Impacted Soil</u> No available technology to destroy AF/FA or economically remove it from impacted soil	Not a Suitable Option
	<u>Anthropogenic Material</u> The waste material poses an aesthetic issue that cannot be treated onsite	Not a Suitable Option
	<u>Bonded ACM Impacted Soils</u> Hand picking of ACM from within fill material following excavation. Disposal of separated material. Reuse of soil. Hand-picking is labour intensive, however, it is more in keeping with the principals of ecological sustainable development, reducing the need to dispose of material to landfill and import material to reinstate excavations As discussed in **Section 9,** a validation criterion of no visible ACM is required Should the material be particularly high in ACM content, or prove difficult to achieve validation, consideration should be given to off-site disposal (**Option 3**)	**The Preferred Option**
	<u>USTs and associated infrastructure/surrounding soils</u> USTs and associated infrastructure can be decommissioned and foam filled in-situ. Based on the conceptual design plans, abandonment in situ is likely to impeded/restrict future redevelopment. Given the potential for soil contaminants associated with petroleum storage there is a potential that these may be able to be remediated on site by bioremediation. Bioremediation occurs where contaminants are chemically broken-down by the metabolic processes of micro-organisms into less toxic or non-toxic forms. Recent NSW EPA guidance requires bioremediation methods to demonstrate that pollutant emissions are not discharged to the atmosphere. On this basis, the lateral extent of the bioremediation activity requires restriction to ensure that air emissions from remediation materials are able to be collected.	Feasible but not Practical
2. Off-site Treatment (so that the contaminants are either destroyed or the associated hazards are reduced to an acceptable level, after which the soil is returned to the site)	<u>AF/FA Impacted Soil</u> No available technology to destroy AF/FA or economically remove impacted soil	Not a Suitable Option
	<u>Anthropogenic Material</u> The waste material poses an aesthetic issue that cannot be treated off-site and returned	Not a Suitable Option
	<u>Bonded ACM Impacted Soils</u> As per **Option 1**, however, there are reductions in noise and dust emissions on site in comparison to on-site treatment (**Option 1**), but these are offset by increased truck movements and the potential for exposure to emissions over a wider area. It is also noted, that there are licensing issues, associated costs and limited licensed	Feasible but not Practical

Remedial Option	Applicability	Assessment
	off-site treatment facilities in the surrounding area	
3. Excavation and Off-site Removal of Impacted Material.	<u>AF/FA Impacted Soil</u> There are currently suitably licensed waste facilities within the region capable of accepting AF/FA impacted soils. Given the relatively minor amount of AF/FA contaminated soils identified, this option is likely the fastest and most cost-effective and environmentally suitable method of remediating the asbestos fibre contaminated material.	**The Preferred Option**
	<u>Anthropogenic Material</u> Removal of surface material directly to a truck for off-site disposal. Where material is within the fill profile, excavation, physical separation (where practicable) and off-site disposal of anthropogenic material. This will involve the tilling of material to remove over size that represents an aesthetics issue	**The Preferred Option**
	<u>Surface Bonded ACM and Bonded ACM Impacted Soils</u> There are currently suitably licensed waste facilities in the region capable of accepting ACM contaminated soils. Off-site disposal of ACM contaminated material is likely to be the fastest method of remediating the site to a standard of suitability for the proposed land use, however, this method generates the highest quantity of waste, since the materials are disposed to landfill rather than treated and reused (i.e. **Option 2**) or retained on site (**Option 4**). This option also generates additional truck movements and associated fuel/emissions over **Option 1** and **Option 4**, but less than **Option 2**, since materials are not returned to site Given the likely success of remediation via hand picking (**Option 1**), off-site disposal is not the preferred remedial option. However, should validation prove hard to achieve because of the nature of fill this option may be reconsidered.	A Feasible Option but not the Preferred Option
	<u>USTs and associated infrastructure/surrounding soils</u> It is anticipated there are suitably licensed waste facilities in the region capable of accepting the USTs/infrastructure and potentially impacted fill material (subject to waste classification). This option provides for the remediation of the site without ongoing concerns with regard to monitoring/management of residual impacts. There may be significant costs associated with disposal as a result of the NSW Waste Levy, cartage and landfill gate fees. Dependent upon final development levels, where significant volumes of fill material require removal, suitable material may be required to be imported to site to reinstate resulting excavations. Where fill material and/or natural soils identified as requiring off-site disposal to achieve the remedial objectives extend beyond surficial levels, further consideration of potential site excavation stability requirements will be required to achieve excavation and off-site disposal.	**The Preferred Option**
4. On-site in situ management of the soil by physical separation, and ongoing management.	<u>Surface Bonded ACM and Bonded ACM Impacted Soils, AF/FA Impacted Soils</u> ACM and/or AF/FA impacted soils (not sorted/screened) may be retained below a physical barrier (e.g. concrete hardstand, engineered layer of compacted soils) such that there are no complete exposure pathways. Containment requires long term site management, and notification on title and planning certificates. Any on site management	A Feasible Option but not the Preferred Option for Residential Land Use

Remedial Option	Applicability	Assessment
	(EMP) will be subject to consent authority approval (Council). It is anticipated a retention strategy is viable for underlying parks/roadways (public domains). JBS&G note retention below residential structures is not considered a viable option (strata encumbered by management i.e. EMP)	Potentially a Preferred Option for Non Residential Land Use
	USTs and associated infrastructure/surrounding soils Following removal of USTs and associated infrastructure, as above, impacted soils may be retained below a physical barrier, however, given the COPC associated with UST, additional characterisation works may be required to establish suitability for retention.	A Feasible Option but not the Preferred Option for Residential Land Use Potentially a Preferred Option for Non Residential Land Use

As discussed in the DSI (JBS&G 2019) management of surface water during remediation must be considered. Surface water may be utilized for dust suppression or applied to land (with consent from Sydney Water, local council or similar body) as a viable treatment process may not be available.

6.4 Preferred Remedial Strategy

A number of potential remedial options have been considered in **Table 6.1**. The preferred remedial strategy for the site is:

AEC 1 and **AEC 2:**

- Asbestos is known to be present within the eastern and southern sports fields and confined to a horizon of dry to wet dark grey, orange and brown sandy gravelly clay / sandy clay material and associated with the importation of fill to extend the sports fields between 1994 and 2005 (**Figures 6** and **7**). Test pits in this area are proposed to be conducted at a rate of 2 x recommended location density of EPA (1995) Sampling Design Guidelines in accordance with Table 1 of DOH (2009) (90 locations);
- Excavation of fill identified to contain bonded ACM above the adopted criteria and hand picking/removal of ACM fragments from the fill soil profile for on-site reuse of fill following validation;
- Off-site disposal of ACM fragments; and
- Excavation, sort and remove anthropogenic material from the fill profile and off-site disposal of anthropogenic material to land fill/licensed waste facility.

AEC 3:

- Decommissioning/removal of identified UST/s (**Figure 5**), any associated infrastructure, tank backfill material and any further petroleum impacted soils which may be present at concentrations unable to be retained and/or deemed not suitable for the proposed land use, and disposal to land fill/licenced waste facility.

No AF/FA impacted material has been identified on site. However, should this material be identified during the proposed AQ works (**Section 7.4.1**) then this will require remediation as follows:

- Excavation and off-site disposal of soil impacted by asbestos fines/fibrous asbestos (AF/FA) exceedances to facility lawfully able to accept the material.

The estimated extent of remedial activity is shown on **Figures 5** and **6**. Surface water in the two dams and several water obstacles (endurance course) on site will need to be managed during remediation activities. Utilisation as dust suppression and/or application to land (with appropriate consents) are considered viable options.

7. Remediation Plan

7.1 Regulatory and Planning Requirements

This RAP has been prepared with reference to the following guidelines and legislation. Details regarding regulatory approvals/licensing requirements are presented in **Section 11**.

7.1.1 Environment Planning and Assessment Act 1979 / SEPP 55

A review of the site location and proposed activities is outlined in **Section 12.2**. On the basis of this review, the proposed remediation works are classified as Category 2 Remediation Works as per the meaning provided in *State Environmental Planning Policy* (SEPP) 55 and will not require specific development consent under the *Environmental Planning and Assessment Act 1997*.

Notification of commencement of Category 2 remediation works will be required to be given to Council at least 30 days prior to commencement, and Council requires notification within 30 days following completion of remediation works, consistent with SEPP 55 requirements and Council's Contaminated Land Policy.

7.1.2 Environment Planning and Assessment Regulation 2000 – Schedule 3 Designated Development

It is not anticipated that the proposed remediation works will incorporate any on-site treatment of soil. However, if soil is required to be pre-treated prior to off-site disposal, an assessment of potential triggers for the works to be a designated development as defined in Schedule 3 – Clause 15 will be completed.

7.1.3 Protection of the Environment Operations Act 1997

The proposed remediation/validation activities are not required to be licensed under the *Protection of the Environment Operation Act 1997*.

7.1.4 Water Management Act 2000

Dewatering is not anticipated for remedial works because excavation will be undertaken in fill above natural ground level and groundwater.

Should groundwater dewatering be required, a dewatering license will be obtained from the NSW Department of Primary Industry – Water (DPI). The approval will require to be obtained prior to the undertaking of any groundwater dewatering and treatment.

If rainwater accumulates at the site and requires dewatering, permission should be sought from the local council and criteria met prior to the release of the water into stormwater assets.

Surface water already present on site may be used for dust suppression and/or applied to land, with appropriate consents from Sydney Water or local council.

7.1.5 Protection of the Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transporting. The proposed works on the site do not require license because they are no prescribed activities in the meaning of the regulation. However, Section 48 of the Regulation requires that wastes are stored in an environmentally safe manner. It is also stipulated that vehicles used to transport waste must be appropriately licensed and covered when loaded with impacted materials. For transport activities after 1 July 2016 this regulation also details additional tracking requirements for vehicles carrying Special (asbestos) Waste if material is identified to contain asbestos following waste classification activities.

Provision is provided in the Regulation and EPA (2014) guidelines for the NSW EPA to approve the immobilisation of contaminants in waste (e.g. if required with unexpected finds).

Waste Classification Guidelines (EPA 2014)

All wastes generated and proposed to be disposed off-site shall be assessed, classified and managed in accordance with EPA (2014). Where wastes require immobilisation prior to off-site disposal (to reduce waste classifications) an immobilisation approval shall be sought in accordance with Part 2 of the guideline. Immobilisation is not anticipated.

7.2 Approvals, Licences and Notifications

SEPP 55 requires Council to be notified 30 days before Category 2 remediation works commence, and within 30 days of completion.

Asbestos Works

The identified asbestos is in bonded non-friable form, as per the definitions in relevant regulatory guidance. In accordance with Safe Work Australia (SWA 2016[11]), excavation, remediation and off-site removal of bonded ACM impacted soil is required to be conducted by a contractor holding at least a Class B license.

No AF/FA impacted material has been identified on site. However, should this material be identified during the proposed AQ works (**Section 7.4.1**) then this will require remediation. For remediation of AF/FA impacted material, the contractor will require a Class A asbestos removal licence.

Before starting the works, the appointed Specialist Contractor (civil works contractor) is required to obtain a site-specific permit approving the asbestos works from SafeWork NSW. A permit will not be granted without a current licence and the permit application must be made at least seven days before the work is due to commence.

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

7.3 Site Establishment

The extent of remediation is summarised in **Section 6** and shown on **Figures 5** and **6d**. The remedial contractor shall secure the site to ensure that all safety and environmental controls are implemented. These controls will include, but not be limited to:

- Locate and isolate all required utilities in the proximity of the works;
- Assess need for and implement of any necessary traffic controls;
- Work area security fencing;
- Site signage and contact numbers;
- Stabilised site entry gate;
- Appropriate decontamination areas for personnel and plant, if required;
- Sediment fencing (attached to security fencing); and
- Stormwater runoff and sediment controls (e.g. silt fences and hay bales).

7.4 Remedial Works

Areas requiring remediation are discussed in **Section 6** and shown on **Figures 5** and **6**. The remedial works are required to be undertaken by a Specialist Contractor (civil works contractor) with appropriately qualifications, licenses and experience, under the supervision of JBS&G.

[11] How to safely remove Asbestos – Code of Practice, Safe Work Australia, 2016 (SWA 2016)

7.4.1 Asbestos Quantification of Eastern Sports Fields

Fill materials within the southern and eastern sports fields will be subject to asbestos quantification as per DOH (2009) and NEPM (2013). Given the occurrence of known asbestos impacts and the potential for further impacts to be present in the same fill profile due to the anthropogenic inclusions identified in other areas of the same fill profile. A systematic grid will be placed across the remedial area of the site and a sampling density of 2 x the EPA (1995) Sampling Design Guidelines adopted. For an area of 33,400 m^2 this equates to 90 (45 x 2) sample locations on a grid spacing of 20 m^2.

Test pits are considered the most appropriate sampling approach for assessing fill material as they enable a better characterisation of the typically heterogeneous composition of fill.

The following test pitting methodology will be adopted for the quantification of asbestos:

- At each sample location, the test pit shall be advanced through the fill soil profile, exposing the underlying natural sandy clay soils, and a minimum 10 litre sample (per fill stratum, per metre, per location) of soil will be collected, weighed in the field, and then placed on texture contrasting plastic, spread out and inspected using a 7 mm diameter teethed rake. All identifiable ACM will be recovered and bagged;
- ACM collected from each 10 litre sample shall be weighed in-house using a calibrated scale (accuracy of 1 g) with the mass of asbestos for each sample location recorded; and
- To assess for potential ACM (<7 mm size) and AF/FA, one soil sample from each raked 10 litre sample is required to be collected and submitted for asbestos analysis (500 ml). Collected soil samples will be immediately transferred to polyethylene zip-lock bags and shipped to the testing laboratory. A chain-of-custody form will be completed and forwarded with the samples.

Following receipt of the laboratory results for the asbestos analysis and calculation of the percentage soil asbestos (NEPC 2013), the results shall be compared with the assessment criteria presented in NEPC (2013) and **Section 9.2.7**.

Where the AQ assessment identifies material with AF/FA and/or ACM % in material above the assessment criteria presented in NEPC (2013), the material will require remediation in accordance with the procedures outlined in **Sections 7.4.1.1 and 7.4.1.2.**

In addition, during AQ works the fill soil profile will be inspected for anthropogenic materials representing an aesthetic issue with reference to the validation criterion presented in **Section 9.2.7**.

7.4.1.1 ACM Impacted Fill

The following remedial works shall be undertaken subsequent to AQ characterisation activities to address ACM fragments in fill representing a potential unacceptable health risk:

- Fill identified to contain bonded ACM above the adopted criterion is to be progressively excavated and stockpiled in accordance with **Section 9**;
- The bonded ACM impacted fill is to be spread by the Specialist Contractor (civil works contractor) to form pad/s not more than 0.1 m thick, within the designated pad sorting area (more than one pad may be used);
- The dimensions of each pad are to be documented such that the volume of material can be verified and meet the validation sampling density required (**Section 9.2.7**);
- ACM fragments are to be collected by raking and hand picking of the spread material by the Specialist Contractor (civil works contractor) or their appointed contractor. Raking shall be undertaken with a 10 mm spaced rake and two raking alignments at 90 ° of each other

completed. Collected ACM fragments will be disposed of off-site to an appropriately licensed waste facility;

- Following the initial screening process, the Specialist Contractor (civil works contractor) or their appointed contractor shall complete a second walkover of the pads at completion of raking/hand picking to confirm there is no visible ACM;
- Pads will be validated by JBS&G as per **Section 9.2.7**. Should validation fail the pad will be subjected to an additional rake, walk/pick by the Specialist Contractor (civil works contractor) or their appointed contractor and re-validated by JBS&G until such time as validation is achieved;
- At completion of validation of a prepared pad, it will be excavated and placed in a holding stockpile and the process restarted with the placement of a new pad; and
- The footprint of all stockpiles/pads and material underlying impacted fill (following excavation) are to be validated by JBS&G as per **Section 9.2.7.** Should validation fail, the failed base of the excavation/pad/stockpile will be excavated a further 0.2 m in the direction of the failure and the validation process repeated until validation is achieved.

Should anthropogenic material be identified within the fill profile that represent an aesthetic issue (**Section 9.2.7**) then this material will require remediation as per **Section 7.4.3** below.

7.4.1.2 AF/FA Impacted Material

No AF/FA impacted material has been identified on site. However, should this material be identified during the proposed AQ works (**Section 7.4.1**) then this will require remediation. This material is proposed to be remediated by excavation and off-site disposal to landfill in accordance with **Section 7.6**. The Remediation Contractor will require a Class A Asbestos Removal licence for this work (see **Section 7.2**).

- Locations where AF/FA is identified to exceed the land use criteria, are to be boxed out (excavated) and loaded directly onto trucks and disposed of off-site to an appropriately licensed waste facility as per **Section 7.6**; and
- Excavations are to be validated by JBS&G as per **Section 9**. Should validation fail, the failed walls and/or base of the excavation will be excavated a further 0.5 m in the direction of the failure and the validation process repeated until validation is achieved.

7.4.2 Removal of Anthropogenic Materials Representing an Aesthetic Issue

The following remedial works shall be undertaken to remove sub-surface aesthetic impacts. Where remediation of aesthetic impacts and asbestos impacts overlap, asbestos removal will occur first to avoid potential damage/attrition of asbestos fragments:

- Carefully excavate soil, sort, and remove foreign materials that represent an aesthetics issue (refer to **Section 6**);
- The lateral and vertical extents are to be surveyed for material volume reconciliation as discussed in **Section 7.10**;
- Dispose foreign materials to an appropriately licensed waste facility;
- Validation by JBS&G that foreign materials have been successfully removed to a level which does not represent and aesthetics issue; and
- Reuse of soil on site.
    - Note: Reuse of soil may also be subject to geotechnical suitability, which is outside of the scope of this RAP.

7.4.3 USTs

Removal of the UST/s and associated potential hydrocarbon impacted soils as identified on **Figure 2** will include the following:

- Removal and disposal of any hardstand over the USTs and associated infrastructure, and any concrete anchors that may be in place;
- Inspection and removal of any residual liquid contents from the USTs and linework (e.g. water and rust inhibiter mix) and off-site disposal in accordance with the EPA (2014a) Waste Classification Guidelines;
- Decommissioning of all related infrastructure;
- Excavation and off-site disposal of the USTs and related infrastructure to a licensed destruction facility (retaining destruction documentation for validation purposes);
- Identification and excavation of all potentially contaminated backfill sands/surrounding soils in the vicinity of the USTs and associated line work (if present);
- All materials requiring offsite disposal (i.e. tank-pit sands, and impacted soils) will require to be assessed in accordance with the *Waste Classification Guidelines, Part 1: Classifying Waste* (NSW EPA 2014) and be disposed of at a facility lawfully able to accept such wastes;
- Validation of the walls and base of the excavations as per requirements of **Section 9.2.7;**
- Sampling of the excavated potentially contaminated soils (as detailed in further detail in **Table 9.3**) for on-site reuse or waste classification and offsite disposal at a frequency of at least 1 per 25 m^3;
- Document the lateral and vertical extent of the excavation/s to facilitate volume reconciliation; and
- Reinstatement of the excavation with material obtained from either site-won soils or imported soils, which has been validated as appropriate for use.

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

- *Work, Health and Safety Act and associated regulations* (WHS 2011 and 2017);
- *Protection of the Environment Operations* (Underground Petroleum Storage Systems) *Regulation* 2008 (UPSS Regulation);
- *Waste Classification Guidelines Part 1: Classifying waste, NSW EPA* (2014a);
- *Guidelines for Implementing the POEO* (Underground Petroleum Storage Systems) Regulation 2008, DECC (2009) UPSS Guidelines;
- Australian Standard AS1940-2004 The storage and handling of flammable and combustible liquid;
- AS 4976-2008 The removal and disposal of underground petroleum storage tanks; and
- NSW EPA (2014b) Technical Note: Investigation of Service Station Sites, April 2014; and
- WorkCover *(2005) Code of Practice: Storage and Handling of Dangerous Goods (as a guide only).*

7.5 Off-site Disposal

Fill materials shall be classified in accordance with *Waste Classification Guidelines Part 1: Classifying Waste, November 2014, NSW EPA* (EPA 2014) or an appropriate exemption as created under the *Protection of the Environment Operations (Waste) Regulation 2014*.

Should natural soils/bedrock require off-site disposal then these shall also be classified in accordance with *Waste Classification Guidelines Part 1: Classifying Waste, November 2014, NSW EPA* (EPA 2014).

Waste certificates will be prepared for each stockpile and/or material type that is to be disposed.

The waste facility must be lawfully licensed to receive the material sent to it for disposal.

The Specialist Contractor (civil works contractor) must be aware of and conduct all waste disposal in accordance with all relevant regulations. All waste tracking documentation including disposal dockets must be maintained by the Specialist Contractor (civil works contractor) and must be provided to JBS&G/the client for inclusion in the validation report.

7.6 Asbestos Air Monitoring

During the remedial works, perimeter air monitoring will be conducted on each of the site boundaries. Additional downwind monitoring locations will be included in the air monitoring program as required.

Air monitoring will be conducted in accordance with the requirements of the National Occupational Health and Safety Commission (NOHSC) Asbestos Code of Practice and Guidance Notes, in particular the Guidance note for the estimation of airborne asbestos dust [NOHSC 3002:2005] as detailed in **Section 10.9**.

7.7 Materials Importation

A requirement to import material is unlikely.

If material is to be imported to the site, e.g. for the reinstatement of site surfaces, then it shall be validated as per **Section 9**.

7.8 Materials Tracking

Movement of all materials within the site, exported from the site and imported to the site will be tracked from source, through processing (if required), to final placement on site or disposal offsite.

Disposal dockets and waste tracker information will be documented.

7.9 Surveying

A qualified surveyor will conduct surveying of excavations, stockpiles and remedial extent. Details of the surveying requirements are provided in **Section 9**.

7.10 Validation

Validation of the remedial works will be conducted by JBS&G to demonstrate that the remediation objectives have been achieved.

Consideration to the requirements of the UPSS *Technical Notes: Site Validation Reporting* (DECCW 2010) will be considered in development of the validation program.

Details of the validation program are provided in **Section 9.**

7.11 Backfilling of Excavations

Upon confirmation of validation, excavations will be reinstated using validated excavated material sourced from within the site, or alternatively validated imported fill material. Imported fill material will require assessment prior to importation to confirm the material is consistent with Virgin

Excavated Natural Material (VENM), Excavated Natural Material (ENM) as defined in EPA (2014b**12**) or any other suitable material, granted an applicable EPA waste exemption under the **Protection of the Environment Operations (Waste)** *Regulation 2015*.

7.12 Site Disestablishment

On completion of the remediation works all plant/equipment and safety/environmental controls shall be removed from the site by the appointed Specialist Contractor (civil works contractor). All equipment used during remediation works will need to be appropriately decontaminated or disposed of as waste in accordance with relevant waste regulations.

[12] The excavated natural material exemption 2014. NSW EPA (2014b)

8. Contingency Plan

A review of remediation works has been undertaken to identify potential risks to meeting the specified site validation criteria (**Section 9.4**). Potential risks have been identified. These are listed following with contingencies that will be implemented to ensure that validation criteria are met.

Additionally, the associated remedial works health and environmental risks/hazards and minimisation/mitigation are further discussed in **Sections 10** and **11**.

8.1 Unexpected Finds Protocol

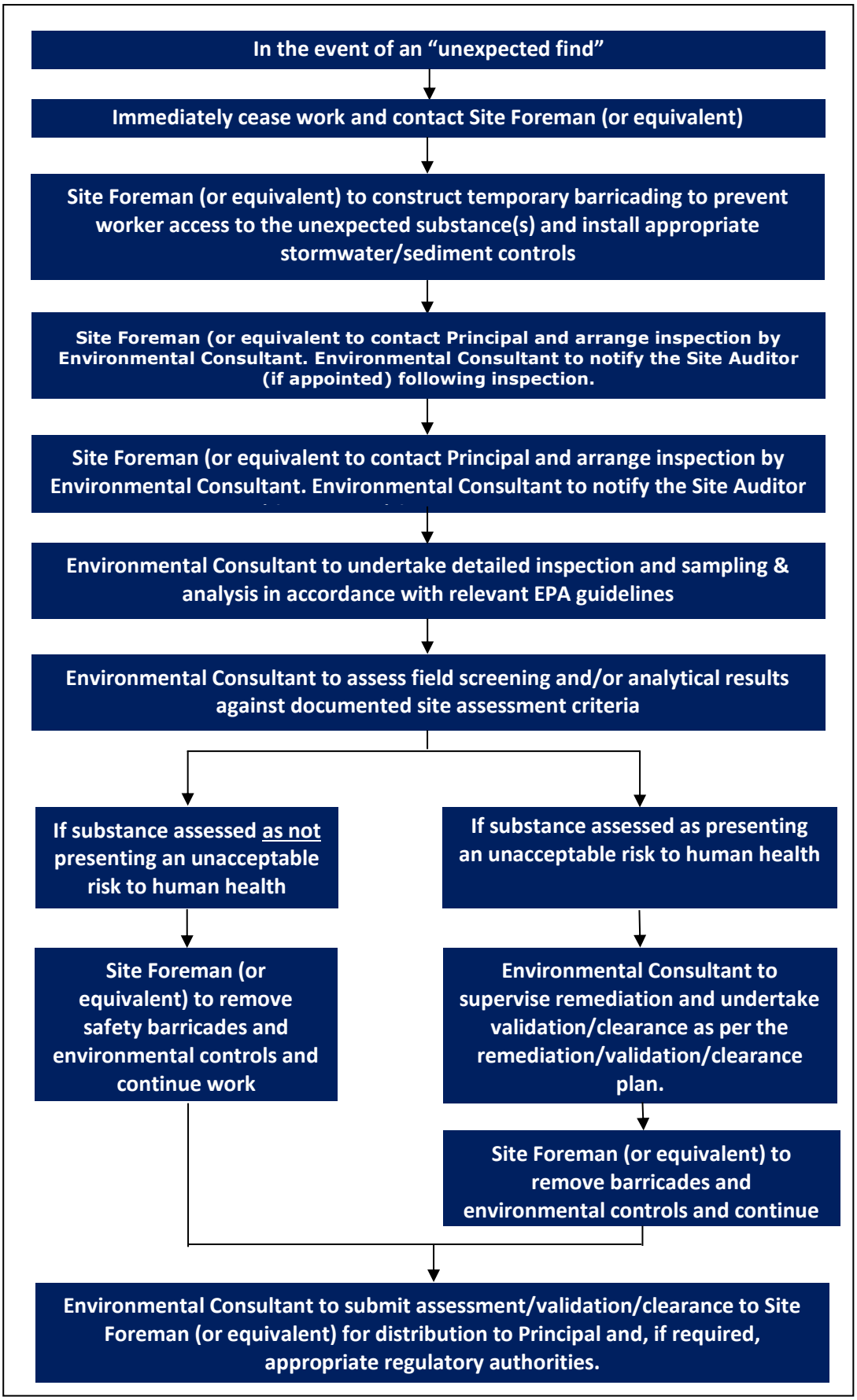
It is acknowledged that previous investigations of the site have been undertaken to assess the identified contaminants of potential concern. However, ground conditions between sampling points may vary, and further hazards may arise from unexpected sources and / or in unexpected locations during remediation.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

- Bottles/containers of chemicals (visible);
- Tar contaminated soils/fill materials (visible);
- Chemically impacted soil/fill materials;
- Fragments of asbestos impacted materials (ACM);
- Petroleum contaminated soils (odorous, staining/discolouration visible);
- Soils contaminated volatile organic compounds (VOCs) (odours) and vapours;
- Soil impacted with anthropogenic material in areas not previously identified; and
- Underground storage tanks (USTs).

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances be identified (or any other unexpected potentially hazardous substance), the procedure summarised in **Flowchart 8.1** is to be followed.

The unexpected finds protocol should be presented and reviewed during the site-specific induction. Unexpected finds will require characterisation and resultant excavations will require validation according to **Table 9.3.**

Flowchart 8.1 – Unexpected Finds Protocol



8.2 Contingency Scenarios

8.2.1 Material Storage Breach

Materials at the site should be transported directly from the excavation to an awaiting truck. Where this is not possible, and materials will require ongoing stockpiling, controls should be emplaced (e.g. surface liner before placement, covering, sediment fence) to mitigate the potential for sediment run-off and aeolian transport of particulates.

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

8.2.2 Complaints

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

- Odour emissions arising from excavation or exposure of hydrocarbon contaminated materials, and material handling and transport;
- Dust emissions arising from soil excavation, material handling, transport, placement and capping; and
- Noise and vibration from excavation.

Monitoring of all potential environmental emissions shall be undertaken as detailed in **Sections 10** and **11** and appropriate actions taken to further control emissions following receipt of a complaint. Such additional controls may include the following actions:

- Disturbance of soils during meteorologically favourable periods (minimal wind conditions) only; and
- Increasing environmental controls including covering and / or wetting down soils which are generating dust or use of odour suppressants to control odours.

Where odour complaints occur, the following will be undertaken:

- Installation of an odour screening/masking system at the remediation area boundaries;
- Disturbance of soils during meteorologically favourable periods only;
- The use of odour suppressant additives to water used to keep impact soils / stockpiles moist; and
- Covering of impacted soils.

8.2.3 Severe Weather

Weather will be monitored daily via checking an internet-based weather service provider. Should severe weather be forecast, especially high winds, works will stop until safe to re-commence. All site management controls will be implemented to the extent practicable as outlined in **Section 10** prior to any severe weather events.

8.2.4 Cap and Contain

Should large volumes of asbestos and/or PFAS and/or hydrocarbon impacted fill be identified on site and a cap and contain method is adopted as a remedial strategy then a Remedial Works Plan (RWP) shall be created.

9. Validation Plan

9.1 Overview

Validation data is required to be collected to verify the effectiveness of the remediation works and document the condition of the site as being suitable for the proposed future uses.

Validation activities will be required for the following aspects:

- Collection of appropriate environmental data from excavation faces, screened material and from beneath former stockpiles and pads following the removal of ACM fragments;
- Visual confirmation that anthropogenic materials have been removed and reduced to a level which does not represent an aesthetics issue;
- Collection of appropriate environmental data from excavation faces, former infrastructure footprints and backfill materials following the removal of former USTs, associated infrastructure and related targeted areas of concern;
- Tracking the movement of fill material on site; and
- Tracking the movement of waste materials requiring off-site disposal.

9.2 Data Quality Objectives

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

9.2.1 State the Problem

Previous investigations have identified fill materials impacted with bonded asbestos that presents a potential human health risk and foreign materials that present an aesthetic issue (**AEC 1** and **AEC 2**). Existing UST/s and associated infrastructure (**AEC 3**) have also been identified which may preclude future redevelopment of the site and/or pose a contamination risk at the site. As such, remediation and management is required as outlined in **Section 7**, for the site to be made suitable for the proposed mixed use (residential, retail/commercial and recreational/open space) land use.

During remediation activities, sufficient validation of site activities is required to demonstrate that the identified health-based risks to site users and aesthetic issues have been adequately managed to render the site suitable for the proposed land use.

9.2.2 Identify the Decision

The decisions which are required to be made for validation of the site are as follows:

- Are contaminant concentrations in remedial excavations above the adopted site remediation criteria?
- Are there any aesthetic issues remaining following remediation works?
- Have the site remediation activities been undertaken in compliance with the regulatory requirements?
- Is the site considered suitable for the proposed use?

During the remediation activities, sufficient validation of site activities is required to demonstrate that the identified environmental and health-based risks to future use(s) of the site have been adequately managed to render the site suitable for the proposed land use.

9.2.3 Identify Inputs to the Decision

The inputs to the decision are:

- Observations and soil analysis data from previous investigations (JBS&G 2019);
- Field observations in relation to inspection of all excavation bases, walls, pads and stockpiles for odours, sheen, ACM, discolouration, and other indicators of potential contamination;
- Soil validation analysis data collected from, pads, the exposed ground surface and from the base and walls of the remedial excavations;
- Waste classification and material characterisation data obtained during assessment of fill material prior to and during remediation works;
- Survey data;
- Disposal dockets and relevant documents in relation to appropriate disposal of material to be removed from site as part of the remediation works (landfill dockets, beneficial reuse / recycling dockets, trade waste disposal, etc.);
- Relevant guideline criteria for validation and waste classification; and
- Data quality indicators (DQIs) as assessed by quality assurance / quality control (QA/QC).

9.2.4 Define the Study Boundaries

The overall study boundary is the site as identified **Table 2.1**.

The lateral and vertical extents of areas subject to remediation under this RAP are outlined in **Section 6** and are shown on **Figure 6**.

In practice, the lateral and vertical extent shall be determined by validation samples/data that satisfy the adopted validation criteria (**Section 9.4**).

The temporal boundaries of this investigation will be limited to the period of field validation assessment works.

9.2.5 Decision Rules

The decision rules adopted to answer the decisions identified in **Section 9.2.2** are discussed below (**Table 9.1**).

Table 9.1: Summary of Decision Rules

Decision Rule	
1. Are contaminant concentrations in remedial excavations above the adopted site remediation criteria?	Soil analytical data will be compared against the adopted criteria in the RAP. For the validation sample sets, statistical analysis of the data will be undertaken in accordance with relevant guidance documents, as appropriate, to facilitate the decisions. The following statistical criteria will be adopted with respect to soils: Either: the reported concentrations will be below adopted site criteria; Or, the 95% Upper Confidence Limit (UCL) of the average concentration for each analyte will be below the adopted health-based site criterion, no single analyte concentration will exceed 250% of the adopted health-based site criterion, and the standard deviation of the results will be less than 50% of the site health based criterion. and If the statistical criteria stated above are satisfied, the answer to the decision will be **No**. If the statistical criteria are not satisfied, the answer to the decision will be **Yes**.
2. Are there any aesthetic issues remaining following remediation works?	If there are any remaining unacceptable odours, soil inclusions or soil discolouration, the answer to the decision will be **Yes.** Otherwise, the answer to the decision will be **No**.
3. Are there any outstanding regulatory compliance issues?	Qualitative assessment of the works in relation to EPA, SafeWork/WorkCover, Council, Sydney Water etc. approvals will be undertaken during and following the completion of remediation activities. If this review identifies non-compliance or outstanding issues the answer to the decision will be **Yes**. Otherwise, the answer to the decision will be **No**.
4. Is the site considered suitable for the proposed use?	Was the answer to any of the above decisions Yes? If the answer was Yes, then the answer to the decision questions is **No** and additional works are required to achieve the RAP objective.

	If there are no outstanding issues, then the answer to the decision questions will be **Yes**.

9.2.6 Specify Limits of Decision Error

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

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

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

The pre-determined DQIs established for the project are discussed below in relation to the PARCC parameters, and are expanded in **Table 9.2**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD[13]) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** –expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; and ensuring analysing laboratories use consistent analysis techniques; and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

13 $$RPD(\%) = \frac{|C_o - C_d|}{C_o + C_d} \times 200$$

Where C0 is the analyte concentration of the original sample
Cd is the analyte concentration of the duplicate sample

Table 9.2: Summary of Data Quality Indicators

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50 % RPD[1]
Blind duplicates (inter laboratory)	1 / 20 samples	<50 % RPD[1]
Laboratory Duplicates (not asbestos)	1 / 20 samples	<50 % RPD[1]
Accuracy		
Surrogate spikes (not asbestos)	All organic samples	70-130 %
Laboratory control samples (not asbestos)	1 per lab batch	70-130 %
Matrix spikes (not asbestos)	1 per lab batch	70-130 %
Representativeness		
Sampling appropriate for media and analytes	All samples	-[2]
Samples extracted and analysed within holding times	All samples	Soil: organics (14 days, other than vinyl chloride – 7 days), inorganics (6 months) Groundwater: metals (6 months, other than mercury – 28 days), sVOCs (PAHs, TRH<C_{10} – 7 days), VOCs/TRH>C_{10} – 14 days).
Laboratory Blanks (not asbestos)	1 per lab batch	<LOR
Trip spike (not asbestos and waste classification samples)	1 per lab batch	70-130% recovery
Storage blank (not asbestos and waste classification samples)	1 per lab batch	<LOR
Rinsate sample (not asbestos and waste classification samples)	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples extracted and analysed within holding times	NATA accredited methods for all sample analysis
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples[2]
Limits of reporting appropriate and consistent	All Samples extracted and analysed within holding times	All samples[2]
Completeness		
Sample description and chain of custody completed and appropriate	All Samples	All samples[2]
Appropriate documentation	All Samples	All samples[2]
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR<= Site assessment criteria

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

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

9.2.7 Optimise the Design for Obtaining Data

The purpose of this step is to identify a resource-effective field validation sampling design that generates data that are expected to satisfy the decision performance criteria, as specified in the preceding steps of the DQO process. The output of this step is the sampling design that will guide development of the field sampling and analysis plan. This step provides a general description of the activities necessary to generate and select data collection designs that satisfy decision performance criteria.

The remediation validation and subsequent laboratory analysis program as outlined in the following sections will need to be implemented during site remediation activities to demonstrate the successful completion of works in compliance with the RAP goals. The validation/characterisation sampling and analytical program for the site is outlined in **Table 9.3** below.

Table 9.3: Characterisation/Remediation Validation Program

Item	RAP Sampling Frequency		Analytical Suite
Asbestos Quantification			
Asbestos Quantification	90 locations at 20 m^2 across the remediation area. Testpits to be dug through to natural and a 10 Litre sample (per stratum, per metre, per location) of soil will be collected and spread out on a texture contracting plastic and raked with a 7 mm rake. All ACM identified will be weighed and bagged and a 500 ml friable asbestos sample collected per AQ.		Asbestos (NEPM AQ protocol) minimum 10 L bulk sample, Asbestos (presence/absence: 40 g) Asbestos (NEPM protocol: 500 mL)
Export of Materials/Landfill Disposal			
Classified in accordance with EPA (2014) Waste Guidelines	Soils requiring additional classification for off-site disposal will be sampled by JBS&G as per the sampling density for stockpiled materials in NEPC (2013)		Heavy metals TPH/BTEX[14] PAH/BaP Phenols/ OCPs/OPPs PCBs Asbestos (presence/absence: 40 g)
AF/FA Remedial Excavation			
	Excavation Floors	Excavation Walls	
AF/FA Remedial Excavation	Visual, and 1 per 100 m^2 (10 m grid) or Minimum 1x sample per base	1 per 10 m lineal (from each distinct horizon/material type/1 m vertical soil profile) Minimum 1 x sample per wall If excavation is shallow, i.e. wall height ≤ 0.2 m, then wall samples are not required.	Asbestos (NEPM protocol: 500 mL)
ACM Remedial/Removal Activities			
	Excavation Floors	Excavation Walls	
Remediated Soil	N/A	N/A	Asbestos (NEPM protocol: 500 mL)
	Stockpiled Material ACM impacted fill soil is to be placed as pads no thicker than 0.1 m. Following remedial activities by the Specialist Contractor (civil works contractor) and confirmation that the material is free of ACM, JBS&G is required to inspect the remediated soil by walking 1 m north south transects then 1 m east west transects and confirm the material as free of visible ACM. If no visible ACM is apparent, a 500 mL validation sample is required to be collected at a density of one sample per 70 m^3 with a minimum of 1 sample per pad (if less than 70 m^3) (at 0.1 m thick this is equivalent to one sample per 7 m^2).		

[14] Phenol/BTEX analysis for waste classification only required for spoil associated with USTs/infrastructure.

Exposed Ground Surface (following stockpiling, sorting and excavation of ACM impacted fill)	Visual, and 1 per 100 m^2 (10 m grid) or Minimum 1x sample per base	1 per 10 m lineal (from each distinct horizon/material type/1 m vertical soil profile) Minimum 1 x sample per wall If excavation is shallow, i.e. wall height ≤ 0.2 m, then wall samples are not required.	Asbestos (NEPM protocol: 500 mL)
Removal of Foreign Material			
	Excavation Floors	Excavation Walls	
Anthropogenic Material	Remove materials that present a potential physical hazard such as sheet metal, car parts, tyres. In addition, the material is required to be geotechnically suitable (as determined by the site geotechnical engineer).	Remove materials that present a potential physical hazard such as sheet metal, car parts, tyres. In addition, the material is required to be geotechnically suitable (as determined by the site geotechnical engineer).	Walls and Floor of Excavation - Visual Inspection by JBS&G and Geotechnical Confirmation by Site Engineer
USTs			
	Excavation Floors	Excavation Walls	
Tank Pit Excavation	1 sample per UST, or a minimum of 1/25 m^2 where one large excavation	1 sample per wall per media, with minimum spacing of one per 5 linear metres	TRH/BTEX Lead PAHs Phenols
Associated Infrastructures (e.g. pipelines)	1 sample per infrastructure, 1 per 5 linear metres of pipeline	1 sample per infrastructure, 1 per 5 linear metres of pipeline	
Excavated Spoil for offsite disposal or retained on site	Sampling at 1/25 m^3, with analysis at 1/100 m^3 based on PID screening		
Materials Importation			
Imported VENM	Visual inspection of source material before importation. Minimum of 5 samples per source site/material type up to 10,000 m^3 then 1 sample per 1000 m^3 thereafter		TRH/BTEX PAH Heavy Metals OCP/PCBs Asbestos (NEPM protocol: 500 mL)
Quarry VENM Materials (e.g. blue metal, sandstone, shale)	Confirmation that the material is quarried rock (VENM) prior to importation, and visual confirmation.		Source Site Inspection Required
Recycle Materials including 'quarry' products that are recycled.	Letter from the source facility showing compliance with the Environmental Protection License and supplemented with analytical data at a density of minimum 3 samples per material type/batch up to 1500 m^3 then 1 sample per 500 m^3 thereafter		TRH/BTEX PAH Heavy Metals Asbestos (NEPM protocol: 500 mL)
Imported ENM	As per the exemption		As per the exemption + asbestos (500 mL)
Unexpected Finds			
	Excavation Floors	Excavation Walls	
Unexpected Find	1 per 25 m^2	1 per 5 m lineal	As appropriate, depending on the location and characteristics of the unexpected find

The nominated sampling densities and analytical program have considered sample density guidance provided in EPA made and endorsed guidelines.

9.3 Soil Sampling Methodology

9.3.1 Validation of Excavation(s)

Samples to be collected by an appropriately trained and experienced environmental scientist / engineer using a hand trowel or directly from the bucket of mechanical excavation equipment, at the required densities to meet the project DQOs presented in **Section 9.2.**

UST excavations will be inspected by a suitably trained and experienced environmental consultant to confirm the extent of potentially impacted materials have been removed. Screening using a calibrated PID to be used where appropriate. If additional potentially impacted material is identified, further excavation will be conducted, and the affected area will be re-inspected until such time as visual and olfactory validation is obtained. Following screening, soil samples will be collected in accordance with **Table 9.3** above.

Prior to collection of each sample, hand tools will need to be thoroughly decontaminated using phosphate free detergent and distilled water as per **Section 9.3.5**.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination will need to be noted on the field documentation.

9.3.2 Stockpile Sampling

For stockpile sampling, material will be obtained from a minimum depth of 0.3 m into the surface of the stockpile at the time of sampling. Appropriate decontamination activities shall be followed following the collection of each sample. For stockpiles greater than 1 m high, stratified sampling will be required.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indications of contamination will be noted on the field documentation.

9.3.3 Sample Handling

Collected samples will be immediately transferred to sample containers of appropriate composition (glass jars for chemical analysis, plastic bags for asbestos). Sample labels recorded: job number; sample identification number; and date of sampling.

Sample containers will be transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form will be completed and forwarded with the samples to the testing laboratory.

9.3.4 Soil Duplicate and Triplicate Sample Preparation and QA/QC Requirements

Field duplicate and triplicate samples for the characterisation/validation assessment will be obtained during sampling using the procedures outlined at a frequency outlined in **Table 9.2**. The primary sample will be divided laterally into three samples with minimal disturbance to reduce the potential for loss of volatiles and placed in three clean glass jars and / or plastic bags. All jars will be filled completely with no headspace to reduce the potential for loss of volatiles and separately labelled as the primary, duplicate and triplicate samples before being placed in the same chilled esky for laboratory transport.

Trip spike, storage blank and rinsate samples will be collected as per **Table 9.2**.

9.3.5 Soil Sampling Equipment Decontamination

The following procedure will be used to clean non-disposable equipment, including the trowel, pick etc., prior to the collection of each sample:

- Scrubbing with a wire brush to remove gross contamination;
- Pressure spray with Decon 90 detergent and potable water mix;

- Pressure spray rinse with potable water; and
- Air drying.

Rinsate samples will be obtained during the field decontamination procedures at regular intervals during characterisation/validation sampling activities. Each rinsate sample will be obtained by rinsing the trowel with laboratory grade demineralised water following the decontamination procedure. The water sample will be appropriately preserved and stored with the site samples prior to transport to the laboratory for chemical analysis.

9.3.6 Field Photoionisation Detector (PID) Screening

Soil validation/characterisation samples will be screened on site during works using a PID to assess the presence of VOCs including petroleum hydrocarbons. Samples obtained for PID screening will be placed in a sealed plastic bag for a period of approximately 5 minutes to equilibrate prior to a PID being attached to the bag. Readings will then be monitored for a period of approximately 1 minute or until values stabilised and the stabilised/highest reading was recorded. PID reading will be recorded on field notes during each sampling event. The PID calibration will be checked prior to each sampling event and the outcome documented in field notes.

9.3.7 Laboratory Analyses

Eurofins MGT Pty Ltd at Lane Cove, NSW will function as the primary laboratory for the required analyses. The secondary laboratory to be contracted for the works will be Envirolab Services Pty Ltd (Envirolab) at Chatswood, NSW. All laboratories are National Association of Testing Authorities (NATA) registered for the relevant analyses. In addition, the laboratories are required to meet JBS&G's internal QA/QC requirements.

9.4 Validation Criteria

The following is a discussion of validation criteria to be adopted during remediation works within the site.

The proposed use of the site is a mixed use development including residential allotments, retail/commercial premises including a childcare centre and recreational/open space areas (**Table 2.1**.; **Figure 3**). The most sensitive land use is equivalent to a NEPC (2013) setting of residential with access to soil.

NEPC (2013) criteria are trigger levels for further investigation if required and have been derived assuming conservative scenarios. These criteria have been adopted as site validation criteria in lieu of derivation of site specific criteria.

No criteria are provided for groundwater or surface water as impact to these receptors from the site has not been previously identified, as outlined in **Section 5**.

9.4.1 Soil Validation Criteria and Rationale

Laboratory results from validation soil samples will be compared against adopted health-based criteria listed in NEPC (2013) for Residential land use in alignment with the zoning and proposed land use of the site:

- Human Health Investigation Levels (HIL) – Residential (HIL-A);
- Human Health Screening Levels (HSL) – Residential (HSL-A);
- Aesthetic considerations as **Table 9.3**;
- Ecological Investigation Levels (EIL) – Residential setting; and
- Ecological Screening Levels (ESL) – Residential setting.

- As discussed above, a validation criterion of no visible ACM within the top 0.1 m of soil has been adopted for remediated soil.
- In addition, the beneficial reuse of site materials is required to meet the validation criteria in **Section 9.2.7.**

9.4.1.1 Statistical Analysis of Data

Where sufficient data sets are available, statistical criteria will be applied as outlined in Decision Rule 1 of **Table 9.1**, and generally as follows:

Either:

- all contaminant concentrations were less than the adopted site assessment criteria,

Or:

- The upper 95% confidence limit of the average concentration for each analyte (calculated for samples collected from consistent soil horizons, stratigraphy or material types) was below the adopted criterion;
- No single analyte concentration exceeded 250% of the adopted criterion; and
- The standard deviation of the results was less than 50% of the criterion.

In addition to the numerical criteria, the following observations will also supplement the validation process:

- Soils shall not emit recognisable odours, be discoloured because of contamination or have any significant additional aesthetic concerns with respect to future site users.

9.4.2 Offsite Disposal Criteria

Contaminated soils requiring disposal off-site shall be assessed in accordance with EPA (2014) *Waste Classification Guidelines Part 1: Classifying Waste*. Refer to **Table 9.3**.

9.4.3 Imported Soil Criteria

In accordance with current EPA policy, only material that does not represent an environmental or health risk at the receiving site may be considered for resource recovery. In accordance with this, only VENM as defined in the *Protection of the Environment Operations Act* (1997) Schedule 1 can be utilised to reinstate excavations at the site or materials covered by a NSW EPA exemption. Refer to **Table 9.3**.

9.4.4 Survey

If surveyed volumes of material are required the principal contractor shall engage a registered surveyor.

9.5 Validation Report

The validation report shall be prepared by the remediation consultant written in general accordance with EPA reporting guidelines (OEH 2011). The validation report will be submitted to the client at the completion of remedial works at the site.

The validation report should contain information including:

- Results of previous investigations conducted at the site;
- Details of the remediation works conducted;
- Information demonstrating that the objectives of the RAP have been achieved;
- Information demonstrating compliance with appropriate regulations and guidelines;

- All material tracking data;
- Any variations to the strategy undertaken during the implementation of the remedial works;
- Details of any environmental incidents occurring during the remedial works and the actions undertaken in response to these incidents; and
- Other information as appropriate, including any requirements for ongoing management.

10. Site Management Plan

This section contains procedures and requirements that are to be implemented as a minimum requirement during the remedial works at the site.

10.1 Hours of Operation

It is understood that the hours of operation for remedial works will be conducted in accordance with the recommended site hours suggested by the EPA[16], however hours may vary from typical hours of operation which will be subject to approval.

Typical hours of operation for remedial works are:

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

10.2 Soil and Water Management

All works shall be conducted in general accordance with Landcom (2004) [17] guidance (the Blue Book), which outlines the general requirements for the preparation of a soil and water management plan.

All remedial works shall be conducted in accordance with a soil and water management plan, which is to be kept onsite and made available to council officers on request. All erosion and sediment measures must be maintained in a functional condition through the remediation works by the remedial contractor.

To prevent the migration of impacted soil off site, silt fences shall be constructed at the down-gradient site boundaries by the remedial contractor. Any material which is collected behind the sediment control structures shall be removed off site to a licensed waste facility after waste classification.

In preparation for or during storm or extended rainfall event, the structures located on site for sediment control shall be monitored and replaced or altered if necessary by the contractor. Collected material shall be managed in accordance with remediation works by the contractor.

10.3 Stockpile Management

All materials stockpiled onsite will be managed by the remedial contractor. Unique numbers will be provided for each stockpile, the source of the stockpile, its volume, material characterisation and its location onsite (via GPS) recorded.

The following procedures will be implemented by the remedial contractor:

- No stockpiles of soil or other materials shall be placed on footpaths or nature strips unless prior Council approval has been obtained;
- All stockpiles of soil or other materials shall be placed away from drainage lines gutters or stormwater pits or inlets;
- All stockpiles of soil or other materials likely to generate dust or odours shall be covered (where practical);
- All stockpiles of contaminated soil shall be placed on plastic sheeting to limit cross contamination of the underlying soils and stored in a secure area.

[16] *Interim Construction Noise Guideline.* Department of Environment & Climate Change NSW. DECC 2009/265. July 2009.
[17] Managing Urban Stormwater: Soils and Construction, Landcom 4th Edition, March 2004.

10.4 Site Access

All vehicle access to the site shall be stabilised to prevent the tracking of sediment onto the roads and footpaths. If any friable asbestos is identified at the site during works, any personnel, equipment, plant or vehicles that enter an asbestos works zone must be appropriately decontaminated prior to exiting.

10.5 Excavation Pump-out

Any excavation pump-out water shall be sampled by the environmental consultant for analysis for total suspended solid concentrations, turbidity, pH and the identified contaminants of concern prior to release to stormwater with appropriate documentation indicating that the discharged water is compliant with the ANZG (2019) toxicity trigger values (TTVs) for the 95% Protection of Marine Ecosystems. If not, appropriate waste disposal practices with a suitably licensed and experienced waste contractor.

Excavation pump out is not anticipated with the general remediation works given the general remedial plan of minimising ground disturbance and groundwater being undisturbed. Pump out following accumulation of surface water is the most likely scenario for water disposal.

10.6 Landscaping / Rehabilitation

All exposed soils shall be stabilised as remedial works progresses.

10.7 Noise

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

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

Louder equipment shall be located away from noise sensitive areas. Works shall be staged as required to avoid concurrent operation of multiple pieces of noisy equipment. Works outside of normal hours of operation (**Section 10.1**) shall be avoided.

10.8 Vibration

The use of plant and machinery by the remedial contractor shall not cause vibrations to be felt or capable to be measured at any premises.

10.9 Air Quality

During remedial works, dust emissions and any odours are to be confined within the site boundary.

Boundary air monitoring for odour or dust is not required due to the extent of required remediation.

During the remedial works, perimeter asbestos in air monitoring will be conducted at each applicable remedial works area boundary when soil with bonded asbestos is being disturbed as discussed in **Section 7.6**. Air monitoring will be conducted on a daily basis at relevant locations whilst disturbance of bonded asbestos contaminated areas takes place to identify failures in containment, poor work practices and to provide proof of containment for occupiers and regularity authorities and to provide evidence of good work practices for both present and future needs.

10.9.1 Dust Control

During the remedial works, as necessary, excavation areas will be wetted down using a water spray to minimise the potential for dust to be generated by the remedial contractor.

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

During all remedial works, dust screens will be erected around the perimeter of the site by the remedial contractor. Where significant fugitive emissions are observed from specific site areas, these areas shall be wetted and/or covered by the remedial contractor.

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

Plant and vehicles should limit their speed when working within asbestos exclusion zones and only traverse wetted haul roads.

10.9.2 Odour / Volatile Emissions Control

No odours should be detectable at the site boundary and volatile emissions of other potentially volatile substances shall be controlled. Appropriate actions will be taken by the remedial contractor to reduce the odours, which may include: increasing the amount of covering of excavations / stockpiles; mist sprays; odour suppressants; and maintenance of equipment.

Records of volatile emissions and odours shall be kept by the remedial contractor. Equipment and machinery will be adequately maintained to minimise exhaust emissions. No materials shall be burnt on the site.

10.10 Transport of Material Offsite

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

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

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

Plant and vehicles should limit their speed when working within asbestos exclusion zones and only traverse wetted haul roads.

10.11 Hazardous Materials

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

Any hazardous wastes will be transported by a NSW EPA licensed transporter.

10.12 Disposal of Contaminated Soil

Refer to **Section 9**.

10.13 Imported Fill

Refer to **Section 9**.

10.14 Groundwater

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

10.15 Site Signage and Contact Numbers

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

10.16 Site Security

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

10.17 Community Consultation

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

The client will be responsible for all community consultation prior to, during and after remediation, as required.

11. Environmental and Health and Safety Management

11.1 Environmental Management

The Site Management Plan of **Section 10** shall be implemented.

11.2 Health and Safety Management

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

The objectives of the WHSP are:

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

These objectives will be achieved by:

- Assignment of responsibilities;
- An evaluation of hazards;
- Establishment of personal protection standards, mandatory safety practices and procedures;
- Monitoring of potential hazards and implementation of corrective measures; and
- Provision for contingencies that may arise while activities are being conducted at the site.

12. Regulatory Approvals / Licensing

12.1 Protection of the Environment Operations Act 1997 (POEO 1997)

The proposed remediation / validation activities are not required to be licensed under the *Protection of the Environment Operation Act 1997*, which is based on the following:

- The proposed remediation works will not treat more than 1 000 m^3 per year of contaminated soil received from off-site.
- The proposed remediation works will not involve the treatment of contaminated soil originating on-site with the capacity: (i) to incinerate more than 1 000 m^3 per year of contaminated soil, or (ii) to treat (otherwise than by incineration) and store more than 30 000 m^3 of contaminated soil, or (iii) disturb an aggregate area of 3 hectares of contaminated soil.

12.2 State Environmental Planning Policy (SEPP) 55 'Remediation of Land'

Development consent for remediation works is addressed by reference to State Environmental Planning Policy 55 – Remediation of Land (SEPP 55) and associated SEPP 55 Planning Guidelines.

The proposed remediation works are classified as 'Category 2' Remediation Works – i.e. not requiring consent. The notification requirements of SEPP 55 include notification to council 30 days before Category 2 remediation works commence. The proposed works do not constitute Category 1 works because:

- The work is not Designated Development under Schedule 3 of the EPA&A Regulation or under a planning instrument.
- The work proposed is not on land identified as critical habitat under the Threatened Species Conservation Act 1995.
- Consideration of s.5A of the EP&A Act indicates the remediation work is not likely to have a significant effect on threatened species, populations, ecological communities or their habitats.
- The work is not proposed in an area or zone to which any classifications to the following effect apply under an environmental planning instrument:
    - coastal protection;
    - conservation or heritage conservation;
    - habitat area, habitat protection area, habitat or wildlife corridor;
    - environmental protection;
    - escarpment, escarpment protection or escarpment preservation;
    - floodway;
    - littoral rainforest;
    - nature reserve;
    - scenic area or scenic protection;
    - wetland, or
    - carried out or to be carried out on any land in a manner that does not comply with a policy made under the contaminated land planning guidelines by the council for any local government area in which the land is situated (or if the land is within the unincorporated area, the Western Lands Commissioner).

- The work does not require consent under another SEPP or regional environmental plan.

In addition, the notification will also include relevant contact details and a proposed remediation schedule. Notice is also required to be given to Council within 30 days of remediation works completion.

12.3 Waste Classification Guidelines, Part 1: Classifying Waste

All wastes generated shall be classified and managed in accordance with the NSW EPA Waste Classification Guidelines Part 1: (2014).

12.4 Asbestos Removal Regulations and Code of Practice

The removal and disposal of asbestos will be managed in accordance with the Work Health and Safety Act (2011) and Work Health and Safety Regulation (2017), *How to Safely Remove Asbestos: Code of Practice* (WorkCover 2016), *How to Manage and Control Asbestos in the Workplace Code of Practice* (WorkCover 2016), the NSW WorkCover Guidelines, the NSW EPA (2014) Waste Classification Guidelines, and requirements under the Protection of the Environment Operations (Waste) Regulation (2014) for asbestos waste monitoring (NSW EPA 2015).

An asbestos removalist with a minimum of a B grade asbestos license and WorkCover notification regarding the scope of the removal works is required.

13. Conclusions and Recommendations

With reference to the limitations in **Section 14**, the following conclusions and recommendations are provided.

13.1 Conclusions

It is considered that the proposed actions outlined in this RAP conform to EPA requirements because they are: technically feasible; environmentally justifiable; and consistent with relevant laws, policies and guidelines endorsed by NSW EPA.

Subject to the successful implementation of the measures described in this RAP and the recommendations below, it is concluded that the risks posed by potential direct human contact pathways with contamination can be managed in such a way as to be adequately protective of human health such that the land can be made suitable for the proposed land use.

13.2 Recommendations

It is recommended that the processes outlined in this RAP be implemented to ensure the risks and impacts during remediation and construction works are controlled in an appropriate manner.

A Site Management Plan, which includes monitoring and management measures required to control the environmental impacts of the works, has been prepared as **Section 10**, and this shall be implemented.

- A Workplace Health and Safety Plan (WHSP) to document the procedures to be followed to manage the risks posed to the health of the workforce shall also be prepared and implemented.

Upon completion of the remediation works, a Validation Report is required to be prepared to verify remedial works were completed in accordance with the RAP.

14. Limitations

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

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

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

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

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

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

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

Figures

Legend

- Approximate Site Boundary
- Coal Conveyour Systems

JBS&G

Job No: 56387	
Client: Urbis Pty Ltd	
Version: R02 RevB	Date 1/10/2019
Drawn By: AS/RF	Checked By: RL

Scale 1:15,000

0 180 360

metres

Coord. Sys. GDA 1994 MGA Zone 56

Pacific Hwy and Wentworth Ave, Doyalson NSW

SITE LOCATION

FIGURE 1

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\R02 Rev B_RAP\56387_01_Sitelocation.mxd
Reference: Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

	Easting	Northing
A	362737.407	6326401.156
B	363268.110	6326317.710
C	363167.179	6325795.900
D	363129.137	6325741.108
E	362510.288	6325839.129
F	362639.587	6326017.426
G	362539.000	6325787.314
H	362504.086	6325814.896
I	362516.363	6325862.500
J	362617.393	6325983.027
K	362639.690	6326017.545

Legend

- Approximate Site Boundary
- Cadastre
- Jemena Gasline
- Stockpiles
- Evaporation Trenches/Septic
- Surface Water
- Underground Storage Tank

JBS&G

Job No: 56387

Client: Urbis Pty Ltd

Version: R02 RevB | Date 1/10/2019

Drawn By: AS/RF | Checked By: RL

Scale 1:4,000

0 40 80
metres

Coord. Sys. GDA 1994 MGA Zone 56

Pacific Hwy and Wentworth Ave, Doyalson NSW

SITE LAYOUT AND FEATURES

FIGURE 2

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\R02 Rev B_RAP\56387_02_SiteLayoutandFeatures.mxd
Reference: www.nearmap.com - Imagery 20190520

	Easting	Northing
A	362737.407	6326401.156
B	363268.110	6326317.710
C	363167.179	6325795.900
D	363129.137	6325741.108
E	362510.288	6325839.129
F	362639.587	6326017.426
G	362539.000	6325787.314
H	362504.086	6325814.896
I	362516.363	6325862.500
J	362617.393	6325983.027
K	362639.690	6326017.545

Legend

- Approximate Site Boundary
- Cadastre

JBS&G

Job No: 56387

Client: Urbis Pty Ltd

Version: R01 RevB | Date 1/10/2019

Drawn By: AS/RF | Checked By: RL

Scale 1:4,000

0 40 80

metres

Coord. Sys. GDA 1994 MGA Zone 56

Pacific Hwy and Wentworth Ave, Doyalson NSW

PROPOSED LAYOUT

FIGURE 3

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\R02 Rev B_RAP\56387_03_ProposedSiteLayout.mxd
Reference:

TP035 Analyte	Date	Presence/ Absence	Criteria
Non-friable Asbestos	14/08/2019	Presence	HSL

TP153 Analyte	Date	Presence/ Absence	Criteria
Chrysotile Asbestos	14/08/2019	Presence	HSL

TP036 Analyte	Date	Presence/ Absence	Criteria
Non-friable Asbestos	14/08/2019	Presence	HSL

Legend

- Approximate Site Boundary
- Cadastre

Sample Locations

- Borehole
- Borehole/Monitoring well
- Surface water

JBS&G

Job No: 56387

Client: Urbis Pty Ltd

Version: R02 RevB | Date 1/10/2019

Drawn By: AS/RF | Checked By: RL

Scale 1:5,000

0 50 100

metres

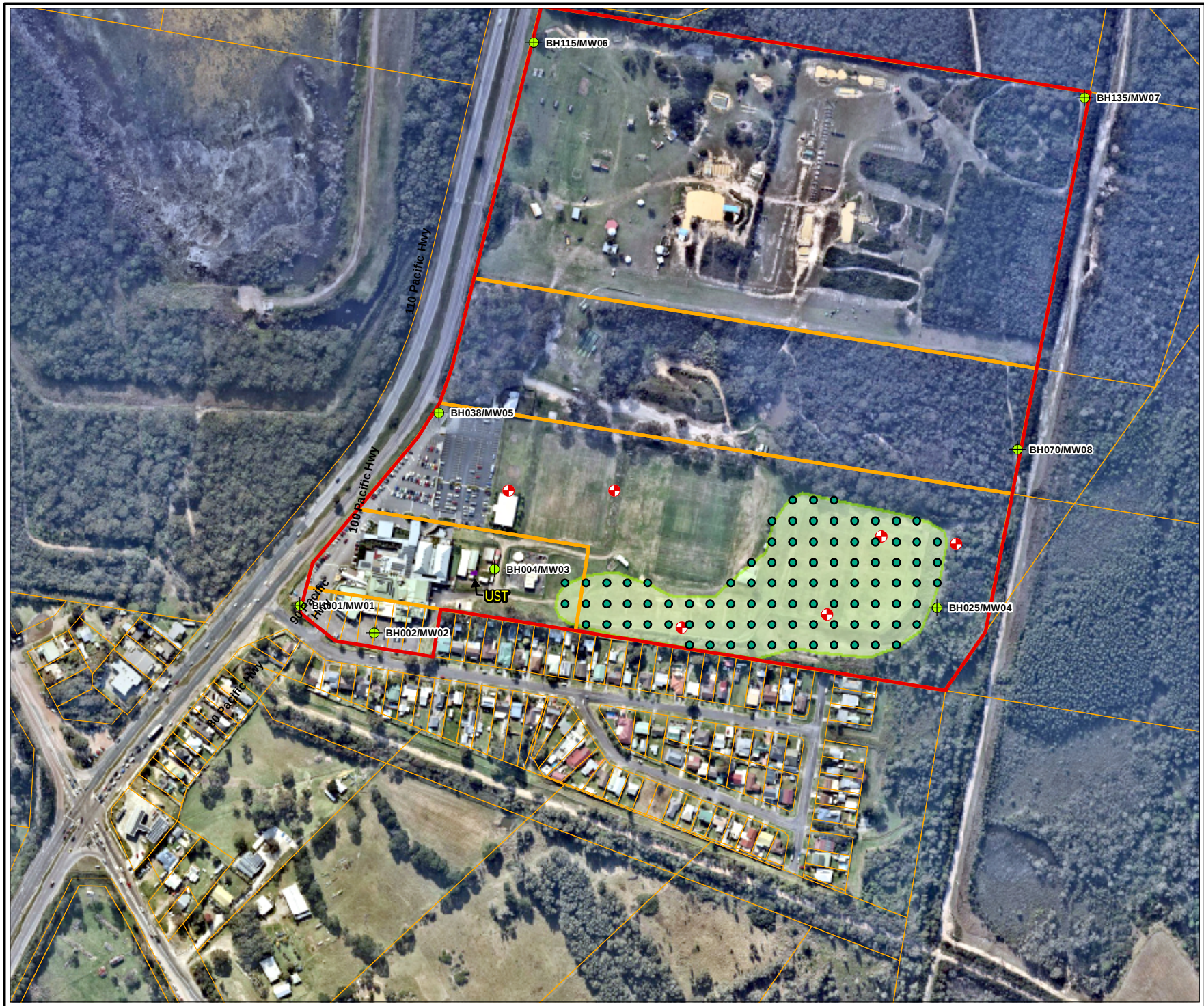
Coord. Sys. GDA 1994 MGA Zone 56

Pacific Hwy and Wentworth Ave, Doyalson NSW

HISTORICAL SAMPLE LOCATIONS AND EXCEEDANCES

FIGURE 4

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\R02 Rev B_RAP\56387_04_HistoricalSampleLocations_Exceedances.mxd
Reference: www.nearmap.com - Imagery 20190520



Legend

- Approximate Site Boundary
- Cadastre
- Existing Groundwater Monitoring Well Location (JBS&G 2019)
- Proposed Groundwater Monitoring Well Location
- Proposed Soil Sample Locations
- AEC 1 & 2 - Bonded ACM & Anthropogenic Waste
- AEC 3 - Underground Storage Tank

JBS&G

Job No: 56387	
Client: Urbis Pty Ltd	
Version: R02 RevB	Date 1/10/2019
Drawn By: AS/RF	Checked By: RL
Scale 1:5,000	

0 50 100
metres

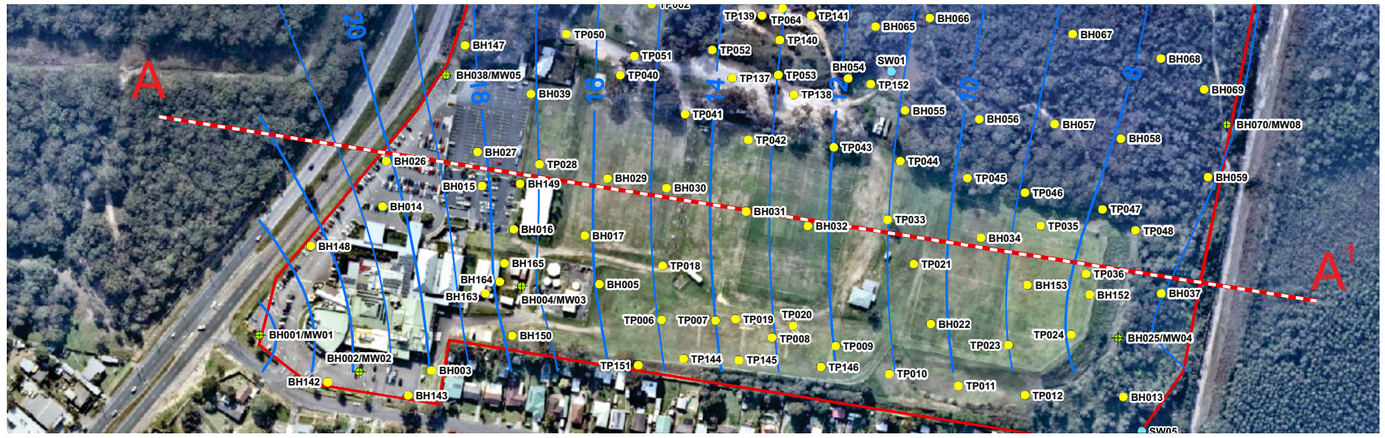
Coord. Sys. GDA 1994 MGA Zone 56

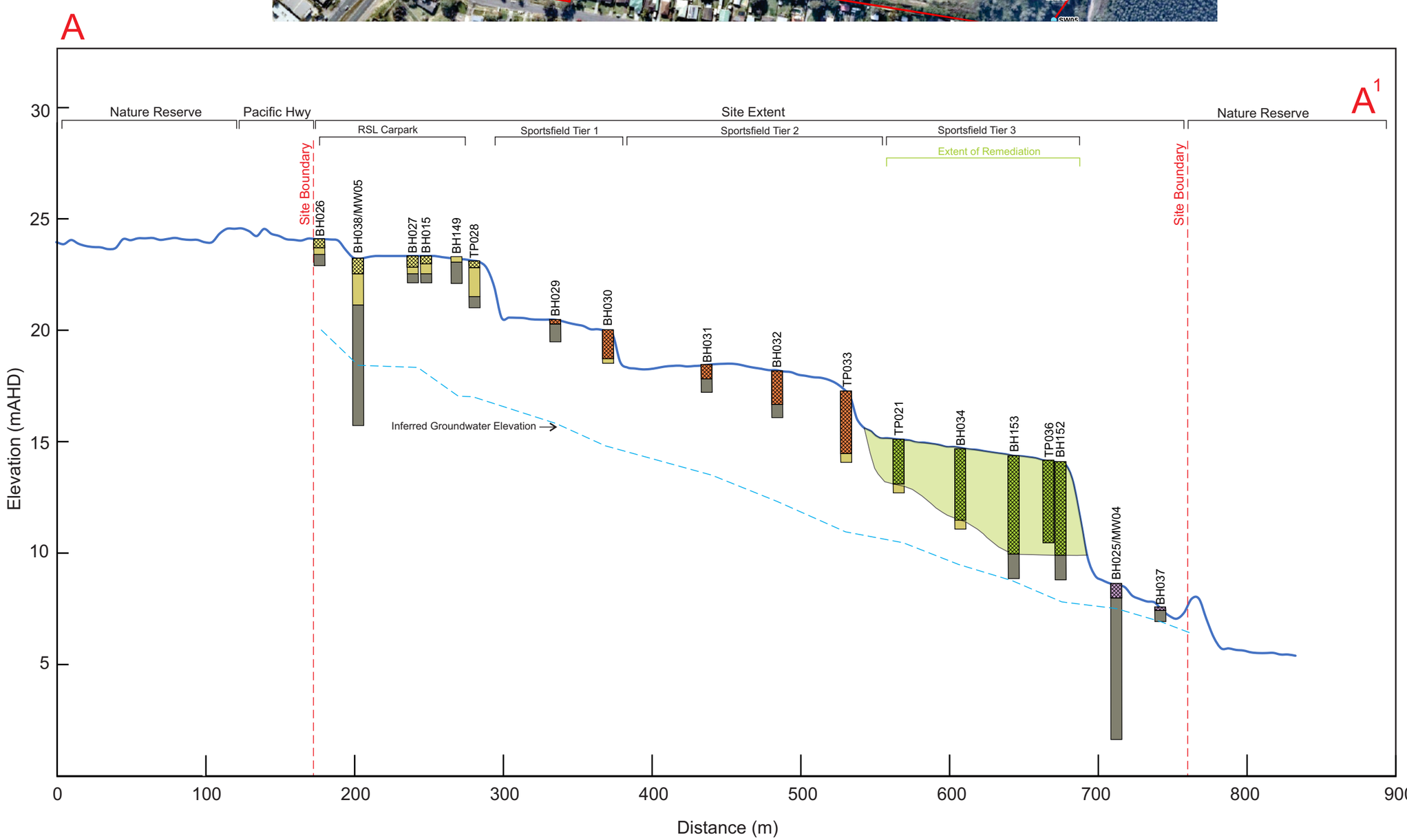
Pacific Hwy and Wentworth Ave, Doyalson NSW

EXTENT OF REMEDIATION

FIGURE 5

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\R02 Rev B_RAP\56387_05_ExtentofRemediation.mxd
Reference: www.nearmap.com - Imagery 20190520





Legend:

- FILL - Orange Clayey SAND / Sandy CLAY (1976)
- FILL - Dark Grey / Brown Sandy CLAY / Sandy Gravelly CLAY (1994-2005)
- FILL - Other Silty SAND, Gravelly Silty SAND
- Natural SANDS
- Natural CLAYS
- Remediation Extent

JBS&G

Job No: 56687	
Client: Urbis Pty Ltd	
Version: R02 Rev B	Date: 1/10/2019
Drawn By: RF	Checked By: RL

Scale: Vertical Exageration 3:1

0 50 100
metres

Coord. Sys. GDA 1994 MGA Zone 56

Pacific Hwy and Wentworth Ave, Doyalson, NSW

CROSS SECTION

FIGURE 6:

Document Path:
Reference:

Legend

- Approximate Site Boundary
- Cadastre
- Groundwater Monitoring Well Location
- Base - 2m Elevation Contours (NSW LPI, 2019)
- Groundwater Elevation (mAHD) August 2 019
- Inferred Groundwater Flow Direction

JBS&G

Job No: 56387	
Client: Urbis Pty Ltd	
Version: R02 RevB	Date 1/10/2019
Drawn By: AS/RF	Checked By: RL
Scale 1:5,000	

0 50 100
metres

Coord. Sys. GDA 1994 MGA Zone 56

Pacific Hwy and Wentworth Ave, Doyalson NSW

GROUNDWATER ELEVATION (mAHD)

FIGURE 7

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\R02 Rev B_RAP\56387_07_GroundwaterElevation.mxd
Reference: www.nearmap.com - Imagery 20190520 Service Layer Credits: © Department of Finance, Services & Innovation 2018

Appendix A Summary Tables

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																							
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C10-C16 Fraction	>C16-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	PAHs (Total)	Phenanthrene	Pyrene	Total Positive PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	50	100	100	50	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1	
Site Specific EILs (Fill)	100		640	180	1100		110	420														170																						
Site Specific EILs (Natural)	100		640	50	1100		8	150														170																						
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil										300[#1]	2800[#1]		120[#2]		180[#2]	50[#1]	70[#1]	85[#1]			105[#1]						0.7[#1]																		
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil										1300[#1]	5600[#1]		120[#2]		180[#2]	65[#1]	125[#1]	105[#1]			45[#1]						0.7[#1]																		
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse									1000[#3]	2500	10000			700[#4]																															
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine									1000[#3]	3500	10000			800[#4]																															
NEPM 2013 Soil HIL A	100[#8]	20	100[#9]	6000	300[#10]	40[#11]	400	7400										160[#12]															3[#13]			300[#14]						
NEPM 2013 Soil Clay - Saturation Limit													560[#5]		850[#6]	430[#7]	68[#7]	630[#7]			330[#7]	10[#7]																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m													280[#16]		50[#17]	0.7	NL	480			110	5																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m													NL[#16]		90[#17]	1	NL	NL			310	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m													NL[#16]		150[#17]	2	NL	NL			NL	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+													NL[#16]		290[#17]	3	NL	NL			NL	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m													110[#16]		45[#17]	0.5	55	160			40	3																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m													240[#16]		70[#17]	0.5	NL	220			60	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m													440[#16]		110[#17]	0.5	NL	310			95	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+													NL[#16]		200[#17]	0.5	NL	540			170	NL																					

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																												
BH001/MW01 0.0-0.1	Fill	12/08/2019	671221	S19-Au20121	2.5	<0.4	17	9.5	9.2	<0.1	11	19	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	1.9	<0.5	3.3	17	18	14	22	18	23	5.7	30.35	51	0.8	13	244.9	9.2	48	-
BH001/MW01 0.2-0.3	Fill	12/08/2019	671221	S19-Au20122	-	-	-	-	-	-	-	-	<50	190	<100	190	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH002/MW02 0.2-0.3	Fill	12/08/2019	671221	S19-Au20124	<2	<0.4	<5	<5	<5	2.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC01	BH002/MW02 0.2-0.3	13/08/2019	671221	S19-Au20140	5	<0.4	43	20	10	<0.1	36	35	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA01	BH002/MW02 0.2-0.3	14/08/2019	224101	224101-1	<4	<0.4	23	12	8	<0.1	19	19	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
BH003 0.0-0.1	Fill	12/08/2019	671221	S19-Au20126	<2	<0.4	7.5	5.5	5.4	<0.1	9.5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH004/MW03 0.0-0.1	Fill	14/08/2019	671628	S19-Au23499	<2	<0.4	7.5	5.5	7.2	<0.1	7	33	<50	140	<100	140	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH004/MW03 0.2-0.3	Fill	14/08/2019	671628	S19-Au23500	3.7	<0.4	8.8	<5	7	<0.1	<5	25	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC05	BH004/MW03 0.2-0.3	14/08/2019	671628	S19-Au23555	<2	<0.4	<5	<5	5.2	<0.1	<5	11	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA05	BH004/MW03 0.2-0.3	14/08/2019	224101	224101-5	6	<0.4	11	<1	8	<0.1	<1	3	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
BH004/MW03 0.4-0.5	Fill	14/08/2019	671628	S19-Au23501	5.7	<0.4	15	<5	12	<0.1	<5	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH005 0.0-0.1	Fill	14/08/2019	671628	S19-Au23502	<2	<0.4	5.9	<5	5.6	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP06_0.4-0.5	Fill	13/08/2019	671221	S19-Au20151	<2	<0.4	6.8	6.5	13	<0.1	<5	30	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP06_2.4-2.5	Fill	13/08/2019	671221	S19-Au20152	<2	<0.4	6.4	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP07_0.0-0.1	Fill	13/08/2019	671221	S19-Au20147	-	-	-	-	-	-	-	-	<50	<100	150	150	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-
TP07_2.4-2.5	Fill	13/08/2019	671221	S19-Au20149	7.4	<0.4	8.1	6.1	11	<0.1	<5	26	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP08_0.0-0.1	Fill	13/08/2019	671221	S19-Au20141	5.4	<0.4	29	12	7	<0.1	20	44	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP08_2.9-3.0	Fill	13/08/2019	671221	S19-Au20142	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-
TP08_3.9-4.0	Fill	13/08/2019	671221	S19-Au20143	13	2.2	26	8.3	31	<0.1	<5	380	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP09 0.0-0.1	Fill	13/08/2019	671628	S19-Au23515	2.5	<0.4	7.3	6.4	13	<0.1	<5	36	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC04	TP09 0.0-0.1	13/08/2019	671628	S19-Au23539	3.2	<0.4	11	<5	12	<0.1	<5	21	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA04	TP09 0.0-0.1	14/08/2019	224101	224101-4	5	<0.4	7	6	9	<0.1	5	21	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
TP09 0.4-0.5	Fill	13/08/2019	671628	S19-Au23516	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-
TP09 4.4-4.5	Natural	13/08/2019	671628	S19-Au23518	3.3	<0.4	13	<5	6.2	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP10 0.0-0.1	Fill	13/08/2019	671628	S19-Au23519	4.3	<0.4	15	5.5	10	<0.1	<5	31	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP10 1.4-1.5	Fill	13/08/2019	671628	S19-Au23520	2.7	<0.4	9.6	<5	5.1	<0.1	<5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP10 2.9-3.0	Natural	13/08/2019	671628	S19-Au23521	<2	<0.4	5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 0.4-0.5	Fill	13/08/2019	671628	S19-Au23512	6.6	<0.4	6.8	<5	5.6	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP11 1.4-1.5	Fill	13/08/2019	671628	S19-Au23513	12	<0.4	14	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP11 1.9-2.0	Natural	13/08/2019	671628	S19-Au23514	<2	<0.4	7	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP12 0.0-0.1	Reworked Natural	13/08/2019	671628	S19-Au23509	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP12 0.9-1.0	Natural	13/08/2019	671628	S19-Au23510	5.1	<0.4	12	<5	14	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<2	<0.4	8.5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH014 0.2-0.3	Fill	14/08/2019	671628	S19-Au23504	<2	<0.4	9.3	16	6.1	<0.1	9.4	33	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH15 0.0-0.1	Fill	14/08/2019	671628	S19-Au23505	<2	<0.4	9.9	13	6.1	<0.1	13	38	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH15 0.4-0.5	Natural	14/08/2019	671628	S19-Au23506	2.1	<0.4	11	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH16 0.0-0.1	Fill	14/08/2019	671628	S19-Au23507	<2	<0.4	<5	<5	<5	<0.1	<5	9	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH17 0.0-0.1	Fill	14/08/2019	671628	S19-Au23508	<2	<0.4	9.7	<5	6.7	<0.1	<5	32	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP18 0.0-0.1	Fill	14/08/2019	671628	S19-Au23568	<2	<0.4	5.5	<5	<5	<0.1	<5	15	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC07	TP18 0.0-0.1	14/08/2019	671628	S19-Au25918	<2	<0.4	6.8	<5	5.2	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC07	TP18 0.0-0.1	14/08/2019	671628	S19-Au25918	<2	<0.4	6.8	<5	5.2	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP18 1.4-1.5	Natural	14/08/2019	671628	S19-Au23569	<2	<0.4	6.3	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP19 0.0-0.1	Fill	13/08/2019	671628	S19-Au23535	2.5	<0.4	24	13	5.2	<0.1	22	40	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP19 0.4-0.5	Fill	13/08/2019	671628	S19-Au23536	3.2	<0.4	13	<5	5.7	<0.1	<5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP19 1.4-1.5	Fill	13/08/2019	671628	S19-Au23537	<2	<0.4	6.2	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP19 2.4-2.5	Fill	13/08/2019	671628	S19-Au23538	3.6	<0.4	8.8	<5	6.4	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP20_0.9-1.0	Fill	13/08/2019	671221	S19-Au20145	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP20_3.4-3.5	Natural	13/08/2019	671221	S19-Au20146	<2	<0.4	9	<5	5.4	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP21 0.0-0.1	Fill	14/08/2019	671628	S19-Au23570	<2	<0.4	6.7	<5	5.8	<0.1	<5	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21 0.9-1.0	Fill	14/08/2019	671628	S19-Au23571	3	<0.4	8.9	7	13	<0.1	<5	20	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH22 0.0-0.1	Fill	14/08/2019	671628	S19-Au23479	<2	<0.4	7.5	9.8	7.7	<0.1	<5	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH22 0.9-1.0	Fill	14/08/2019	671628	S19-Au23480	4.3	<0.4	8.1	5.9	19	<0.1	<5	130	<50	170	<100	170	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP23 0.0-0.1	Fill	14/08/2019	671628	S19-Au23572	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP23 0.3-0.4	Fill	14/08/2019	671628	S19-Au23573	2.2	<0.4	14	14	14	<0.1	15	29	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP23 2.9-3.0	Fill	14/08/2019	671628	S19-Au23574	6.6	<0.4	7.6	<5	9.2	<0.1	<5	11	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP24 0.0-0.05	Fill	14/08/2019	671628	S19-Au23575	<2	<0.4	<5	<5	<5	<0.1	<5	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP24 1.4-1.5	Fill	14/08/2019	671628	S19-Au23576	3	<0.4	10	9.5	27	<0.1	6.8	46	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																											
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C10-C16 Fraction	>C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benz(b&j)fluoranthene	Benz(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	PAHs (Total)	Phenanthrene	Pyrene	Total Positive PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	50	100	100	50	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1	
Site Specific EILs (Fill)	100		640	180	1100		110	420														170																											
Site Specific EILs (Natural)	100		640	50	1100		8	150														170																											
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil										300[#1]	2800[#1]		120[#2]		180[#2]	50[#1]	70[#1]	85[#1]			105[#1]						0.7[#1]																					
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil										1300[#1]	5600[#1]		120[#2]		180[#2]	65[#1]	125[#1]	105[#1]			45[#1]						0.7[#1]																					
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse									1000[#3]	2500	10000			700[#4]																																		
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine									1000[#3]	3500	10000			800[#4]																																		
NEPM 2013 Soil HIL A	100[#8]	20	100[#9]	6000	300[#10]	40[#11]	400	7400										160[#12]														3[#13]				300[#14]									
NEPM 2013 Soil Clay - Saturation Limit													560[#5]		850[#6]	430[#7]	68[#7]	630[#7]			330[#7]	10[#7]																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m													280[#16]		50[#17]	0.7	NL	480			110	5																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m													NL[#16]		90[#17]	1	NL	NL			310	NL																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m													NL[#16]		150[#17]	2	NL	NL			NL	NL																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+													NL[#16]		290[#17]	3	NL	NL			NL	NL																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m													110[#16]		45[#17]	0.5	55	160			40	3																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m													240[#16]		70[#17]	0.5	NL	220			60	NL																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m													440[#16]		110[#17]	0.5	NL	310			95	NL																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+													NL[#16]		200[#17]	0.5	NL	540			170	NL																										

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																														
BH34 0.9-1.0	Fill	14/08/2019	671628	S19-Au23494	<2	<0.4	<5	<5	9.1	<0.1	<5	20	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP35 0.0-0.1	Fill	14/08/2019	671628	S19-Au23583	<2	<0.4	<5	<5	<5	<0.1	<5	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP35 1.9-2.0	Fill	14/08/2019	671628	S19-Au23584	2.7	<0.4	<5	<5	6.9	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP35 4.2-4.3	Natural	14/08/2019	671628	S19-Au23585	4.1	<0.4	16	<5	6.1	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP36 0.0-0.15	Fill	14/08/2019	671628	S19-Au23588	5.9	<0.4	12	<5	8.8	<0.1	<5	15	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP36 1.4-1.5	Fill	14/08/2019	671628	S19-Au23589	5.6	<0.4	9	6.6	14	<0.1	<5	39	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH37_0.0-0.1	Fill	15/08/2019	671915	S19-Au25384	4.4	<0.4	8.2	<5	8.5	<0.1	<5	18	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH38/MW05 0.0-0.1	Fill	13/08/2019	671628	S19-Au23542	5.5	<0.4	26	32	5.5	<0.1	51	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38/MW05 0.2-0.3	Fill	13/08/2019	671628	S19-Au23543	<2	<0.4	8.4	<5	8.7	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH39 0.0-0.1	Fill	13/08/2019	671628	S19-Au23544	<2	<0.4	9.8	15	6	<0.1	13	39	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH39 0.4-0.5	Fill	13/08/2019	671628	S19-Au23545	3.7	<0.4	23	<5	5.6	<0.1	<5	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP40 0.0-0.1	Natural	14/08/2019	671628	S19-Au23591	<2	<0.4	<5	<5	6.9	<0.1	<5	30	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP40 0.9-1.0	Natural	14/08/2019	671628	S19-Au23592	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP41 0.0-0.1	Fill	14/08/2019	671628	S19-Au23593	-	-	-	-	-	-	-	-	<50	<100	140	140	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP41 0.3-0.4	Fill	14/08/2019	671628	S19-Au23594	2.7	<0.4	9.2	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP42 0.0-0.1	Fill	14/08/2019	671628	S19-Au23595	<2	<0.4	7.1	5.5	8	0.2	<5	41	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC06	TP42 0.0-0.1	14/08/2019	671628	S19-Au23596	<2	<0.4	6.3	<5	7.2	0.2	<5	31	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA06	TP42 0.0-0.1	14/08/2019	224101	224101-6	<4	<0.4	5	4	6	0.1	3	37	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
TP43_0.0-0.1	Reworked Natural	12/08/2019	671221	S19-Au20169	6	<0.4	9.6	<5	10	<0.1	<5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP44_0.0-0.1	Fill	12/08/2019	671221	S19-Au20170	<2	<0.4	<5	<5	11	0.2	<5	15	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP44_0.4-0.5	Fill	12/08/2019	671221	S19-Au20171	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP45_0.0-0.1	Natural	12/08/2019	671221	S19-Au20172	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP46_0.4-0.5	Natural	12/08/2019	671221	S19-Au20174	<2	<0.4	5.3	<5	9.2	<0.1	<5	21	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP47_0.0-0.1	Natural	12/08/2019	671221	S19-Au20175	<2	<0.4	5.1	<5	9.1	<0.1	<5	28	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP48_0.0-0.1	Natural	12/08/2019	671221	S19-Au20177	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP49_0.4-0.5	Fill	12/08/2019	671221	S19-Au20179	<2	<0.4	5.3	7.9	10	<0.1	<5	59	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP50_0.0-0.1	Fill	12/08/2019	671221	S19-Au20180	8	<0.4	11	9.3	5.1	<0.1	13	22	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP51_0.0-0.1	Fill	12/08/2019	671221	S19-Au20154	<2	<0.4	11	16	8.8	<0.1	27	33	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP52_0.0-0.5	Fill	12/08/2019	671221	S19-Au20166	5.3	<0.4	14	<5	9.6	<0.1	<5	11	<50	<100	<100	<100	<50	<100	<100	<0.5	<0.5	<0.5	<0.5	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP53_0.9-1.0	Fill	12/08/2019	671221	S19-Au20165	3.1	<0.4	7.6	<5	<5	<0.1	<5	11	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP54 0.0-0.1	Fill	14/08/2019	671628	S19-Au23558	2.8	<0.4	6	8.2	<5	<0.1	9.7	20	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP54 1.4-1.5	Natural	14/08/2019	671628	S19-Au23559	3	<0.4	13	<5	18	<0.1	<5	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC08	TP54 1.4-1.5	14/08/2019	671628	S19-Au23560	5.1	<0.4	14	<5	18	<0.1	<5	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA08	TP54 1.4-1.5	14/08/2019	224101	224101-8	<4	<0.4	7	<1	9	<0.1	<1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
TP55 0.0-0.1	Natural	14/08/2019	671628	S19-Au23561	2.5	<0.4	6	<5	12	<0.1	<5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP55 0.9-1.0	Natural	14/08/2019	671628	S19-Au23562	<2	<0.4	7.1	<5	6.3	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH056_0.0-0.1	Natural	15/08/2019	671915	S19-Au25521	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH057_0.4-0.5	Natural	15/08/2019	671915	S19-Au25522	<2	<0.4	7.1	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH058_0.0-0.1	Natural	15/08/2019	671915	S19-Au25523	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH59_0.0-0.1	Natural	15/08/2019	671915	S19-Au25381	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP60_0.0-0.1	Natural	12/08/2019	671221	S19-Au20181	<2	<0.4	<5	<5	5.4	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP61_0.0-0.1	Natural	12/08/2019	671221	S19-Au20182	<2	<0.4	<5	<5	<5	<0.1	<5	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP61_0.4-0.5	Natural	12/08/2019	671221	S19-Au20183	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP62_0.0-0.1	Natural	12/08/2019	671221	S19-Au20184	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP63_0.4-0.5	Fill	12/08/2019	671221	S19-Au20157	5.9	<0.4	15	<5	12	<0.1	5.3	11	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP64_0.0-0.1	Fill	12/08/2019	671221	S19-Au20159	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH65_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25387	<2	<0.4	<5	<5	5.2	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH66_0.3-0.4	Reworked Natural	15/08/2019	671915	S19-Au25388	3.2	<0.4	21	<5	12	<0.1	<5	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH67_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25389	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH068_0.4-0.5	Natural	15/08/2019	671915	S19-Au25519	<2	<0.4	11	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH069_0.0-0.1	Natural	15/08/2019	671915	S19-Au25520	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH70/MW08 0.0-0.1	Fill	13/08/2019	671628	S19-Au23540	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC03	BH70/MW08 0.0-0.1	13/08/2019	671628	S19-Au23541	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA03	BH70/MW08 0.0-0.1	14/08/2019	224101	224101-3	<4	<0.4	2	2	4	<0.1	<1	5	<50	<100	<100	<50	<50	<25	<25	0.2	<1	<0.5	<1	<2	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
BH71_0.0-0.1	Fill	15/08/2019	671915	S19-Au25382	3.4	<0.4	6	<5	6.7	<0.1	<5	17	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP072_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25391	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP072_0.4-0.5	Natural	15/08/2019	671915	S19-Au25392	3.1	<0.4	20	<5	8.5	<0.1	<5	11	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP073_0.0-0.1	Fill	15/08/2

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

					Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																	
					Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene	Total Positive PAHs
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2	0.4	1	1	1	0.1	1	1	50	100	100	50	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1	
Site Specific EILs (Fill)					100		640	180	1100		110	420														170																		
Site Specific EILs (Natural)					100		640	50	1100		8	150														170																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil														300$^{\#1}$	2800$^{\#1}$		120$^{\#2}$		180$^{\#2}$	50$^{\#1}$	70$^{\#1}$	85$^{\#1}$			105$^{\#1}$						0.7$^{\#1}$													
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil														1300$^{\#1}$	5600$^{\#1}$		120$^{\#2}$		180$^{\#2}$	65$^{\#1}$	125$^{\#1}$	105$^{\#1}$			45$^{\#1}$						0.7$^{\#1}$													
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse													1000$^{\#3}$	2500	10000			700$^{\#4}$																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine													1000$^{\#3}$	3500	10000			800$^{\#4}$																										
NEPM 2013 Soil HIL A					100$^{\#8}$	20	100$^{\#9}$	6000	300$^{\#10}$	40$^{\#11}$	400	7400										160$^{\#12}$															3$^{\#13}$				300$^{\#14}$			
NEPM 2013 Soil Clay - Saturation Limit																	560$^{\#5}$		850$^{\#6}$	430$^{\#7}$	68$^{\#7}$	630$^{\#7}$			330$^{\#7}$	10$^{\#7}$																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																	280$^{\#16}$		50$^{\#17}$	0.7	NL	480			110	5																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																	NL$^{\#16}$		90$^{\#17}$	1	NL	NL			310	NL																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																	NL$^{\#16}$		150$^{\#17}$	2	NL	NL			NL	NL																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																	NL$^{\#16}$		290$^{\#17}$	3	NL	NL			NL	NL																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																	110$^{\#16}$		45$^{\#17}$	0.5	55	160			40	3																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																	240$^{\#16}$		70$^{\#17}$	0.5	NL	220			60	NL																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																	440$^{\#16}$		110$^{\#17}$	0.5	NL	310			95	NL																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																	NL$^{\#16}$		200$^{\#17}$	0.5	NL	540			170	NL																		
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**																																								
TP094_0.4-0.5	Natural	15/08/2019	671915	S19-Au25423	19	<0.4	29	<5	14	<0.1	<5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP095_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25395	8	<0.4	11	<5	13	<0.1	<5	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP096_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25405	<2	<0.4	<5	<5	6	<0.1	<5	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP097_0.2-0.3	Fill	15/08/2019	671915	S19-Au25542	4.4	<0.4	20	<5	18	<0.1	5.8	15	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP097_0.4-0.5	Fill	15/08/2019	671915	S19-Au25529	4	<0.4	15	6.5	20	<0.1	8.8	15	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH98_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25375	11	<0.4	22	<5	22	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP099_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25527	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP099_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25528	33	<0.4	45	<5	33	<0.1	<5	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP100_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25548	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP101_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25545	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH102_0.0-0.1	Natural	15/08/2019	671915	S19-Au25512	<2	<0.4	<5	<5	<5	<0.1	<5	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH103_0.0-0.1	Natural	15/08/2019	671915	S19-Au25517	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP104_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25428	<2	<0.4	<5	<5	13	<0.1	<5	13	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP104_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25429	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP105_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25426	<2	<0.4	<5	<5	8.1	<0.1	<5	78	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP105_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25427	5.2	<0.4	9.4	<5	6.6	<0.1	<5	42	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP106_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25400	<2	<0.4	<5	<5	6.3	<0.1	<5	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP106_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25401	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP106_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25503	51	<0.4	79	<5	31	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP107_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25402	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP108_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25541	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH109_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25537	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP110_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25372	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP111_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25549	2.4	<0.4	11	<5	9.4	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP112_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25544	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH113_0.3-0.4	Natural	15/08/2019	671915	S19-Au25514	2.3	<0.4	<5	<5	<5	<0.1	<5	5.3	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH114_0.0-0.1	Natural	15/08/2019	671915	S19-Au25513	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH115/MW06 0.0-0.1	Fill	13/08/2019	671221	S19-Au20130	<2	<0.4	<5	<5	16	<0.1	<5	18	<50	<100	<100	<100	<50	<20	<20	<0.1	0.3	<0.1	0.2	0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH115/MW06 0.2-0.3	Reworked Natural	13/08/2019	671221	S19-Au20131	<2	<0.4	<5	<5	7.4	<0.1	<5	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP116_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25430	<2	<0.4	<5	<5	6.4	<0.1	<5	8.9	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP117_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25504	<2	<0.4	<5	<5	5.3	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP118_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25509	<2	<0.4	6.7	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP119_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25554	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP120_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25539	57	<0.4	56	<5	24	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP121_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP121_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25374	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP122_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25550	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP123_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25543	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP124_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25553	3.1	<0.4	9	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP125_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25552	4.7	<0.4	8.5	<5	5.1	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP126_0.0-0.1	Fill	15/08/2019	671915	S19-Au25505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP126_0.2-0.3	Fill	15/08/2019	671915	S19-Au25506	<2	<0.4	<5	<5	9.2	<0.1	<5	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP127_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25431	<2	<0.4	<5	<5	8.4	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP127_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25410	3.2	<0.4	10	<5	9.1	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP128_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25507	<2	<0.4	<5	<5	5.2	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP129_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25508	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP130_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25540	3.5	<0.4	7.9	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP131_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25538	2.3	<0.4	11	<5	10	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP132_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25526	17	<0.4	22	<5	12	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP133_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25531	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP134_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25535	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH135/MW01 0.2-0.3	Natural	13/08/2019	671221	S19-Au20134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH135/MW07 0.0-0.1	Reworked Natural	13/08/2019	671221	S19-Au20133	<2	<0.4	<5	<5	5.4	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP136_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25536	22	<0.4	15	<5	9.3	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP137_0.0-0.1	Fill	12/08/2019	671221	S19-Au20162	<2	<0.4	<5	<5	6.3	<0.1	<5	16	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP137_0.4-0.5	Natural	12/08/2019	671221	S19-Au20163	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP138_0.0-0.1	Fill	12/08/2019	671221	S19-Au20161	32	<0.4	30	<5	33	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP139_0.0-0.1	Fill	12/08/2019	671221	S19-Au20160	10	<0.4	16	<5	17	<0.1	<5	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP140_0.0-0.1	Fill	12/08/2019	671221	S19-Au20158	2.6	<0.4	14	<5	<5	<0.1	<5	6.7	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP141_0.0-0.1	Fill	12/08/2019	671221	S19-Au20155	3	<0.4	8.5	<5	<5	<0.1	<5	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP141_0.9-1.0	Fill	12/08/2019	671221	S19-Au20156	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH142 0.2-0.3	Fill	12/08/2019	671221	S19-Au20128	<2	<0.4	6.4	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH143 0.0-0.1	Fill	12/08/2019	671221	S19-Au20129	5.3	<0.4	32	<5	<5	<0.1	<5	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP144 0.0-0.1	Fill	13/08/2019	671628	S19-Au23522	<2	<0.4	12	5.9	6.7	<0.1	7.1	33	<50	150	380	530	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP144 0.9-1.0	Fill	13/08/2019	671628	S19-Au23523	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP144 1.9-2.0	Fill	13/08/2019	671628	S19-Au23524	<2	<0.4	8.5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP144 2.9-3.0	Fill	13/08/2019	671628	S19-Au23525	<2	<0.4	<5	<5	<5	<0.1	<5	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP145 0.0-0.1	Fill	13/08/2019	671628	S19-Au23530	<2	<0.4	7.7	7	6.8	<0.1	5.6	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP145 0.4-0.5	Fill	13/08/2019	671628	S19-Au23531	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-
TP145 0.9-1.0	Fill	13/08/2019	671628	S19-Au23532	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 2.4-2.5	Fill	13/08/2019	671628	S19-Au23533	3.7	<0.4	6.3	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP145 3.4-3.5	Fill	13/08/2019	671628	S19-Au23534	2.1	<0.4	6.8	<5	7.1	<0.1	6.9	20	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP146 0.0-0.1	Fill	13/08/2019	671628	S19-Au23526	3.5	<0.4	9.3	5.6	9.2	<0.1	5.9	29	<50	<100	130	130	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP146 0.3-0.4	Fill	13/08/2019	671628	S19-Au23527	7.2	<0.4	10	<5	6.6	<0.1	<5	5.7	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP146 0.9-1.0	Fill	13/08/2019	671628	S19-Au23528	2.7	<0.4	9.2	<5	9.2	<0.1	<5	11	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP146 1.9-2.0	Fill	13/08/2019	671628	S19-Au23529	3	<0.4	12	5.7	7.2	<0.1	5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH147 0.0-0.1	Fill	13/08/2019	671628	S19-Au23547	<2	<0.4	<5	<5	22	<0.1	<5	30	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH148 0.0-0.1	Fill	14/08/2019	671628	S19-Au23495	2.4	<0.4	11	12	12	<0.1	14	24	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH148 0.4-0.5	Natural	14/08/2019	671628	S19-Au23496	3.2	<0.4	8.5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH149 0.0-0.1	Fill	14/08/2019	671628	S19-Au23497	<2	<0.4	<5	<5	<5	<0.1	<5	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH150 0.0-0.1	Fill	14/08/2019	671628	S19-Au23498	2.3	<0.4	11	8.5	15	<0.1	11	40	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	0.6	<0.5	<0.5	<0.5	0.9585	1	<0.5	<0.5	3.2	<0.5	1	-
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	<2	<0.4	<5	5.3	7.4	<0.1	<5	130	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP151 0.9-1.0	Fill	14/08/2019	671628	S19-Au23564	2.8	<0.4	6.5	<5	8.1	<0.1	<5	10	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																							
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C16-C34 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b&j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	PAHs (Total)	Phenanthrene	Pyrene	Total Positive PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	50	100	100	50	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1	
Site Specific EILs (Fill)	100		640	180	1100		110	420														170																				
Site Specific EILs (Natural)	100		640	50	1100		8	150														170																				
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil										300[#1]	2800[#1]		120[#2]		180[#2]	50[#1]	70[#1]	85[#1]			105[#1]						0.7[#1]																
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil										1300[#1]	5600[#1]		120[#2]		180[#2]	65[#1]	125[#1]	105[#1]			45[#1]						0.7[#1]																
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse									1000[#3]	2500	10000			700[#4]																														
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine									1000[#3]	3500	10000			800[#4]																														
NEPM 2013 Soil HIL A	100[#8]	20	100[#9]	6000	300[#10]	40[#11]	400	7400										160[#12]															3[#13]			300[#14]				
NEPM 2013 Soil Clay - Saturation Limit													560[#5]		850[#6]	430[#7]	68[#7]	630[#7]			330[#7]	10[#7]																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m													280[#16]		50[#17]	0.7	NL	480			110	5																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m													NL[#16]		90[#17]	1	NL	NL			310	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m													NL[#16]		150[#17]	2	NL	NL			NL	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+													NL[#16]		290[#17]	3	NL	NL			NL	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m													110[#16]		45[#17]	0.5	55	160			40	3																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m													240[#16]		70[#17]	0.5	NL	220			60	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m													440[#16]		110[#17]	0.5	NL	310			95	NL																					
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+													NL[#16]		200[#17]	0.5	NL	540			170	NL																					

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																											
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	3	<0.4	11	9.7	11	<0.1	9.2	45	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH152 2.9-3.0	Fill	14/08/2019	671628	S19-Au23549	3.1	<0.4	8.3	<5	10	<0.1	<5	10	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH152 6.4-6.5	Natural	14/08/2019	671628	S19-Au23550	<2	<0.4	16	<5	7.1	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH153 0.0-0.1	Fill	14/08/2019	671628	S19-Au23551	<2	<0.4	6.2	<5	6.9	<0.1	<5	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH153 1.9-2.0	Fill	14/08/2019	671628	S19-Au23552	2.3	<0.4	15	11	<5	<0.1	15	24	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH153 3.9-4.0	Fill	14/08/2019	671628	S19-Au23553	2.4	<0.4	9.2	<5	5.6	<0.1	<5	56	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP154_0.0-0.1	Fill	14/08/2019	673401	M19-Au37867	2.3	<0.4	5.8	6	10	<0.1	<5	25	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC09	TP154_0.0-0.1	14/08/2019	671628	S19-Au23566	<2	<0.4	7.3	6.2	9	<0.1	<5	26	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA09	TP154_0.0-0.1	14/08/2019	224101	224101-9	<4	<0.4	8	11	12	<0.1	8	31	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.172	<0.1	<0.1	<0.1	<1.3	<0.1	<0.1	<0.05
TP155_0.0-0.05	Fill	15/08/2019	671915	S19-Au25413	4.7	<0.4	1200	110	19	<0.1	420	130	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP155_0.05-0.15	Fill	15/08/2019	671915	S19-Au25414	49	<0.4	220	5.8	30	<0.1	<5	31	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP156_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25424	<2	<0.4	<5	<5	5.6	<0.1	<5	29	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP156_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25425	2.4	<0.4	6.5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP157_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25421	<2	<0.4	<5	<5	51	<0.1	<5	120	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	0.6	0.6	<0.5	-
TP158_0.0-0.1	Fill	15/08/2019	671915	S19-Au25419	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP158_0.9-1.0	Fill	15/08/2019	671915	S19-Au25390	6.6	<0.4	12	<5	10	<0.1	<5	15	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP159_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25394	<2	<0.4	<5	<5	9.7	<0.1	<5	6.5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP160_0.4-0.5	Natural	15/08/2019	671915	S19-Au25397	4.9	<0.4	50	<5	21	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP161_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25403	<2	<0.4	5.9	<5	<5	<0.1	<5	9.4	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP161_0.4-0.5	Natural	15/08/2019	671915	S19-Au25404	2.2	<0.4	19	<5	5.5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP162_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25417	-	-	-	-	-	-	-	-	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP162_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25418	<2	<0.4	<5	<5	<5	<0.1	<5	36	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH163_0.0-0.1	Fill	16/08/2019	671915	S19-Au25534	<2	<0.4	18	17	<5	<0.1	21	81	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH164_0.0-0.1	Fill	16/08/2019	671915	S19-Au25532	2.6	<0.4	14	16	8.1	<0.1	21	71	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH165_0.2-0.3	Fill	16/08/2019	671915	S19-Au25533	<2	<0.4	<5	<5	6.4	<0.1	<5	110	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-

Statistical Summary

Number of Results	253	253	253	253	253	253	253	253	115	115	115	115	115	115	115	115	115	115	115	115	115	262	249	249	249	249	249	238	249	238	249	249	249	249	249	249	253	249	249	11
Number of Detects	115	1	164	57	161	6	42	157	0	4	4	7	0	0	0	1	1	0	1	1	1	0	1	0	1	2	4	2	3	2	2	1	4	4	1	2	5	3	4	1
Minimum Concentration	<2	<0.4	<1	<1	1	<0.1	<1	<1	<50	<100	<100	<50	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.1	<0.5	<0.1	<0.1	0.111	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.05
Minimum Detect	2	2.2	2	2	1	0.1	1	1	ND	140	130	130	ND	ND	ND	0.2	0.3	ND	0.2	0.5	0.7	ND	1.9	ND	3.3	1.1	0.05	1.1	0.6	1.5	1.5	5.7	0.111	0.2	0.8	1.9	0.6	0.6	0.1	0.3	
Maximum Concentration	57	2.2	1200	110	51	2.1	420	390	<50	190	380	530	<50	<100	<100	<0.5	<1	<0.5	<1	<2	<3	<0.5	1.9	<0.5	3.3	17	18	14	22	18	23	5.7	30.35	51	0.8	13	244.9	9.2	48	0.3	
Maximum Detect	57	2.2	1200	110	51	2.1	420	390	ND	190	380	530	ND	ND	ND	0.2	0.3	ND	0.2	0.5	0.7	ND	1.9	ND	3.3	17	18	14	22	18	23	5.7	30.35	51	0.8	13	244.9	9.2	48	0.3	
Average Concentration	3.7	0.21	15	4.4	7.6	0.06	5.7	18	25	54	55	58	25	10	10	0.055	0.077	0.062	0.077	0.15	0.23	0.24	0.25	0.24	0.25	0.31	0.32	0.31	0.34	0.33	0.34	0.26	0.71	0.46	0.24	0.3	1.3	0.29	0.45	0.05	
Median Concentration	1	0.2	7.1	2.5	6.1	0.05	2.5	7.2	25	50	50	50	25	10	10	0.05	0.05	0.05	0.05	0.1	0.15	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.605	0.25	0.25	0.25	0.25	0.25	0.25	0.025	
Standard Deviation	7.1	0.13	77	7.6	6.6	0.13	27	39	0	21	34	51	0	3.8	3.8	0.025	0.1	0.048	0.1	0.21	0.31	0.04	0.11	0.041	0.2	1.1	1.1	0.89	1.4	1.2	1.4	0.35	1.9	3.2	0.054	0.82	15	0.58	3	0.083	
Number of Guideline Exceedances	0	0	2	1	0	0	27	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	
Number of Guideline Exceedances(Detects Only)	0	0	2	1	0	0	27	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	

Env Stds Comments
#1:ESLs are of low reliability.
#2:ESLs are of moderate reliability.
#3:Management limits of BTEX and naphthalene are not available, hence should not be subtracted from the relevant fractions to obtain F1 and F2.
#4:Limits applied after consideration of relevant ESLs and HSLs
#5:To obtain F2 subtract naohthalene from >C10-C16. Exceedence quantifies further interpretation.
#6:To obtain F1 subtract the sum of BTEX from C6-C10. Exceedence quantifies further interpretation.
#7:Exceedence quantifies further interpretation.
#8:Key limitations of HSL should be referred to prior to application in Friebel and Nadebaum (2011b and 2011d).
#9:TV adopted from Chromium (VI)
#10:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#11:Refer to HSL and soil saturation concentration limit.
#12:Sensitive setting HSL A & HSL B Sand 0m to <1m criteria adopted. Exceedence quantifies further interpretation.
#13:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#14:TV maybe be multiplied by a factor to account for biodegradation of vapour
#15:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific assessment should be untertaken
#16:To obtain F2 subtract naohthalene from >C10-C16.
#17:To obtain F1 subtract the sum of BTEX from C6-C10.

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Organochlorine Pesticides																									Chlorinated Alkanes																			
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	Alpha-BHC	Alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)									180																																		
Site Specific EILs (Natural)									180																																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																										
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																										
NEPM 2013 Soil HIL A			6				50				240					10				6			300	20																			
NEPM 2013 Soil Clay - Saturation Limit																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																										

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																											
BH001/MW01 0.0-0.1	Fill	12/08/2019	671221	S19-Au20121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH001/MW01 0.2-0.3	Fill	12/08/2019	671221	S19-Au20122	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH002/MW02 0.2-0.3	Fill	12/08/2019	671221	S19-Au20124	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC01	BH002/MW02 0.2-0.3	13/08/2019	671221	S19-Au20140	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA01	BH002/MW02 0.2-0.3	14/08/2019	224101	224101-1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
BH003 0.0-0.1	Fill	12/08/2019	671221	S19-Au20126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH004/MW03 0.0-0.1	Fill	14/08/2019	671628	S19-Au23499	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH004/MW03 0.2-0.3	Fill	14/08/2019	671628	S19-Au23500	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC05	BH004/MW03 0.2-0.3	14/08/2019	671628	S19-Au23555	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA05	BH004/MW03 0.2-0.3	14/08/2019	224101	224101-5	<0.1	<0.1	<0.2	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
BH004/MW03 0.4-0.5	Fill	14/08/2019	671628	S19-Au23501	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH005 0.0-0.1	Fill	14/08/2019	671628	S19-Au23502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06_0.4-0.5	Fill	13/08/2019	671221	S19-Au20151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06_2.4-2.5	Fill	13/08/2019	671221	S19-Au20152	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP07_0.0-0.1	Fill	13/08/2019	671221	S19-Au20147	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP07_2.4-2.5	Fill	13/08/2019	671221	S19-Au20149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	Fill	13/08/2019	671221	S19-Au20141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_2.9-3.0	Fill	13/08/2019	671221	S19-Au20142	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP08_3.9-4.0	Fill	13/08/2019	671221	S19-Au20143	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09 0.0-0.1	Fill	13/08/2019	671628	S19-Au23515	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	TP09 0.0-0.1	13/08/2019	671628	S19-Au23539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA04	TP09 0.0-0.1	14/08/2019	224101	224101-4	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
TP09 0.4-0.5	Fill	14/08/2019	671628	S19-Au23516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09 4.4-4.5	Natural	13/08/2019	671628	S19-Au23518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 0.0-0.1	Fill	13/08/2019	671628	S19-Au23519	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10 1.4-1.5	Fill	13/08/2019	671628	S19-Au23520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 2.9-3.0	Natural	13/08/2019	671628	S19-Au23521	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 0.4-0.5	Fill	13/08/2019	671628	S19-Au23512	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 1.4-1.5	Fill	13/08/2019	671628	S19-Au23513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 1.9-2.0	Natural	13/08/2019	671628	S19-Au23514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0.0-0.1	Reworked Natural	13/08/2019	671628	S19-Au23509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0.9-1.0	Natural	13/08/2019	671628	S19-Au23510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH014 0.2-0.3	Fill	14/08/2019	671628	S19-Au23504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.0-0.1	Fill	14/08/2019	671628	S19-Au23505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.4-0.5	Natural	14/08/2019	671628	S19-Au23506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.0-0.1	Fill	14/08/2019	671628	S19-Au23507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.0-0.1	Fill	14/08/2019	671628	S19-Au23508	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP18 0.0-0.1	Fill	14/08/2019	671628	S19-Au23568	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC07	TP18 0.0-0.1	14/08/2019	671628	S19-Au25918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC07	TP18 0.0-0.1	14/08/2019	671628	S19-Au25918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18 1.4-1.5	Natural	14/08/2019	671628	S19-Au23569	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19 0.0-0.1	Fill	13/08/2019	671628	S19-Au23535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19 0.4-0.5	Fill	13/08/2019	671628	S19-Au23536	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19 1.4-1.5	Fill	13/08/2019	671628	S19-Au23537	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19 2.4-2.5	Fill	13/08/2019	671628	S19-Au23538	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP20_0.9-1.0	Fill	13/08/2019	671221	S19-Au20145	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP20_3.4-3.5	Natural	13/08/2019	671221	S19-Au20146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21 0.0-0.1	Fill	14/08/2019	671628	S19-Au23570	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21 0.9-1.0	Fill	14/08/2019	671628	S19-Au23571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.0-0.1	Fill	14/08/2019	671628	S19-Au23479	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.9-1.0	Fill	14/08/2019	671628	S19-Au23480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP23 0.0-0.1	Fill	14/08/2019	671628	S19-Au23572	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP23 0.3-0.4	Fill	14/08/2019	671628	S19-Au23573	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP23 2.9-3.0	Fill	14/08/2019	671628	S19-Au23574	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP24 0.0-0.05	Fill	14/08/2019	671628	S19-Au23575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP24 1.4-1.5	Fill	14/08/2019	671628	S19-Au23576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP24 3.4-3.5	Fill	14/08/2019	671628	S19-Au23577	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25/MW04 0.0-0.1	Natural	14/08/2019	671628	S19-Au23481	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC12		14/08/2019	671628	S19-Au23567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA012		14/08/2019	224101	224101-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25/MW04 0.9-1.0	Natural	14/08/2019	671628	S19-Au23483	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25/MW04 5.5-5.6	Natural	14/08/2019	671628	S19-Au23484	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.0-0.1	Fill	14/08/2019	671628	S19-Au23485	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27 0.0-0.1	Fill	13/08/2019	671628	S19-Au23546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP28 0.4-0.5	Fill	14/08/2019	671628	S19-Au23579	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.0-0.1	Fill	14/08/2019	671628	S19-Au23486	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.4-0.5	Natural	14/08/2019	671628	S19-Au23487	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC10	BH29 0.4-0.5	14/08/2019	671628	S19-Au23556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA10	BH29 0.4-0.5	14/08/2019	224101	224101-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 0.0-0.1	Fill	14/08/2019	671628	S19-Au23489	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH30 0.4-0.5	Fill	14/08/2019	671628	S19-Au23490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC11	BH30 0.4-0.5	14/08/2019	671628	S19-Au23557	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA11	BH30 0.4-0.5	14/08/2019	224101	224101-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.0-0.1	Fill	14/08/2019	671628	S19-Au23491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 1.4-1.5	Natural	14/08/2019	671628	S19-Au23492	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.0-0.1	Fill	14/08/2019	671628	S19-Au23580	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP32 0.4-0.5	Fill	14/08/2019	671628	S19-Au23581	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP32 1.4-1.5	Fill	14/08/2019	671628	S19-Au23582	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP33_0.9-1.0	Fill	12/08/2019	671221	S19-Au20168	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Organochlorine Pesticides																									Chlorinated Alkanes																	
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)									180																																	
Site Specific EILs (Natural)									180																																	
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																										
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																										
NEPM 2013 Soil HIL A			6				50				240					10				6			300	20																			
NEPM 2013 Soil Clay - Saturation Limit																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																										

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																								
BH34 0.9-1.0	Fill	14/08/2019	671628	S19-Au23494	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP35 0.0-0.1	Fill	14/08/2019	671628	S19-Au23583	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP35 1.9-2.0	Fill	14/08/2019	671628	S19-Au23584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP35 4.2-4.3	Natural	14/08/2019	671628	S19-Au23585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP36 0.0-0.15	Fill	14/08/2019	671628	S19-Au23588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP36 1.4-1.5	Fill	14/08/2019	671628	S19-Au23589	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH37_0.0-0.1	Fill	15/08/2019	671915	S19-Au25384	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH38/MW05 0.0-0.1	Fill	13/08/2019	671628	S19-Au23542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38/MW05 0.2-0.3	Fill	13/08/2019	671628	S19-Au23543	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39 0.0-0.1	Fill	13/08/2019	671628	S19-Au23544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH39 0.4-0.5	Fill	13/08/2019	671628	S19-Au23545	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP40 0.0-0.1	Natural	14/08/2019	671628	S19-Au23591	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP40 0.9-1.0	Natural	14/08/2019	671628	S19-Au23592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP41 0.0-0.1	Fill	14/08/2019	671628	S19-Au23593	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP41 0.3-0.4	Fill	14/08/2019	671628	S19-Au23594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP42 0.0-0.1	Fill	14/08/2019	671628	S19-Au23595	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC06	TP42 0.0-0.1	14/08/2019	671628	S19-Au23596	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA06	TP42 0.0-0.1	14/08/2019	224101	224101-6	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
TP43_0.0-0.1	Reworked Natural	12/08/2019	671221	S19-Au20169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP44_0.0-0.1	Fill	12/08/2019	671221	S19-Au20170	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP44_0.4-0.5	Fill	12/08/2019	671221	S19-Au20171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP45_0.0-0.1	Natural	12/08/2019	671221	S19-Au20172	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP46_0.4-0.5	Natural	12/08/2019	671221	S19-Au20174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP47_0.0-0.1	Natural	12/08/2019	671221	S19-Au20175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP48_0.0-0.1	Natural	12/08/2019	671221	S19-Au20177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP49_0.4-0.5	Fill	12/08/2019	671221	S19-Au20179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP50_0.0-0.1	Fill	12/08/2019	671221	S19-Au20180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP51_0.0-0.1	Fill	12/08/2019	671221	S19-Au20154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP52_0.0-0.5	Fill	12/08/2019	671221	S19-Au20166	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	-	<2.5	<2.5	<2.5	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
TP53_0.9-1.0	Fill	12/08/2019	671221	S19-Au20165	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP54 0.0-0.1	Fill	14/08/2019	671628	S19-Au23558	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP54 1.4-1.5	Natural	14/08/2019	671628	S19-Au23559	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC08	TP54 1.4-1.5	14/08/2019	671628	S19-Au23560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA08	TP54 1.4-1.5	14/08/2019	224101	224101-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP55 0.0-0.1	Natural	14/08/2019	671628	S19-Au23561	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP55 0.9-1.0	Natural	14/08/2019	671628	S19-Au23562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH056_0.0-0.1	Natural	15/08/2019	671915	S19-Au25521	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH057_0.4-0.5	Natural	15/08/2019	671915	S19-Au25522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH058_0.0-0.1	Natural	15/08/2019	671915	S19-Au25523	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH59_0.0-0.1	Natural	15/08/2019	671915	S19-Au25381	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP60_0.0-0.1	Natural	12/08/2019	671221	S19-Au20181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP61_0.0-0.1	Natural	12/08/2019	671221	S19-Au20182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP61_0.4-0.5	Natural	12/08/2019	671221	S19-Au20183	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP62_0.0-0.1	Natural	12/08/2019	671221	S19-Au20184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP63_0.4-0.5	Fill	12/08/2019	671221	S19-Au20157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP64_0.0-0.1	Fill	12/08/2019	671221	S19-Au20159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH65_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH66_0.3-0.4	Reworked Natural	15/08/2019	671915	S19-Au25388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH67_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25389	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH068_0.4-0.5	Natural	15/08/2019	671915	S19-Au25519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH069_0.0-0.1	Natural	15/08/2019	671915	S19-Au25520	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH70/MW08 0.0-0.1	Fill	13/08/2019	671628	S19-Au23540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC03	BH70/MW08 0.0-0.1	13/08/2019	671628	S19-Au23541	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA03	BH70/MW08 0.0-0.1	14/08/2019	224101	224101-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
BH71_0.0-0.1	Fill	15/08/2019	671915	S19-Au25382	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP072_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25391	0.21	<0.05	<0.05	<0.05	-	<0.05	<0.1	0.22	0.46	<0.05	0.89	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP072_0.4-0.5	Natural	15/08/2019	671915	S19-Au25392	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP073_0.0-0.1	Fill	15/08/2019	671915	S19-Au25398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP073_0.4-0.5	Natural	15/08/2019	671915	S19-Au25399	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP074_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25407	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP075_0.2-0.3	Fill	15/08/2019	671915	S19-Au25408	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP76_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH77_0.0-0.1	Fill	15/08/2019	671915	S19-Au25385	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH078_0.0-0.1	Fill	15/08/2019	671915	S19-Au25524	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP079_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH80_0.0-0.1	Natural	15/08/2019	671915	S19-Au25386	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH081_0.0-0.1	Natural	15/08/2019	671915	S19-Au25515	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP082_0.0-0.1	Fill	15/08/2019	671915	S19-Au25415	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP082_1.2-1.3	Reworked Natural	15/08/2019	671915	S19-Au25416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP083_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25396	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP084_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25393	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP085_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25406	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP87_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25376	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP88_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25378	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP88_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25379	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP089_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25547	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP090_0.0-0.1	Reworked

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Organochlorine Pesticides																								Chlorinated Alkanes																	
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	Alpha-BHC	Alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	1	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)									180																																	
Site Specific EILs (Natural)									180																																	
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																										
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																										
NEPM 2013 Soil HIL A			6				50				240					10				6			300	20																			
NEPM 2013 Soil Clay - Saturation Limit																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																										

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																									
TP094_0.4-0.5	Natural	15/08/2019	671915	S19-Au25423	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP095_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25395	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP096_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP097_0.2-0.3	Fill	15/08/2019	671915	S19-Au25542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP097_0.4-0.5	Fill	15/08/2019	671915	S19-Au25529	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH98_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25375	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP099_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25527	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP099_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP100_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25548	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP101_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25545	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102_0.0-0.1	Natural	16/08/2019	671915	S19-Au25512	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103_0.0-0.1	Natural	15/08/2019	671915	S19-Au25517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25428	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP104_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25429	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25426	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP105_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25400	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25503	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25402	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25541	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH109_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25537	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP110_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP111_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP112_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH113_0.3-0.4	Natural	15/08/2019	671915	S19-Au25514	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH114_0.0-0.1	Natural	15/08/2019	671915	S19-Au25513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH115/MW06 0.0-0.1	Fill	13/08/2019	671221	S19-Au20130	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH115/MW06 0.2-0.3	Reworked Natural	13/08/2019	671221	S19-Au20131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP116_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25430	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP117_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25504	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP118_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP119_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25554	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP120_0.2-0.3	Reworked Natural	16/08/2019	671915	S19-Au25539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP121_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25373	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP121_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP122_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP123_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25543	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP124_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP125_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25552	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP126_0.0-0.1	Fill	15/08/2019	671915	S19-Au25505	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP126_0.2-0.3	Fill	15/08/2019	671915	S19-Au25506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP127_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25431	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP127_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25410	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP128_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25507	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP129_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25508	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP130_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP131_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25538	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP132_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25526	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP133_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25531	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP134_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH135/MW01 0.2-0.3	Natural	13/08/2019	671221	S19-Au20134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH135/MW07 0.0-0.1	Reworked Natural	13/08/2019	671221	S19-Au20133	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP136_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25536	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP137_0.0-0.1	Fill	12/08/2019	671221	S19-Au20162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP137_0.4-0.5	Natural	12/08/2019	671221	S19-Au20163	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP138_0.0-0.1	Fill	12/08/2019	671221	S19-Au20161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP139_0.0-0.1	Fill	12/08/2019	671221	S19-Au20160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP140_0.0-0.1	Fill	12/08/2019	671221	S19-Au20158	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP141_0.0-0.1	Fill	12/08/2019	671221	S19-Au20155	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP141_0.9-1.0	Fill	12/08/2019	671221	S19-Au20156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH142 0.2-0.3	Fill	12/08/2019	671221	S19-Au20128	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH143 0.0-0.1	Fill	12/08/2019	671221	S19-Au20129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP144 0.0-0.1	Fill	13/08/2019	671628	S19-Au23522	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP144 0.9-1.0	Fill	13/08/2019	671628	S19-Au23523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP144 1.9-2.0	Fill	13/08/2019	671628	S19-Au23524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP144 2.9-3.0	Fill	13/08/2019	671628	S19-Au23525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 0.0-0.1	Fill	13/08/2019	671628	S19-Au23530	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 0.4-0.5	Fill	13/08/2019	671628	S19-Au23531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 0.9-1.0	Fill	13/08/2019	671628	S19-Au23532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 2.4-2.5	Fill	13/08/2019	671628	S19-Au23533	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 3.4-3.5	Fill	13/08/2019	671628	S19-Au23534	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP146 0.0-0.1	Fill	13/08/2019	671628	S19-Au23526	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP146 0.3-0.4	Fill	13/08/2019	671628	S19-Au23527	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP146 0.9-1.0	Fill	13/08/2019	671628	S19-Au23528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP146 1.9-2.0

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Organochlorine Pesticides																								Chlorinated Alkanes																			
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	1	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)									180																																		
Site Specific EILs (Natural)									180																																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																										
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																										
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																										
NEPM 2013 Soil HIL A			6				50				240					10				6			300	20																			
NEPM 2013 Soil Clay - Saturation Limit																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																										
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																										

Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																											
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH152 2.9-3.0	Fill	14/08/2019	671628	S19-Au23549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH152 6.4-6.5	Natural	14/08/2019	671628	S19-Au23550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 0.0-0.1	Fill	14/08/2019	671628	S19-Au23551	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 1.9-2.0	Fill	14/08/2019	671628	S19-Au23552	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 3.9-4.0	Fill	14/08/2019	671628	S19-Au23553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP154_0.0-0.1	Fill	14/08/2019	673401	M19-Au37867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC09	TP154_0.0-0.1	14/08/2019	671628	S19-Au23566	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA09	TP154_0.0-0.1	14/08/2019	224101	224101-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP155_0.0-0.05	Fill	15/08/2019	671915	S19-Au25413	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP155_0.05-0.15	Fill	15/08/2019	671915	S19-Au25414	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP156_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25424	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP156_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP157_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP158_0.0-0.1	Fill	15/08/2019	671915	S19-Au25419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP158_0.9-1.0	Fill	15/08/2019	671915	S19-Au25390	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP159_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25394	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP160_0.4-0.5	Natural	15/08/2019	671915	S19-Au25397	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP161_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP161_0.4-0.5	Natural	15/08/2019	671915	S19-Au25404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP162_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP162_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25418	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH163_0.0-0.1	Fill	16/08/2019	671915	S19-Au25534	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH164_0.0-0.1	Fill	16/08/2019	671915	S19-Au25532	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH165_0.2-0.3	Fill	16/08/2019	671915	S19-Au25533	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Statistical Summary

Number of Results	103	103	103	103	5	103	98	103	103	103	103	103	103	103	103	103	103	98	5	103	103	103	103	98	112	112	112	112	112	112	6	112	112	112	6	112	112	112	112	112	106	112
Number of Detects	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect	0.21	ND	ND	ND	ND	ND	ND	0.22	0.46	ND	0.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	0.21	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	0.22	0.46	<0.1	0.89	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<1	<2.5	<2.5	<2.5	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Maximum Detect	0.21	ND	ND	ND	ND	ND	ND	0.22	0.46	ND	0.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.028	0.026	0.029	0.026	0.05	0.026	0.05	0.028	0.03	0.026	0.035	0.026	0.026	0.026	0.026	0.026	0.026	0.025	0.05	0.026	0.026	0.026	0.026	0.5	0.27	0.27	0.27	0.27	0.27	0.27	0.5	0.27	0.27	0.27	0.5	0.27	0.27	0.27	0.27	0.27	0.26	0.27
Median Concentration	0.025	0.025	0.025	0.025	0.05	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation	0.019	0.0054	0.016	0.0054	0	0.0054	0	0.02	0.043	0.0054	0.085	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0	0	0.0054	0.0054	0.0054	0.0054	0	0.11	0.11	0.11	0.11	0.11	0.11	0	0.11	0.11	0.11	0	0.11	0.11	0.11	0.11	0.11	0.097	0.11
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Env Stds Comments
#1:ESLs are of low reliability.
#2:ESLs are of moderate reliability.
#3:Management limits of BTEX and naphthalene are not available, hence should not be subtracted from the relevant fra
#4:Limits applied after consideration of relevant ESLs and HSLs
#5:To obtain F2 subtract naohthalene from >C10-C16. Exceedence quantifies further interpretation.
#6:To obtain F1 subtract the sum of BTEX from C6-C10. Exceedence quantifies further interpretation.
#7:Exceedence quantifies further interpretation.
#8:Key limitations of HSL should be referred to prior to application in Friebel and Nadebaum (2011b and 2011d).
#9:TV adopted from Chromium (VI)
#10:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#11:Refer to HSL and soil saturation concentration limit.
#12:Sensitive setting HSL A & HSL B Sand 0m to <1m criteria adopted. Exceedence quantifies further interpretation.
#13:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#14:TV maybe be multiplied by a factor to account for biodegradation of vapour
#15:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific assessment should be untertaken
#16:To obtain F2 subtract naohthalene from >C10-C16.
#17:To obtain F1 subtract the sum of BTEX from C6-C10.

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

					Chlorinated Alkenes													Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons											Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes			
					1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	Total MAH*	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5		0.5	0.5				0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5			0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)																																																							
Site Specific EILs (Natural)																																																							
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																																							
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																																							
NEPM 2013 Soil HIL A																										1$^{\#15}$																									10				
NEPM 2013 Soil Clay - Saturation Limit																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																																							
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**																																																		
BH001/MW01 0.0-0.1	Fill	12/08/2019	671221	S19-Au20121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH001/MW01 0.2-0.3	Fill	12/08/2019	671221	S19-Au20122	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH002/MW02 0.2-0.3	Fill	12/08/2019	671221	S19-Au20124	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QC01	BH002/MW02 0.2-0.3	13/08/2019	671221	S19-Au20140	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QA01	BH002/MW02 0.2-0.3	14/08/2019	224101	224101-1	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1
BH003 0.0-0.1	Fill	12/08/2019	671221	S19-Au20126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH004/MW03 0.0-0.1	Fill	14/08/2019	671628	S19-Au23499	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH004/MW03 0.2-0.3	Fill	14/08/2019	671628	S19-Au23500	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QC05	BH004/MW03 0.2-0.3	14/08/2019	671628	S19-Au23555	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QA05	BH004/MW03 0.2-0.3	14/08/2019	224101	224101-5	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1
BH004/MW03 0.4-0.5	Fill	14/08/2019	671628	S19-Au23501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH005 0.0-0.1	Fill	14/08/2019	671628	S19-Au23502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06_0.4-0.5	Fill	13/08/2019	671221	S19-Au20151	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP06_2.4-2.5	Fill	13/08/2019	671221	S19-Au20152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP07_0.0-0.1	Fill	13/08/2019	671221	S19-Au20147	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP07_2.4-2.5	Fill	13/08/2019	671221	S19-Au20149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	Fill	13/08/2019	671221	S19-Au20141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_2.9-3.0	Fill	13/08/2019	671221	S19-Au20142	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP08_3.9-4.0	Fill	13/08/2019	671221	S19-Au20143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP09 0.0-0.1	Fill	13/08/2019	671628	S19-Au23515	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
QC04	TP09 0.0-0.1	13/08/2019	671628	S19-Au23539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA04	TP09 0.0-0.1	14/08/2019	224101	224101-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-
TP09 0.4-0.5	Fill	13/08/2019	671628	S19-Au23516	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP09 4.4-4.5	Natural	13/08/2019	671628	S19-Au23518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 0.0-0.1	Fill	13/08/2019	671628	S19-Au23519	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP10 1.4-1.5	Fill	13/08/2019	671628	S19-Au23520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10 2.9-3.0	Natural	13/08/2019	671628	S19-Au23521	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 0.4-0.5	Fill	13/08/2019	671628	S19-Au23512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP11 1.4-1.5	Fill	13/08/2019	671628	S19-Au23513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11 1.9-2.0	Natural	13/08/2019	671628	S19-Au23514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0.0-0.1	Reworked Natural	13/08/2019	671628	S19-Au23509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12 0.9-1.0	Natural	13/08/2019	671628	S19-Au23510	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH014 0.2-0.3	Fill	14/08/2019	671628	S19-Au23504	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH15 0.0-0.1	Fill	14/08/2019	671628	S19-Au23505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15 0.4-0.5	Natural	14/08/2019	671628	S19-Au23506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16 0.0-0.1	Fill	14/08/2019	671628	S19-Au23507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 0.0-0.1	Fill	14/08/2019	671628	S19-Au23508	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP18 0.0-0.1	Fill	14/08/2019	671628	S19-Au23568	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QC07	TP18 0.0-0.1	14/08/2019	671628	S19-Au25918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC07	TP18 0.0-0.1	14/08/2019	671628	S19-Au25918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18 1.4-1.5	Natural	14/08/2019	671628	S19-Au23569	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP19 0.0-0.1	Fill	13/08/2019	671628	S19-Au23535	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP19 0.4-0.5	Fill	13/08/2019	671628	S19-Au23536	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP19 1.4-1.5	Fill	13/08/2019	671628	S19-Au23537	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP19 2.4-2.5	Fill	13/08/2019	671628	S19-Au23538	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP20_0.9-1.0	Fill	13/08/2019	671221	S19-Au20145	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP20_3.4-3.5	Natural	13/08/2019	671221	S19-Au20146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21 0.0-0.1	Fill	14/08/2019	671628	S19-Au23570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP21 0.9-1.0	Fill	14/08/2019	671628	S19-Au23571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22 0.0-0.1	Fill	14/08/2019	671628	S19-Au23479	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH22 0.9-1.0	Fill	14/08/2019	671628	S19-Au23480	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP23 0.0-0.1	Fill	14/08/2019	671628	S19-Au23572	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP23 0.3-0.4	Fill	14/08/2019	671628	S19-Au23573	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP23 2.9-3.0	Fill	14/08/2019	671628	S19-Au23574	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP24 0.0-0.05	Fill	14/08/2019	671628	S19-Au23575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP24 1.4-1.5	Fill	14/08/2019	671628	S19-Au23576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP24 3.4-3.5	Fill	14/08/2019	671628	S19-Au23577	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25/MW04 0.0-0.1	Natural	14/08/2019	671628	S19-Au23481	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
QC12		14/08/2019	671628	S19-Au23567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA012		14/08/2019	224101	224101-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25/MW04 0.9-1.0	Natural	14/08/2019	671628	S19-Au23483	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH25/MW04 5.5-5.6	Natural	14/08/2019	671628	S19-Au23484	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26 0.0-0.1	Fill	14/08/2019	671628	S19-Au23485	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH27 0.0-0.1	Fill	13/08/2019	671628	S19-Au23546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP28 0.4-0.5	Fill	14/08/2019	671628	S19-Au23579	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29 0.0-0.1	Fill	14/08/2019	671628	S19-Au23486	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH29 0.4-0.5	Natural	14/08/2019	671628	S19-Au23487	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC10	BH29 0.4-0.5	14/08/2019	671628	S19-Au23556	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
QA10	BH29 0.4-0.5	14/08/2019	224101	224101-10	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
BH30 0.0-0.1	Fill	14/08/2019	671628	S19-Au23489	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH30 0.4-0.5	Fill	14/08/2019	671628	S19-Au23490	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
QC11	BH30 0.4-0.5	14/08/2019	671628	S19-Au23557	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA11	BH30 0.4-0.5	14/08/2019	224101	224101-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31 0.0-0.1	Fill	14/08/2019	671628	S19-Au23491	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH31 1.4-1.5	Natural	14/08/2019	671628	S19-Au23492	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32 0.0-0.1	Fill	14/08/2019	671628	S19-Au23580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP32 0.4-0.5	Fill	14/08/2019	671628	S19-Au23581	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP32 1.4-1.5	Fill	14/08/2019	671628	S19-Au23582	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP33_0.9-1.0	Fill	12/08/2019	671221	S19-Au20168	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QC02	TP33_0.9-1.0	12/08/2019	671221	S19-Au20176	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QA02	TP33_0.9-1.0	14/08/2019	224101	224101-2	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1
BH34 0.0-0.1	Fill	14/08/2019	671628	S19-Au23493	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

					Chlorinated Alkenes													Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons											Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes			
					1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	Total MAH*	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5		0.5	0.5				0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5			0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)																																																							
Site Specific EILs (Natural)																																																							
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																																							
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																																							
NEPM 2013 Soil HIL A																										$1^{\#15}$																									10				
NEPM 2013 Soil Clay - Saturation Limit																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																																							
Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																																			
BH34 0.9-1.0	Fill	14/08/2019	671628	S19-Au23494	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP35 0.0-0.1	Fill	14/08/2019	671628	S19-Au23583	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP35 1.9-2.0	Fill	14/08/2019	671628	S19-Au23584	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP35 4.2-4.3	Natural	14/08/2019	671628	S19-Au23585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP36 0.0-0.15	Fill	14/08/2019	671628	S19-Au23588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP36 1.4-1.5	Fill	14/08/2019	671628	S19-Au23589	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH37_0.0-0.1	Fill	15/08/2019	671915	S19-Au25384	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH38/MW05 0.0-0.1	Fill	13/08/2019	671628	S19-Au23542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38/MW05 0.2-0.3	Fill	13/08/2019	671628	S19-Au23543	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39 0.0-0.1	Fill	13/08/2019	671628	S19-Au23544	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH39 0.4-0.5	Fill	13/08/2019	671628	S19-Au23545	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP40 0.0-0.1	Natural	14/08/2019	671628	S19-Au23591	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP40 0.9-1.0	Natural	14/08/2019	671628	S19-Au23592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP41 0.0-0.1	Fill	14/08/2019	671628	S19-Au23593	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP41 0.3-0.4	Fill	14/08/2019	671628	S19-Au23594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP42 0.0-0.1	Fill	14/08/2019	671628	S19-Au23595	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QC06	TP42 0.0-0.1	14/08/2019	671628	S19-Au23596	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
QA06	TP42 0.0-0.1	14/08/2019	224101	224101-6	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1
TP43_0.0-0.1	Reworked Natural	12/08/2019	671221	S19-Au20169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP44_0.0-0.1	Fill	12/08/2019	671221	S19-Au20170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP44_0.4-0.5	Fill	12/08/2019	671221	S19-Au20171	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP45_0.0-0.1	Natural	12/08/2019	671221	S19-Au20172	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP46_0.4-0.5	Natural	12/08/2019	671221	S19-Au20174	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP47_0.0-0.1	Natural	12/08/2019	671221	S19-Au20175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP48_0.0-0.1	Natural	12/08/2019	671221	S19-Au20177	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP49_0.4-0.5	Fill	12/08/2019	671221	S19-Au20179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP50_0.0-0.1	Fill	12/08/2019	671221	S19-Au20180	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP51_0.0-0.1	Fill	12/08/2019	671221	S19-Au20154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP52_0.0-0.5	Fill	12/08/2019	671221	S19-Au20166	<2.5	-	<5	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	-	-	-	-	-	-	-	-	<2.5	<2.5	-	<2.5	<2.5	-	-	-	<2.5	-	<2.5	<2.5	<2.5	<2.5	<2.5	-	<2.5	<2.5	-	-	<2.5	<2.5	<2.5	<2.5	<0.05	<2.5	<2.5	<2.5	<2.5
TP53_0.9-1.0	Fill	12/08/2019	671221	S19-Au20165	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP54 0.0-0.1	Fill	14/08/2019	671628	S19-Au23558	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP54 1.4-1.5	Natural	14/08/2019	671628	S19-Au23559	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC08	TP54 1.4-1.5	14/08/2019	671628	S19-Au23560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA08	TP54 1.4-1.5	14/08/2019	224101	224101-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP55 0.0-0.1	Natural	14/08/2019	671628	S19-Au23561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP55 0.9-1.0	Natural	14/08/2019	671628	S19-Au23562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH056_0.0-0.1	Natural	15/08/2019	671915	S19-Au25521	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH057_0.4-0.5	Natural	15/08/2019	671915	S19-Au25522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH058_0.0-0.1	Natural	15/08/2019	671915	S19-Au25523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH59_0.0-0.1	Natural	15/08/2019	671915	S19-Au25381	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP60_0.0-0.1	Natural	12/08/2019	671221	S19-Au20181	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP61_0.0-0.1	Natural	12/08/2019	671221	S19-Au20182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP61_0.4-0.5	Natural	12/08/2019	671221	S19-Au20183	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP62_0.0-0.1	Natural	12/08/2019	671221	S19-Au20184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP63_0.4-0.5	Fill	12/08/2019	671221	S19-Au20157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP64_0.0-0.1	Fill	12/08/2019	671221	S19-Au20159	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH65_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH66_0.3-0.4	Reworked Natural	15/08/2019	671915	S19-Au25388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH67_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25389	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH068_0.4-0.5	Natural	15/08/2019	671915	S19-Au25519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH069_0.0-0.1	Natural	15/08/2019	671915	S19-Au25520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH70/MW08 0.0-0.1	Fill	13/08/2019	671628	S19-Au23540	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
QC03	BH70/MW08 0.0-0.1	13/08/2019	671628	S19-Au23541	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
QA03	BH70/MW08 0.0-0.1	14/08/2019	224101	224101-3	<1	<1	<2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
BH71_0.0-0.1	Fill	15/08/2019	671915	S19-Au25382	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP072_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25391	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP072_0.4-0.5	Natural	15/08/2019	671915	S19-Au25392	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP073_0.0-0.1	Fill	15/08/2019	671915	S19-Au25398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP073_0.4-0.5	Natural	15/08/2019	671915	S19-Au25399	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP074_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25407	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP075_0.2-0.3	Fill	15/08/2019	671915	S19-Au25408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP76_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH77_0.0-0.1	Fill	15/08/2019	671915	S19-Au25385	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH078_0.0-0.1	Fill	15/08/2019	671915	S19-Au25524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP079_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH80_0.0-0.1	Natural	15/08/2019	671915	S19-Au25386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH081_0.0-0.1	Natural	15/08/2019	671915	S19-Au25515	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP082_0.0-0.1	Fill	15/08/2019	671915	S19-Au25415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP082_1.2-1.3	Reworked Natural	15/08/2019	671915	S19-Au25416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP083_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25396	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP084_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25393	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP085_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25406	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP87_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25376	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP88_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP88_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25379	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP089_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25547	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP090_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25546	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH091_0.0-0.1	Natural	15/08/2019	671915	S19-Au25511	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH092_0.0-0.1	Natural	15/08/2019	671915	S19-Au25518	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP093_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25411	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP093_0.4-0.5	Natural	15/08/2019	671915	S19-Au25412	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP094_0.0-0.1	Fill	15/08/2019	671915	S19-Au25422	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

					Chlorinated Alkenes													Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons											Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes			
					1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	Total MAH*	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5		0.5	0.5				0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5			0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)																																																							
Site Specific EILs (Natural)																																																							
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																																							
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																																																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																																																							
NEPM 2013 Soil HIL A																										1[#15]																										10				
NEPM 2013 Soil Clay - Saturation Limit																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																																																							
Sample ID	Soil Description	Sample Date	Lab Report	Sample Code																																																		
TP094_0.4-0.5	Natural	15/08/2019	671915	S19-Au25423	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP095_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25395	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP096_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP097_0.2-0.3	Fill	15/08/2019	671915	S19-Au25542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP097_0.4-0.5	Fill	15/08/2019	671915	S19-Au25529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH98_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25375	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP099_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP099_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP100_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25548	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP101_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25545	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102_0.0-0.1	Natural	15/08/2019	671915	S19-Au25512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH103_0.0-0.1	Natural	15/08/2019	671915	S19-Au25517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25428	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP104_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25429	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25426	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP105_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP106_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25503	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP108_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25541	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH109_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25537	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP110_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25372	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP111_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP112_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25544	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH113_0.3-0.4	Natural	15/08/2019	671915	S19-Au25514	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH114_0.0-0.1	Natural	15/08/2019	671915	S19-Au25513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH115/MW06 0.0-0.1	Fill	13/08/2019	671221	S19-Au20130	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH115/MW06 0.2-0.3	Reworked Natural	13/08/2019	671221	S19-Au20131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP116_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25430	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP117_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25504	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP118_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25509	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP119_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25554	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP120_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP121_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25373	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP121_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP122_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25550	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP123_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25543	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP124_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP125_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25552	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP126_0.0-0.1	Fill	15/08/2019	671915	S19-Au25505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP126_0.2-0.3	Fill	15/08/2019	671915	S19-Au25506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP127_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25431	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP127_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25410	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP128_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25507	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP129_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25508	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP130_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25540	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP131_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25538	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP132_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP133_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP134_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH135/MW01 0.2-0.3	Natural	13/08/2019	671221	S19-Au20134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH135/MW07 0.0-0.1	Reworked Natural	13/08/2019	671221	S19-Au20133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP136_0.0-0.1	Reworked Natural	16/08/2019	671915	S19-Au25536	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP137_0.0-0.1	Fill	12/08/2019	671221	S19-Au20162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP137_0.4-0.5	Natural	12/08/2019	671221	S19-Au20163	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP138_0.0-0.1	Fill	12/08/2019	671221	S19-Au20161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP139_0.0-0.1	Fill	12/08/2019	671221	S19-Au20160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP140_0.0-0.1	Fill	12/08/2019	671221	S19-Au20158	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP141_0.0-0.1	Fill	12/08/2019	671221	S19-Au20155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP141_0.9-1.0	Fill	12/08/2019	671221	S19-Au20156	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH142 0.2-0.3	Fill	12/08/2019	671221	S19-Au20128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH143 0.0-0.1	Fill	12/08/2019	671221	S19-Au20129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP144 0.0-0.1	Fill	13/08/2019	671628	S19-Au23522	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP144 0.9-1.0	Fill	13/08/2019	671628	S19-Au23523	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP144 1.9-2.0	Fill	13/08/2019	671628	S19-Au23524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP144 2.9-3.0	Fill	13/08/2019	671628	S19-Au23525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 0.0-0.1	Fill	13/08/2019	671628	S19-Au23530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP145 0.4-0.5	Fill	13/08/2019	671628	S19-Au23531	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP145 0.9-1.0	Fill	13/08/2019	671628	S19-Au23532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP145 2.4-2.5	Fill	13/08/2019	671628	S19-Au23533	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP145 3.4-3.5	Fill	13/08/2019	671628	S19-Au23534	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP146 0.0-0.1	Fill	13/08/2019	671628	S19-Au23526	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP146 0.3-0.4	Fill	13/08/2019	671628	S19-Au23527	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP146 0.9-1.0	Fill	13/08/2019	671628	S19-Au23528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP146 1.9-2.0	Fill	13/08/2019	671628	S19-Au23529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH147 0.0-0.1	Fill	13/08/2019	671628	S19-Au23547	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH148 0.0-0.1	Fill	14/08/2019	671628	S19-Au23495	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH148 0.4-0.5	Natural	14/08/2019	671628	S19-Au23496	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH149 0.0-0.1	Fill	14/08/2019	671628	S19-Au23497	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH150 0.0-0.1	Fill	14/08/2019	671628	S19-Au23498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP151 0.9-1.0	Fill	14/08/2019	671628	S19-Au23564	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5

Table A(1) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

					Chlorinated Alkenes													Solvents
					1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)																		
Site Specific EILs (Natural)																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																		
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																		
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																		
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																		
NEPM 2013 Soil HIL A																		
NEPM 2013 Soil Clay - Saturation Limit																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																		
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**														
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH152 2.9-3.0	Fill	14/08/2019	671628	S19-Au23549	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH152 6.4-6.5	Natural	14/08/2019	671628	S19-Au23550	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 0.0-0.1	Fill	14/08/2019	671628	S19-Au23551	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 1.9-2.0	Fill	14/08/2019	671628	S19-Au23552	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 3.9-4.0	Fill	14/08/2019	671628	S19-Au23553	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP154_0.0-0.1	Fill	14/08/2019	673401	M19-Au37867	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC09	TP154_0.0-0.1	14/08/2019	671628	S19-Au23566	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA09	TP154_0.0-0.1	14/08/2019	224101	224101-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP155_0.0-0.05	Fill	15/08/2019	671915	S19-Au25413	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP155_0.05-0.15	Fill	15/08/2019	671915	S19-Au25414	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP156_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25424	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP156_0.4-0.5	Reworked Natural	15/08/2019	671915	S19-Au25425	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP157_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25421	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP158_0.0-0.1	Fill	15/08/2019	671915	S19-Au25419	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP158_0.9-1.0	Fill	15/08/2019	671915	S19-Au25390	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP159_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25394	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP160_0.4-0.5	Natural	15/08/2019	671915	S19-Au25397	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP161_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25403	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP161_0.4-0.5	Natural	15/08/2019	671915	S19-Au25404	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP162_0.0-0.1	Reworked Natural	15/08/2019	671915	S19-Au25417	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP162_0.2-0.3	Reworked Natural	15/08/2019	671915	S19-Au25418	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH163_0.0-0.1	Fill	16/08/2019	671915	S19-Au25534	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH164_0.0-0.1	Fill	16/08/2019	671915	S19-Au25532	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH165_0.2-0.3	Fill	16/08/2019	671915	S19-Au25533	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Statistical Summary																		
Number of Results					112	6	66	6	106	112	112	112	112	112	112	112	112	106
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.5	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<2.5	<1	<5	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration					0.27	0.5	0.58	0.5	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.26
Median Concentration					0.25	0.5	0.5	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation					0.11	0	0.28	0	0.097	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.097
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons										
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	Total MAH*
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5		0.5	0.5				0.5		0.5
Site Specific EILs (Fill)																			
Site Specific EILs (Natural)																			
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																			
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																			
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																			
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																			
NEPM 2013 Soil HIL A								$1^{\#15}$											
NEPM 2013 Soil Clay - Saturation Limit																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																			
Sample ID																			
BH152 0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH152 2.9-3.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
BH152 6.4-6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 1.9-2.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
BH153 3.9-4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP154_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC09	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
QA09	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
TP155_0.0-0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP155_0.05-0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP156_0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP156_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP157_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP158_0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP158_0.9-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP159_0.0-0.1	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP160_0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
TP161_0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP161_0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
TP162_0.0-0.1	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
TP162_0.2-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
BH163_0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
BH164_0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
BH165_0.2-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5
Statistical Summary																			
Number of Results	75	75	75	75	75	75	75	75	112	112	6	112	112	6	6	6	112	6	106
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Minimum Concentration	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<1	<0.5	<0.5	<1	<1	<1	<0.5	<1	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Maximum Concentration	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2.5	<2.5	<1	<2.5	<2.5	<1	<1	<1	<2.5	<1	<2.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Average Concentration	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.27	0.27	0.5	0.27	0.27	0.5	0.5	0.5	0.27	0.5	0.27
Median Concentration	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.25	0.5	0.25	0.25	0.5	0.5	0.5	0.25	0.5	0.25
Standard Deviation	0	0	0	0	0	0	0	0	0.11	0.11	0	0.11	0.11	0	0	0	0.11	0	0.12
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes			
	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5		0.5	0.5			0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5
Site Specific EILs (Fill)																		
Site Specific EILs (Natural)																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																		
NEPM 2013 ESL Urban Residential and Public Open Space, Fine Soil																		
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																		
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Fine																		
NEPM 2013 Soil HIL A														10				
NEPM 2013 Soil Clay - Saturation Limit																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 1 to <2m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 4m+																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 1 to <2m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 4m+																		
Sample ID																		
BH152 0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH152 2.9-3.0	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
BH152 6.4-6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
BH153 1.9-2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH153 3.9-4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP154_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP155_0.0-0.05	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP155_0.05-0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP156_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP156_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP157_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP158_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP158_0.9-1.0	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP159_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP160_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-
TP161_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP161_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP162_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP162_0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH163_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH164_0.0-0.1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH165_0.2-0.3	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
Statistical Summary																		
Number of Results	112	106	106	112	6	112	106	6	6	112	112	112	112	103	112	112	112	112
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<2.5	<2.5	<2.5	<2.5	<1	<2.5	<2.5	<1	<1	<2.5	<2.5	<2.5	<2.5	<0.1	<2.5	<2.5	<2.5	<2.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.27	0.26	0.26	0.27	0.5	0.27	0.26	0.5	0.5	0.27	0.27	0.27	0.27	0.026	0.27	0.27	0.27	0.27
Median Concentration	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.25	0.025	0.25	0.25	0.25	0.25
Standard Deviation	0.11	0.097	0.097	0.11	0	0.11	0.097	0	0	0.11	0.11	0.11	0.11	0.0054	0.11	0.11	0.11	0.11
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Env Stds Comments
#1:ESLs are of low reliability.
#2:ESLs are of moderate reliability.
#3:Management limits of BTEX and naphthalene are not available, hence should not be subtracted from the relevant fra
#4:Limits applied after consideration of relevant ESLs and HSLs
#5:To obtain F2 subtract naohthalene from >C10-C16. Exceedence quantifies further interpretation.
#6:To obtain F1 subtract the sum of BTEX from C6-C10. Exceedence quantifies further interpretation.
#7:Exceedence quantifies further interpretation.
#8:Key limitations of HSL should be referred to prior to application in Friebel and Nadebaum (2011b and 2011d).
#9:TV adopted from Chromium (VI)
#10:Assumptions of HSL are presented in Friebel and Nadebaum (2011a and 2011b).
#11:Refer to HSL and soil saturation concentration limit.
#12:Sensitive setting HSL A & HSL B Sand 0m to <1m criteria adopted. Exceedence quantifies further interpretation.
#13:Refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).
#14:TV maybe be multiplied by a factor to account for biodegradation of vapour
#15:HIL relates to non-dioxin-like PCBs only. If PCB source is suspected a site-specific assessment should be untertaken
#16:To obtain F2 subtract naohthalene from >C10-C16.
#17:To obtain F1 subtract the sum of BTEX from C6-C10.

Table A(2) - Soil Analytical Data (Asbestos)
Project Number: 56387
Project Name: Doyalson DSI

					Asbestos										Asbestos
					Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos ID in Soil
					g	%w/w	%w/w	g	g	g	g	g	g	g	Comment
EQL															Presence/ Abesence
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A						0.01[#1]									
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL							0.001[#2]								
Sample ID	**Matrix Description**	**Sample Date**	**Lab Report**	**Sample Code**											
BH001/MW01 0.0-0.1	Fill	12/08/2019	671221	S19-Au20121	537	0	0	0	0	0	0	0	0	0	Absense
BH002/MW02 0.0-0.1	Fill	12/08/2019	671221	S19-Au20123	550	0	0	0	0	0	0	0	0	0	Absense
BH003 0.0-0.1	Fill	12/08/2019	671221	S19-Au20126	283	0	0	0	0	0	0	0	0	0	Absense
BH004/MW03 0.2-0.3	Fill	14/08/2019	671628	S19-Au23500	504	0	0	0	0	0	0	0	0	0	Absense
QC05	BH004/MW03 0.2-0.3	14/08/2019	671628	S19-Au23555	407	0	0	0	0	0	0	0	0	0	Absense
BH005 0.0-0.1	Fill	14/08/2019	671628	S19-Au23502	212	0	0	0	0	0	0	0	0	0	Absense
TP06_0.0-0.1	Fill	13/08/2019	671221	S19-Au20150	601	0	0	0	0	0	0	0	0	0	Absense
TP07_0.0-0.1	Fill	13/08/2019	671221	S19-Au20147	561	0	0	0	0	0	0	0	0	0	Absense
TP08_0.0-0.1	Fill	13/08/2019	671221	S19-Au20141	625	0	0	0	0	0	0	0	0	0	Absense
TP09 0.0-0.1	Fill	13/08/2019	671628	S19-Au23515	609	0	0	0	0	0	0	0	0	0	Absense
TP10 0.0-0.1	Fill	13/08/2019	671628	S19-Au23519	592	0	0	0	0	0	0	0	0	0	Absense
TP11 0.0-0.1	Fill	13/08/2019	671628	S19-Au23511	634	0	0	0	0	0	0	0	0	0	Absense
BH15 0.0-0.1	Fill	14/08/2019	671628	S19-Au23505	386	0	0	0	0	0	0	0	0	0	Absense
BH17 0.0-0.1	Fill	14/08/2019	671628	S19-Au23508	458	0	0	0	0	0	0	0	0	0	Absense
TP18 0.0-0.1	Fill	14/08/2019	671628	S19-Au23568	795	0	0	0	0	0	0	0	0	0	Absense
TP19 0.0-0.1	Fill	13/08/2019	671628	S19-Au23535	531	0	0	0	0	0	0	0	0	0	Absense
TP20_0.0-0.1	Fill	13/08/2019	671221	S19-Au20144	625	0	0	0	0	0	0	0	0	0	Absense
TP21 0.0-0.1	Fill	14/08/2019	671628	S19-Au23570	790	0	0	0	0	0	0	0	0	0	Absense
BH22 0.0-0.1	Fill	14/08/2019	671628	S19-Au23479	308	0	0	0	0	0	0	0	0	0	Absense
TP23 0.0-0.1	Fill	14/08/2019	671628	S19-Au23572	685	0	0	0	0	0	0	0	0	0	Absense
TP23 2.9-3.0	Fill	14/08/2019	671628	S19-Au23574	731	0	0	0	0	0	0	0	0	0	Absense
TP24 0.0-0.05	Fill	14/08/2019	671628	S19-Au23575	519	0	0	0	0	0	0	0	0	0	Absense
TP24 1.4-1.5	Fill	14/08/2019	671628	S19-Au23576	798	0	0	0	0	0	0	0	0	0	Absense
BH25/MW04 0.0-0.1	Natural	14/08/2019	671628	S19-Au23481	387	0	0	0	0	0	0	0	0	0	Absense
BH27 0.0-0.1	Fill	13/08/2019	671628	S19-Au23546	506	0	0	0	0	0	0	0	0	0	Absense
TP28 0.0-0.1	Fill	14/08/2019	671628	S19-Au23578	792	0	0	0	0	0	0	0	0	0	Absense
BH29 0.0-0.1	Fill	14/08/2019	671628	S19-Au23486	406	0	0	0	0	0	0	0	0	0	Absense
BH32 0.0-0.1	Fill	14/08/2019	671628	S19-Au23580	232	0	0	0	0	0	0	0	0	0	Absense
TP33_0.0-0.1	FIll	12/08/2019	671221	S19-Au20167	630	0	0	0	0	0	0	0	0	0	Absense
TP33_0.9-1.0	Fill	12/08/2019	671221	S19-Au20168	627	0	0	0	0	0	0	0	0	0	Absense
QC02	TP33_0.9-1.0	12/08/2019	671221	S19-Au20176	446	0	0	0	0	0	0	0	0	0	Absense
QA02	TP33_0.9-1.0	14/08/2019	224101	224101-2	511	0	0	0	0	0	0	0	0	0	Absense
TP35 0.0-0.1	Fill	14/08/2019	671628	S19-Au23583	690	0	0	0	0	0	0	0	0	0	Absense
TP36 0.0-0.15	Fill	14/08/2019	671628	S19-Au23588	734	0	0	0	0	0	0	0	0	0	Absense
BH38/MW05 0.0-0.1	Fill	13/08/2019	671628	S19-Au23542	474	0	0	0	0	0	0	0	0	0	Absense
BH39 0.0-0.1	Fill	13/08/2019	671628	S19-Au23544	439	0	0	0	0	0	0	0	0	0	Absense
TP40 0.0-0.1	Natural	14/08/2019	671628	S19-Au23591	790	0	0	0	0	0	0	0	0	0	Absense
TP41 0.0-0.1	Fill	14/08/2019	671628	S19-Au23593	625	0	0	0	0	0	0	0	0	0	Absense
TP42 0.0-0.1	Fill	14/08/2019	671628	S19-Au23595	713	0	0	0	0	0	0	0	0	0	Absense
QC06	TP42 0.0-0.1	14/08/2019	671628	S19-Au23596	689	0	0	0	0	0	0	0	0	0	Absense
QA06	TP42 0.0-0.1	14/08/2019	224101	224101-6	750	0	0	0	0	0	0	0	0	0	Absense
TP43_0.0-0.1	Natural	12/08/2019	671221	S19-Au20169	655	0	0	0	0	0	0	0	0	0	Absense
TP44_0.0-0.1	Fill	12/08/2019	671221	S19-Au20170	465	0	0	0	0	0	0	0	0	0	Absense
TP45_0.0-0.1	Natural	12/08/2019	671221	S19-Au20172	403	0	0	0	0	0	0	0	0	0	Absense
TP46_0.0-0.1	Natural	12/08/2019	671221	S19-Au20173	632	0	0	0	0	0	0	0	0	0	Absense
TP47_0.0-0.1	Natural	12/08/2019	671221	S19-Au20175	588	0	0	0	0	0	0	0	0	0	Absense
TP48_0.0-0.1	Natural	12/08/2019	671221	S19-Au20177	470	0	0	0	0	0	0	0	0	0	Absense
TP49_0.0-0.1	Fill	12/08/2019	671221	S19-Au20178	529	0	0	0	0	0	0	0	0	0	Absense
TP50_0.0-0.1	Fill	12/08/2019	671221	S19-Au20180	590	0	0	0	0	0	0	0	0	0	Absense
TP51_0.0-0.1	Fill	12/08/2019	671221	S19-Au20154	1037	0	0	0	0	0	0	0	0	0	Absense
TP52_0.0-0.5	Fill	12/08/2019	671221	S19-Au20166	762	0	0	0	0	0	0	0	0	0	Absense
TP53_0.0-0.1	Fill	12/08/2019	671221	S19-Au20164	842	0	0	0	0	0	0	0	0	0	Absense
TP54 0.0-0.1	Fill	14/08/2019	671628	S19-Au23558	745	0	0	0	0	0	0	0	0	0	Absense
BH59_0.0-0.1	Natural	15/08/2019	671915	S19-Au25381	264	0	0	0	0	0	0	0	0	0	Absense
TP60_0.0-0.1	Natural	12/08/2019	671221	S19-Au20181	710	0	0	0	0	0	0	0	0	0	Absense
TP61_0.0-0.1	Natural	12/08/2019	671221	S19-Au20182	700	0	0	0	0	0	0	0	0	0	Absense
TP62_0.0-0.1	Natural	12/08/2019	671221	S19-Au20184	636	0	0	0	0	0	0	0	0	0	Absense
TP63_0.4-0.5	Fill	12/08/2019	671221	S19-Au20157	682	0	0	0	0	0	0	0	0	0	Absense
TP64_0.0-0.1	Fill	12/08/2019	671221	S19-Au20159	554	0	0	0	0	0	0	0	0	0	Absense
BH70/MW08 0.0-0.1	Fill	13/08/2019	671628	S19-Au23540	512	0	0	0	0	0	0	0	0	0	Absense
QC03	BH70/MW08 0.0-0.1	13/08/2019	671628	S19-Au23541	422	0	0	0	0	0	0	0	0	0	Absense
QA03	BH70/MW08 0.0-0.1	14/08/2019	224101	224101-3	409	0	0	0	0	0	0	0	0	0	Absense
BH77_0.0-0.1	Fill	15/08/2019	671915	S19-Au25385	529	0	0	0	0	0	0	0	0	0	Absense

Table A(2) - Soil Analytical Data (Asbestos)
Project Number: 56387
Project Name: Doyalson DSI

					Asbestos										Asbestos
					Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos ID in Soil
					g	%w/w	%w/w	g	g	g	g	g	g	g	Comment
EQL															Presence/ Abesence
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A						0.01[#1]									
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL							0.001[#2]								
Sample ID	**Matrix Description**	**Sample Date**	**Lab Report**	**Sample Code**											
TP082_0.0-0.1	Fill	15/08/2019	671915	S19-Au25415	87	0	0	0	0	0	0	0	0	0	Absense
TP083_0.0-0.1	Natural	15/08/2019	671915	S19-Au25396	857	0	0	0	0	0	0	0	0	0	Absense
TP085_0.0-0.1	Natural	15/08/2019	671915	S19-Au25406	735	0	0	0	0	0	0	0	0	0	Absense
TP093_0.0-0.1	Natural	15/08/2019	671915	S19-Au25411	540	0	0	0	0	0	0	0	0	0	Absense
TP094_0.0-0.1	Natural	15/08/2019	671915	S19-Au25422	605	0	0	0	0	0	0	0	0	0	Absense
TP099_0.0-0.1	Natural	15/08/2019	671915	S19-Au25527	405	0	0	0	0	0	0	0	0	0	Absense
TP104_0.0-0.1	Natural	15/08/2019	671915	S19-Au25428	637	0	0	0	0	0	0	0	0	0	Absense
TP105_0.0-0.1	Natural	15/08/2019	671915	S19-Au25426	546	0	0	0	0	0	0	0	0	0	Absense
BH113_0.0-0.1	Natural	15/08/2019	671915	S19-Au25856	498	0	0	0	0	0	0	0	0	0	Absense
BH115/MW06 0.0-0.1	Fill	13/08/2019	671221	S19-Au20130	326	0	0	0	0	0	0	0	0	0	Absense
BH115/MW06 0.2-0.3	Natural	13/08/2019	671221	S19-Au20131	579	0	0	0	0	0	0	0	0	0	Absense
TP117_0.0-0.1	Natural	15/08/2019	671915	S19-Au25504	469	0	0	0	0	0	0	0	0	0	Absense
BH135/MW07 0.0-0.1	Natural	13/08/2019	671221	S19-Au20133	463	0	0	0	0	0	0	0	0	0	Absense
TP137_0.0-0.1	Fill	12/08/2019	671221	S19-Au20162	996	0	0	0	0	0	0	0	0	0	Absense
TP139_0.0-0.1	Fill	12/08/2019	671221	S19-Au20160	761	0	0	0	0	0	0	0	0	0	Absense
TP140_0.0-0.1	Fill	12/08/2019	671221	S19-Au20158	731	0	0	0	0	0	0	0	0	0	Absense
TP141_0.0-0.1	Fill	12/08/2019	671221	S19-Au20155	763	0	0	0	0	0	0	0	0	0	Absense
BH142 0.0-0.1	Fill	12/08/2019	671221	S19-Au20127	421	0	0	0	0	0	0	0	0	0	Absense
BH143 0.0-0.1	Fill	12/08/2019	671221	S19-Au20129	268	0	0	0	0	0	0	0	0	0	Absense
TP144 0.0-0.1	Fill	13/08/2019	671628	S19-Au23522	608	0	0	0	0	0	0	0	0	0	Absense
TP144 2.9-3.0	Fill	13/08/2019	671628	S19-Au23525	788	0	0	0	0	0	0	0	0	0	Absense
TP145 0.4-0.5	Fill	13/08/2019	671628	S19-Au23531	679	0	0	0	0	0	0	0	0	0	Absense
BH147 0.0-0.1	Fill	13/08/2019	671628	S19-Au23547	369	0	0	0	0	0	0	0	0	0	Absense
BH150 0.0-0.1	Fill	14/08/2019	671628	S19-Au23498	307	0	0	0	0	0	0	0	0	0	Absense
BH152 0.0-0.1	Fill	14/08/2019	671628	S19-Au23548	373	0	0	0	0	0	0	0	0	0	Absense
TP154 0.0-0.1	Natural	14/08/2019	671628	S19-Au23565	655	0	0	0	0	0	0	0	0	0	Absense
TP155_0.0-0.05	Fill	15/08/2019	671915	S19-Au25413	870	0	0	0	0	0	0	0	0	0	Absense
TP156_0.0-0.1	Natural	15/08/2019	671915	S19-Au25424	651	0	0	0	0	0	0	0	0	0	Absense
TP157_0.0-0.1	Natural	15/08/2019	671915	S19-Au25421	624	0	0	0	0	0	0	0	0	0	Absense
TP158_0.0-0.1	Fill	15/08/2019	671915	S19-Au25419	512	0	0	0	0	0	0	0	0	0	Absense
TP159_0.0-0.1	Natural	15/08/2019	671915	S19-Au25394	782	0	0	0	0	0	0	0	0	0	Absense
TP161_0.0-0.1	Natural	15/08/2019	671915	S19-Au25403	438	0	0	0	0	0	0	0	0	0	Absense
TP162_0.2-0.3	Natural	15/08/2019	671915	S19-Au25418	561	0	0	0	0	0	0	0	0	0	Absense
BH163_0.0-0.1	Natural	16/08/2019	671915	S19-Au25534	446	0	0	0	0	0	0	0	0	0	Absense
BH164_0.0-0.1	Natural	16/08/2019	671915	S19-Au25532	408	0	0	0	0	0	0	0	0	0	Absense
Fragments															
TP08_FRAG01	TP08 at 3.5 m bgs	13/08/2019	671221	S19-Au20153	38	0	0	0	0	0	0	0	0	0	Absense
TP35 FRAG01	TP35 at 2.0 m bgs	14/08/2019	671628	S19-Au23586	33	0	0	0	0	0	0	0	0	0	**Presence**
TP35 FRAG02	TP35 at 3.0 m bgs	14/08/2019	671628	S19-Au23587	85	0	0	0	0	0	0	0	0	0	**Presence**
TP36 FRAG01	TP36 at 0.5 m bgs	14/08/2019	671628	S19-Au23590	75	0	0	0	0	0	0	0	0	0	**Presence**
BH153 FRAG-01	TP153 at 2.1 m bgs	14/08/2019	671628	S19-Au23554	42	0	0	0	0	0	0	0	0	0	**Presence**
GROUND FRAG01	Surface	16/08/2019	671915	S19-Au25558	18	0	0	0	0	0	0	0	0	0	Absense

Statistical Summary of 500 ml Asbestos Analysis

Number of Results	98	98	98	98	98	98	98	98	98	98	1
Number of Detects	98	98	98	98	98	98	98	98	98	98	1
Minimum Concentration	87	0	0	0	0	0	0	0	0	0	0
Minimum Detect	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	1037	0	0	0	0	0	0	0	0	0	0
Maximum Detect	1037	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	572	0	0	0	0	0	0	0	0	0	
Median Concentration	583.5	0	0	0	0	0	0	0	0	0	0
Standard Deviation	173	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0

Env Stds Comments
#1:Residential A with garden/accessible soil also includes children's day care centres, preschools and primary schools.
#2:The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures (refer Section 4.10). This screening level is not applicable to free fibres.

Table A(3) - Soil Analytical Data (PFAS)
Project Number: 56387
Project Name: Doyalson DSI

					Per and Poly – Fluoroalkyl Substances (PFAS)																																					
					2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.001	0.005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0005	0.0005	0.001	0.0002	0.001	0.005	0.0001	0.0002	0.0001	0.0002	0.0001	0.001	0.0001	0.005	0.0001	0.0002	0.0005	0.0005	0.005	0.0001	0.0001	0.0001	0.0001	0.005	0.01	0.0001
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)														0.1																				0.009						
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)																																	0.1							
Sample ID	**Matrix Description**	**Sample Date**	**Lab Report**	**Sample Code**																																				
BH002/MW02 6.0-6.1	Natural	12/08/2019	671221	S19-Au20125	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH004/MW03 0.9-1.0	Fill	14/08/2019	673449	S19-Au38076	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH13 0.0-0.1	Fill	14/08/2019	671628	S19-Au23608	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP18 0.4-0.5	Fill	14/08/2019	673449	S19-Au38069	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP24 3.4-3.5	Fill	14/08/2019	673449	S19-Au23577	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH25/MW04 0.2-0.3	Natural	14/08/2019	671628	S19-Au23482	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
QC01_PFAS	BH25/MW04 0.2-0.3	14/08/2019	671628	S19-Au23488	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
QA01-PFA	BH25/MW04 0.2-0.3	14/08/2019	224101	224101-13	<0.001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0005	<0.0005	<0.001	<0.0002	<0.001	<0.0002	0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.001	<0.0001	-	0.0015	<0.0002	<0.0005	<0.0005	<0.005	<0.0001	0.0002	0.0017	0.0003	-	-	0.0019
BH25/MW04 0.9-1.0	Natural	14/08/2019	673449	S19-Au23483	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP28 0.4-0.5	Fill	14/08/2019	673449	S19-Au23579	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH31 0.0-0.1	Fill	14/08/2019	673449	S19-Au23491	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP35 1.9-2.0	Fill	14/08/2019	673449	S19-Au23584	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH37 0.0-0.1	Fill	14/08/2019	671628	S19-Au23607	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH59 0.0-0.1	Natural	14/08/2019	671628	S19-Au23609	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH70/MW08 0.0-0.1	Fill	13/08/2019	671628	S19-Au23540	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH103 0.0-0.1	Natural	14/08/2019	671628	S19-Au23606	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH115/MW06 4.8-4.9	Natural	13/08/2019	671221	S19-Au20132	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH135/MW01 0.2-0.3	Natural	13/08/2019	671221	S19-Au20134	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
BH142 0.2-0.3	Fill	12/08/2019	671221	S19-Au20128	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP144 0.9-1.0	Fill	13/08/2019	671628/673449	S19-Au23523	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP146 1.9-2.0	Fill	13/08/2019	671628/673449	S19-Au23529	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
Statistical Summary																																								
Number of Results					21	21	21	217	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	20	21	21	21	21	21	21	21	21	20	20	21
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	1
Minimum Concentration					<0.001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0005	<0.0005	<0.001	<0.0002	<0.001	<0.0002	0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.001	<0.0001	<0.005	0.0015	<0.0002	<0.0005	<0.0005	<0.005	<0.0001	0.0002	0.0017	0.0003	<0.005	<0.01	0.0019
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	0.0015	ND	ND	ND	ND	ND	0.0002	0.0017	0.0003	ND	ND	0.0019
Maximum Concentration					<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	0.0015	ND	ND	ND	ND	ND	0.0002	0.0017	0.0003	ND	ND	0.0019
Average Concentration					0.0024	0.0025	0.0024	0.005	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024	0.0048	0.0024	0.0048	0.0024	0.0024	0.0024	0.0025	0.0025	0.0024	0.0024	0.0024	0.0025	0.0024	0.0024	0.0025	0.0024	0.0025	0.005	0.024
Median Concentration					0.0025	0.0025	0.0025	0.005	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.0025	0.005	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.025
Standard Deviation					0.00044	0	0.00053	0.00034	0.00053	0.00053	0.00052	0.00052	0.00053	0.00049	0.00049	0.00044	0.00052	0.00044	0.00052	0.00052	0.0011	0.00053	0.0011	0.00053	0.00044	0.00053	0	0.00022	0.00052	0.00049	0.00049	0	0.00053	0.0005	0.00017	0.00048	0	0	0.005
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A(4) - Soil Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

					Microbiological			Acid Sulfate Soils				Ionic Balance		
					Thermotolerant Coliforms	E.coli	Salmonella	Acid trail - Titratable Sulfidic Acidity	pH-KCL	pH-OX	Sulfur - Peroxide Oxidisable Sulfur	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water
					MPN/g	MPN/g	T	MOL H+/T	ph Units	ph Units	% S	meq/100g	µS/cm	ph Units
EQL					1	1		2	0.1	0.1	0.02	0.05	10	0.1
Grade A Microbiological Standards from NSW EPA Use and Disposal of Biosolid Products, 1997					1000	100	Detected							
ASSMAC, 1998								18			0.03			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL														
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)														
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)														
Sample ID	**Matrix Description**	**Sample Date**	**Lab Report**	**Sample Code**										
TP07_1.4-1.5	Fill	13/08/2019	671221	S19-Au20148	<10	<10	Non Detect	-	-	-	-	-	-	-
TP09 3.9-4.0	Fill	13/08/2019	671628	S19-Au23517	<10	<10	Non Detect	-	-	-	-	-	-	-
BH22 0.0-0.1	Fill	14/08/2019	671628	S19-Au23479	-	-	-	-	-	-	-	3.6	20	5.8
BH25/MW04 5.5-5.6	Natural	14/08/2019	671628	S19-Au23484	-	-	-	6	5	5.4	<0.2	2.6	36	5.3
BH069_0.0-0.1	Natural	15/08/2019	671915	S19-Au25520	-	-	-	-	-	-	-	0.84	<10	5.1
BH078_0.3-0.4	Natural	15/08/2019	671915	S19-Au25525	-	-	-	-	-	-	-	1.6	<10	5.1
BH135/MW01 1.7-1.8	Natural	13/08/2019	671221	S19-Au20135	-	-	-	10	4.6	4.5	<0.02	-	-	-
BH135/MW07 0.0-0.1	Natural	13/08/2019	671221	S19-Au20133	-	-	-	4	5	3.7	<0.02	-	-	-
TP151 0.0-0.1	Fill	14/08/2019	671628	S19-Au23563	<10	<10	Non Detect	-	-	-	-	-	-	-
BH152 2.9-3.0	Fill	14/08/2019	671628	S19-Au23549	-	-	-	-	-	-	-	13	160	6.9
Statistical Summary														
Number of Results					3	3	0	3	3	3	3	5	5	5
Number of Detects					0	0	0	3	3	3	0	5	3	5
Minimum Concentration					<10	<10	ND	4	4.6	3.7	<0.02	0.84	<10	5.1
Minimum Detect					ND	ND	ND	4	4.6	3.7	ND	0.84	20	5.1
Maximum Concentration					<10	<10	0	10	5	5.4	<0.2	13	160	6.9
Maximum Detect					ND	ND	ND	10	5	5.4	ND	13	160	6.9
Average Concentration					5	5		6.7	4.9	4.5	0.04	4.3	45	5.6
Median Concentration					5	5		6	5	4.5	0.01	2.6	20	5.3
Standard Deviation					0	0		3.1	0.23	0.85	0.052	5	65	0.76
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0

Table B - Sediment Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																					
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C16-C34 Fraction	>C34-C40 Fraction	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene	Total Positive PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	50	100	100	50	50	100	100	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1	
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - Guideline Value	20	1.5	80	65	50	0.15	21	200				280																											10,000			
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - SQG High	70	10	370	270	220	1	52	410				550																											50,000			
NEPM 2013 Soil HIL A	100[#8]	20	100[#9]	6000	300[#10]	40[#11]	400	7400												160[#12]															3[#13]				300[#14]			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m													280[#16]				50[#17]	0.7	NL	480			110	5																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m													110[#16]				45[#17]	0.5	55	160			40	3																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																										
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																										
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)																																										
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)																																										
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**																																							
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<2	<0.4	8.5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	7.6	<0.4	23	<5	14	<0.1	<5	8.8	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	<2	<0.4	<5	5.3	7.4	<0.1	<5	130	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	3	<0.4	11	9.7	11	<0.1	9.2	45	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
Statistical Summary																																										
Number of Results	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	4	4	4	0
Number of Detects	2	0	3	2	3	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	99999
Minimum Detect	3	ND	8.5	5.3	7.4	ND	9.2	8.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	7.6	<0.4	23	9.7	14	<0.1	9.2	130	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Maximum Detect	7.6	ND	23	9.7	14	ND	9.2	130	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	3.2	0.2	11	5	8.7	0.05	4.2	47	25	50	50	50	25	10	10	0.05	0.05	0.05	0.05	0.1	0.15	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		0.25	0.25	0.25	0.25	0.25	0.25	
Median Concentration	2	0.2	9.75	3.9	9.2	0.05	2.5	26.9	25	50	50	50	25	10	10	0.05	0.05	0.05	0.05	0.1	0.15	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.605	0.25	0.25	0.25	0.25	0.25	0.25	
Standard Deviation	3.1	0	8.6	3.4	5	0	3.4	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B - Sediment Analytical Data
Project Number: 56387
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	Organochlorine Pesticides																							Chlorinated Alkanes																			
	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	1,1,1,2-tetrachloroethane	1,1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - Guideline Value							4.5		1.2	2.8						2.7						0.9																					
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - SQG High							9		5	7						60						1.4																					
NEPM 2013 Soil HIL A			6				50				240					10				6			300	20																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																											
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																											
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)																																											
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)																																											
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**																																								
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																																												
Number of Results	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	3	3	3	3	3	3	0	3	3	3	0	3	3	3	3	3	3	3
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.05	<0.05	<0.05	<0.05	99999	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	99999	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	99999	<0.5	<0.5	<0.5	99999	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.05	<0.05	<0.05	<0.05	0	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0	<0.05	<0.05	<0.05	<0.05	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	<0.5	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration																									0.25	0.25	0.25	0.25	0.25	0.25		0.25	0.25	0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25
Median Concentration	0.025	0.025	0.025	0.025		0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025		0.025	0.025	0.025	0.025	0.5	0.25	0.25	0.25	0.25	0.25	0.25		0.25	0.25	0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation																									0	0	0	0	0	0		0	0	0		0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B - Sediment Analytical Data
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Project Name: Doyalson DSI

	Chlorinated Alkenes														Solvents	Polychlorinated Biphenyls								Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons							Chlorinated Benzenes							Trihalomethanes			
	1,1-dichloroethene	1,1-dichloropropene	1,3-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	Tert-butyl benzene	Total MAH*	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5		0.5	0.5				0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - Guideline Value																						34																													
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - SQG High																						280																													
NEPM 2013 Soil HIL A																						1 [#15]																												10			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																		
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)																																																		
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)																																																		
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**																																															
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	<0.5	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																																																			
Number of Results	3	0	1	0	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3	3	0	3	3	0	0	0	3	0	3	3	3	3	3	0	3	3	3	3	3	2	3	3	3	3	
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum Concentration	<0.5	99999	<1	99999	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	99999	<0.5	<0.5	99999	99999	99999	<0.5	99999	<0.5	<0.5	<0.5	<0.5	<0.5	99999	<0.5	<0.5	99999	99999	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Maximum Concentration	<0.5	0	<1	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0	<0.5	<0.5	0	0	0	<0.5	0	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0	0	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Average Concentration	0.25				0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25									0.25	0.25		0.25	0.25				0.25		0.25	0.25	0.25	0.25	0.25		0.25	0.25	0.25	0.25	0.25		0.25	0.25	0.25	0.25	
Median Concentration	0.25		0.5		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.25		0.25	0.25				0.25		0.25	0.25	0.25	0.25	0.25		0.25	0.25	0.25	0.25	0.25	0.025	0.25	0.25	0.25	0.25	
Standard Deviation	0				0	0	0	0	0	0	0	0	0	0									0	0		0	0				0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B - Sediment Analytical Data
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					Per and Poly – Fluoroalkyl Substances (PFAS)																																		
					2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTS)	1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTS)	1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTS)	1H.1H.2H.2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)
					mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.001	0.005	0.0001	0.1	0.0001	0.0001	0.0002	0.1	0.0001	0.0005	0.0005	0.001	0.0002	0.001	5	0.0001	0.0002	0.0001	0.0002	0.0001	0.001	0.0001	5	0.0001	0.0002	0.0005	0.0005	0.005	0.0001	0.0001	0.0001	0.0001	0.005	0.01	0.0001
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - Guideline Value																																							
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - SQG High																																							
NEPM 2013 Soil HIL A																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m																																							
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																							
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																							
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																							
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)																					0.1															0.009				
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)																																			0.1					
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**																																			
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	<0.005	<0.005	<0.005	<10	<0.005	<0.005	<0.005	<5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																																							
Number of Results					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.005	<0.005	<0.005	<10	<0.005	<0.005	<0.005	<5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.005	<0.005	<0.005	<10	<0.005	<0.005	<0.005	<5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration																																							
Median Concentration					0.0025	0.0025	0.0025	5	0.0025	0.0025	0.0025	2.5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	2.5	0.0025	0.005	0.0025	0.005	0.0025	0.0025	0.0025	2.5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.025
Standard Deviation																																							
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B - Sediment Analytical Data
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	Microbiological			Asbestos				Other
	Thermotolerant Coliforms	E.coli	Salmonella	Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Asbestos ID in Soil	% Moisture 103oC
	MPN/g	MPN/g	T	g	%w/w	%w/w	Comment	%
EQL	1	1					Presence/ Abes	1
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - Guideline Value								
ANZECC/AEMCANZ Sediment Quality Guideline (2013) - SQG High								
NEPM 2013 Soil HIL A								
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Clay 0 to <1m								
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m								
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A					0.01[#1]			
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL						0.001[#2]		
PFAS NEPM 2018 - Residenital with Garden/Accessible Soil (Table 2)								
PFAS NEPM 2018 - Ecological Guideline Values (Table 3)								
Sample ID	**Soil Description**	**Sample Date**	**Lab Report**	**Sample Code**				
BH13_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25383	-	-	-	-	-	-	-	12
TP086_0.0-0.1	Sediment	15/08/2019	671915	S19-Au25530	-	-	-	-	-	-	-	15
TP151 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23563	<10[#2]	<10	Non Detect	-	-	-	-	15
BH152 0.0-0.1	Sediment	14/08/2019	671628	S19-Au23548	-	-	-	373	0	0	Absense	20
Statistical Summary												
Number of Results					1	1	0	1	1	1	0	4
Number of Detects					0	0	0	1	1	1	0	4
Minimum Concentration					<10	<10	ND	373	0	0	Absence	12
Minimum Detect					ND	ND	ND	373	ND	ND	ND	12
Maximum Concentration					<10	<10	0	373	0	0	0	20
Maximum Detect					ND	ND	ND	373	ND	ND	ND	20
Average Concentration												16
Median Concentration					5	5		373	0	0		15
Standard Deviation												3.3
Number of Guideline Exceedances					0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0

Table B - Groundwater Analytical Data
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	Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons						
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C16-C10 Fraction	>C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	m-Xylene (o)	p-Xylene (m & p)	Xylene (Total)	Naphthalene	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.0001	0.001	0.001	0.001	0.00005	0.001	0.001	0.05	0.1	0.1	0.1	0.05	0.01	0.01	0.001	1	0.001	0.001	0.002	0.003	0.00001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG 2018 Water Quality Guidelines (Fresh Water) 95% level of Protection		0.0002		0.0014	0.0034	0.0006	0.011	0.008								0.95			0.35			0.016																	
ADWG 2011 (as amended Aug 2018) - Drinking Water	0.01	0.002		2	0.01	0.001	0.02									0.001	300	0.8			0.6										0.03				0.001				
ADWG 2011 (as amended Aug 2018) (factor 10) – Recreational	0.1	0.02		20	0.1	0.01	0.2		0.9	0.9	0.9	0.9	0.9			0.01	3000	8			6										0.3		0.01		0.01				
ADWG 2011 (as amended Aug 2018) - Aesthetics				1				3									3	0.025			0.02										0.004								
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m													NL		NL	5	NL	NL			NL	NL																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 4 to <8m													NL		NL	5	NL	NL			NL	NL																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m													1		1	0.8	NL	NL			NL	NL																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 4 to <8m													1		1	0.8	NL	NL			NL	NL																	
Sample ID	**Sample Date**	**Lab Report Number**	**Sample Code**																																					
MW01	19/08/2019	672129	S19-Au27277	0.001	<0.0002	0.003	0.003	0.003	<0.0001	0.037	0.098	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW02	19/08/2019	672129	S19-Au27273	<0.001	<0.0002	0.002	<0.001	0.001	<0.0001	0.003	0.04	0.18	0.2	<0.1	0.38	0.18	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
QA01_GME	19/08/2019	224219	224219-1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	0.002	0.028	<0.05	<0.1	<0.1	-	-	<0.01	-	<0.001	<1	<0.001	<0.001	<0.002	-	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.01	<0.001	<0.001	-
QC01_GME	19/08/2019	672129	S19-Au27274	<0.001	<0.0002	0.002	<0.001	0.001	<0.0001	0.003	0.039	0.17	0.2	<0.1	0.37	0.17	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW03	19/08/2019	672129	S19-Au27275	0.001	<0.0002	0.002	0.003	0.004	<0.0001	0.002	0.026	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW04	19/08/2019	672129	S19-Au27278	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.002	0.007	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW05	19/08/2019	672129	S19-Au27276	0.002	<0.0002	0.007	0.004	0.004	<0.0001	0.001	0.03	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW06	19/08/2019	672129	S19-Au27279	0.002	<0.0002	0.016	0.002	0.002	<0.0001	0.007	0.05	<0.05	0.2	<0.1	0.2	<0.05	<0.02	<0.02	<0.001	<1	<0.001	0.001	0.003	0.004	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW07	19/08/2019	672129	S19-Au27280	0.003	<0.0002	0.1	0.022	0.024	<0.0001	0.018	0.064	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
MW08	19/08/2019	672129	S19-Au27281	<0.001	<0.0002	0.002	0.002	0.003	<0.0001	0.003	0.034	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001
Statistical Summary																																								
Number of Results				10	10	10	10	10	10	10	10	9	9	10	9	10	10	10	10	10	9	10	10	10	1	10	10	1	1	1	10	1	10	9	9	10	1	10	9
Number of Detects				6	8	0	10	10	2	3	0	3	2	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.001	<0.001	<0.00005	0.001	0.007	<0.05	<0.1	<0.1	<0.1	<0.05	<0.01	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Minimum Detect				0.001	ND	0.002	0.002	0.001	ND	0.001	0.007	0.17	0.2	ND	0.2	0.17	ND	ND	ND	ND	0.001	0.003	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				0.003	<0.001	0.1	0.022	0.024	<0.0001	0.037	0.098	0.18	0.2	<0.1	0.38	0.18	<0.02	<0.02	<0.001	<1	<0.001	0.001	0.003	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001
Maximum Detect				0.003	ND	0.1	0.022	0.024	ND	0.037	0.098	0.18	0.2	ND	0.38	0.18	ND	ND	ND	ND	0.001	0.003	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.0012	0.00014	0.014	0.0038	0.0043	0.000048	0.0078	0.042	0.055	0.095	0.05	0.14	0.058	0.0095	0.01	0.0005	0.5	0.0005	0.00055	0.0012	0.0018	0.00046	0.0005	0.0005		0.0005	0.0005				0.0005		0.0005	0.0005	0.0005	0.00095		0.0005	0.0005
Median Concentration				0.00075	0.0001	0.002	0.002	0.0025	0.00005	0.003	0.0365	0.025	0.05	0.05	0.05	0.025	0.01	0.01	0.0005	0.5	0.0005	0.0005	0.001	0.0015	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Standard Deviation				0.00088	0.00013	0.031	0.0065	0.0071	0.0000079	0.011	0.025	0.063	0.072	0	0.14	0.066	0.0016	0	0	0	0	0.00016	0.00063	0.00083	0.00013	0	0		0	0				0		0	0	0	0.0014		0	0
Number of Guideline Exceedances				0	1	0	6	3	0	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	6	3	0	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Data Comments
#1 Quantification of linear and branched isomers

Table B - Groundwater Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Chlorinated Alkanes																		Chlorinated Alkenes											Chlorinated Benzenes					
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	bromochloromethane	carbon tetrachloride	chloroethane	chloromethane	Dichlorodifluoromethane	dichloromethane	trichlorofluoromethane	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	trichloroethene	Vinyl Chloride	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	chlorobenzene
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG 2018 Water Quality Guidelines (Fresh Water) 95% level of Protection				6.5																											0.01	0.17	0.16	0.26	0.06	
ADWG 2011 (as amended Aug 2018) - Drinking Water								0.003					0.003				0.004		0.03							0.05				0.0003	0.03	0.03	1.5		0.04	0.3
ADWG 2011 (as amended Aug 2018) (factor 10) – Recreational								0.03					0.03				0.04		0.3							0.5			0.2	0.003			15		0.4	3
ADWG 2011 (as amended Aug 2018) - Aesthetics																																	0.001	0.02	0.0003	0.01
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																				
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 4 to <8m																																				
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																				
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 4 to <8m																																				
Sample ID	**Sample Date**	**Lab Report Number**	**Sample Code**																																		
MW01	19/08/2019	672129	S19-Au27277	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW02	19/08/2019	672129	S19-Au27273	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
QA01_GME	19/08/2019	224219	224219-1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	-	<0.01	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
QC01_GME	19/08/2019	672129	S19-Au27274	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW03	19/08/2019	672129	S19-Au27275	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW04	19/08/2019	672129	S19-Au27278	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW05	19/08/2019	672129	S19-Au27276	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW06	19/08/2019	672129	S19-Au27279	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW07	19/08/2019	672129	S19-Au27280	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
MW08	19/08/2019	672129	S19-Au27281	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001
Statistical Summary																																				
Number of Results				10	10	10	10	10	10	1	10	10	10	1	10	10	10	10	10	9	10	10	1	1	9	10	10	10	10	10	10	10	10	1	1	10	10	10	10
Number of Detects				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.0005	0.0005	0.0005	0.0005	0.0005	0.0005		0.0005	0.0005	0.0005		0.0005	0.0005	0.00095	0.00095	0.00095	0.0005	0.00095	0.0005			0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00095			0.0005	0.0005	0.0005	0.0005
Median Concentration				0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Standard Deviation				0	0	0	0	0	0		0	0	0		0	0.0014	0.0014	0.0014	0	0.0014	0				0	0	0	0	0	0	0	0.0014			0	0	0	0
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Data Comments
#1 Quantification of linear and branched isomers

Table B - Groundwater Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Polycyclic Aromatic Hydrocarbons																	Solvents	Trihalomethanes				Nutrients			Major Anions				Ionic Balance				VIC - IWRG	
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indenol(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene	2-Propanone (Acetone)	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Ammonia (as N)	Nitrate (as N)	Nitrite (as N)	Carbonate Alkalinity (as CO3)	Bicarbonate Alkalinity (as CaCO3)	Carbonate Alkalinity (as CaCO3)	Hydroxide Alkalinity (as CaCO3)	EC_Lab	pH_Lab	Total Alkalinity (as CaCO3)	Chlorinated Hydrocarbons EPAVic	Other Chlorinated Hydrocarbons EPAVic
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	MG/L	mg/L	mg/L	mg/L	µS/cm	pH Unit	mg/L	µg/L	µg/L
EQL	0.00001	0.00001	0.00001	0.00001	0.00001	0.0005	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	1	0.001	0.001	0.001	0.001	0.01	0.005	0.005	5	5	10	5	1	0.1	5	5	5
ANZG 2018 Water Quality Guidelines (Fresh Water) 95% level of Protection																							0.9												
ADWG 2011 (as amended Aug 2018) - Drinking Water					0.00001														0.25	0.25	0.25	0.25													
ADWG 2011 (as amended Aug 2018) (factor 10) – Recreational					0.0001													140000	2.5	2.5	2.5	2.5		112.9	92										
ADWG 2011 (as amended Aug 2018) - Aesthetics																							0.5												
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																			
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 4 to <8m																																			
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																			
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 4 to <8m																																			
Sample ID	**Sample Date**	**Lab Report Number**	**Sample Code**																																	
MW01	19/08/2019	672129	S19-Au27277	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	0.08	<0.02	<0.02	-	100	<10	<20	5100	6.8	100	<5	<5
MW02	19/08/2019	672129	S19-Au27273	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	0.09	<0.02	<0.02	-	250	<10	<20	5700	7.7	250	<5	<5
QA01_GME	19/08/2019	224219	224219-1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0[#2]	<0.0001	<0.0001	-	<0.001	<0.001	<0.001	<0.001	0.09	<0.05	<0.05	<5	230	-	<5	5000	7.3	230	-	-
QC01_GME	19/08/2019	672129	S19-Au27274	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	0.11	<0.02	0.02	-	240	<10	<20	5600	7.3	240	<5	<5
MW03	19/08/2019	672129	S19-Au27275	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	<0.01	4.5	0.02	-	<20	<10	<20	350	5.7	<20	<5	<5
MW04	19/08/2019	672129	S19-Au27278	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	<0.01	0.13	<0.02	-	23	<10	<20	480	5.6	23	<5	<5
MW05	19/08/2019	672129	S19-Au27276	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	<0.01	0.5	0.04	-	<20	<10	<20	110	5.3	<20	<5	<5
MW06	19/08/2019	672129	S19-Au27279	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	0.03	0.03	<0.02	-	200	<10	<20	1500	7.2	200	<5	<5
MW07	19/08/2019	672129	S19-Au27280	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	<0.01	0.18	0.03	-	24	<10	<20	710	6.3	24	<5	<5
MW08	19/08/2019	672129	S19-Au27281	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	<0.01	0.54	<0.02	-	<20	<10	<20	950	5.5	<20	<5	<5
Statistical Summary																																			
Number of Results				10	10	10	10	10	1	9	10	9	10	10	10	10	10	10	10	10	10	9	10	10	10	10	10	10	1	10	9	10	10	10	10	9	9
Number of Detects				0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	6	4	0	7	0	0	10	10	7	0	0
Minimum Concentration				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0	<0.0001	<0.0001	<0.0001	<0.0001	<1	<0.001	<0.001	<0.001	<0.001	<0.01	<0.02	<0.02	<5	<20	<10	<5	110	5.3	<20	<5	<5
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03	0.03	0.02	ND	23	ND	ND	110	5.3	23	ND	ND
Maximum Concentration				<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1	<0.001	<0.005	<0.001	<0.001	0.11	4.5	<0.05	<5	250	<10	<20	5700	7.7	250	<5	<5
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	4.5	0.04	ND	250	ND	ND	5700	7.7	250	ND	ND
Average Concentration				0.00046	0.00046	0.00046	0.00046	0.00046		0.0005	0.00046	0.0005	0.00046	0.00046	0.00046	0.00046	0.00045	0.00046	0.00046	0.00046	0.5	0.0005	0.0023	0.0005	0.0005	0.043	0.59	0.019		110	5	9.3	2550	6.5	110	2.5	2.5
Median Concentration				0.0005	0.0005	0.0005	0.0005	0.0005	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.5	0.0005	0.0025	0.0005	0.0005	0.0175	0.08	0.015	2.5	62	5	10	1225	6.55	62	2.5	2.5
Standard Deviation				0.00014	0.00014	0.00014	0.00014	0.00014		0	0.00014	0	0.00014	0.00014	0.00014	0.00014	0.00016	0.00014	0.00014	0.00014	0	0	0.00063	0	0	0.044	1.4	0.011		108	0	2.4	2446	0.9	108	0	0
Number of Guideline Exceedances				0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0

Data Comments
#1 Quantification of linear and branched isomers

Table B - Groundwater Analytical Data (PFAS)
Project Number: 56387
Project Name: Doyalson DSI

				PFAS																																			
				2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.05	0.05	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.05	0.01	0.01	0.02	0.01	0.02	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01
PFAS NEMP 2018 - Freshwater 95%																				220													0.13						
PFAS NEMP 2018 - Drinking Water																				0.56														0.07					
PFAS NEMP 2018 - Recreational Water																				5.6														0.7					
Sample ID	**Sample Date**	**Lab Report Number**	**Sample Code**																																					
MW01	19/08/2019	672129	S19-Au27277	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	0.04	0.02	<0.01	<0.01	<0.05	0.08[#1]	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	0.05[#1]	<0.01	<0.01	<0.01	<0.01	<0.01	0.03[#1]	0.08	0.03	0.08	0.22	0.22
MW02	19/08/2019	672129	S19-Au27273	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
QA01_GME	19/08/2019	224219	224219-1	-	-	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	-	<0.01
QC01_GME	19/08/2019	672129	S19-Au27274	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	0.03[#1]	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
MW03	19/08/2019	672129	S19-Au27275	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	0.02[#1]	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
MW04	19/08/2019	672129	S19-Au27278	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	0.04	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	0.02[#1]	<0.05	<0.01	<0.05	0.01	<0.05	<0.01	1.4[#1]	<0.01	<0.01	<0.01	<0.01	<0.01	0.05[#1]	1.45	0.07	1.47	1.52	1.52
MW05	19/08/2019	672129	S19-Au27276	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01[#1]	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01[#1]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
MW06	19/08/2019	672129	S19-Au27279	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
MW07	19/08/2019	672129	S19-Au27280	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
MW08	19/08/2019	672129	S19-Au27281	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1
Statistical Summary																																							
Number of Results				9	9	9	10	10	9	9	9	9	9	9	9	9	9	9	10	9	9	9	9	9	9	9	9	9	9	10	10	10	9	9	10
Number of Detects				0	0	0	0	0	0	2	1	0	0	0	3	0	1	0	0	0	1	0	0	2	0	0	0	0	0	2	2	2	2	2	2
Minimum Concentration				<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01
Minimum Detect				ND	ND	ND	ND	ND	ND	0.04	0.02	ND	ND	ND	0.02	ND	0.02	ND	ND	ND	0.01	ND	ND	0.05	ND	ND	ND	ND	ND	0.03	0.08	0.03	0.08	0.22	0.22
Maximum Concentration				<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	0.04	0.02	<0.01	<0.01	<0.05	0.08	<0.05	0.02	<0.05	<0.01	<0.05	0.01	<0.05	<0.01	1.4	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	1.45	0.07	1.47	1.52	1.52
Maximum Detect				ND	ND	ND	ND	ND	ND	0.04	0.02	ND	ND	ND	0.08	ND	0.02	ND	ND	ND	0.01	ND	ND	0.05	1.4	ND	ND	ND	ND	ND	0.05	1.45	0.07	1.47	1.52	1.52
Average Concentration				0.025	0.025	0.005	0.023	0.005	0.005	0.025	0.013	0.0067	0.005	0.005	0.025	0.018	0.025	0.0065	0.025	0.005	0.025	0.0056	0.025	0.005	0.15	0.005	0.005	0.005	0.005	0.005	0.012	0.16	0.014	0.18	0.21	0.21
Median Concentration				0.025	0.025	0.005	0.025	0.005	0.005	0.025	0.005	0.005	0.005	0.005	0.025	0.005	0.025	0.005	0.025	0.005	0.025	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.025	0.05
Standard Deviation				0	0	0	0.0063	0	0	0	0.015	0.005	0	0	0	0.025	0	0.0047	0	0	0	0.0017	0	0	0.44	0	0	0	0	0	0.015	0.45	0.021	0.49	0.49	0.46
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0

Data Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
#2 NIL (+)VE

Table C - Surface Water Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Metals & Metalloids								TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons																
	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	C10-C16 Fraction	C16-C34 Fraction	C34-C40 Fraction	C10-C40 Fraction (Total)	C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene	Total Positive PAHs
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.0001	0.001	0.001	0.001	0.00005	0.001	0.001	0.05	0.1	0.1	0.1	0.05	0.01	0.01	0.001	1	0.001	0.001	0.002	0.003	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.0005	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001			
ANZG 2018 Water Quality Guidelines (Fresh Water) 95% level of Protection		0.0002		0.0014	0.0034	0.0006	0.011	0.008								0.95			0.35			0.016																	
ADWG 2011 (as amended Aug 2018) - Drinking Water	0.01	0.002		2	0.01	0.001	0.02									0.001	300	0.8			0.6						0.00001												
ADWG 2011 (as amended Aug 2018) (factor 10) – Recreational	0.1	0.02		20	0.1	0.01	0.2		0.9	0.9	0.9	0.9	0.9			0.01	3000	8			6						0.0001												
ADWG 2011 (as amended Aug 2018) - Aesthetics				1				3									3	0.025			0.02																		
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m													NL		NL	5	NL	NL			NL	NL																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 4 to <8m													NL		NL	5	NL	NL			NL	NL																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m													1		1	0.8	NL	NL			NL	NL																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 4 to <8m													1		1	0.8	NL	NL			NL	NL																	

Field_ID	Sampled_Date-Time	Lab_Report_Number	SampleCode																																					
SW01	14/08/2019	671628	S19-Au23597	0.001	<0.0002	0.003	<0.001	0.004	<0.0001	0.002	0.021	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	-
QA01-SW	14/08/2019	224101	224101-12	0.001	<0.0001	0.002	0.003	0.003	<0.00005	0.001	0.015	<0.05	<0.1	<0.1	-	<0.05	<0.01	<0.01	<0.001	<1	<0.001	<0.001	<0.002	-	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0[#2]
QC01_SW	14/08/2019	671628	S19-Au23601	0.001	<0.0002	0.003	<0.001	0.004	<0.0001	0.002	0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	-
SW02	14/08/2019	671628	S19-Au23598	<0.001	<0.0002	0.007	<0.001	0.005	<0.0001	<0.001	0.012	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	-
SW03	14/08/2019	671628	S19-Au23599	0.001	<0.0002	0.012	<0.001	0.009	<0.0001	0.002	0.018	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	-
SW04	14/08/2019	671628	S19-Au23600	<0.001	<0.0002	0.008	<0.001	0.012	<0.0001	0.002	0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	-
SW05	16/08/2019	671915	S19-Au25922	<0.001	<0.0002	0.004	<0.001	0.004	<0.0001	0.005	0.33	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	-

Statistical Summary																																							
Number of Results	7	7	7	7	7	7	7	7	7	7	7	6	7	7	7	7	7	7	7	7	6	7	7	7	7	7	7	1	6	7	6	7	7	7	7	7	6	7	7	1
Number of Detects	4	0	7	1	7	0	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Minimum Concentration	<0.001	<0.0001	0.002	<0.001	0.003	<0.00005	<0.001	0.012	<0.05	<0.1	<0.1	<0.1	<0.05	<0.01	<0.01	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0	<0.00001	<0.00001	<0
Minimum Detect	0.001	ND	0.002	0.003	0.003	ND	0.001	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	0.001	<0.0002	0.012	0.003	0.012	<0.0001	0.005	0.33	<0.05	<0.1	<0.1	<0.1	<0.05	<0.02	<0.02	<0.001	<1	<0.001	<0.001	<0.002	<0.003	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0
Maximum Detect	0.001	ND	0.012	0.003	0.012	ND	0.005	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.00079	0.000093	0.0056	0.00086	0.0059	0.000046	0.0021	0.062	0.025	0.05	0.05	0.05	0.025	0.0093	0.0093	0.0005	0.5	0.0005	0.0005	0.001	0.0015	0.000019	0.000011	0.000011	0.000011	0.000011	0.000011		0.000005	0.000011	0.000005	0.000011	0.000011	0.000011	0.000011	0.000011	0.000011	0	0.000011	0.000011	
Median Concentration	0.001	0.0001	0.004	0.0005	0.004	0.00005	0.002	0.02	0.025	0.05	0.05	0.05	0.025	0.01	0.01	0.0005	0.5	0.0005	0.0005	0.001	0.0015	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00025	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0	0.000005	0.000005	0
Standard Deviation	0.00027	0.000019	0.0036	0.00094	0.0033	0.0000094	0.0014	0.12	0	0	0	0	0	0.0019	0.0019	0	0	0	0	0	0	0.000036	0.000017	0.000017	0.000017	0.000017	0.000017		0	0.000017	0	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0	0.000017	0.000017	
Number of Guideline Exceedances	0	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table C - Surface Water Analytical Data
Project Number: 56387
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				Chlorinated Alkanes																	Chlorinated Alkenes												Solvents
				1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
EQL				0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
ANZG 2018 Water Quality Guidelines (Fresh Water) 95% level of Protection					6.5																												
ADWG 2011 (as amended Aug 2018) - Drinking Water											0.003					0.003				0.004		0.03							0.05			0.0003	
ADWG 2011 (as amended Aug 2018) (factor 10) – Recreational											0.03					0.03				0.04		0.3							0.5			0.2	0.003	140000
ADWG 2011 (as amended Aug 2018) - Aesthetics																																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 4 to <8m																																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																	
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 4 to <8m																																	
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**SampleCode**																															
SW01	14/08/2019	671628	S19-Au23597	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
QA01-SW	14/08/2019	224101	224101-12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	-	<0.01	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	-
QC01_SW	14/08/2019	671628	S19-Au23601	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
SW02	14/08/2019	671628	S19-Au23598	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
SW03	14/08/2019	671628	S19-Au23599	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
SW04	14/08/2019	671628	S19-Au23600	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
SW05	16/08/2019	671915	S19-Au25922	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
Statistical Summary																																	
Number of Results				7	7	7	7	7	7	1	7	7	7	1	7	7	7	7	7	6	7	7	1	1	6	7	7	7	7	7	7	7	6
Number of Detects				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0011	0.0011	0.0011	0.0005	0.0011	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0011	0.5
Median Concentration				0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.5
Standard Deviation				0	0	0	0	0	0		0	0	0		0	0	0.0017	0.0017	0.0017	0	0.0017	0			0	0	0	0	0	0	0	0	0.0017	0
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table C - Surface Water Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

	Monocyclic Aromatic Hydrocarbons										Miscellaneous Hydrocarbons							Chlorinated Benzenes						Trihalomethanes				Nutrients			Major Anions			Ionic Balance			ANZG 2018 VIC - IWRG	
	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	Isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene	tert-butyl benzene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Ammonia (as N)	Nitrate (as N)	Nitrite (as N)	Bicarbonate Alkalinity (as CaCO3)	Carbonate Alkalinity (as CaCO3)	Hydroxide Alkalinity (as CaCO3)	EC_Lab	pH_Lab	Total Alkalinity (as CaCO3)	Chlorinated Hydrocarbons EPAVic	Other Chlorinated Hydrocarbons EPAVic
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	pH Unit	mg/L	µg/L	µg/L
EQL	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.005	0.005	5	10	5	1	0.1	5	5	5
ANZG 2018 Water Quality Guidelines (Fresh Water) 95% level of Protection																		0.01	0.17	0.16	0.26	0.06						0.9										
ADWG 2011 (as amended Aug 2018) - Drinking Water									0.03					0.001				0.03	0.03	1.5		0.04	0.3	0.25	0.25	0.25	0.25											
ADWG 2011 (as amended Aug 2018) (factor 10) – Recreational									0.3		0.01			0.01						15		0.4	3	2.5	2.5	2.5	2.5		112.9	92								
ADWG 2011 (as amended Aug 2018) - Aestetics									0.004											0.001	0.02	0.0003	0.01					0.5										
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 2 to <4m																																						
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Clay 4 to <8m																																						
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 2 to <4m																																						
NEPM 2013 Groundwater HSL A & HSL B for Vapour Intrusion - Sand 4 to <8m																																						

Field_ID	Sampled_Date-Time	Lab_Report_Number	SampleCode																																				
SW01	14/08/2019	671628	S19-Au23597	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.08	0.32	<0.02	25	<10	<20	170	7.1	25	<5	<5
QA01-SW	14/08/2019	224101	224101-12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.01	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.24	0.005	-	-	-	180	7	23	-	-
QC01_SW	14/08/2019	671628	S19-Au23601	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.08	0.32	<0.02	<20	<10	<20	200	4.2	<20	<5	<5
SW02	14/08/2019	671628	S19-Au23598	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1.6	0.49	<0.02	<20	<10	<20	190	3.6	<20	<5	<5
SW03	14/08/2019	671628	S19-Au23599	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.57	0.35	<0.02	<20	<10	<20	170	3.6	<20	<5	<5
SW04	14/08/2019	671628	S19-Au23600	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.19	0.98	<0.02	<20	<10	<20	150	3.9	<20	<5	<5
SW05	16/08/2019	671915	S19-Au25922	<0.001	<0.001	-	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.12	<0.02	<0.02	51	<10	<20	-	-	51	-	-

Statistical Summary																																						
Number of Results	7	7	1	7	7	1	1	1	7	1	7	6	6	7	1	7	6	1	1	7	7	7	7	7	7	7	7	6	7	7	6	6	6	6	6	7	5	5
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	1	2	0	0	6	6	3	0	0
Minimum Concentration	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.08	<0.02	0.005	<20	<10	<20	150	3.6	<20	<5	<5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.08	0.24	0.005	25	ND	ND	150	3.6	23	ND	ND
Maximum Concentration	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1.6	0.98	<0.02	51	<10	<20	200	7.1	51	<5	<5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	0.98	0.005	51	ND	ND	200	7.1	51	ND	ND
Average Concentration	0.0005	0.0005		0.0005	0.0005				0.0005		0.0005	0.0005	0.0005	0.0011		0.0005	0.0005			0.0005	0.0005	0.0005	0.0005	0.0005	0.0022	0.0005	0.0005	0.44	0.39	0.0093	19	5	10	177	4.9	20	2.5	2.5
Median Concentration	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0025	0.0005	0.0005	0.155	0.32	0.01	10	5	10	175	4.05	10	2.5	2.5
Standard Deviation	0	0		0	0				0		0	0	0	0.0017		0	0			0	0	0	0	0	0.00076	0	0	0.6	0.3	0.0019	17	0	0	18	1.7	15	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0

Table C - Surface Water Analytical Data
Project Number: 56387
Project Name: Doyalson DSI

				PFAS																																			
				2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.05	0.05	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.05	0.01	0.05	0.01	0.02	0.01	0.02	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	
PFAS NEMP 2018 - Freshwater 95%																		220														0.13							
PFAS NEMP 2018 - Drinking Water																		0.56															0.07						
PFAS NEMP 2018 - Recreational Water																		5.6															0.7						
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**	**SampleCode**																																					
SW01	14/08/2019	671628	S19-Au23597	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.1
QA01-SW	14/08/2019	224101	224101-12	<0.05	<0.5	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02	<0.05	<0.05	0.03	<0.1	<0.01	<0.02	<0.01	<0.02	<0.01	<0.1	<0.01	<0.01	<0.02	<0.02	<0.1	<0.5	<0.01	<0.01	<0.01	<0.01	-	-	0.03			
QC01_SW	14/08/2019	671628	S19-Au23601	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.1
SW02	14/08/2019	671628	S19-Au23598	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	0.01	0.01	<0.01	<0.01	<0.05	<0.01	<0.05	0.07[#1]	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05[#1]	0.05	0.12	0.12	0.14	0.14		
SW03	14/08/2019	671628	S19-Au23599	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.1
SW04	14/08/2019	671628	S19-Au23600	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.1
SW05	16/08/2019	671915	S19-Au25922	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.01	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.1
Statistical Summary																																							
Number of Results				7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	6	7			
Number of Detects				0	0	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1	2			
Minimum Concentration				<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	<0.02	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	0.03			
Minimum Detect				ND	ND	ND	ND	ND	ND	0.01	0.01	ND	ND	ND	0.03	ND	0.07	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND	0.05	0.05	0.12	0.12	0.14	0.03			
Maximum Concentration				<0.05	<0.5	<0.01	<0.05	<0.01	<0.01	<0.05	0.01	0.01	<0.02	<0.05	<0.05	0.03	<0.1	0.07	<0.05	<0.01	<0.05	<0.01	<0.1	<0.01	0.09	<0.02	<0.02	<0.1	<0.5	<0.01	0.05	0.05	0.12	0.12	0.14	0.14			
Maximum Detect				ND	ND	ND	ND	ND	ND	0.01	0.01	ND	ND	ND	0.03	ND	0.07	ND	ND	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	0.05	0.05	0.12	0.12	0.14	0.14			
Average Concentration				0.025	0.057	0.005	0.022	0.005	0.005	0.023	0.0057	0.0057	0.0057	0.0079	0.025	0.0086	0.029	0.014	0.023	0.005	0.023	0.005	0.029	0.005	0.017	0.0057	0.0057	0.011	0.04	0.005	0.011	0.011	0.021	0.024	0.044	0.06			
Median Concentration				0.025	0.025	0.005	0.025	0.005	0.005	0.025	0.005	0.005	0.005	0.005	0.025	0.005	0.025	0.005	0.025	0.005	0.025	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.025	0.05			
Standard Deviation				0	0.085	0	0.0076	0	0	0.0057	0.0019	0.0019	0.0019	0.0076	0	0.0094	0.0094	0.025	0.0057	0	0.0057	0	0.0094	0	0.032	0.0019	0.0019	0.017	0.093	0	0.017	0.017	0.043	0.047	0.047	0.036			
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Data Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
#2 NIL (+)VE

Appendix B Historical Borelogs

BH001/MW01

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 9.5
Bore Diameter (mm): 150

Eastings (GDA 94): 362505.660608
Northings (GDA 94): 6325820.96773
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 7.5
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 6.5
Screen Bottom Depth (mbgs): 9.5

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
SFA			0			Fill	Fill - Silty SAND - dark brown, damp to wet, loose, poorly sorted with trace inclusions of gravels and asphalt	BH001/MW01 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
								BH001/MW01 0.2-0.3 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
				0.40		Fill	Fill - Sandy CLAY - brown, damp to wet, low plasticity, soft with trace inclusions of gravels and asphalt	BH001/MW01 0.4-0.5	No Odour, Staining or Asbestos Observed
				0.60		CL	CLAY - greyish brown with orange mottling, heterogeneous, damp, medium plasticity, firm		
			1					BH001/MW01 0.9-1.0	No Odour, Staining or Asbestos Observed
				1.20		SW	SAND - fine, orangish brown which grades to light grey and yellowish brown at 3.4mbgs, homogeneous, damp, dense, well sorted		
			2						
			3						
			4						
			5						
				5.50		SC	Clayey SAND - light grey, homogeneous, damp, dense, well sorted		
			6						
			7						
	▶			7.30		SANDSTONE	Sandstone - light grey, homogeneous, moist, hard		
			8						
			9						
				9.50			Borehole BH001/MW01 terminated at 9.5m		End of Hole at Program Depth
			10						

BH002/MW02

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 10.1
Bore Diameter (mm): 150

Eastings (GDA 94): 362580.271989
Northings (GDA 94): 6325795.5284
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 8.5
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 7.1
Screen Bottom Depth (mbgs): 10.1

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
SFA						Fill	Fill - Gravelly Silty SAND - brown, moist, loose, poorly sorted with trace inclusions of concrete	BH002/MW02 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
				0.20		Fill	Fill - Silty SAND - brown, heterogeneous, damp, loose, poorly sorted, with trace inclusions of gravels	BH002/MW02 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
				0.40		SC	Clayey SAND - orangish brown, well sorted, homogeneous, damp, loose	BH002/MW02 0.4-0.5	No Odour, Staining or Asbestos Observed
			1					BH002/MW02 0.9-1.0	No Odour, Staining or Asbestos Observed
			2	2.00		SW	SAND - fine to medium, orangish brown, homogeneous, very loose, well sorted, damp		
			3						
			4						
			5						
				5.50		SANDSTONE	SANDSTONE - brown and then grey at 6.3 mbgs, homogeneous, moist, hard		
			6					BH002/MW02 6.0-6.1	No Odour, Staining or Asbestos Observed
			7						
			8						
	▼			8.30		SANDSTONE	SANDSTONE - greyish brown, homogeneous, damp, hard		
			9						
			10						
				10.10			Borehole BH002/MW02 terminated at 10.1m		End of Hole at Program Depth

BH004/MW03

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 7.5
Bore Diameter (mm): 150

Eastings (GDA 94): 362693.513882
Northings (GDA 94): 6325855.85352
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 6
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 4.5
Screen Bottom Depth (mbgs): 7.5

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA						Fill	Fill - Silty SAND - brown, heterogeneous, damp, medium plasticity, poorly sorted with trace inclusions of glass, asphalt and gravels	BH004/MW03 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
								BH004/MW03 0.2-0.3 PID = 0 ppm	No Odour, Staining or Asbestos Observed
				0.35		Fill	Fill - Sandy CLAY - brown, heterogeneous, damp, loose plasticity, firm, with trace inclusions of gravels	BH004/MW03 0.4-0.5	No Odour, Staining or Asbestos Observed
				0.60		CL	CLAY - brown with red and grey mottling, grades to grey with red mottling at 1.2mbgs, heterogeneous, damp, medium plasticity, firm	BH004/MW03 0.9-1.0	No Odour, Staining or Asbestos Observed
			1						
			2						
			3						
				3.60		CL-SC	Sandy CLAY - light brown then greyish brown at 4.2mbgs, homogeneous, damp, soft, medium plasticity		
	▶		4						
			5						
			6						
			7						
				7.50			Borehole BH004/MW03 terminated at 7.5m		End of Hole at Program Depth
			8						
			9						
			10						

BH025/MW04

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 7
Bore Diameter (mm): 150

Eastings (GDA 94): 363118.995939
Northings (GDA 94): 6325819.4548
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 5.5
Surface Finish: Standpipe
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 4
Screen Bottom Depth (mbgs): 7

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
SFA			0			Fill	Fill - Sandy SILT - dark brown, homogeneous, moist, low plasticity, soft with trace inclusions of rootlets	BH025/MW04 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
								BH025/MW04 0.2-0.3 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
				0.40		Fill	Fill - Sandy CLAY - dark grey, homogeneous, moist, low plasticity, very soft	BH025/MW04 0.4-0.5	No Odour, Staining or Asbestos Observed
				0.65		CH-SC	Sandy CLAY - grey with yellow mottling which grades to grey at 2.1mbgs, moist, homogeneous, medium plasticity, soft		
			1					BH025/MW04 0.9-1.0	No Odour, Staining or Asbestos Observed
			2						
			3	2.60		CL	CLAY - light grey, homogeneous, damp, high plasticity, firm		
			4						
			5						
	▶			5.10		CL-SC	Sandy CLAY - orange, homogeneous, moist, medium plasticity, soft	BH025/MW04 5.5-5.6	No Odour, Staining or Asbestos Observed
			6						
			7						
				7.00			Borehole BH025/MW04 terminated at 7m		End of Hole at Program Depth
			8						
			9						
			10						

BH038/MW05

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M.Swinfield
Contractor: Terra Test
Total Hole Depth (mbgs): 7.5
Bore Diameter (mm): 150

Eastings (GDA 94): 362639.623441
Northings (GDA 94): 6326003.87761
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 5.5
Surface Finish: Roadbox
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 4.5
Screen Bottom Depth (mbgs): 7.5

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA						Fill	Gravelly Silty SAND, brown, heterogeneous, damp, loose, poorly sorted, with trace inclusions of asphalt	BH038/MW05 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
				0.20		Fill	Silty SAND, brown, heterogeneous, damp, medium density, poorly sorted, damp, with trace inclusions of gravels	BH038/MW05 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
								BH038/MW05 0.4-0.5	No Odour, Staining or Asbestos Observed
				0.70		SC	Clayey SAND, orangey yellow, homogeneous, damp, medium density, well sorted	BH038/MW05 0.9-1.0	No Odour, Staining or Asbestos Observed
			1						
			2	2.10		CH-SC	Sandy CLAY, orange with grey mottling, heterogeneous, damp, low plasticity, firm		
			3						
			4	3.80		CL	CLAY, reddish grey, homogeneous, damp, medium plasticity, firm		
			5	4.90		CH-SC	Sandy CLAY, grey, homogeneous, damp, low plasticity soft		
	▶			5.60		CL	CLAY, yellowish brown with white mottling, heterogeneous, moist medium plasticity		
			6						
			7						
				7.50			Borehole BH038/MW05 terminated at 7.5m		End of Hole at Program Depth
			8						
			9						
			10						

BH070/MW08

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M.Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 6.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363196.307649
Northings (GDA 94): 6325973.49807
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 4.5
Surface Finish: Standpipe
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 3.5
Screen Bottom Depth (mbgs): 6.5

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA						ML-SM	Sandy SILT, dark brown, heterogeneous, damp, low plasticity, soft, with trace inclusions of rootlets and gravels	BH070/MW08 0.0-0.1	No Odour, Staining or Asbestos Observed
								BH070/MW08 0.2-0.3	No Odour, Staining or Asbestos Observed
								BH070/MW08 0.4-0.5	No Odour, Staining or Asbestos Observed
				0.35		CH-SC	Sandy CLAY, dark grey, homogeneous, wet, low plasticity, very soft		
			1						
				1.50		CL	CLAY, red with grey mottling, heterogeneous, damp, medium plasticity, firm		
			2						
			3						
				3.50		CH-SC	Sandy CLAY, reddish grey, homogeneous, damp, low plasticity, soft		
			4						
	▶			4.50		CH-SC	Sandy CLAY, light brown, homogeneous, saturated, low plasticity, very soft		
			5						
			6						
				6.50			Borehole BH070/MW08 terminated at 6.5m		End of Hole at Program Depth
			7						
			8						
			9						
			10						

BH115/MW06

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M.Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 6
Bore Diameter (mm): 150

Eastings (GDA 94): 363262.155755
Northings (GDA 94): 6326306.71677
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 4
Surface Finish: Standpipe
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 3
Screen Bottom Depth (mbgs): 6

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA						Fill	Sandy SILT, dark brown, heterogeneous, moist, low plasticity, soft, with trace inclusions of gravels	BH115/MW06 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
				0.20		Fill	Sandy CLAY, brown, homogeneous, moist, low plasticity, soft	BH115/MW06 0.2-0.3 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
								BH115/MW06 0.4-0.5	No Odour, Staining or Asbestos Observed
				0.70		CH-SC	Sandy CLAY, orangey brown, homogeneous, moist, non plastic, soft		
			1					BH115/MW06 0.9-1.0	No Odour, Staining or Asbestos Observed
				1.70		CL	CLAY, light grey with red mottling, heterogeneous, damp, firm, medium plasticity		
			2						
				2.80		CH-SC	Sandy CLAY, light brown, homogeneous, damp, low plasticity, very soft		
			3						
				3.50		SC	Clayey SAND, light brown, homogeneous, damp, well sorted, medium density		
	▶		4						
				4.50		CL	Sandy CLAY, light brown, homogeneous, saturated, low plasticity, very soft		
			5					BH115/MW06 4.8-4.9	No Odour, Staining or Asbestos Observed
			6						
				6.00			Borehole BH115/MW06 terminated at 6m		End of Hole at Program Depth
			7						
			8						
			9						
			10						

BH135/MW07

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M.Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 9.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363262.155755
Northings (GDA 94): 6326306.71677
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Water Level Initial (mbgs): 7.5
Surface Finish: Standpipe
Casing / Screen Type: Class 18 PVC - 50mm
Casing Bottom Depth (mbgs): 6.5
Screen Bottom Depth (mbgs): 9.5

Method	Water (mbgs)	Well Details	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA			1			SM	Silty SAND, greyish brown, homogeneous, damp, loose, well sorted with trace inclusions of rootlets	BH135/MW07 0.0-0.1	No Odour, Staining or Asbestos Observed
				0.20		SC	Clayey SAND, light brown, homogeneous, damp, medium density, poorly sorted, with trace inclusions of gravels	BH135/MW07 0.2-0.3	No Odour, Staining or Asbestos Observed
				0.40		CH-SC	Sandy CLAY, brown with red mottling, heterogeneous, damp, low plasticity, firm	BH135/MW07 0.4-0.5	No Odour, Staining or Asbestos Observed
			2	1.20		SC	Clayey SAND, brownish red, homogeneous, medium density, damp, well sorted	BH135/MW07 1.7-1.8	No Odour, Staining or Asbestos Observed
			3						
			4						
				4.50		CL	CLAY, red with light grey mottling, heterogeneous, medium plasticity, firm		
			5						
			6						
			7						
	▶			7.20		CL	CLAY, light brown, homogeneous, wet, medium plasticity, soft, moist		
			8						
			9						
				9.50			Borehole BH135/MW07 terminated at 9.5m		End of Hole at Program Depth
			10						

WELL JBSG WELL - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH003

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 150

Eastings (GDA 94): 362627.897084
Northings (GDA 94): 6325796.58673
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
PT				Fill	Fill - Silty SAND - brown, heterogeneous, damp, loose, poorly sorted, with trace inclusions of rootlets and gravels	BH003 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - SAND - greyish brown, homogeneous, damp, loose, well sorted	BH003 0.2-0.3 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
						BH003 0.4-0.5	No Odour, Staining or Asbestos Observed
	1	0.80		CH-SC	Sandy CLAY - greyish brown with red mottling, heterogeneous, damp, low plasticity		
		1.20			Borehole BH003 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH005

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 150

Eastings (GDA 94): 362748.053456
Northings (GDA 94): 6325858.36402
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
PT				Fill	Fill - Silty SAND - brown, heterogeneous, damp, loose, poorly sorted, with trace inclusions of rootlets and gravels	BH005 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
						BH005 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		SC	Clayey SAND - light brown, homogeneous, damp, medium density, well sorted	BH005 0.4-0.5	No Odour, Staining or Asbestos Observed
	1	0.80		CL	CLAY - orange with grey mottling, heterogeneous, damp medium plasticity, firm		
		1.20			Borehole BH005 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

TP006

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362792.835292
Northings (GDA 94): 6325832.84946
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - SAND - dark brown and grey, medium gained, homogeneous with trace inclusions of gravels and rootlets	TP006 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP006 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.50		Fill	Fill - Sandy Gravelly CLAY - dark brown with whie and black mottling, moist, heterogeneous, some inclusions of woody fragments, sandstone and igenous gravels		
	1.0					TP006 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5					TP006 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.50		SW	SAND - dark, grey, medium grained, moist to wet, homogeneous		
	2.0					TP006 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP006 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0					TP006 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.00		CL-SC	Sandy CLAY - reddish white with black mottling, medium plasticity, medium density, homogeneous		
						TP006 3.2-3.3	No Odour, Staining or Asbestos Observed
		3.30			Test Pit TP006 terminated at 3.3m		End of Hole at Program Depth
	3.5						
	4.0						
	4.5						

TP007

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.9
Pit Dimension (m3): 450

Eastings (GDA 94): 362831.447921
Northings (GDA 94): 6325832.33404
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Clayey SAND - dark brown, fine grained, moist, heterogeneous with trace inclusions of rootlets	TP007 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - light brown with black mottling, heterogeneous, with trace inclusions of organics and igenous gravels		
	0.5					TP007 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP007 0.9-1.0 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		1.40		Fill	Fill - Sandy CLAY - dark brownish grey, medium grained, moist with trace inclusions of wood fragments, rootlets, igenous gravels and concrete	TP007 1.4-1.5	No Odour, Staining or Asbestos Observed
	1.5						
	2.0					TP007 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP007 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0					TP007 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.20		SC	Clayey SAND - dark greym homogenous, wet, highly plastic, well sorted		
	3.5					TP007 3.4-3.5	No Odour, Staining or Asbestos Observed
		3.50		CL-SC	Sandy CLAY - reddish white with orange mottling, medium plasticity, medium density, moist		
						TP007 3.8-3.9	No Odour, Staining or Asbestos Observed
	4.0	3.90			Test Pit TP007 terminated at 3.9m		End of Hole at Program Depth
	4.5						

TP008

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362872.069248
Northings (GDA 94): 6325820.14687
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Silty SAND dark grey with white speckles, loose, damp, heteregeneous	TP008 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Gravelly SAND - pale grey to yellow, fine to medium grained, heterogenous with inclusions of sandstone gravels		
	0.5					TP008 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP008 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		1.00		Fill	Fill - Sandy Gravelly CLAY - dark grey with white mottling, medium grained sand to boulder sized clasts, damp and then wet to saturated at depth, dense, medium plasticity with anthropogenic inclusions of brick, plastics, concrete, machinery, piping and bonded building fragments		
	1.5					TP008 1.4-1.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	2.0					TP008 1.9-2.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	2.5					T008 2.4-2.5 PID = 0.3 ppm	Strong Hydrocarbon Odour. No Staining or Asbestos Observed
	3.0					TP008 2.9-3.0 PID = 0.2 ppm	Strong Hydrocarbon Odour. No Staining or Asbestos Observed
	3.5					TP008 3.4-3.5 PID = 0.3 ppm	Suspected ACM Encountered at Interval. Strong Hydrocarbon Odour, No Staining Observed
	4.0					TP008 3.9-4.0 PID = 5.4 ppm	Strong Hydrocarbon Odour. No Staining or Asbestos Observed
		4.30			Test Pit TP008 terminated at 4.3m		End of hole. Depth limit of excavator reached.
	4.5						

TP009

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362917.569785
Northings (GDA 94): 6325814.20153
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Clayey SAND - dark brown, damp, heterogeneous	TP009 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Clayey SAND - greyish brown, medium density, medum plasticity, damp, heteregeneous with trace inclusions of ironstone gravels		
	0.5					TP009 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.60		Fill	Fill - Sandy CLAY - light orange to brown, dense, medium plasticity		
	1.0					TP009 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		1.00		Fill	Fill - Sandy CLAY - dark grey with orange and black mottling, moist which increases to wet with depth, medium plasticty, dense with trace inclusions of brick and wood		
	1.5						
	2.0					TP009 1.9-2.0 PID = 0.1 ppm	Water entering test pit at ~1.5mbgs. No Odour, Staining or Asbestos Observed
	2.5						
	3.0					TP009 2.9-3.0	No Odour, Staining or Asbestos Observed
	3.5						
		3.50		SW	SAND - dark grey, loose, homogeneous, coarse grained, damp		
	4.0					TP009 3.9-4.0	No Odour, Staining or Asbestos Observed
		4.00		CL	CLAY - Red, white, pale grey, medium grained with minor inclusions of ironstone gravels		
	4.5					TP009 4.4-4.5	No Odour, Staining or Asbestos Observed End of Hole at Program Depth
		4.60			Test Pit TP009 terminated at 4.6m		

TP010

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362956.18071
Northings (GDA 94): 6325794.07388
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Gravelly CLAY - dark brown, loose, damp with inclusiuons of fine igneous gravels	TP010 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		Fill	Fill - Sandy CLAY - orangey brown, medium density, pockets of loose pale cream sand with inclusions of rootlets and gravels	TP010 0.4-0.5 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP010 0.9-1.0 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		1.20		Fill	Fill - Sandy CLAY - orangey brown, medium density with inclusions of woody fragments, corrugated iron and Astroturf. PVC piping encountered at ~1.5mbgs		
	1.5					TP010 1.4-1.5	No Odour, Staining or Asbestos Observed
	2.0						
	2.5					TP010 2.4-2.5	No Odour, Staining or Asbestos Observed
		2.80		CL-GC	Gravelly CLAY - red and white with orange mottling, dense, medium plasticity with trace inclusions of gravels		
	3.0					TP010 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.30			Test Pit TP010 terminated at 3.3m		End of Hole at Program Depth
	3.5						
	4.0						
	4.5						

TP011

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

Eastings (GDA 94): 363005.687151
Northings (GDA 94): 6325785.7321
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Sandy CLAY - orange to light brown, dense, damp medium plastic, inclusions of organics and rootlets	TP011 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP011 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.60		Fill	Fill - Sandy CLAY - dark grey to black, heterogeneous, medium density, medium plasticity with trace inclusions of timber and roots		
	1.0	0.90		SW	SAND - yellowish brown, medium grained, moist to wet, loose, homogeneous	TP011 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5					TP011 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.50		CL-SC	Sandy CLAY - red and white to pale grey, medium grained, medium density and plasticty, heterogeneous with minor inclusions of gravels		
	2.0					TP011 1.9-2.0	No Odour, Staining or Asbestos Observed
		2.00			Test Pit TP011 terminated at 2m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP012

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362823.811802
Northings (GDA 94): 6325993.70766
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Sandy CLAY - dark grey, moist to wet, heterogeneous with trace inclusions of roots and rootlets	TP012 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP012 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL-SC	Sandy CLAY - red and white to pale grey with iron staining, medium density and plasticity, heterogeneous		
	1.0					TP012 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.30			Test Pit TP012 terminated at 1.3m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH013

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 100

Eastings (GDA 94): 363124.000778
Northings (GDA 94): 6325777.52256
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				Fill	Fill - Silty CLAY - brown, non plastic, inclusions of rootlets, firm, heterogeneous	BH013 0.0-0.1 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
		0.15		CL-SC	Sandy CLAY - orange, medium plasticity, stiff, homogeneous	BH013 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH013 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH014

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362592.659805
Northings (GDA 94): 6325914.24982
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - greyish brown, damp to wet, medium density, poorly sorted with inclusions of trace asphalt	BH014 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.10		SG	SAND - light brown, damp to wet, medium density, poorly sorted	BH014 0.2-0.3	No Odour, Staining or Asbestos Observed
						BH014 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.80		CL-SC	Sandy CLAY - orangish brown, damp to wet, loose plasticity, firm		
	1					BH014 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Borehole BH014 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH015

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362664.07099
Northings (GDA 94): 6325928.921
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - greyish brown, damp to wet, poorly sorted, medium density with trace inclusions of asphalt	BH015 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Silty SAND - light brown, homogeneous, damp, medium density, well sorted	BH015 0.2-0.3 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.35		SC	Clayey SAND - yellowish brown, homogeneous, medium density, well sorted	BH015 0.4-0.5	No Odour, Staining or Asbestos Observed
	1	0.80		CH-SC	Sandy CLAY - brown with yellowish grey and orange mottling, heterogeneous, firm, damp, low plasticity		
		1.20			Borehole BH015 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH016

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362686.634702
Northings (GDA 94): 6325897.65777
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Silty SAND - brown, homogeneous, damp, loose, well sorted	BH016 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.25		Fill	Fill - Sandy CLAY - orangish brown, heterogeneous, damp, low plasticity, with trace inclusions of asphalt	BH016 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.40		SC	Clayey SAND - brown grading to grey at 0.9mbgs, heterogeneous, damp, medium plasticity, well sorted	BH016 0.4-0.5	No Odour, Staining or Asbestos Observed
	1						
		1.20			Borehole BH016 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH017

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1
Bore Diameter (mm): 150

Eastings (GDA 94): 362737.657554
Northings (GDA 94): 6325893.02329
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Fill - Silty SAND - brown, homogeneous, damp, medium density, well sorted with trace inclusions of rootlets	BH017 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		CH-SC	Sandy CLAY - brown with red and yellow mottling, heterogeneous, damp, low plasticity, firm	BH017 0.4-0.5	No Odour, Staining or Asbestos Observed
	1					BH017 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Borehole BH017 terminated at 1m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

TP018

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362793.627969
Northings (GDA 94): 6325871.57476
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND -dark greyish brown, fine grained, loose, damp, heterogeneous	TP018 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - orangey grey, medium grained, high plasticity, heterogeneous medium density		
	0.5					TP018 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.50		SC	Clayey SAND - orange and grey, medium grained, homogeneous, loose		
	1.0					TP018 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5	1.40		SC	Clayey SAND - orange and white mottling, medium grained, heterogeneous with trace inclusions of sandstone gravels	TP018 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.80		CL-SC	Sandy CLAY - reddish white to pale grey, medium grained, dense, medium plasticity, iron staining, heterogeneous		
	2.0					TP018 2.1-2.2	No Odour, Staining or Asbestos Observed
		2.20			Test Pit TP018 terminated at 2.2m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP019

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362845.910942
Northings (GDA 94): 6325833.30409
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - dark brownish grey, fine grained, heterogeneous, moist with trace inclusions of rootlets	TP019 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.15		Fill	Fill - Gravelly SAND - grey and yellowish brown, coarse, well graded, dry, loose with some inclusions of slag and ash	TP019 0.2-0.3 PID = 0.1 ppm	Minor Odour of Tar. No Staining or Asbestos Observed
		0.30		Fill	Fill - Clayey SAND - medium brown to orange, medium plasticity, dense, moist with trace inclusions of igneous gravels, rootlets and woody fragments	TP019 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5						
	1.0					TP019 0.9-1.0 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		1.00		Fill	Fill - Sandy CLAY - sand decreasing with depth, dark grey brown, loose to medium density, moist to wet increasing with depth at 2.0mbgs with trace inclusions of wood		
	1.5					TP019 1.4-1.5	No Odour, Staining or Asbestos Observed
	2.0					TP019 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP019 2.4-2.5	No Odour, Staining or Asbestos Observed
		2.80		CL-SC	Sandy CLAY - reddish white, dense, low plasticty, iron stained with trace inclusions of gravels		
	3.0					TP019 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.30			Test Pit TP019 terminated at 3.3m		End of Hole at Program Depth
	3.5						
	4.0						
	4.5						

TP020

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.5
Pit Dimension (m3): 450

Eastings (GDA 94): 362887.165518
Northings (GDA 94): 6325828.57858
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - dark brown, moist with trace inclusions of rootlets	TP020 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Sandy CLAY - orange and grey mottling, dense, low plasticity, heterogeneous with minor inclusions of gravels		
	0.5					TP020 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.80		Fill	Fill - Clayey SAND - dark grey, medium grained, homogeneous		
	1.0					TP020 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.5					TP020 1.4-1.5 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		1.50		Fill	Fill - Sandy CLAY - dark brownish grey, highly plastic, moist to wet, heterogeneous, some trace inclusions of branches and wood fragments and presence of a metal pipe associated with redundant service		
	2.0					TP020 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP020 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0					TP020 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.10		CL-GC	Gravelly CLAY - reddish grey, medium density and plasticity, minors inclusions of sandy and iron gravels		
	3.5					TP020 3.4-3.5	No Odour, Staining or Asbestos Observed
		3.50			Test Pit TP020 terminated at 3.5m		End of Hole at Program Depth
	4.0						
	4.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP021

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.4
Pit Dimension (m3): 450

Eastings (GDA 94): 362973.685157
Northings (GDA 94): 6325872.7948
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - dark brown, moist, loose, heterogeneous with trace inclusions of rootlets	TP021 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - SAND - grey, medium grained, loose, well sorted, homogeneous, damp		
	0.5					TP021 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.50		Fill	Fill - Sandy CLAY - light to dark brown, medium density and plasticity, damp with inclusions of wood and rootlets		
	1.0					TP021 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.5						
	2.0					TP021 1.9-2.0	No Odour, Staining or Asbestos Observed
		2.00		SC	Clayey SAND - reddish orange with white mottling, medium grained, dense, heterogenous		
						TP021 2.3-2.4	No Odour, Staining or Asbestos Observed
	2.5	2.40			Test Pit TP021 terminated at 2.4m		End of Hole at Program Depth
	3.0						
	3.5						
	4.0						
	4.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH022

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 3.6
Bore Diameter (mm): 50

Eastings (GDA 94): 362985.929587
Northings (GDA 94): 6325829.89879
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Silty SAND - brown, homogeneous, damp, loose, well sorted, with trace inclusions of rootlets	BH022 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - greyish brown, damp to wet, medium density, poorly sorted with trace inclusions of gravels, wood and clay clasts	BH022 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.70		Fill	Fill - Sandy CLAY - greyish brown, damp to wet, medium density, firm with trace inclusions of wood, gravels and concrete	BH022 0.9-1.0 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
	1					BH022 1.4-1.5	No Odour, Staining or Asbestos Observed
	2					BH022 2.4-2.5	No Odour, Staining or Asbestos Observed
	3					BH022 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.10		SC	Clayey SAND - brownish grey, homogeneous, damp, medium density, well sorted	BH022 3.4-3.5	No Odour, Staining or Asbestos Observed
		3.60			Borehole BH022 terminated at 3.6m		End of Hole at Program Depth
	4						
	5						
	6						

TP023

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.1
Pit Dimension (m3): 50

Eastings (GDA 94): 363041.488026
Northings (GDA 94): 6325814.81623
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - dark grey, loose, damp, heterogeneous	TP023 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.10		Fill	Fill - Clayey SAND - yellow, medium grained, well sorted, damp, loose		
						TP023 0.3-0.4 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		Fill	Fill - Sandy Gravelly CLAY - dark grey with red mottling, medium density and plasticity, damp, heterogeneous, some inclusions of plastics, plastic piping, concrete, organics, igneous and sandstone gravels		
	1.0					TP023 0.9-1.0 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1.5						
	2.0					TP023 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5						
	3.0					TP023 2.9-3.0	No Odour, Staining or Asbestos Observed
	3.5						
	4.0					TP023 3.9-4.0	No Odour, Staining or Asbestos Observed
		4.10			Test Pit TP023 terminated at 4.1m		End of hole. Depth limit of excavator reached.
	4.5						

TP024

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.2
Pit Dimension (m3): 450

Eastings (GDA 94): 363086.785351
Northings (GDA 94): 6325822.26981
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - dark brown to yellow with depth, medium grained, damp, heterogeneous with trace inclusions of rootlets	TP024 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.15		Fill	Fill - Sandy Gravelly CLAY - dark grey to black, medium density, highly plastic, heterogeneous with some inclusions of rootlets, tree stumps, anthropogenic metals and timber, concrete, asphalt and igneous gravels	TP024 0.1-0.2 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5					TP024 0.4-0.5 PID = 0.2 ppm	Mild Odour of Decaying Organics. No Staining or Asbestos Observed
	1.0						
	1.5					TP024 1.4-1.5 PID = 0.2 ppm	Mild Odour of Decaying Organics. No staining or Asbestos Observed
	2.0						
	2.5					TP024 2.4-2.5	Mild Odour of Decaying Organics. No staining or Asbestos Observed
	3.0						
	3.5					TP024 3.4-3.5	Mild Odour of Decaying Organics. No staining or Asbestos Observed
	4.0					TP024 4.1-4.2	Mild Odour of Decaying Organics. No staining or Asbestos Observed
		4.20			Test Pit TP024 terminated at 4.2m		End of hole. Depth limit of excavator reached.
	4.5						

BH026

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 150

Eastings (GDA 94): 362595.305644
Northings (GDA 94): 6325946.66134
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Fill - Gravelly Silty SAND - brown, damp to wet, medium density, poorly sorted with trace inclusions of gravels	BH026 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Silty SAND - light brown, heterogeneous, damp to wet, loose, poorly sorted, trace inclusions of gravels	BH026 0.2-0.3 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.40		SW	SAND - light brown, homogeneous, damp, loose, well sorted	BH026 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70		CL-SC	Sandy CLAY - orangey brown, damp to wet, loose plasticity, firm with trace inclusions of gravels		
	1						
		1.20			Borehole BH026 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH027

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362660.684316
Northings (GDA 94): 6325953.26271
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - brownish grey, damp to wet, medium density, poorly sorted	BH027 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - light brown, damp to wet, medium density, poorly sorted with trace inclusions of gravels	BH027 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						BH027 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50		SC	Clayey SAND - orangish brown, homogeneous, damp, well sorted, medium density		
		0.80		CL	CLAY - grey with red and yellow mottling, homogeneous, damp, firm, medium plasticity		
	1					BH027 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Borehole BH027 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

TP028

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362705.14309
Northings (GDA 94): 6325944.33604
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - dark brownish grey, fine, loose, damp, heterogeneous	TP028 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.30		SG-GC	Gravelly Clayey SAND - dark grey, loose, medium grained with inclusions of sandstone gravels		
	0.5					TP028 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0					TP028 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5						
		1.60		SC	Clayey SAND - orangey red with white mottling, loose, medium grained with trace inclusions of sandstone and igneous gravels		
	2.0					TP028 1.9-2.0	No Odour, Staining or Asbestos Observed
		2.10			Test Pit TP028 terminated at 2.1m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH029

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1
Bore Diameter (mm): 150

Eastings (GDA 94): 362754.023101
Northings (GDA 94): 6325934.20129
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Fill - Silty SAND - brown, homogeneous, damp, medium density, well sorted with trace inclusions of rootlets	BH029 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - brown with red and yellow mottling, damp, low plasticity, firm	BH029 0.4-0.5	No Odour, Staining or Asbestos Observed
	1					BH029 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Borehole BH029 terminated at 1m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH030

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.5
Bore Diameter (mm): 150

Eastings (GDA 94): 362796.421131
Northings (GDA 94): 6325927.35363
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Fill - Silty SAND - brown, homogeneous, damp, medium density, well sorted with trace inclusions of rootlets	BH030 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Sandy CLAY - orangey brown, damo to wet, low plasticity, firm with trace inclusions of gravels	BH030 0.4-0.8 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.70		Fill	Fill - Clayey SAND - light brown, homogeneous, damp, medium density, well sorted	BH030 0.9-1.0 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	1	1.30		SW	SAND - light brown with yellow mottling, homogeneous, damp, loose, well sorted	BH030 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.50			Borehole BH030 terminated at 1.5m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH031

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.5
Bore Diameter (mm): 150

Eastings (GDA 94): 362853.461098
Northings (GDA 94): 6325910.48617
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Fill - Silty SAND - brown, heterogeneous, damp, medium density, well sorted with trace inclusions of rootlets	BH031 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Sandy CLAY - brown, heterogeneous, damp, low plasticity, firm with trace inclusions of gravels	BH031 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1	0.90		CL-SC	Sandy CLAY - orangey brown, homogeneous, damp		
						BH031 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.50			Borehole BH031 terminated at 1.5m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH032

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Terratest
Total Hole Depth (mbgs): 2.1
Bore Diameter (mm): 50

Eastings (GDA 94): 362897.861028
Northings (GDA 94): 6325900.03787
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - SAND - medium brown, fine grained, damp with trace inclusions of rootlets	BH032 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.25		Fill	Fill - Clayey SAND - orangey brown with grey mottling, medium grained, medum density and plasticity with some inclusions of rootlets, igneous and sandstone gravels	BH032 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1					BH032 0.9-1.0	No Odour, Staining or Asbestos Observed
						BH032 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.50		CL-GC	Gravelly CLAY - reddish white, medium plastic, dense with inclusions of ironstone and igneous gravels		
	2					BH032 1.9-2.0	No Odour, Staining or Asbestos Observed
		2.10			Borehole BH032 terminated at 2.1m		End of Hole at Program Depth
	3						
	4						
	5						
	6						

TP033

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362954.855312
Northings (GDA 94): 6325904.74925
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy CLAY - dark brown, moist, heterogeneous with trace inclusions of rootlets	TP033 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Sandy CLAY - yellowish brown, medium plasticity, dense, heterogeneous, trace inclusions of wood, igeneous gravels and rootlets		
	0.5					TP033 0.4-0.5 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP033 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5					TP033 1.4-1.5	No Odour, Staining or Asbestos Observed
	2.0					TP033 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP033 2.4-2.5	No Odour, Staining or Asbestos Observed
		2.80		SC	Clayey SAND - pale grey with red mottling, medium to coarse grained, heterogeneous, high plasticity		
	3.0					TP033 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.20			Test Pit TP033 terminated at 3.2m		End of Hole at Program Depth
	3.5						
	4.0						
	4.5						

BH034

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 3.6
Bore Diameter (mm): 50

Eastings (GDA 94): 363021.95883
Northings (GDA 94): 6325891.5084
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Silty SAND - brown, heterogeneous, damp, loose, well sorted, with trace inclusions of rootlets	BH034 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Sandy CLAY - brown, heterogeneous, damp, low plasticity, firm with trace inclusions of gravels and bricks	BH034 0.4-0.5 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	1	0.80		Fill	Fill - Silty SAND - greyish brown, heterogeneous, moist, medium plasticity, poorly sorted with trace inclusions of wood and gravels	BH034 0.9-1.0 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		1.30		Fill	Fill - Sandy CLAY - grey and brown, heterogeneous, damp, low plasticity, firm with trae inclusions of gravels	BH034 1.4-1.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	2						
		2.10		Fill	Fill - Clayey SAND - grey, heterogeneous, wet, medium density, poorly sorted with trace inclusions of gravels	BH034 2.4-2.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	3						
		3.20		CH	CLAY - grey with orange and yellow mottling, homogeneous, damp, firm, medium plasticity	BH034 3.4-3.5	No Odour, Staining or Asbestos Observed
		3.60			Borehole BH034 terminated at 3.6m		End of Hole at Program Depth
	4						
	5						
	6						

TP035

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.3
Pit Dimension (m3): 450

Eastings (GDA 94): 363064.630829
Northings (GDA 94): 6325900.21091
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - yellow to dark brown, medium grained, well sorted, heterogeneous, damp with inclusions of rootlets	TP035 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Clayey SAND - light yellowish orange, medium densitu, heterogeneous with trace inclusions of organic matter and gravels		
	0.5					TP035 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.60		Fill	Fill - Sandy Gravelly CLAY - dark brownish grey, dense, medium plastic, heterogeneous, some inclusions of tyres, saw blades (1.5mbgs), metals, plastic matting, timber and bonded builidng material fragments		
	1.0					TP035 0.9-1.0 PID = 0.2 ppm	Slight Odour of Organic Decay. No Staining or Asbestos Observed
	1.5						
	2.0					TP035 1.9-2.0	Potential ACM Encounted at Interval. Slight Odour of Organic Decay. No Staining Observed
	2.5						
	3.0					TP035 2.9-3.0	Potential ACM Encounted at Interval. Slight Odour of Organic Decay. No Staining Observed
	3.5						
	4.0					TP035 3.9-4.0	Slight Odour of Organic Decay. Staining or Asbestos Observed
		4.00		CH-SC	Sandy CLAY - grey and red with white mottling, iron staining, medium density and plasticity with some inclusions of ironstone gravels		
						TP035 4.2-4.3	Slight Odour of Organic Decay. Staining or Asbestos Observed
		4.30			Test Pit TP035 terminated at 4.3m		End of hole. Depth limit of excavator reached.
	4.5						

TP036

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 3.7
Pit Dimension (m3): 450

Eastings (GDA 94): 363097.31382
Northings (GDA 94): 6325865.75567
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - SAND - yellow to dark grey, loose, medium grained, damp with some inclusions of rootlets	TP036 0.0-0.2 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.15		Fill	Fill - Sandy Gravelly CLAY - yellow, low density, damp with some inclusions of sandstone and igneous gravels		
	0.5					TP036 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.50		Fill	Fill - Sandy Gravelly CLAY - dark grey, medium density, high plasticity, damp with some inclusions of timber, concrete, tyres, roots, asphalt, plastics, brick and sbonded building material fragments		
	1.0						
	1.5					TP036 1.4-1.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	2.0						
	2.5					TP036 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0						Potential bonded ACM encountered at 2.8mbgs
	3.5					TP036 3.4-3.5	No Odour, Staining or Asbestos Observed
		3.70			Test Pit TP036 terminated at 3.7m		End of hole. Depth limit of excavator reached.
	4.0						
	4.5						

BH037

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363151.200342
Northings (GDA 94): 6325851.69681
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				Fill	Fill - Silty CLAY - brown, non plastic, firm, hetereogeneous with inclusions of rootlets	BH037 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.15		CL-SC	Sandy CLAY - orangey brown, medium plasticity, stiff, homogenous	BH037 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH037 terminated at 0.5m		End of Hole at Program Depth
	1						
	2						
	3						
	4						
	5						
	6						

BH039

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362699.237943
Northings (GDA 94): 6325994.68875
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - brownish grey, heterogeneous, damp, medium density, poorly sorted	BH039 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.25		Fill	Fill - Clayey SAND - light brown, heterogeneous, damp, medium density, poorly sorted with trace inclusions of gravels	BH039 0.2-0.3 PID = 0 ppm	No Odour, Staining or Asbestos Observed
						BH039 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		SC	Clayey SAND - orangey brown, homogeneous, damp, well sorted, medium density		
	1	0.90		CL	CLAY - grey with red and yellow mottling, homogeneous, damp, firm, medium plasticity	BH039 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Borehole BH039 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH040

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Bore Diameter (mm): 450

Eastings (GDA 94): 362763.247441
Northings (GDA 94): 6326008.08523
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Clayey SILT - medum grey, fine grained, damp, dense, homogeneous with trace inclusions of rootlets	BH040 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.30		SC	Clayey SAND - orange, medium grained, loose, homogeneous, damp	BH040 0.4-0.5	No Odour, Staining or Asbestos Observed
	1	0.80		SC	Clayey SAND - orangey white with red mottling, damp, loose with some inclusions of igneous and sandstone gravels	BH040 0.9-1.0	No Odour, Staining or Asbestos Observed
						BH040 1.7-1.8	No Odour, Staining or Asbestos Observed
	2	1.80			Borehole BH040 terminated at 1.8m		End of Hole at Program Depth
	3						
	4						
	5						
	6						

TP041

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362809.612882
Northings (GDA 94): 6325980.28713
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - light to medium grey, medium grained, damp, homogenous	TP041 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.10		Fill	Fill - Clayey SAND - orange, medium grained, damp, loose, homogenous		
						TP041 0.3-0.4 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.40		CL-SC	Sandy CLAY - reddish white, medium plasticity, heterogenous with iron staining and trace inclusions of ironstone and sandstone gravels		
	0.5						
	1.0					TP041 1.0-1.1	No Odour, Staining or Asbestos Observed
		1.20			Test Pit TP041 terminated at 1.2m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP042

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.8
Pit Dimension (m3): 450

Eastings (GDA 94): 362855.079837
Northings (GDA 94): 6325961.80611
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark brown, loose, damp	TP042 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - reddish orange with white mottling, medium density and plasticity with some inclusions of ironstone gravels		
	0.5					TP042 0.4-0.5	No Odour, Staining or Asbestos Observed
						TP042 0.7-0.8	No Odour, Staining or Asbestos Observed
		0.80			Test Pit TP042 terminated at 0.8m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP043

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 8/12/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362916.42642
Northings (GDA 94): 6325956.67551
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - light to medium brown with while speckles, loose, dry, low density, heterogeneous with trace inclusions of rootlets	TP043 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.30		SC	Clayey SAND - yellow, medium grained, loose, heterogeneous		
	0.5					TP043 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50		CL-SC	Sandy CLAY - yellow, medium grained, loose, heterogeneous	TP043 0.5-0.6	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP043 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP044

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 8/12/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.4
Pit Dimension (m3): 450

Eastings (GDA 94): 362964.002214
Northings (GDA 94): 6325946.74751
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - light brown with white speckles, loose, moist, heterogeneous with trace inclusions of rootlets	TP044 0.0-0.1 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Gravelly Clayey SAND - medium brown, loose, grades to dense clay with depth, damp, heterogeneous with minor inclusions of asphalt and igneous gravels		
	0.5					TP044 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP044 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5					TP044 1.4-1.5	No Odour, Staining or Asbestos Observed
	2.0					TP044 1.9-2.0	No Odour, Staining or Asbestos Observed
		2.00		SW	SAND - orangey red with white and grey mottling, loose, medium grained, heterogeneous with trace inclusions of woody fragments		
						TP044 2.3-2.4	No Odour, Staining or Asbestos Observed
		2.40			Test Pit TP044 terminated at 2.4m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP045

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 8/12/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 363012.436395
Northings (GDA 94): 6325934.38945
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - medium greyish brown, damp, loose, heterogeneous with trace inclusions of rootlets and woody fragments	TP045 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		SC	Clayey SAND - dark yellow with red mottling, damp, loose, heterogeneous	TP045 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0					TP045 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Test Pit TP045 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP046

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 363053.388968
Northings (GDA 94): 6325923.97483
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Clayey SILT - dark brown, moist, homogeneous	TP046 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		SW	SAND - greyish yellow, medium grained, wet, homogeneous, loose		
	0.5					TP046 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50		CL	CLAY - dark brown with red mottling, moist, high plasticity, dense, heterogeneous		
	1.0					TP046 1.0-1.1	No Odour, Staining or Asbestos Observed
		1.20			Test Pit TP046 terminated at 1.2m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP047

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

Eastings (GDA 94): 363109.185461
Northings (GDA 94): 6325912.08715
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark brown, medium grained, moist with trace inclusions of rootlets	TP047 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		SC	Clayey SAND - medium brown, medium grained, wet, homogeneous	TP047 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70		CL	CLAY - orange with red mottling, medium density, medium platiscity		
	1.0					TP047 1.0-1.1	No Odour, Staining or Asbestos Observed
							Groundwater encountered
	1.5	1.40			Test Pit TP047 terminated at 1.4m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP048

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 363132.797254
Northings (GDA 94): 6325896.89819
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark grey with white speckles, moist, loose, low density, heterogeneous with trace inclusions of rootlets	TP048 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.30		SW	SAND - grey, wet, fine to medium grained, low density, loose, homogeneous		
	0.5					TP048 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL-SC	Sandy CLAY - light reddish grey, highly plastic, wet, high density		
	1.0					TP048 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Test Pit TP048 terminated at 1.2m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP049

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 8/12/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2
Pit Dimension (m3): 450

Eastings (GDA 94): 362683.833698
Northings (GDA 94): 6326071.21937
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark brown, moist, heterogeneous with some inclusions of organics, roots and woody fragments	TP049 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5					TP049 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0					TP049 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.10		ML-SM	Sandy SILT - dark grey, dry, dense, homogeneous with minor inclusions of rootlets		~~ Groundlevel 1.1m ~~
	1.5					TP049 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.60		SC	Clayey SAND - mustard yellow, fine to medium grained, loose, damp		
	2.0					TP049 1.9-2.0	No Odour, Staining or Asbestos Observed
		2.00			Test Pit TP049 terminated at 2m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP050

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362724.594943
Northings (GDA 94): 6326037.76931
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Gravelly ROAD BASE - light greyish brown, medium grained, heterogeneous, well graded	TP050 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.30		SC	Clayey SAND - yellowish orange, medium grained, loose, heterogeneous with minor inclusions of sandstone and ironstone gravels		
	0.5					TP050 0.4-0.5	No Odour, Staining or Asbestos Observed
						TP050 0.6-0.7	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP050 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP051

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362773.332219
Northings (GDA 94): 6326022.16801
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Gravelly ROAD BASE - light greyish brown, medium grained, heterogeneous, well graded with some inclusions of igneous gravels	TP051 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.10		CL-SC	Sandy CLAY - orangey brown with red mottling, medium density and plasticity with minor inclusions of gravels		
	0.5					TP051 0.6-0.7	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP051 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP052

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362829.260656
Northings (GDA 94): 6326026.36992
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Clayey SAND -orangey brown with grey mottling, loose, moist, heterogeneous with inclusions of asphalt, gravels, road base, wood and rootlets	TP052 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1.0						
	1.5					TP052 1.5-1.6	No Odour, Staining or Asbestos Observed
	2.0						
	2.5						
	3.0						~~ Groundlevel 3.2m ~~
		3.20		CL-ML	Silty CLAY - yellowish brown, medium plasticty, homogeneous		
	3.5					TP052 3.5-3.6	No Odour, Staining or Asbestos Observed
		3.80		SC	Clayey SAND - reddish orange, low density, homogeneous with iron staining		
	4.0					TP052 4.1-4.2	No Odour, Staining or Asbestos Observed
		4.20			Test Pit TP052 terminated at 4.2m		End of Hole at Program Depth
	4.5						

TP053

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362876.700366
Northings (GDA 94): 6326008.38358
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Clayey SAND - medium brown, loose, moist, heterogenous with some inclusions of roadbase gravels, asphalt, roots and rootlets	TP053 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP053 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5						
		1.80		SC	Clayey SAND - light to medium brown, loose, moist, homogeneous with trace inclusions of rootlets		~~ Groundlevel 1.8m ~~
	2.0					TP053 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5	2.40		CL	CLAY - brown, medium plasticity, dense, homogeneous	TP053 2.5-2.6	No Odour, Staining or Asbestos Observed
		2.60			Test Pit TP053 terminated at 2.6m		End of Hole at Program Depth
	3.0						
	3.5						
	4.0						
	4.5						

TP054

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362926.733546
Northings (GDA 94): 6326005.93455
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Clayey SILT - dark brown, damp, heterogeneous with some inclusions of fine gravels, roots and rootlets	TP054 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.10		Fill	Fill - Clayey SAND - dark brown, dense, heterogeneous with some inclusions of plastics, concrete, medium sandstone and igneous gravels		
	0.5					TP054 0.4-0.5 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP054 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.30		CL-SC	Sandy CLAY - reddish brown with white mottling, dense, medium plasticity with iron staining		
	1.5					TP054 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.70			Test Pit TP054 terminated at 1.7m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP055

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362967.420436
Northings (GDA 94): 6325982.9484
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				ML-CL	Clayey SILT - light brown, compact, dense, heterogeneous with trace inclusions of igneous gravels, roots and rootlets	TP055 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.40		SC	Clayey SAND - light brown, medium to fine grained, medium density, well sorted, homogeneous with some inclusions of gravels	TP055 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.80		SC	Clayey SAND - orange with white mottling with iron staining, medium grained, loose, heterogenous	TP055 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5	1.30			Test Pit TP055 terminated at 1.3m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH056

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363020.690273
Northings (GDA 94): 6325976.59077
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - white to light brown, damp, angular, loose, homogeneous with trace inclusions of rootlets	BH056 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.30		CL-SC	Sandy CLAY - orange, medium plasticity, damp, stiff, homogeneous	BH056 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH056 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH057

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.55
Bore Diameter (mm): 150

Eastings (GDA 94): 363074.893629
Northings (GDA 94): 6325973.15202
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - white to light brown, damp, angular, loose, homogeneous with trace inclusions of rootlets	BH057 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.25		CL-SC	Sandy CLAY - orange, medium plasticity, damp, stiff, homogeneous	BH057 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.55			Borehole BH057 terminated at 0.55m		End of Hole at Program Depth

BH058

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.6
Bore Diameter (mm): 150

Eastings (GDA 94): 363122.377224
Northings (GDA 94): 6325962.79143
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - white to light brown, damp, angular, loose, homogeneous with trace inclusions of rootlets	BH058 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - orange, medium plasticity, damp, stiff, homogeneous	BH058 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.60			Borehole BH058 terminated at 0.6m		End of Hole at Program Depth

BH059

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363184.66676
Northings (GDA 94): 6325935.33949
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				CL-SC	Sandy CLAY - yellow to orange, medium plasticity, stiff	BH059 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH059 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH059 terminated at 0.5m		End of Hole at Program Depth
	1						
	2						
	3						
	4						
	5						
	6						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP060

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362688.961497
Northings (GDA 94): 6326112.99437
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.0			ML-SM	Sandy SILT - light grey, dry, loose, homogeneous with inclusions of roots and rootlets	TP060 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.40		SC	Clayey SAND - yellow tending towards orange with depth, medium to coarse grained, homogeneous	TP060 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0					TP060 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.10			Test Pit TP060 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP061

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362744.411038
Northings (GDA 94): 6326083.91187
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				ML-SG	Sandy Gravelly SILT - pale grey, dry, dense, heterogenous with some inclusions of ironstone nodules	TP061 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.30		SC-SG	Clayey Gravelly SAND - brownish, dry, high density		
	0.5					TP061 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP061 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP062

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362785.716741
Northings (GDA 94): 6326059.24734
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				MH-SM	Sandy SILT - dark brown, wet, medium to fine grained, homogeneous with inclusions of roots and rootlets	TP062 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		SC	Clayey SAND - yellowish brown, medium grained, homogeneous		
	0.5					TP062 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP062 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP063

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362854.856123
Northings (GDA 94): 6326065.94046
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Sandy Clayey SILT - dark grey to black, heterogeneous with inclusions of concrete chunks and organic matter	TP063 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1.0						
		1.20		CL-SC	Sandy CLAY - orangey grey with red mottling, medium plasticity and density, homogeneous with trace inclusions of roots		~~ Groundlevel 1.2m ~~
	1.5					TP063 1.3-1.4	No Odour, Staining or Asbestos Observed
	2.0					TP063 2.2-2.3	No Odour, Staining or Asbestos Observed
		2.30			Test Pit TP063 terminated at 2.3m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP064

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362879.683419
Northings (GDA 94): 6326056.36794
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Gravelly ROAD BASE - light brown, fine to medium grained, loose, well graded, heterogeneous	TP064 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.10		SC	Clayey SAND - orangey brown, well sorted, dense, homogeneous		
						TP064 0.3-0.4	No Odour, Staining or Asbestos Observed
	0.5						
		0.50		CL-SC	Sandy CLAY - light brown with grey mottling, medium density and plasticty, homogeneous		
						TP064 0.6-0.7	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP064 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH065

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.6
Bore Diameter (mm): 150

Eastings (GDA 94): 362946.25189
Northings (GDA 94): 6326043.16188
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - white to light brown, fine, medium graded, dry, angular with trace inclusions of rootlets	BH065 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - orange, stiff, damp, medium plasticity	BH065 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Borehole BH065 terminated at 0.6m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH066

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 362985.0734
Northings (GDA 94): 6326049.33014
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - light brown, fine, well sorted, angular, damp, loose, homogeneous with some inclusions of rootlets	BH066 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - orange, stiff, damp, homogenous	BH066 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH066 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH067

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.6
Bore Diameter (mm): 150

Eastings (GDA 94): 363087.640708
Northings (GDA 94): 6326037.7334
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - light brown, fine, well sorted, angular, damp, loose, homogeneous with some inclusions of rootlets	BH067 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.25		CL-SC	Sandy CLAY - orange, stiff, damp, homogenous	BH067 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.60			Borehole BH067 terminated at 0.6m		End of Hole at Program Depth

BH068

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.55
Bore Diameter (mm): 150

Eastings (GDA 94): 363150.933782
Northings (GDA 94): 6326020.24168
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - light brown, fine, well sorted, angular, damp, loose, homogeneous with some inclusions of rootlets	BH068 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.15		CL-SC	Sandy CLAY - orange, stiff, damp, homogenous	BH068 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.55			Borehole BH068 terminated at 0.55m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH069

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.45
Bore Diameter (mm): 150

Eastings (GDA 94): 363182.017928
Northings (GDA 94): 6325997.89259
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - light brown, fine, well sorted, angular, damp, loose, homogeneous with some inclusions of rootlets	BH069 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.15		CL-SC	Sandy CLAY - orange, stiff, damp, homogenous	BH069 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.45			Borehole BH069 terminated at 0.45m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP071

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

Eastings (GDA 94): 362695.909417
Northings (GDA 94): 6326164.63123
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - SILT - brown, non plastic, damp, heterogeneous with trace inclusions of gravels and rootlets	TP071 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP071 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50		CL-SC	Sandy CLAY - orange, firm, medium plasticity, homogeneous		
	1.0					TP071 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.40			Test Pit TP071 terminated at 1.4m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP072

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362747.508717
Northings (GDA 94): 6326157.12376
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP072 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.20		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	0.5					TP072 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP072 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP073

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 362794.301085
Northings (GDA 94): 6326155.48206
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP073 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP073 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.90			Test Pit TP073 terminated at 0.9m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP074

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362844.792182
Northings (GDA 94): 6326148.10696
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and gravels	TP074 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
						TP074 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	0.5					TP074 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP074 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP075

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.5
Pit Dimension (m3): 450

Eastings (GDA 94): 362896.560495
Northings (GDA 94): 6326138.82024
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Gravelly Sandy SILT - heterogeneous, dry, stiff, no plasticity with trace inclusions of rootlets	TP075 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP075 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	0.5					TP075 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Test Pit TP075 terminated at 0.5m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP076

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362947.830127
Northings (GDA 94): 6326136.85393
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SG-SM	Gravelly Silty SAND - brown, heterogeneous, damp, poorly sorted, medium density	TP076 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP076 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - grey with red mottling, homogeneous, damp, medium plasticity, firm	TP076 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
		0.60			Test Pit TP076 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP079

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 363084.142133
Northings (GDA 94): 6326098.36078
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP079 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP079 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - yellowish brown with orange mottling, homogeneous, damp, low plasticity, firm	TP079 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP079 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH077

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.6
Bore Diameter (mm): 150

Eastings (GDA 94): 362978.162426
Northings (GDA 94): 6326084.5359
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				Fill	Fill - Sandy GRAVEL - brownish grey, rounded, well graded, loose, dry then damp with depth, heterogeneous with some inclusions of rootlets	BH077 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.15		CL-SC	Sandy CLAY - orange, medium plasticity, damp, stiff, homogeneous		
						BH077 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Borehole BH077 terminated at 0.6m		End of Hole at Program Depth
	1						
	2						
	3						
	4						
	5						
	6						

BH078

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.6
Bore Diameter (mm): 150

Eastings (GDA 94): 363053.745591
Northings (GDA 94): 6326076.29318
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				ML-GS	Gravelly Sandy SILT - grey, non plastic, dry, rounded, heterogeneous with trace inclusions of rootlets	BH078 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - orange, stiff, damp, medium plasticity	BH078 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.60			Borehole BH078 terminated at 0.6m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH080

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363135.949253
Northings (GDA 94): 6326088.27633
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				ML-SM	Sandy SILT - grey, loose, damp, sub angular, well graded, homogeneous	BH080 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.30		CH-SC	Sandy CLAY - red with orange mottling, stiff, damp, homogeneous	BH080 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH080 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH081

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363184.3681
Northings (GDA 94): 6326081.66173
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - grey, fine to medium grained, well sorted, loose, damp, sub angular with trace inclusions of rootlets	BH081 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		SC	Clayey SAND - orange, medium plasticity, damp, well sorted	BH081 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH081 terminated at 0.5m		End of Hole at Program Depth

TP082

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362710.421514
Northings (GDA 94): 6326194.2511
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.0			Fill	Fill - SILT - greyish brown, damp, heterogeneous and inclusions of wood mulch	TP082 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5					TP082 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0						~~ Groundlevel 1.0m ~~
		1.00		SC	Clayey SAND - grey, medium grained, high plasticity, medium density, homogeneous	TP082 1.2-1.3	No Odour, Staining or Asbestos Observed
	1.5	1.30		CL	CLAY - red and orange with white mottling, dense, low plasticty, iron stained with minor inclusions of sandstone gravels	TP082 1.6-1.7	No Odour, Staining or Asbestos Observed
		1.70			Test Pit TP082 terminated at 1.7m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP083

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 362755.648235
Northings (GDA 94): 6326208.70418
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets, plastic and gravels	TP083 0.0-0.1 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP083 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0					TP083 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Test Pit TP083 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP084

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362806.425676
Northings (GDA 94): 6326198.52379
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP084 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP084 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP084 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP085

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 362850.515671
Northings (GDA 94): 6326176.37889
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of gravels	TP085 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP085 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP085 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	1.00			Test Pit TP085 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP086

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362904.648352
Northings (GDA 94): 6326188.16088
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - CLAY - brown, heterogeneous, dry, stiff, medium plasticity with trace inclusions of asphalt	TP086 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
						TP086 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	0.5					TP086 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP086 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP087

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362954.18014
Northings (GDA 94): 6326177.33526
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				ML-SM	Sandy SILT - brownish grey, heterogeneous, dry, low plasticity, firm	TP087 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP087 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	0.5					TP087 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP087 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP088

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362998.630228
Northings (GDA 94): 6326157.49147
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogenous, dry, medium plasticty, poorly sorted with trace inclusions of gravels and rootlets	TP088 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP088 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - yellowish brown, homogeneous, damp, medium plasticity, firm	TP088 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0						
		1.10			Test Pit TP088 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP089

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.5
Pit Dimension (m3): 450

Eastings (GDA 94): 363038.317808
Northings (GDA 94): 6326122.5664
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP089 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		CL	CLAY - yellowish brown, homogeneous, damp, medium plasticity, firm	TP089 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5						
		0.50			Test Pit TP089 terminated at 0.5m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP090

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 363097.055425
Northings (GDA 94): 6326124.1539
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of gravels	TP090 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP090 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - yellowish brown with orange mottling, homogeneous, damp, low plasticity, firm	TP090 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP090 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH091

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363164.52431
Northings (GDA 94): 6326138.28268
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - grey, fine, sub angular, loose, damp with trace inclusions of rootlets and gravels	BH091 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.30		CL-SC	Sandy CLAY - reddish orange, medium plasticity, damp	BH091 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH091 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH092

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363205.799393
Northings (GDA 94): 6326118.96806
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - grey, well graded, loose, damp with trace inclusions of rootlets	BH092 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.25		SC	Clayey SAND - orange, medium density, damp, well graded	BH092 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH092 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP093

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 362719.527006
Northings (GDA 94): 6326248.1031
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				ML-CL-SC	Sandy Clayey SILT - dark grey, wet to moist with trace inclusions of roots and rootlets	TP093 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - orangey white, medium density and plasticty, iron staining with minor inclusions of roots and gravels		
	0.5					TP093 0.4-0.5	No Odour, Staining or Asbestos Observed
						TP093 0.8-0.9	No Odour, Staining or Asbestos Observed
		0.90			Test Pit TP093 terminated at 0.9m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP094

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 362763.351621
Northings (GDA 94): 6326241.89841
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP094 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP094 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.60		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP094 0.9-0.1	No Odour, Staining or Asbestos Observed
		1.00			Test Pit TP094 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP095

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.8
Pit Dimension (m3): 450

Eastings (GDA 94): 362815.734113
Northings (GDA 94): 6326227.47635
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP095 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.35		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP095 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.80			Test Pit TP095 terminated at 0.8m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP096

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362858.687963
Northings (GDA 94): 6326223.43664
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SG-SM	Gravelly Silty SAND - greyish brown, homogeneous, damp, poorly sorted, medium density	TP096 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP096 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP096 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP096 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP097

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

Eastings (GDA 94): 362940.238266
Northings (GDA 94): 6326204.76014
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Gravelly Silty SAND - brownish grey, heterogeneous, dry, medium density, poorly sorted with trace inclusions of gravels, brick, tiles and roots	TP097 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
						TP097 0.2-0.3	No Odour, Staining or Asbestos Observed
						TP097 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0					TP097 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.10		CL	CLAY - light brown, damp, homegeneous, medium plasticty, firm		~~ Groundlevel 1.1m ~~
	1.5					TP097 1.3-1.4	No Odour, Staining or Asbestos Observed
		1.50			Test Pit TP097 terminated at 1.5m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH098

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.65
Bore Diameter (mm): 450

Eastings (GDA 94): 362966.880165
Northings (GDA 94): 6326213.05408
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				ML-SM	Sandy SILT - brownish grey, heterogeneous, dry, low plasticity, firm	BH098 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH098 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	BH098 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.65			Borehole BH098 terminated at 0.65m		End of Hole at Program Depth
	1						
	2						
	3						
	4						
	5						
	6						

TP099

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 363016.092763
Northings (GDA 94): 6326207.49782
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogenous, dry, medium plasticty, poorly sorted with trace inclusions of gravels and rootlets	TP099 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP099 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL	CLAY - yellowish brown, homogeneous, damp, medium plasticity, firm	TP099 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
		0.60			Test Pit TP099 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP100

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 363056.574094
Northings (GDA 94): 6326184.47902
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of gravels	TP100 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP100 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP100 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.90			Test Pit TP100 terminated at 0.9m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP101

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 363106.46127
Northings (GDA 94): 6326173.88926
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP101 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP101 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP101 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.90			Test Pit TP101 terminated at 0.9m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH102

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363153.411788
Northings (GDA 94): 6326163.68273
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SC	Clayey SAND - grey, fine, sub angular, loose, damp with trace inclusions of rootlets	BH102 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		CL-SC	Sandy CLAY - reddish orange, medium plasticity, damp	BH102 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH102 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH103

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363230.405692
Northings (GDA 94): 6326150.9827
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SW	SAND - grey, well graded, damp, heterogeneous with trace inclusions of gravels	BH103 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.25		CL-SC	Sandy CLAY - orange, medium plasticity, damp, firm	BH103 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50			Borehole BH103 terminated at 0.5m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP104

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 362717.017249
Northings (GDA 94): 6326296.25758
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.0			Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP104 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP104 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP104 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.90			Test Pit TP104 terminated at 0.9m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP105

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362772.426433
Northings (GDA 94): 6326291.79317
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.0			Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP105 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5					TP105 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	1.0					TP105 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.10			Test Pit TP105 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP106

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 362817.408032
Northings (GDA 94): 6326292.01238
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with some inclusions of rootlets and rounded gravels	TP106 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP106 0.2-0.3	No Odour, Staining or Asbestos Observed
						TP106 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.50		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP106 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5	1.00			Test Pit TP106 terminated at 1m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP107

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362872.211221
Northings (GDA 94): 6326265.03998
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and rounded gravels	TP107 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP107 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP107 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0						
		1.10			Test Pit TP107 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP108

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 362922.953218
Northings (GDA 94): 6326261.67465
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - light brown, homogeneous, damp, medium density	TP108 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP108 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - orangey brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP108 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.90			Test Pit TP108 terminated at 0.9m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH109

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Bore Diameter (mm): 450

Eastings (GDA 94): 362972.436426
Northings (GDA 94): 6326252.74166
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with some inclusions of rootlets and gravels	BH109 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH109 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL-SC	Sandy CLAY - light brown, homogeneous, damp, low plasticity, firm	BH109 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Borehole BH109 terminated at 0.7m		End of Hole at Program Depth
	1						
	2						
	3						
	4						
	5						
	6						

TP110

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.8
Pit Dimension (m3): 450

Eastings (GDA 94): 363031.174043
Northings (GDA 94): 6326239.24788
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - dark grey, homogeneous, damp, low plasticity, firm with trace inclusions of rootlets	TP110 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	0.5					TP110 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.80			Test Pit TP110 terminated at 0.8m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP111

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 363053.399088
Northings (GDA 94): 6326234.48537
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP111 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP111 0.2-0.3	No Odour, Staining or Asbestos Observed
						TP111 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.60		CL-SC	Sandy CLAY - light grey with yellow mottling, homogeneous, low plasticity, damp, firm	TP111 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5	1.00			Test Pit TP111 terminated at 1m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP112

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 363116.033335
Northings (GDA 94): 6326222.96447
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP112 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP112 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP112 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP112 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH113

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363163.730559
Northings (GDA 94): 6326235.12037
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - grey, homogenous, damp, loose, well sorted with trace inclusions of rootlets	BH113 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.20		SC	Clayey SAND - light brown, homogenous, medium density, trace gravels, poorly sorted	BH113 0.3-0.4	No Odour, Staining or Asbestos Observed
		0.40		CL-SC	Sandy CLAY - brown with red mottling, homogenous, damp, low plasticity, stiff		
		0.50			Borehole BH113 terminated at 0.5m		End of Hole at Program Depth

BH114

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: R Lill
Contractor: JBS&G
Total Hole Depth (mbgs): 0.6
Bore Diameter (mm): 150

Eastings (GDA 94): 363213.736909
Northings (GDA 94): 6326202.57656
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - grey, homogenous, damp, loose, well sorted with trace inclusions of rootlets	BH114 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.25		SC	Clayey SAND - light brown, homogenous, medium density, with trace inclusions of gravels		
		0.40		CL-SC	Sandy CLAY - brown with red mottling, homogenous, damp, low plasticity, stiff	BH114 0.5-0.6	No Odour, Staining or Asbestos Observed
		0.60			Borehole BH114 terminated at 0.6m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP116

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362777.793213
Northings (GDA 94): 6326336.97692
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP116 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP116 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	1.0					TP116 0.9-1.1	No Odour, Staining or Asbestos Observed
		1.10			Test Pit TP116 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP117

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362832.093166
Northings (GDA 94): 6326329.21899
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and rounded gravels	TP117 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP117 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, medium plasticity, damp, firm	TP117 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0						
		1.20			Test Pit TP117 terminated at 1.2m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP118

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362879.32539
Northings (GDA 94): 6326318.31045
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, dry, well sorted, medium density, medium plasticty with trace inclusions of rootlets	TP118 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP118 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		SC	Clayey SAND - yellowish brown, homogeneous, damp, medium density, well sorted	TP118 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
	1.0						
		1.10			Test Pit TP118 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP119

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 362927.875157
Northings (GDA 94): 6326319.74234
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - brownish grey, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP119 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP119 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		CL-SC	Sandy CLAY - yellowish brown, homogeneous, low plasticity, damp, firm	TP119 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
		0.90			Test Pit TP119 terminated at 0.9m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP120

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362979.58019
Northings (GDA 94): 6326297.19175
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - light brown, homogeneous, damp, poorly sorted, medium density with trace inclusions of gravels	TP120 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP120 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP120 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP120 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP121

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 363040.699063
Northings (GDA 94): 6326286.87298
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP121 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP121 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL-SC	Sandy CLAY - yellowish brown, homogeneous, damp, low plasticity	TP121 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
	1.0						
		1.00			Test Pit TP121 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP122

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.8
Pit Dimension (m3): 450

Eastings (GDA 94): 363077.211636
Northings (GDA 94): 6326282.90422
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP122 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP122 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - light brown, damp, homegeneous, medium plasticty, firm	TP122 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
		0.80			Test Pit TP122 terminated at 0.8m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP123

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 363125.6054
Northings (GDA 94): 6326272.03967
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and gravels	TP123 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP123 0.2-0.3	No Odour, Staining or Asbestos Observed
						TP123 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.50		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP123 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Test Pit TP123 terminated at 1m		End of Hole at Program Depth

TEST PIT JBSG TEST PIT - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

TP124

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 363168.493068
Northings (GDA 94): 6326292.27049
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and gravels	TP124 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP124 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP124 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP125

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 363216.911915
Northings (GDA 94): 6326257.34542
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.0			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and gravels	TP125 0.0-0.1	No Odour, Staining or Asbestos Observed
		0.35		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP125 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
	1.0						
		1.00			Test Pit TP125 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP126

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362741.995385
Northings (GDA 94): 6326400.56367
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP126 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP126 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP126 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
		0.70			Test Pit TP126 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP127

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362787.158829
Northings (GDA 94): 6326389.69751
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5	0.30		SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP127 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP127 0.2-0.3	No Odour, Staining or Asbestos Observed
				CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP127 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0	0.70			Test Pit TP127 terminated at 0.7m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP128

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

Eastings (GDA 94): 362840.993988
Northings (GDA 94): 6326366.02593
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with some inclusions of rootlets and rounded gravels	TP128 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP128 0.2-0.3	No Odour, Staining or Asbestos Observed
						TP128 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL	CLAY - brown with red, yellow and grey mottling, homogeneous, damp, medium plasticity, firm		
	1.0					TP128 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5	1.40			Test Pit TP128 terminated at 1.4m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP129

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362905.330666
Northings (GDA 94): 6326358.27989
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.0			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and gravels	TP129 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP129 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, wet, firm	TP129 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0						
		1.10			Test Pit TP129 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP130

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362936.371724
Northings (GDA 94): 6326358.56567
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP130 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP130 0.2-0.3	No Odour, Staining or Asbestos Observed
						TP130 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL-SC	Sandy CLAY - yellowish brown, homogeneous, low plasticity, damp, firm		
	1.0					TP130 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.30			Test Pit TP130 terminated at 1.3m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP131

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 362993.867719
Northings (GDA 94): 6326345.61059
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0			ML-SM	Sandy SILT - dark grey, loose, damp, hetereogeneous with trace inclusions of roots and rootlets	TP131 0.1-0.2	No Odour, Staining or Asbestos Observed
						TP131 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30		SW	SAND - grey, fine to medium grained, damp, heterogeneous with some inclusions of gravels		
	0.5					TP131 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL	CLAY - reddish white, medium density, firm, heterogeneous with some inclusions of sandstone gravels		
	1.0					TP131 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Test Pit TP131 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP132

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 363031.174043
Northings (GDA 94): 6326346.40435
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogenous, dry, medium plasticty, poorly sorted with trace inclusions of gravels and rootlets	TP132 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP132 0.2-0.3	No Odour, Staining or Asbestos Observed
	1.0	0.50		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP132 0.5-0.6	No Odour, Staining or Asbestos Observed
	1.5	1.20			Test Pit TP132 terminated at 1.2m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP133

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.9
Pit Dimension (m3): 450

Eastings (GDA 94): 363086.102262
Northings (GDA 94): 6326330.68694
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, heterogeneous, damp, medium plasticity, poorly sorted with trace inclusions of wood and gravels	TP133 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP133 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.35		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP133 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
		0.90			Test Pit TP133 terminated at 0.9m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP134

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 363135.949253
Northings (GDA 94): 6326317.82929
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP134 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - grey with red mottling, homogeneous, moist, medium plasticity, firm	TP134 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP134 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP136

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 16/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 363228.631508
Northings (GDA 94): 6326285.83113
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SG-SM	Gravelly Silty SAND - greyish brown, homogeneous, damp, poorly sorted, medium density	TP136 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP136 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.50		CL	CLAY - light grey with yellow mottling, damp, homogeneous, medium plasticity, firm	TP136 0.5-0.6	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP136 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP137

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.65
Pit Dimension (m3): 450

Eastings (GDA 94): 362843.313844
Northings (GDA 94): 6326006.02951
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy ROAD BASE - yellow, medium grained, medium density and inclusions of rootlets and roadbase gravels	TP137 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		SC	Clayey SAND - light brownish yellow, dry, loose with minor inclusions of ironstone gravels and roots		
	0.5					TP137 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.50		CL-ML	Silty CLAY - orangish brown, medium plasticty and density	TP137 0.6-0.7	No Odour, Staining or Asbestos Observed
		0.65			Test Pit TP137 terminated at 0.65m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP138

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362887.582063
Northings (GDA 94): 6325994.12482
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Sandy gravelly ROAD BASE - pale grey, fine grained, loose, dry, heterogeneous, well graded with some inclusions of igneous gravels	TP138 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.15		SC	Clayey SAND - brownish orange, fine to medium grained, heterogeneous with trace inclusions of fine gravels	TP138 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.25		CL-ML	Silty CLAY - light brown, medium plasticity, medium density, homogenous		
						TP138 0.5-0.6	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP138 terminated at 0.6m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP139

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362864.984485
Northings (GDA 94): 6326051.12746
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Clayey SAND - orangey brown with grey mottling, moist, loose with some inclusions of wood, rootlets and gravels	TP139 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP139 0.9-1.0	No Odour, Staining or Asbestos Observed ~~ Groundlevel 1.0m ~~
		1.00		SC	Clayey SAND - orangey red with iron staining, medium grained, loose, medium density		
	1.5					TP139 1.2-1.3	No Odour, Staining or Asbestos Observed
		1.80		CL	CLAY - orange with grey mottling, homoogeneous, medium density		
	2.0					TP139 2.1-2.2	No Odour, Staining or Asbestos Observed
		2.20			Test Pit TP139 terminated at 2.2m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP140

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362877.625749
Northings (GDA 94): 6326033.62661
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Clayey Gravelly SAND - orangey brown, dry, medium grained with some inclusions of asphalt and roots	TP140 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.40		Fill	Fill - Clayey Gravelly SAND - orangey brown, moist, medium grained with some inclusions of asphalt and roots		
	1.0					TP140 0.9-1.0 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		1.20			Test Pit TP140 terminated at 1.2m		End of Hole. Test Pit Excavated Stockpile Only.
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP141

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.8
Pit Dimension (m3): 450

Eastings (GDA 94): 362900.018427
Northings (GDA 94): 6326050.98391
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			Fill	Fill - Clayey SAND - light to medium brown, medium grained, loose with some inclusions of asphalt and roots	TP141 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP141 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5	1.20		CL-SC	Sandy CLAY - orangey grey, dense, low plasticity, firm	TP141 1.6-1.7	No Odour, Staining or Asbestos Observed
	2.0	1.80			Test Pit TP141 terminated at 1.8m		End of Hole at Program Depth
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH142

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362553.284435
Northings (GDA 94): 6325788.12005
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - greyish brown, heterogeneous, damp, poorly sorted, medium density	BH142 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.15		Fill	Fill - Sandy SILT - - greyish brown, homogeneous, damp, low plasticity, soft	BH142 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.30		CL-SC	Sandy CLAY - orangey brown, homogeneous, damp, low plasticity, firm	BH142 0.4-0.5	No Odour, Staining or Asbestos Observed
	1						
		1.20			Borehole BH142 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH143

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 12/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362610.963717
Northings (GDA 94): 6325778.59503
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - brown, heterogeneous, medium density, poorly sorted	BH143 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - yellowish brown, heterogeneous, damp, medium density, poorly sorted with trace inclusions of gravels	BH143 0.2-0.3 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.40		CL	CLAY - greyish brown with red mottling, heterogeneous, damp, high plasticity, firm	BH143 0.4-0.5	No Odour, Staining or Asbestos Observed
	1						
		1.20			Borehole BH143 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

TP144

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362808.609242
Northings (GDA 94): 6325804.92512
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark grey, fine, heterogeneous with trace inclusions of rootlets	TP144 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.10		Fill	Fill - Sandy Gravelly CLAY - light brownish orange, dry, medium plasticity, heterogeneous with some inclusions of plastics and wood		
	0.5					TP144 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP144 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		1.10		Fill	Fill - Clayey SAND - dark brown, dense, damp and with inclusions of concrete blocks, timber		
	1.5					TP144 1.4-1.5	No Odour, Staining or Asbestos Observed
	2.0					TP144 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP144 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0					TP144 2.9-3.0	No Odour, Staining or Asbestos Observed
	3.5					TP144 3.4-3.5	No Odour, Staining or Asbestos Observed
	4.0	3.90		CL-SC	Sandy CLAY - white to pale grey, medium grained, wet, loose, low density, homogeneous	TP144 3.9-4.0	No Odour, Staining or Asbestos Observed
						TP144 4.2-4.3	No Odour, Staining or Asbestos Observed
	4.5	4.30			Test Pit TP144 terminated at 4.3m		End of Hole at Program Depth

TP145

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.3
Pit Dimension (m3): 450

Eastings (GDA 94): 362848.301648
Northings (GDA 94): 6325803.93281
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark brown, fine, moist, homogeneous	TP145 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Sandy CLAY - yellowish brown, medium grained, moist dense, heterogeneous with trace inclusions of fine sandstone gravels, woody fragments and rootlets		
	0.5					TP145 0.4-0.5 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
		0.80		Fill	Fill - SAND - grey, medium grained, loose, moist, homogeneous		
	1.0					TP145 0.9-1.0 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		1.30		Fill	Fill - Sandy CLAY - dark grey and orange mottling, moist, medium density and plasticity with minor inclusions of brick, tree branches, terracotta pipe and igneous gravels		
	1.5					TP145 1.4-1.5 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	2.0					TP145 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP145 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0					TP145 2.9-3.0	No Odour, Staining or Asbestos Observed
	3.5					TP145 3.4-3.5	No Odour, Staining or Asbestos Observed
	4.0					TP145 3.9-4.0	No Odour, Staining or Asbestos Observed
		4.30			Test Pit TP145 terminated at 4.3m		End of hole. Depth limit of excavator reached.
	4.5						

TP146

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 4.4
Pit Dimension (m3): 450

Eastings (GDA 94): 362907.103393
Northings (GDA 94): 6325798.97951
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark brownish grey, moist, homogeneous with trace inclusions of rootlets	TP146 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Sandy CLAY - dark orangey brown, dense, damp, medium plasticity with trace inclusions of fine gravels	TP146 0.3-0.4 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		Fill	Fill - Sandy Gravelly CLAY - black, medium grained, dense, low plasticity, damp with some inclusions of sandstone blocks		
	1.0					TP146 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		1.00		Fill	Fill - Sandy CLAY - dark grey, grades from moist to wet with increasing depth, high plasticity, dense and with inclusions of woody fragements, large concrete blocks, plastics, sandstone blocks and PVC piping		
	1.5					TP146 1.4-1.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	2.0					TP146 1.9-2.0	No Odour, Staining or Asbestos Observed
	2.5					TP146 2.4-2.5	No Odour, Staining or Asbestos Observed
	3.0					TP146 2.9-3.0	No Odour, Staining or Asbestos Observed
	3.5					TP146 3.4-3.5	No Odour, Staining or Asbestos Observed
	4.0					TP146 3.9-4.0	No Odour, Staining or Asbestos Observed
	4.5	4.40			Test Pit TP146 terminated at 4.4m		End of hole. Depth limit of excavator reached.

BH147

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 13/08/2019
Logged By: M Smith
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362651.860445
Northings (GDA 94): 6326029.67453
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Sandy SILT - medium grey, fine grained, dry, loose with trace inclusions of rootlets	BH147 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - light yellowish grey, medium grained, loose, dry, homogeneous	BH147 0.3-0.4 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.70		CL-SC	Sandy CLAY - orange red with white mottling, medium plasticity, dense, dry, heterogeneous		
	1					BH147 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Borehole BH147 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH148

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362541.092411
Northings (GDA 94): 6325885.77619
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Gravelly Silty SAND - brown, heterogeneous, damp, poorly sorted, medium density with trace inclusions of asphalt	BH148 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Clayey SAND - yellowish brown, heterogeneous, damp, medium density, poorly sorted with trace inclusions of gravels	BH148 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.40		SC	Clayey SAND - yellowish brown, homogeneous, damp, medium density, well sorted	BH148 0.4-0.5	No Odour, Staining or Asbestos Observed
	1	0.70		CL-SC	Sandy CLAY - orangey brown, damp to wet, loose plasticity, firm		
		1.20			Borehole BH148 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH149

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362691.397211
Northings (GDA 94): 6325930.46617
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				SM	Silty SAND - brown, homogeneous, damp, loose, well sorted	BH149 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH149 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.25		SC	Clayey SAND - greyish brown, homogeneous, damp, medium plasticity, well sorted		Increase in clay content.
	1						
		1.20			Borehole BH149 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

BH150

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm): 50

Eastings (GDA 94): 362685.576366
Northings (GDA 94): 6325821.45762
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
PT				Fill	Fill - Silty SAND - brown, homogeneous, damp, loose, well sorted	BH150 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Sandy CLAY - light brown, heterogeneous, damp, low plasticity, firm with trace inclusions of gravels	BH150 0.2-0.3 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.40		SM	Silty SAND - greyish brown, homogeneous, damp, loose, well sorted	BH150 0.4-0.5	No Odour, Staining or Asbestos Observed
	1					BH150 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Borehole BH150 terminated at 1.2m		End of Hole at Program Depth
	2						
	3						
	4						
	5						
	6						

TP151

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.4
Pit Dimension (m3): 450

Eastings (GDA 94): 362776.188712
Northings (GDA 94): 6325800.27647
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark greyish brown with white speckles, fine grained, damp, loose, heterogeneous with trace inclusions of roots and rootlets	TP151 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Sandy SILT - light brownish yellow and grey mottling, heterogeneous, medium grained, damp		
	0.5					TP151 0.4-0.5 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP151 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00		CL-SC	Sandy CLAY - reddish white, medium density and plasticty, heterogeneous, iron stained with trace inclusions of sandstone and iron gravels		
						TP151 1.3-1.4	No Odour, Staining or Asbestos Observed
		1.40			Test Pit TP151 terminated at 1.4m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH152

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 6.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363099.978237
Northings (GDA 94): 6325850.94005
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SFA				Fill	Fill - Sandy SILT - dark brown, heterogeneous, damp, low plasticity, soft with trace inclusions of gravels	BH152 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Sandy CLAY - brown, heterogeneous, damp, medium plasticty, soft to firm with trace inclusions of gravels, asphalt, wood and concrete		
	1					BH152 0.9-1.0 PID = 0 ppm	No Odour, Staining or Asbestos Observed
	2						
	3					BH152 2.9-3.0	Slight Organic Odour. No Staining or Asbestos Observed
	4						
		4.20		CL-SC	Sandy CLAY - light brown to greyish brown, homogeneous, damp, soft, medium plasticity		
	5					BH152 4.9-5.0	Slight Organic Odour. No Staining or Asbestos Observed
		5.70		CL	CLAY - grey with red mottling, homogeneous, damp, firm, high plasticity		
	6					BH152 6.4-6.5	Slight Organic Odour. No Staining or Asbestos Observed
		6.50			Borehole BH152 terminated at 6.5m		End of Hole at Program Depth

BH153

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Swinfield
Contractor: Terratest
Total Hole Depth (mbgs): 5.5
Bore Diameter (mm): 150

Eastings (GDA 94): 363055.30894
Northings (GDA 94): 6325857.69734
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
PT				Fill	Fill - Sandy SILT - dark brown, heterogeneous, damp, low plasticity, soft with trace inclusions of rootlets	BH153 0.0-0.1 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.30		Fill	Fill - Sandy CLAY - brown, heterogeneous, damp, firm, low plasticity with trace inclusions of gravels and wood chips	BH153 0.4-0.5 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
	1					BH153 0.9-1.0 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		1.40		Fill	Fill - Gravelly Silty SAND - dark brown, heterogeneous, damp, medium plasticity, firm with trace inclsuions of gravels and wood		
	2					BH153 1.9-2.0 PID = 0.1 ppm	Visible Suspected ACM. No Odour or Staining Observed. Suspected Asbestos Fragment Recovered
	3					BH153 2.9-3.0	No Odour, Staining or Asbestos Observed
		3.70		Fill	Fill - Sandy CLAY - dark brown, heterogeneous, damp, medium plasticity, firm with trace inclusions of gravels and wood		
	4					BH153 3.9-4.0	No Odour, Staining or Asbestos Observed
		4.40		CL	CLAY - grey with yellow and orange mottling, damp, homogeneous, firm, medium plasticity		
	5					BH153 5.3-5.4	No Odour, Staining or Asbestos Observed
		5.50			Borehole BH153 terminated at 5.5m		End of Hole at Program Depth
	6						

TP154

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 14/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.2
Pit Dimension (m3): 450

Eastings (GDA 94): 363055.9
Northings (GDA 94): 6325859
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy SILT - dark grey, medium grained, damp with minor inclusions of gravels and rootlets	TP154 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
		0.20		Fill	Fill - Sandy Gravelly CLAY - dark brown, medium density and plasticity with inclusions of concrete, metal, plastics, terracotta, wood, matting and roots		
	0.5					TP154 0.4-0.5 PID = 0.3 ppm	No Odour, Staining or Asbestos Observed
	1.0					TP154 0.9-1.0	Large Weed Mat Encountered. No Odour, Staining or Asbestos Observed
	1.5					TP154 1.4-1.5	No Odour, Staining or Asbestos Observed
	2.0	1.90		CONGLOMERATE	CONGLOMERATE and SANDSTONE - yellow, coarse grained, weathered, breaks easily with some inclusions of fine igneous gravels	TP154 2.1-2.2	No Odour, Staining or Asbestos Observed
		2.20			Test Pit TP154 terminated at 2.2m		End of Hole at Program Depth. Hole refused on Conglomerate.
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP155

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Smith
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.7
Pit Dimension (m3): 450

Eastings (GDA 94): 362726.028572
Northings (GDA 94): 6326219.94659
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy Gravelly ROAD BASE - grey, fine to cobble sized, dry	TP155 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.05		Fill	Fill - Sandy GRAVEL - brownish grey, rounded, well graded, loose, dry then damp with depth, heterogeneous with some inclusions of rootlets	TP155 0.1-0.2 PID = 0 ppm	No Odour, Staining or Asbestos Observed
		0.30		CL	CLAY - pale grey, white and orange, dense, low plasticity, heterogeneous		
	0.5					TP155 0.6-0.7	No Odour, Staining or Asbestos Observed
		0.70			Test Pit TP155 terminated at 0.7m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP156

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362753.4262
Northings (GDA 94): 6326270.44045
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP156 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP156 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm		
	1.0					TP156 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.20			Test Pit TP156 terminated at 1.2m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP157

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1
Pit Dimension (m3): 450

Eastings (GDA 94): 362745.528799
Northings (GDA 94): 6326231.25805
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.0			Fill	Fill - Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets and terracotta pipe	TP157 0.0-0.1 PID = 0.2 ppm	No Odour, Staining or Asbestos Observed
		0.35		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm	TP157 0.4-0.5	No Odour, Staining or Asbestos Observed
	0.5						
	1.0					TP157 0.9-1.0	No Odour, Staining or Asbestos Observed
		1.00			Test Pit TP157 terminated at 1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP158

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.5
Pit Dimension (m3): 450

Eastings (GDA 94): 362712.620386
Northings (GDA 94): 6326215.80935
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				Fill	Fill - Sandy CLAY - orangey brown, heterogeneous, damp, medium plasticity, firm	TP158 0.0-0.1 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
						TP158 0.2-0.3 PID = 0.1 ppm	No Odour, Staining or Asbestos Observed
	0.5	0.40		Fill	Fill - Silty SAND - grey, heterogeneous, damp, loose, poorly sorted with trace inclusions of gravels	TP158 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.70		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, damp, firm		
	1.0					TP158 0.9-1.0	No Odour, Staining or Asbestos Observed
	1.5					TP158 1.4-1.5	No Odour, Staining or Asbestos Observed
		1.50			Test Pit TP158 terminated at 1.5m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP159

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.6
Pit Dimension (m3): 450

Eastings (GDA 94): 362789.338763
Northings (GDA 94): 6326217.11693
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP159 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.35		CL	CLAY - brown with grey mottling, homogeneous, damp, medium plasticity, firm	TP159 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.60			Test Pit TP159 terminated at 0.6m		End of Hole at Program Depth

TP160

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 0.8
Pit Dimension (m3): 450

Eastings (GDA 94): 362838.16304
Northings (GDA 94): 6326232.39641
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, damp, well sorted, medium density with trace inclusions of rootlets	TP160 0.0-0.1	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL	CLAY - brownish red with grey mottling, homogeneous, damp, medium plasticity, firm	TP160 0.4-0.5	No Odour, Staining or Asbestos Observed
		0.80			Test Pit TP160 terminated at 0.8m		End of Hole at Program Depth
	1.0						
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP161

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.2
Pit Dimension (m3): 450

Eastings (GDA 94): 362886.025676
Northings (GDA 94): 6326304.01528
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit	0.5			SM	Silty SAND - greyish brown, homogeneous, moist, well sorted, medium density with trace inclusions of gravels	TP161 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP161 0.2-0.3	No Odour, Staining or Asbestos Observed
	1.0	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, moist, firm	TP161 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.5	1.20			Test Pit TP161 terminated at 1.2m		End of Hole at Program Depth
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

TP162

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: Ken Coles
Total Hole Depth (mbgs): 1.1
Pit Dimension (m3): 450

Eastings (GDA 94): 362873.788948
Northings (GDA 94): 6326298.65314
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
Test Pit				SM	Silty SAND - greyish brown, homogeneous, moist, well sorted, medium density with trace inclusions of gravels and wood	TP162 0.0-0.1	No Odour, Staining or Asbestos Observed
						TP162 0.2-0.3	No Odour, Staining or Asbestos Observed
	0.5	0.40		CL-SC	Sandy CLAY - brown with red and grey mottling, homogeneous, low plasticity, moist, firm	TP162 0.4-0.5	No Odour, Staining or Asbestos Observed
	1.0						
		1.10			Test Pit TP162 terminated at 1.1m		End of Hole at Program Depth
	1.5						
	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

BH163

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: JBS&G
Total Hole Depth (mbgs): 0.3
Bore Diameter (mm): 150

Eastings (GDA 94): 362666.304078
Northings (GDA 94): 6325851.67662
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples / Tests / Remarks	Additional Observations
HA				SM	Silty SAND - dark brown which grades to greyish brown at 0.15, homogeneous, damp, well sorted, medium density with trace inclusions of gravels and asphalt	BH163 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH163 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30			Borehole BH163 terminated at 0.3m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH164

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: JBS&G
Total Hole Depth (mbgs): 0.3
Bore Diameter (mm): 150

Eastings (GDA 94): 362676.887432
Northings (GDA 94): 6325859.93164
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - dark brown which grades to greyish brown at 0.2, homogeneous, damp, well sorted, medium density with trace inclusions of gravels and asphalt	BH164 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH164 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30			Borehole BH164 terminated at 0.3m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

BH165

Project Number: 56387
Client: Doyalson Wyee RSL Ltd.
Project Name: Detailed Site Investigation Doyalson
Site Address: Doyalson Wyee RSL Ltd.

Date: 15/08/2019
Logged By: M Swinfield
Contractor: JBS&G
Total Hole Depth (mbgs): 0.3
Bore Diameter (mm): 150

Eastings (GDA 94): 362680.062438
Northings (GDA 94): 6325873.26666
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
HA				SM	Silty SAND - dark brown which grades to greyish brown at 0.15, homogeneous, damp, well sorted, medium density with trace inclusions of gravels and asphalt	BH165 0.0-0.1	No Odour, Staining or Asbestos Observed
						BH165 0.2-0.3	No Odour, Staining or Asbestos Observed
		0.30			Borehole BH165 terminated at 0.3m		End of Hole at Program Depth

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 2/9/19

Appendix C Photographic Log

PHOTO 1: SHOWS SOUTHERN-MOST SPORTING FIELD, FACING SOUTH, 08/08/2019

PHOTO 2: SHOWING THE NORTHERN BOUNDARY OF THE EASTERN-MOST SPORTING FIELD, FACING EAST, 08/08/2019

PHOTO 7: SHOWING THE SOUTHERN PORTION OF THE SPORTS FIELDS FACING WEST TOWARDS THE RSL, 08/08/2019

PHOTO 4: SHOWING THE EASTERN-MOST FIELD, FACING WEST, NOTE THE TERRACING BETWEEN FIELDS, 08/08/2019

JBS&G

Job No: 56377

Client: Doyalson Wyee R.S.L Limited

Version: R02 Rev 0	Date: 05/09/2019
Drawn By: RL	Checked By: RL

Not to Scale

Coord. Sys n/a

49-68 Wentworth Ave and 80, 90, 100 and 110 Pacific Highway Doyalson, NSW

APPENDIX A

PHOTO 5: TP06 TEST PIT FILL. PHOTO TAKEN 13/08/2019

PHOTO 6: BH22. FILL PROFILE. 14/08/2019

PHOTO 7: BH152. SATURATED DARK GREY FILL. 14/08/2019

PHOTO 8: BH152. SATURATED DARK GREY FILL. 14/08/2019

PHOTO 9: TP07 FILL PROFILE IN SOUTHERN PORTION OF SPORTS FIELDS. 13/08/2019

PHOTO 10: TP09 ANTHROPOGENIC INCLUSIONS IN FILL. 13/08/2019

JBS&G

Job No: 56387	
Client: Doyalson Wyee R.S.L Ltd	
Version: R02 Rev 0	Date: 05/09/2019
Drawn By: RL	Checked By: RL
Not to Scale	
Coord. Sys n/a	

49-68 Wentworth Ave and 80, 90, 100 and 110 Pacific Highway Doyalson, NSW

APPENDIX A

PHOTO 11: EXCAVATION OF TP23 IN AN AREA OF DEEP FILL IN THE EASTERN PORTION OF THE SPORTS FIELD, FACING NORTH-EAST, 14/08/19

PHOTO 12: TP035 IN THE NORTHERN PORTION OF THE EASTERN SPORTS FIELD. FILL INCLUDED ACM, PLASTICS, SAW BLADES, ORGANICS AND BUILDING DEMO, 14/08/19

PHOTO 13: FILL FROM TP008 IN THE SOUTHERN PORTION OF SPORTS FIELD, WHICH INCLUDED A LARGE VOLUME OF DEMO WASTE AND ENGINE PARTS, 13/08/19

PHOTO 14: 90 PACIFIC HWY – TP36 THICK FILL FOUND TO BE TYPICAL OF THE EASTERN PORTION OF SPORTS FIELD, 13/08/19

JBS&G

Job No: 56387

Client: Doyalson Wyee R.S.L Ltd

Version: R02 Rev 0 | Date: 05/09/2019

Drawn By: RL | Checked By: RL

Not to Scale

Coord. Sys n/a

49-68 Wentworth Ave and 80, 90, 100 and 110 Pacific Highway Doyalson, NSW

APPENDIX A

PHOTO 15: BH153 WITHIN THE EASTERN PORTS FIELDS FACING EAST, 14/08/19

PHOTO 16:TP36 FACING SOUTH TOWARDS TP24 14/08/19

PHOTO 17: TP10 FACING SOUTH EAST. 14/08/19

PHOTO 18: TP11 FACING THE EASTERN PORTION OF THE SPORTS FIELDS (NORTH). 13/08/19

JBS&G

Job No: 56387	
Client: Doyalson Wyee R.S.L Ltd	
Version: R02 Rev 0	Date: 05/09/2019
Drawn By: RL	Checked By: RL
Not to Scale	
Coord. Sys n/a	

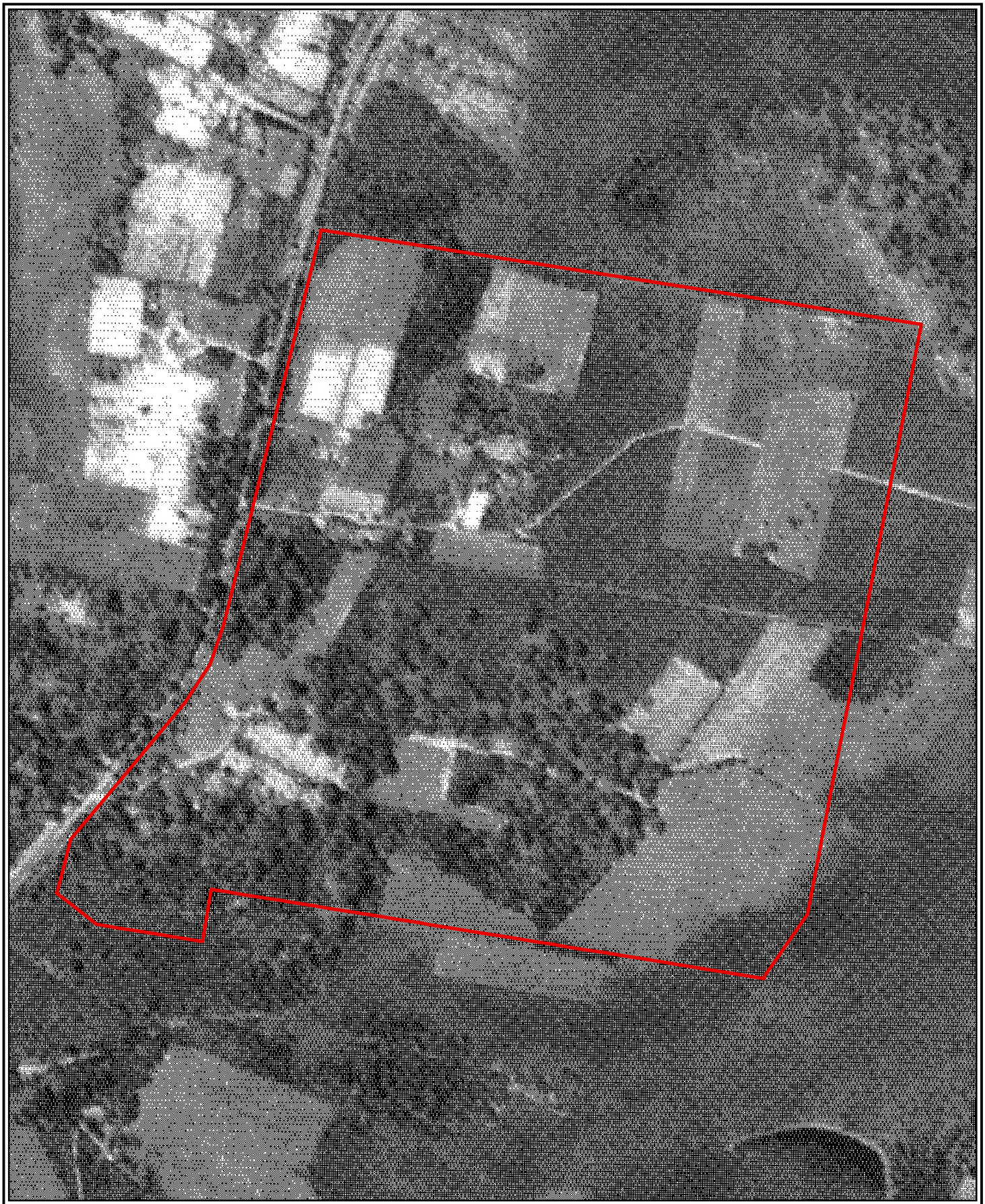
49-68 Wentworth Ave and 80, 90, 100 and 110 Pacific Highway Doyalson, NSW

APPENDIX A

Appendix D Registered Groundwater Bores


GW027938
GW027929
GW027933

Appendix E Historical Aerial Photographs

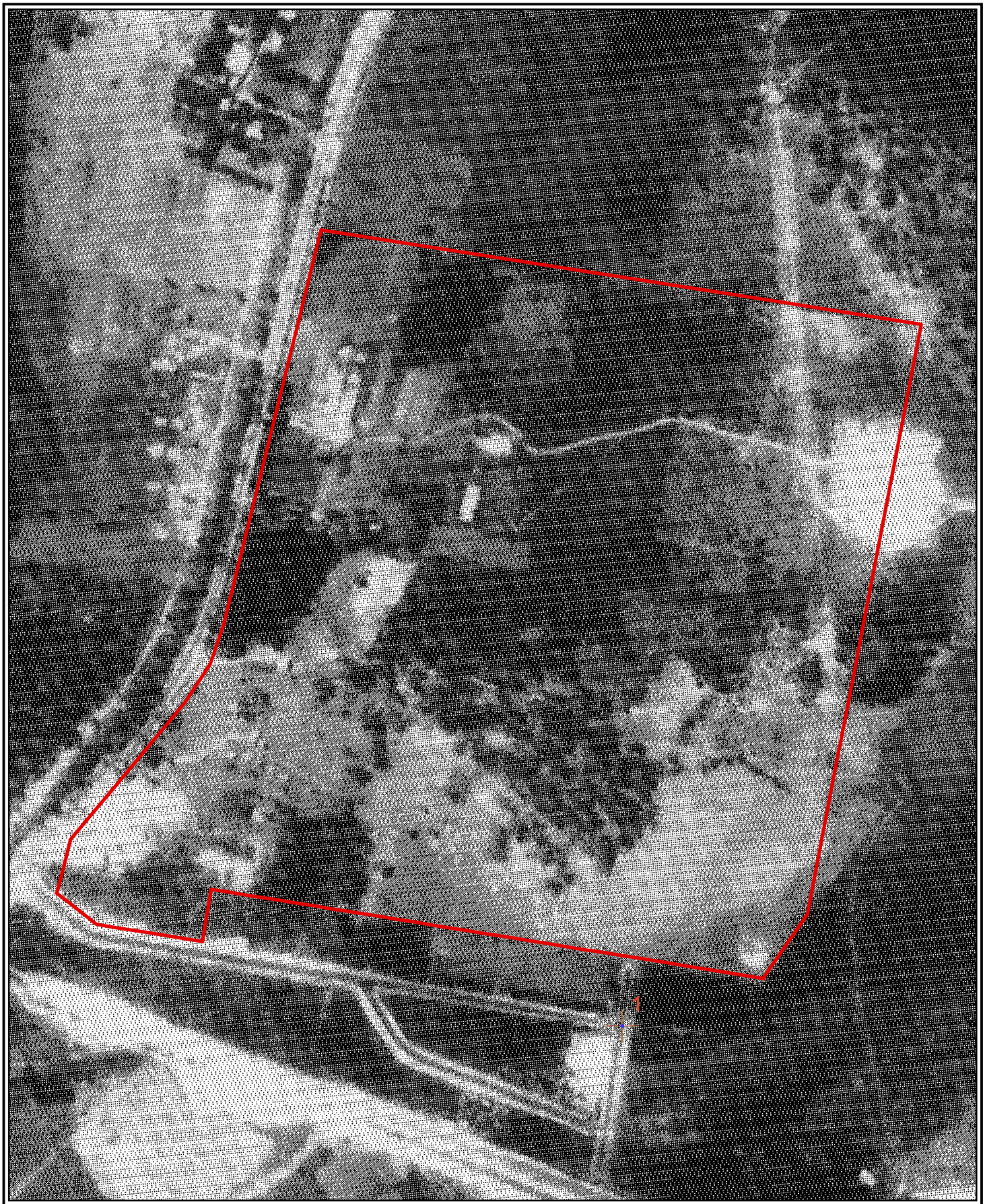


Legend:

Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 1954**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 1954**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_1954.mxd
Reference: NSW Department Finance, Services & Innovation



Legend:

Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 1966**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 1966**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_1966.mxd
Reference: NSW Department Finance, Services & Innovation

Legend:

Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 1976**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 1976**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_1976.mxd
Reference: NSW Department Finance, Services & Innovation

Legend:

Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 1984**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 1984**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_1984.mxd
Reference: NSW Department Finance, Services & Innovation

Legend:

Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 1994**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 1994**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_1994.mxd
Reference: NSW Department Finance, Services & Innovation

Legend:
Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 2006**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 2006**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_2006.mxd
Reference: Google Earth - imagery 2006

Legend:

Approximate Site Boundary

Scale 1:4,480 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 2010**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 2010**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_2010.mxd
Reference: Google Earth - imagery 2010

Legend:
Approximate Site Boundary

Scale 1:4,500 (0 50 100 metres)		**Pacific Hwy and Wentworth Ave, Doyalson NSW**
Coord. Sys. GDA 1994 MGA Zone 56		**HISTORICAL AERIAL 2016**
Job No: 56387		
Client: Urbis Pty Ltd		**FIGURE 2016**
Version: R01 RevA	Date 30/08/2019	JBS&G
Drawn By: AS	Checked By: RL	

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Urbis Pty Ltd\56387 DSI Doyalson\GIS\Maps\Aerials\56387_2016.mxd
Reference: Department Finance, Services & Innovation

Appendix F EPA Searches

POEO Act Search

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

Suburb - doyalson

returned 35 results

Export to excel

1 of 2 Pages

Search Again

Number	Name	Location	Type	Status	Issued date
2061	BORAL RESOURCES (COUNTRY) PTY. LIMITED	BUDGEWOI ROAD, DOYALSON, NSW 2262	POEO licence	No longer in force	03 Nov 1999
1024680	CENTENNIAL MANNERING PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	04 Feb 2003
1043601	CENTENNIAL MANNERING PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	14 Jan 2005
1055208	CENTENNIAL MANNERING PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	01 Mar 2006
1105215	CENTENNIAL MANNERING PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	22 Feb 2011
1502466	CENTENNIAL MANNERING PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	21 Dec 2011
1511832	CENTENNIAL MANNERING PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	Compliance Audit	Complete	07 Feb 2013
2316	CENTENNIAL MUNMORAH PTY LIMITED	SCENIC DRIVE, DOYALSON, NSW 2262	POEO licence	Surrendered	06 Apr 2000
1105297	CENTENNIAL MUNMORAH PTY LIMITED	SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	22 Feb 2011
1127305	CENTENNIAL MUNMORAH PTY LIMITED	SCENIC DRIVE, DOYALSON, NSW 2262	s.80 Surrender of a Licence	Issued	03 May 2011
1012998	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	26 Sep 2003
1039717	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	12 Aug 2004
1104462	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	24 Aug 2009
1115371	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	07 Jul 2011
1509816	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	11 Jan 2013
1516866	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	07 Apr 2014
1525902	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	21 Jan 2015
1534970	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	14 Dec 2015
1543547	DELTA ELECTRICITY	OFF SCENIC DRIVE, DOYALSON, NSW 2262	Compliance Audit	Complete	12 Aug 2016
5002	FULTON HOGAN INDUSTRIES PTY LTD	2-4 DAVID STREET, DOYALSON, NSW 2262	POEO licence	No longer in force	26 Apr 2000

POEO Act Search

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

Suburb - doyalson

returned 35 results

Export to excel

2 of 2 Pages

Search Again

Number	Name	Location	Type	Status	Issued date
1017778	FULTON HOGAN INDUSTRIES PTY LTD	2-4 DAVID STREET, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	04 Mar 2003
759	GENERATOR PROPERTY MANAGEMENT PTY LIMITED	OFF SCENIC DRIVE, DOYALSON, NSW 2262	POEO licence	Issued	14 Jun 2000
1565974	GENERATOR PROPERTY MANAGEMENT PTY LIMITED	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	26 Jun 2018
1576069	GENERATOR PROPERTY MANAGEMENT PTY LIMITED	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	26 Mar 2019
1583906	GENERATOR PROPERTY MANAGEMENT PTY LIMITED	OFF SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Pending	26 Jul 2019
191	GREAT SOUTHERN ENERGY PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	POEO licence	Issued	06 Apr 2000
2190	HANSON CONSTRUCTION MATERIALS PTY LTD	LOT 1 PACIFIC HIGHWAY, DOYALSON, NSW 2262	POEO licence	No longer in force	13 Oct 1999
1006250	HANSON CONSTRUCTION MATERIALS PTY LTD	LOT 1 PACIFIC HIGHWAY, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	23 Apr 2001
1562167	HANSON CONSTRUCTION MATERIALS PTY LTD	LOT 1 PACIFIC HIGHWAY, DOYALSON, NSW 2262	s.91 Clean Up Notice	Issued	23 Feb 2018
3173524999	HANSON CONSTRUCTION MATERIALS PTY LTD	LOT 1 PACIFIC HIGHWAY, DOYALSON, NSW 2262	Penalty Notice	Issued	06 Mar 2018
1502568	KENNETH MARTIN GRAHAM	15 Pacific Highway, DOYALSON, NSW 2262	s.91 Clean Up Notice	Issued	30 Nov 2011
1527523	LAKECOAL PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	13 May 2015
1551540	LAKECOAL PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	12 May 2017
1006168	POWERCOAL PTY LTD	SCENIC DRIVE, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	30 Jul 2001
1005801	POWERCOAL PTY LTD	RUTLEYS ROAD, DOYALSON, NSW 2262	s.58 Licence Variation	Issued	13 Aug 2001

Environment Protection Licence

Licence - 759

Licence Details	
Number:	759
Anniversary Date:	01-January

Licensee

GENERATOR PROPERTY MANAGEMENT PTY LIMITED

PO BOX 132

BUDGEWOI NSW 2262

Premises

MUNMORAH POWER STATION

OFF SCENIC DRIVE

DOYALSON NSW 2262

Scheduled Activity

N/A

Fee Based Activity	Scale
Miscellaneous licensed discharge to waters (at any time)	> 1000 ML maximum annual volume of discharge authorised

Region

North - Hunter

Ground Floor, NSW Govt Offices, 117 Bull Street

NEWCASTLE WEST NSW 2302

Phone: (02) 4908 6800

Fax: (02) 4908 6810

PO Box 488G

NEWCASTLE NSW 2300

Section 55 Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 5002

Department of Environment & Climate Change NSW

Licence Details

Number:	5002
Anniversary Date:	23-February
Review Due Date:	04-Mar-2011

Licensee

PIONEER ROAD SERVICES PTY LTD
LOCKED BAG 13
WINDSOR NSW 2756

Licence Type

Premises

Premises

PIONEER ROAD SERVICES PTY LTD
2-4 DAVID STREET
DOYALSON NSW 2262

Scheduled Activity

Bitumen mixing

Fee Based Activity	Scale
Bitumen mixing	> 30000 - 100000 T produced

Region

North East - Hunter
Ground Floor, NSW Govt Offices, 117 Bull Street
NEWCASTLE WEST NSW 2302
Phone: 02 49086800
Fax: 02 49086810

PO Box 488G NEWCASTLE
NSW 2300

Environment Protection Licence

Licence - 191

Licence Details	
Number:	191
Anniversary Date:	01-January

Licensee

CENTENNIAL MANNERING PTY LTD

PO BOX 1000

TORONTO NSW 2283

Premises

MANNERING COLLIERY

RUTLEYS ROAD

DOYALSON NSW 2262

Scheduled Activity

Coal Works

Mining for Coal

Fee Based Activity	Scale
Coal works	0-2000000 T handled
Mining for coal	> 500000-2000000 T produced

Region

North East - Hunter

Ground Floor, NSW Govt Offices, 117 Bull Street

NEWCASTLE WEST NSW 2302

Phone: (02) 4908 6800

Fax: (02) 4908 6810

PO Box 488G NEWCASTLE

NSW 2300

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
DENMAN	Former Industrial Site	10 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37945456	150.6868239
DENMAN	Former Industrial Site	9 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37911159	150.6869866
DORA CREEK	Former Service Station	4 Doree PLACE	Service Station	Under assessment	-33.08452746	151.502415
DOYALSON	Part Lot 3 DP 259306	Off David STREET	Other Industry	Regulation under CLM Act not required	-33.20436131	151.5232558
DOYALSON	Munmorah Power Station	(Central Coast Highway) Scenic DRIVE	Unclassified	Regulation under CLM Act not required	-33.20678347	151.540795
DOYALSON	Mannering Colliery (formerly Wyee)	Rutleys ROAD	Other Industry	Regulation under CLM Act not required	-33.17179576	151.5419248
DOYALSON NORTH	Caltex Service Station	235 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.18501024	151.5526114
DOYALSON NORTH	Shell Coles Express Service Station	260-270 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.18636608	151.5482399
DRUMMOYNE	Coles Express Service Station Drummoyne (Eastbound)	36-46 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85576628	151.1593519
DRUMMOYNE	Former Dry Cleaners	225 Victoria ROAD	Chemical Industry	Regulation under CLM Act not required	-33.8507152	151.1537113
DRUMMOYNE	Coles Express Service Station Drummoyne South (Westbound)	39-45 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85606575	151.1589061
DRUMMOYNE	Caltex Service Station	191-195 Lyons ROAD	Service Station	Regulation under CLM Act not required	-33.85699216	151.1460356
DUBBO	BP Reliance Petroleum Service Station (Former Mobil Depot)	107 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24441287	148.6111704
DUBBO	Dubbo Police Station	143 Brisbane STREET	Other Petroleum	Regulation under CLM Act not required	-32.24652288	148.6034702
DUBBO	Shell Coles Express Service Station	131-133 Cobra STREET	Service Station	Regulation under CLM Act not required	-32.25511317	148.6126147
DUBBO	Shell Coles Express Service Station	45-49 Whylandra STREET	Service Station	Regulation under CLM Act not required	-32.2474598	148.5932769
DUBBO	Former Mobil depot	40-44 Morgan STREET	Other Petroleum	Regulation under CLM Act not required	-32.23912277	148.6182711
DUBBO	Caltex Service Station, Dubbo	60 Windsor PARADE	Service Station	Regulation under CLM Act not required	-32.25459322	148.6318
DUBBO	BP-Branded Service Station Dubbo West	51-63 Whylandra STREET	Service Station	Regulation under CLM Act not required	-32.24827657	148.5927084
DUBBO	Lowes Petroleum (BP-Branded) Depot, Dubbo	105 Erskine STREET	Service Station	Regulation under CLM Act not required	-32.24423247	148.6101676
DUBBO	Inland Petroleum (Former Shell) Depot	109 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24470512	148.6124108
DUBBO	Former Caltex Depot	Phillip (corner Fitzroy) STREET	Service Station	Regulation under CLM Act not required	-32.24534863	148.6150144

S.58 EPA NSW

Search results

Your search for: Suburb: DOYALSON

Search Again | Refine Search

did not find any records in our database.

Search TIP

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

... more search tips

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

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

More information about particular sites may be available from:

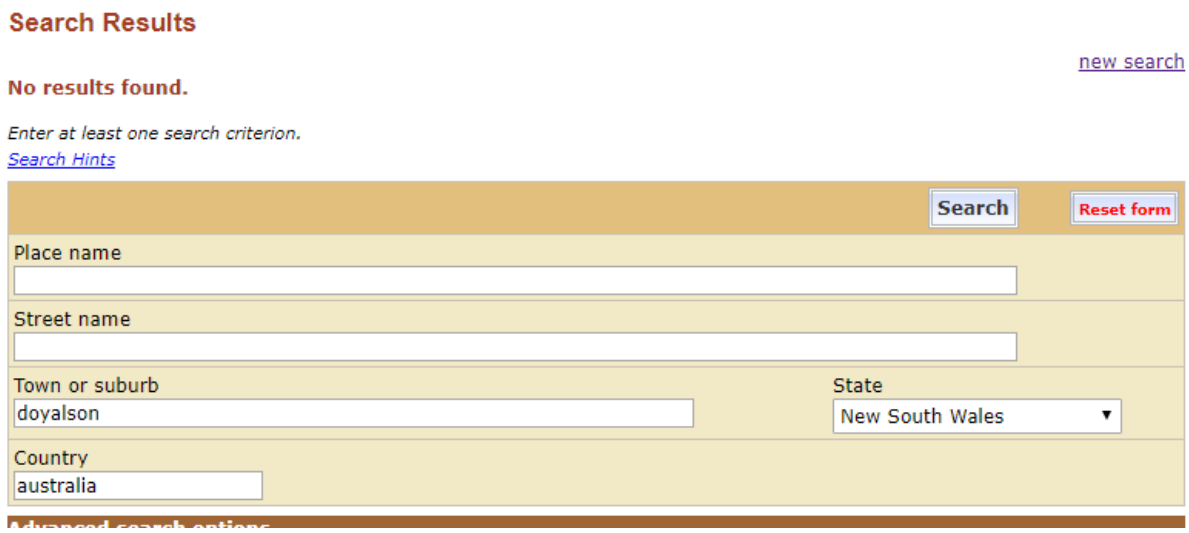
- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

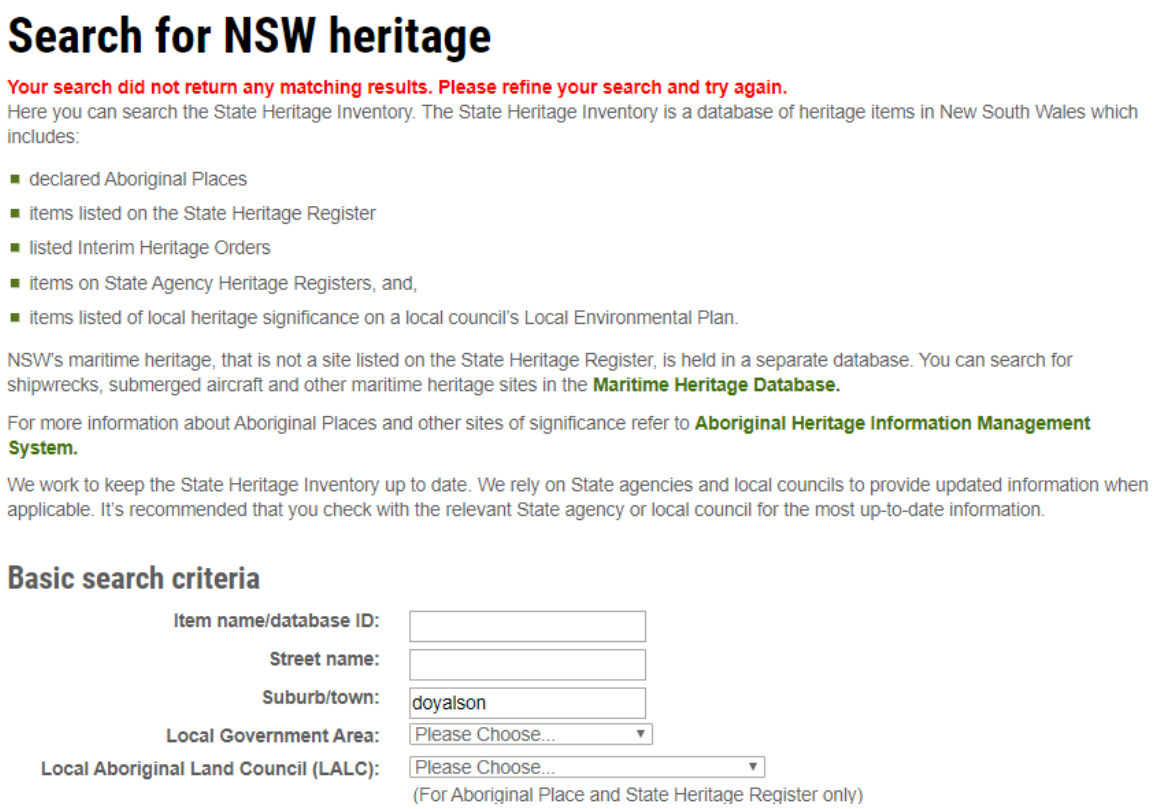
If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the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

26 August 2019

Australia Heritage Database Search



NSW Heritage Database



Appendix G PFAS Investigation Area

PFAS INVESTIGATION AREA

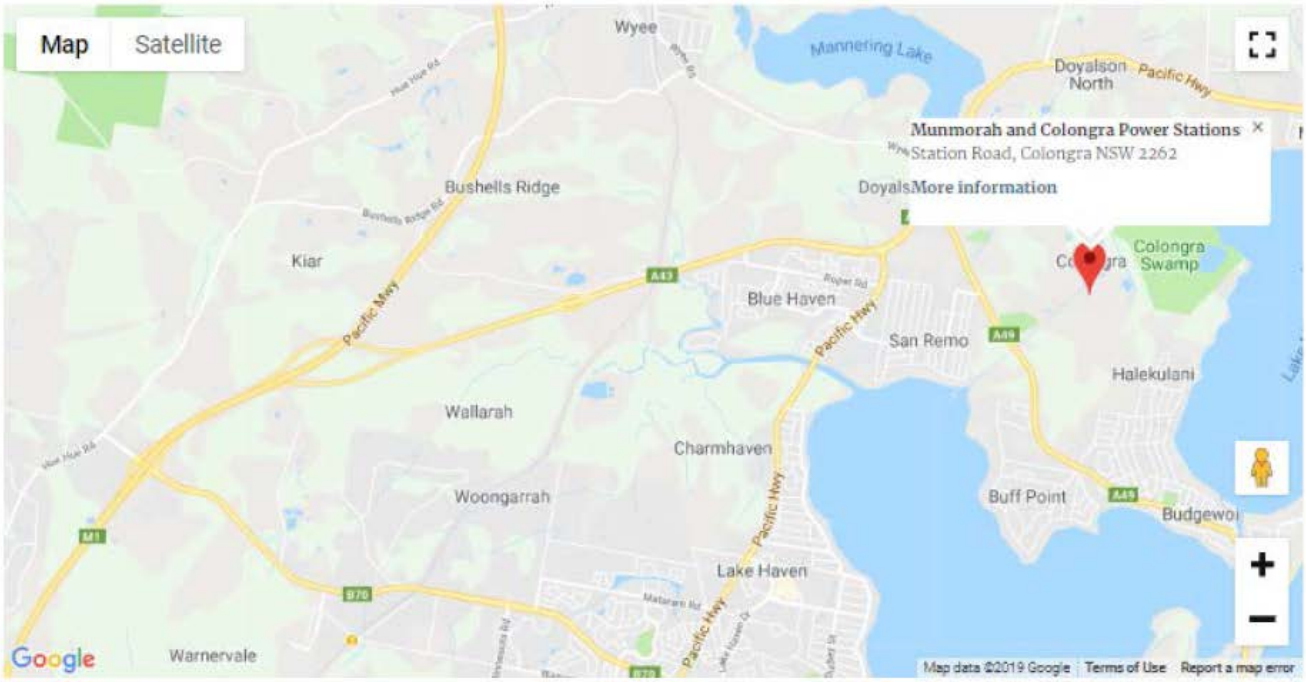
The NSW Government PFAS Investigation Program

NSW has a nation leading, state-wide PFAS investigation program underway to identify the use and impacts of legacy PFAS.

The EPA is leading an investigation program to assess the legacy of PFAS use across NSW. With the assistance of the NSW PFAS Taskforce, which includes NSW Health, Department of Primary Industries and the Office of Environment and Heritage, we provide impacted residents with tailored, precautionary dietary advice to help them reduce any exposure to PFAS.

Current investigations are focused on sites where it is likely that large quantities of PFAS have been used. The EPA is currently investigating PFAS at these sites:

Map view | List view



PFAS INVESTIGATION AREA
Extracted from GHD 2018

Legend

PFAS Investigation Site

Appendix H Council 10.7 Planning Certificates

ABN 73 149 644 003
Certificate No:24830
Reference No: 56387:147536

Mr R Lill
1/50 Margaret St
SYDNEY NSW 2000

SECTION 10.7(2) AND (5) PLANNING CERTIFICATE

This Planning Certificate is issued on 22 August 2019 in respect to the land described below, pursuant to s.10.7 of the Environmental Planning and Assessment Act 1979

Fee paid:	$133.00
Receipt No:	13989063
Receipt Date:	22 August 2019

DESCRIPTION OF LAND
COUNTY OF NORTHUMBERLAND

Property Address:	Doyalson RSL Club, 49-65 Wentworth Avenue, DOYALSON NSW 2262
Property Description:	LOTS 1 to 9 DP 215875
Property Owner:	Doyalson Wyee RSL Club Ltd

The information contained within this certificate relates to the land.

1 RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments which apply to the land

Wyong Local Environmental Plan 2013

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy No 21 – Caravan Parks
State Environmental Planning Policy No 36 – Manufactured Home Estates
State Environmental Planning Policy No 44 – Koala Habitat Protection
State Environmental Planning Policy No 50 – Canal Estate Development
State Environmental Planning Policy No 55 – Remediation of Land
State Environmental Planning Policy No 64 – Advertising and Signage
State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development
State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes)
State Environmental Planning Policy (State Significant Precincts) 2005
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy (Primary Production and Rural Development) 2019

1.2 Proposed Environmental Planning Instruments which will apply to the land and is or has been the subject of community consultation or public exhibition

Draft Central Coast Local Environmental Plan will replace Gosford Local Environmental Plan 2014, Interim Development Order No. 122 – Gosford, Gosford Planning Scheme Ordinance and Wyong Local Environmental Plan 2013.
The land is subject to an amendment to *Wyong Local Environmental Plan 2013*

Draft Amendment to State Environmental Planning Policy No 44 – Koala Habitat Protection
Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

1.3 Development Control Plans

Development Control Plan 2013 applies to this land.

2 ZONING AND LAND USE

a Identity of the Zone

Lots 1 to 9 DP 215875

RE2 Private Recreation

Identity of the zone in Proposed Environmental Planning Instrument

Lots 1 to 9 DP 215875

Proposed RE2 Private Recreation

For each of the environmental planning instruments referred to in clause 1, please refer to the attached land use table to determine (b), (c) and (d) listed below:

b development that may be carried out within the zone without the need for development consent,

c development which may not be carried out within the zone except with development consent and

d development which is prohibited within the zone

e Development Standards applying to the land

Nil

Notwithstanding the above, reference should be made to Clause 4.2B of the Local Environmental Plan, which may contain other provisions enabling or restricting the erection of Dual Occupancies and Dwelling Houses on the land.

Development Standards in Proposed Environmental Planning Instrument

There are no development standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house on the land. However there are minimum lot sizes applying to the subdivision of land, and in some zones the entitlement to erect a dwelling-house, or carry out other types of residential development, is linked to that minimum lot size.

f Critical Habitat

Nil

g Conservation Area

Nil

h Environmental Heritage

Nil

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Not applicable

3 COMPLYING DEVELOPMENT

Whether or not the land is land on which complying development can be carried out under each of the codes for complying development because of the provisions of clause 1.17A (c) and (d) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008?*

1. PART 3 – HOUSING CODE

a Complying Development under the General Housing Code **may** be carried out

on the land.

2. PART 3A – RURAL HOUSING CODE

a Complying development under the Rural Housing Code **may** be carried out on the land providing the land is not less than the minimum lot size for the erection of a dwelling house under the Wyong Local Environmental Plan 2013.

3. PART 3B – LOW RISE MEDIUM DENSITY HOUSING CODE

a Complying Development under the Low Rise Medium Density Housing Code **may** be carried out on the land.

4. PART 4 – HOUSING ALTERATIONS CODE

a Complying development under the Housing Alterations Code **may** be carried out on the land.

5. PART 4A – GENERAL DEVELOPMENT CODE

a Complying development under the General Development Code **may** be carried out on the land.

6. PART 5 – COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

a Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

7. PART 5A – COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

a Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

8. PART 5B – CONTAINER RECYCLING FACILITIES CODE

a Complying Development under the Container Recycling Facilities Code **may** be carried out on the land.

9. PART 6 – SUBDIVISIONS CODE

a Complying development under the Subdivisions Code **may** be carried out on the land.

10. PART 7 – DEMOLITION CODE

a Complying development under the Demolition code **may** be carried out on the land.

11. PART 8 – FIRE SAFETY CODE

a Complying development under the Fire Safety Code **may** be carried out on the land.

4, 4A (Repealed)

4B ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

5 MINE SUBSIDENCE

The land is within a proclaimed mine subsidence district under the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING OR ROAD ALIGNMENT

(a) DIVISION 2 SECTION 25 OF THE ROADS ACT 1993

The land is not affected by road realignment or road widening under the above.

(b) ENVIRONMENTAL PLANNING INSTRUMENT

The land is not affected by road widening or road re-alignment under the above.

(c) COUNCIL RESOLUTIONS

The land is not affected by road widening or road re-alignment under the above.

7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES TO RESTRICT DEVELOPMENT DUE TO RISK

This land is affected by a policy adopted by the council or other public authority that restricts the development of the land because of the likelihood of risk restrictions. This land is affected because:

Lots 5, 6, 7, 8, & 9 of DP 215875
The land is classed as being Acid Sulfate Soil Class 5

7A FLOOD RELATED DEVELOPMENT CONTROLS

1. Development on this land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or senior housing) is **not** subject to flood related development controls.

2. Development on this land or part of the land for any other purpose is **not** subject to flood related development controls.

A word or expression used in this clause has the same meaning as it has in the *Floodplain Development Manual* (ISBN 0 7347 5476 0), published by the NSW Government in April 2005, unless it is otherwise defined in this Plan.

8 LAND RESERVED FOR ACQUISITION

The following environmental planning instruments and proposed environmental planning instruments make provisions for the acquisition of land by a public authority as referred to in Section 3.15 of the Act:

Nil

9 CONTRIBUTION PLANS

This land is subject to the Wyong Shire Section 94A Levy Development Contributions Plan.

This land is subject to the Section 94 Contributions Plan for Wyong Shire No. 11 - Shirewide Infrastructure, Services and Facilities.

9A BIODIVERSITY CERTIFIED LAND

The land **is not** biodiversity certified land within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*.

10 BIOBANKING AGREEMENTS

Council has not been notified by the Director-General of the Department of Planning and Environment of an agreement issued under Part 7A of the *Threatened Species Conservation Act 1995*.

11 BUSHFIRE PRONE LAND

Lots 1 & 2 of DP 215875

The information currently available to Council indicates **all** of the land is shown as bush fire prone land according to the Act.

Lots 3 & 4 of DP 215875

The information currently available to Council indicates **some** of the land is shown as bush fire prone land according to the Act.

Lots 5, 6, 7, 8, & 9 of DP 215875

The information currently available to Council indicates that this land **is not** bush fire prone land according to the Act.

12 PROPERTY VEGETATION PLAN

This land is not subject to a property vegetation plan under the Native Vegetation Act 2003.

NOTE: The advice provided in this section is based on notification by the Local Land Services - Greater Sydney of the approval of a plan. Further information about property vegetation plans should be obtained from that Authority.

13 ORDER UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Council has not been notified of an Order issued under the Trees (Disputes between Neighbours) Act 2006.

NOTE: This advice is based on information provided by the Land and Environment Court.

14 DIRECTIONS UNDER PART 3A

Not Applicable

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTUCTURE

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

17 SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

18 PAPER SUBDIVISION INFORMATION

(1) THE NAME OF ANY DEVELOPMENT PLAN ADOPTED BY A RELEVANT AUTHORITY THAT APPLIES TO THIS LAND OR THAT IS PROPOSED TO BE SUBJECT TO A CONSENT BALLOT.

Nil

(2) THE DATE OF ANY SUBDIVISION ORDER THAT APPLIES TO THIS LAND.

Not applicable

Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19 SITE VERIFICATION CERTIFICATE

Council is not aware of a Site Verification Certificate having been issued by the Director-General of the Department of Planning and Environment in respect to this land.

Note: A site verification certificate sets out the Director-General's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

20 LOOSE-FILL ASBESTOS INSULATION

This land does not include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division. That register lists residential premises that contain or have contained loose-fill asbestos insulation.

21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICFATION ORDERS (Building Products Safety Act 2017)

1. Is there any affected building notice of which the council is aware that is in force in respect of the land?

No

2.a Is there any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

2.b Is there any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

No

22 CONTAMINATED LAND MANAGEMENT ACT 1997

Note. The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates is significantly contaminated land within the meaning of that Act - if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No

(b) The land to which the certificate relates is subject to a management order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(c) The land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act - if it is the subject of such an approved proposal at the date when the certificate is issued,

No

(d) The land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(e) The land to which the certificate relates is the subject of a site audit statement within the meaning of that Act - if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No

23 ADVICE PROVIDED PURSUANT TO S.10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

23.1 Prescribed Streams

Approval of the NSW Office of Water is required before the removal of any native vegetation within 20 metres of a prescribed stream. Contact the Office of Water for

details.

*****

For any enquiries regarding this Certificate please contact Council's Customer Contact Centre on 4350 5555.

Ananya Senjuti
Signed on Behalf of Council

LAND USE TABLE

Zone RE2 Private Recreation

Wyong Local Environmental Plan 2013

1 Objectives of zone

- To enable land to be used for private open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To offer opportunities for tourism development that is compatible with the natural environment.
- To allow for alternative uses of open space areas for community purposes that are compatible with surrounding areas.
- To enable land uses that are compatible with, and complementary to, recreational uses.

2 Permitted without consent

Nil

3 Permitted with consent

Amusement centres; Aquaculture; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roads; Sewerage systems; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

DRAFT LAND USE TABLE

Zone RE2 Private Recreation

Draft Central Coast Local Environmental Plan

1 Objectives of zone

- To enable land to be used for private open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To offer opportunities for community and/or tourist development that is compatible with the natural environment.

2 Permitted without consent

Nil

3 Permitted with consent

Amusement centres; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roads; Sewerage systems; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

ABN 73 149 644 003
Certificate No:24832
Reference No: 56387:147536

Mr R Lill
1/50 Margaret St
SYDNEY NSW 2000

SECTION 10.7(2) AND (5) PLANNING CERTIFICATE

This Planning Certificate is issued on 22 August 2019 in respect to the land described below, pursuant to s.10.7 of the Environmental Planning and Assessment Act 1979

Fee paid:	$133.00
Receipt No:	13989063
Receipt Date:	22 August 2019

DESCRIPTION OF LAND
COUNTY OF NORTHUMBERLAND

Property Address:	Doyalson RSL Club, 80 Pacific Highway, DOYALSON NSW 2262
Property Description:	Lot 1 DP 503655
Property Owner:	Doyalson Wyee RSL Club Ltd

The information contained within this certificate relates to the land.

1 RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments which apply to the land

Wyong Local Environmental Plan 2013

State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy No 21 – Caravan Parks
State Environmental Planning Policy No 36 – Manufactured Home Estates
State Environmental Planning Policy No 44 – Koala Habitat Protection
State Environmental Planning Policy No 50 – Canal Estate Development
State Environmental Planning Policy No 55 – Remediation of Land
State Environmental Planning Policy No 64 – Advertising and Signage
State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development
State Environmental Planning Policy (State Significant Precincts) 2005
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy (Primary Production and Rural Development) 2019

1.2 Proposed Environmental Planning Instruments which will apply to the land and is or has been the subject of community consultation or public exhibition

Draft Central Coast Local Environmental Plan will replace Gosford Local Environmental Plan 2014, Interim Development Order No. 122 – Gosford, Gosford Planning Scheme Ordinance and Wyong Local Environmental Plan 2013.
2The land is subject to an amendment to *Wyong Local Environmental Plan 2013*

Draft Amendment to State Environmental Planning Policy No 44 – Koala Habitat Protection
Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

1.3 Development Control Plans

Development Control Plan 2013 applies to this land.

2 ZONING AND LAND USE

a Identity of the Zone

Lot 1 DP 503655

RE2 Private Recreation

Identity of the zone in Proposed Environmental Planning Instrument

Lot 1 DP 503655

Proposed RE2 Private Recreation

For each of the environmental planning instruments referred to in clause 1, please refer to the attached land use table to determine (b), (c) and (d) listed below:

b development that may be carried out within the zone without the need for development consent,

c development which may not be carried out within the zone except with development consent and

d development which is prohibited within the zone

e Development Standards applying to the land

Nil

Notwithstanding the above, reference should be made to Clause 4.2B of the Local Environmental Plan, which may contain other provisions enabling or restricting the erection of Dual Occupancies and Dwelling Houses on the land.

Development Standards in Proposed Environmental Planning Instrument

There are no development standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house on the land. However there are minimum lot sizes applying to the subdivision of land, and in some zones the entitlement to erect a dwelling-house, or carry out other types of residential development, is linked to that minimum lot size.

f Critical Habitat

Nil

g Conservation Area

Nil

h Environmental Heritage

Nil

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Not applicable

3 COMPLYING DEVELOPMENT

Whether or not the land is land on which complying development can be carried out under each of the codes for complying development because of the provisions of clause 1.17A (c) and (d) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008?*

1. PART 3 – HOUSING CODE

a Complying Development under the General Housing Code **may** be carried out

on the land.

2. PART 3A – RURAL HOUSING CODE

a Complying development under the Rural Housing Code **may** be carried out on the land providing the land is not less than the minimum lot size for the erection of a dwelling house under the Wyong Local Environmental Plan 2013.

3. PART 3B – LOW RISE MEDIUM DENSITY HOUSING CODE

a Complying Development under the Low Rise Medium Density Housing Code **may** be carried out on the land.

4. PART 4 – HOUSING ALTERATIONS CODE

a Complying development under the Housing Alterations Code **may** be carried out on the land.

5. PART 4A – GENERAL DEVELOPMENT CODE

a Complying development under the General Development Code **may** be carried out on the land.

6. PART 5 – COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

a Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

7. PART 5A – COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

a Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

8. PART 5B – CONTAINER RECYCLING FACILITIES CODE

a Complying Development under the Container Recycling Facilities Code **may** be carried out on the land.

9. PART 6 – SUBDIVISIONS CODE

a Complying development under the Subdivisions Code **may** be carried out on the land.

10. PART 7 – DEMOLITION CODE

a Complying development under the Demolition code **may** be carried out on the land.

11. PART 8 – FIRE SAFETY CODE

a Complying development under the Fire Safety Code **may** be carried out on the land.

4, 4A (Repealed)

4B ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

5 MINE SUBSIDENCE

The land is within a proclaimed mine subsidence district under the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING OR ROAD ALIGNMENT

(a) DIVISION 2 SECTION 25 OF THE ROADS ACT 1993

The land is not affected by road realignment or road widening under the above.

(b) ENVIRONMENTAL PLANNING INSTRUMENT

The land is not affected by road widening or road re-alignment under the above.

(c) COUNCIL RESOLUTIONS

The land is not affected by road widening or road re-alignment under the above.

However, it should be noted that this parcel either fronts or abuts a road under the control of the Roads and Maritime Services. For further details regarding road widening please refer to that agency.

7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES TO RESTRICT DEVELOPMENT DUE TO RISK

This land is affected by a policy adopted by the council or other public authority that restricts the development of the land because of the likelihood of risk restrictions. This land is affected because:

The land is classed as being Acid Sulfate Soil Class 5

7A FLOOD RELATED DEVELOPMENT CONTROLS

1. Development on this land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or senior housing) is **not** subject to flood related development controls.

2. Development on this land or part of the land for any other purpose is **not** subject to flood related development controls.

A word or expression used in this clause has the same meaning as it has in the *Floodplain Development Manual* (ISBN 0 7347 5476 0), published by the NSW Government in April 2005, unless it is otherwise defined in this Plan.

8 LAND RESERVED FOR ACQUISITION

The following environmental planning instruments and proposed environmental planning instruments make provisions for the acquisition of land by a public authority as referred to in Section 3.15 of the Act:

Nil

9 CONTRIBUTION PLANS

This land is subject to the Wyong Shire Section 94A Levy Development Contributions Plan.

This land is subject to the Section 94 Contributions Plan for Wyong Shire No. 11 - Shirewide Infrastructure, Services and Facilities.

9A BIODIVERSITY CERTIFIED LAND

The land **is not** biodiversity certified land within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*.

10 BIOBANKING AGREEMENTS

Council has not been notified by the Director-General of the Department of Planning and Environment of an agreement issued under Part 7A of the *Threatened Species Conservation Act 1995*.

11 BUSHFIRE PRONE LAND

The information currently available to Council indicates **some** of the land is shown as bush fire prone land according to the Act.

12 PROPERTY VEGETATION PLAN

This land is not subject to a property vegetation plan under the Native Vegetation Act 2003.

NOTE: The advice provided in this section is based on notification by the Local Land Services - Greater Sydney of the approval of a plan. Further information about property vegetation plans should be obtained from that Authority.

13 ORDER UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Council has not been notified of an Order issued under the Trees (Disputes between Neighbours) Act 2006.

NOTE: This advice is based on information provided by the Land and Environment Court.

14 DIRECTIONS UNDER PART 3A

Not Applicable

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTUCTURE

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

17 SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

18 PAPER SUBDIVISION INFORMATION

(1) THE NAME OF ANY DEVELOPMENT PLAN ADOPTED BY A RELEVANT AUTHORITY THAT APPLIES TO THIS LAND OR THAT IS PROPOSED TO BE SUBJECT TO A CONSENT BALLOT.

Nil

(2) THE DATE OF ANY SUBDIVISION ORDER THAT APPLIES TO THIS LAND.

Not applicable

Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19 SITE VERIFICATION CERTIFICATE

Council is not aware of a Site Verification Certificate having been issued by the Director-General of the Department of Planning and Environment in respect to this land.

Note: A site verification certificate sets out the Director-General's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

20 LOOSE-FILL ASBESTOS INSULATION

This land does not include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division. That register lists residential premises that contain or have contained loose-fill asbestos insulation.

21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICFATION ORDERS (Building Products Safety Act 2017)

1. Is there any affected building notice of which the council is aware that is in force in respect of the land?

No

2.a Is there any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

2.b Is there any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

No

22 CONTAMINATED LAND MANAGEMENT ACT 1997

Note. The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates is significantly contaminated land within the meaning of that Act - if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No

(b) The land to which the certificate relates is subject to a management order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(c) The land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act - if it is the subject of such an approved proposal at the date when the certificate is issued,

No

(d) The land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(e) The land to which the certificate relates is the subject of a site audit statement within the meaning of that Act - if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No

23 ADVICE PROVIDED PURSUANT TO S.10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

23.1 Prescribed Streams

Approval of the NSW Office of Water is required before the removal of any native vegetation within 20 metres of a prescribed stream. Contact the Office of Water for details.

*****

For any enquiries regarding this Certificate please contact Council's Customer Contact Centre on 4350 5555.

Tim Ennis
Signed on Behalf of Council

LAND USE TABLE

Zone RE2 Private Recreation

Wyong Local Environmental Plan 2013

1 Objectives of zone

- To enable land to be used for private open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To offer opportunities for tourism development that is compatible with the natural environment.
- To allow for alternative uses of open space areas for community purposes that are compatible with surrounding areas.
- To enable land uses that are compatible with, and complementary to, recreational uses.

2 Permitted without consent

Nil

3 Permitted with consent

Amusement centres; Aquaculture; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roads; Sewerage systems; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

DRAFT LAND USE TABLE

Zone RE2 Private Recreation

Draft Central Coast Local Environmental Plan

1 Objectives of zone

- To enable land to be used for private open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To offer opportunities for community and/or tourist development that is compatible with the natural environment.

2 Permitted without consent

Nil

3 Permitted with consent

Amusement centres; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roads; Sewerage systems; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

ABN 73 149 644 003
Certificate No:24833
Reference No: 56387:147536

Mr R Lill
1/50 Margaret St
SYDNEY NSW 2000

SECTION 10.7(2) AND (5) PLANNING CERTIFICATE

This Planning Certificate is issued on 22 August 2019 in respect to the land described below, pursuant to s.10.7 of the Environmental Planning and Assessment Act 1979

Fee paid:	$133.00
Receipt No:	13989063
Receipt Date:	22 August 2019

DESCRIPTION OF LAND
COUNTY OF NORTHUMBERLAND

Property Address:	Doyalson RSL Club, 90 Pacific Highway, DOYALSON NSW 2262
Property Description:	Lot 11 DP 240685
Property Owner:	Doyalson Wyee RSL Club Ltd

The information contained within this certificate relates to the land.

1 RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments which apply to the land

Wyong Local Environmental Plan 2013

State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy No 21 – Caravan Parks
State Environmental Planning Policy No 36 – Manufactured Home Estates
State Environmental Planning Policy No 44 – Koala Habitat Protection
State Environmental Planning Policy No 50 – Canal Estate Development
State Environmental Planning Policy No 55 – Remediation of Land
State Environmental Planning Policy No 64 – Advertising and Signage
State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development
State Environmental Planning Policy (State Significant Precincts) 2005
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy (Primary Production and Rural Development) 2019

1.2 Proposed Environmental Planning Instruments which will apply to the land and is or has been the subject of community consultation or public exhibition

Draft Central Coast Local Environmental Plan will replace Gosford Local Environmental Plan 2014, Interim Development Order No. 122 – Gosford, Gosford Planning Scheme Ordinance and Wyong Local Environmental Plan 2013.
2The land is subject to an amendment to *Wyong Local Environmental Plan 2013*

Draft Amendment to State Environmental Planning Policy No 44 – Koala Habitat Protection
Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

1.3 Development Control Plans

Development Control Plan 2013 applies to this land.

2 ZONING AND LAND USE

a Identity of the Zone

Lot 11 DP 240685

RE2 Private Recreation

Identity of the zone in Proposed Environmental Planning Instrument

Lot 11 DP 240685

Proposed RE2 Private Recreation

For each of the environmental planning instruments referred to in clause 1, please refer to the attached land use table to determine (b), (c) and (d) listed below:

b development that may be carried out within the zone without the need for development consent,

c development which may not be carried out within the zone except with development consent and

d development which is prohibited within the zone

e Development Standards applying to the land

Nil

Notwithstanding the above, reference should be made to Clause 4.2B of the Local Environmental Plan, which may contain other provisions enabling or restricting the erection of Dual Occupancies and Dwelling Houses on the land.

Development Standards in Proposed Environmental Planning Instrument

There are no development standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house on the land. However there are minimum lot sizes applying to the subdivision of land, and in some zones the entitlement to erect a dwelling-house, or carry out other types of residential development, is linked to that minimum lot size.

f Critical Habitat

Nil

g Conservation Area

Nil

h Environmental Heritage

Nil

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Not applicable

3 COMPLYING DEVELOPMENT

Whether or not the land is land on which complying development can be carried out under each of the codes for complying development because of the provisions of clause 1.17A (c) and (d) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008?*

1. PART 3 – HOUSING CODE

a Complying Development under the General Housing Code **may** be carried out

on the land.

2. PART 3A – RURAL HOUSING CODE

a Complying development under the Rural Housing Code **may** be carried out on the land providing the land is not less than the minimum lot size for the erection of a dwelling house under the Wyong Local Environmental Plan 2013.

3. PART 3B – LOW RISE MEDIUM DENSITY HOUSING CODE

a Complying Development under the Low Rise Medium Density Housing Code **may** be carried out on the land.

4. PART 4 – HOUSING ALTERATIONS CODE

a Complying development under the Housing Alterations Code **may** be carried out on the land.

5. PART 4A – GENERAL DEVELOPMENT CODE

a Complying development under the General Development Code **may** be carried out on the land.

6. PART 5 – COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

a Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

7. PART 5A – COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

a Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

8. PART 5B – CONTAINER RECYCLING FACILITIES CODE

a Complying Development under the Container Recycling Facilities Code **may** be carried out on the land.

9. PART 6 – SUBDIVISIONS CODE

a Complying development under the Subdivisions Code **may** be carried out on the land.

10. PART 7 – DEMOLITION CODE

a Complying development under the Demolition code **may** be carried out on the land.

11. PART 8 – FIRE SAFETY CODE

a Complying development under the Fire Safety Code **may** be carried out on the land.

4, 4A (Repealed)

4B ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

5 MINE SUBSIDENCE

The land is within a proclaimed mine subsidence district under the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING OR ROAD ALIGNMENT

(a) DIVISION 2 SECTION 25 OF THE ROADS ACT 1993

The land is not affected by road realignment or road widening under the above.

(b) ENVIRONMENTAL PLANNING INSTRUMENT

The land is not affected by road widening or road re-alignment under the above.

(c) COUNCIL RESOLUTIONS

The land is not affected by road widening or road re-alignment under the above.

However, it should be noted that this parcel either fronts or abuts a road under the control of the Roads and Maritime Services. For further details regarding road widening please refer to that agency.

7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES TO RESTRICT DEVELOPMENT DUE TO RISK

This land is affected by a policy adopted by the council or other public authority that restricts the development of the land because of the likelihood of risk restrictions. This land is affected because:

The land is classed as being Acid Sulfate Soil Class 4

The land is classed as being Acid Sulfate Soil Class 5

7A FLOOD RELATED DEVELOPMENT CONTROLS

1. Development on this land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or senior housing) is **not** subject to flood related development controls.

2. Development on this land or part of the land for any other purpose is **not** subject to flood related development controls.

A word or expression used in this clause has the same meaning as it has in the *Floodplain Development Manual* (ISBN 0 7347 5476 0), published by the NSW Government in April 2005, unless it is otherwise defined in this Plan.

8 LAND RESERVED FOR ACQUISITION

The following environmental planning instruments and proposed environmental planning instruments make provisions for the acquisition of land by a public authority as referred to in Section 3.15 of the Act:

Nil

9 CONTRIBUTION PLANS

This land is subject to the Wyong Shire Section 94A Levy Development Contributions Plan.

This land is subject to the Section 94 Contributions Plan for Wyong Shire No. 11 - Shirewide Infrastructure, Services and Facilities.

9A BIODIVERSITY CERTIFIED LAND

The land **is not** biodiversity certified land within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*.

10 BIOBANKING AGREEMENTS

Council has not been notified by the Director-General of the Department of Planning and Environment of an agreement issued under Part 7A of the *Threatened Species Conservation Act 1995*.

11 BUSHFIRE PRONE LAND

The information currently available to Council indicates **some** of the land is shown as bush fire prone land according to the Act.

12 PROPERTY VEGETATION PLAN

This land is not subject to a property vegetation plan under the Native Vegetation Act 2003.

NOTE: The advice provided in this section is based on notification by the Local Land Services - Greater Sydney of the approval of a plan. Further information about property vegetation plans should be obtained from that Authority.

13 ORDER UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Council has not been notified of an Order issued under the Trees (Disputes between Neighbours) Act 2006.

NOTE: This advice is based on information provided by the Land and Environment Court.

14 DIRECTIONS UNDER PART 3A

Not Applicable

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTUCTURE

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

17 SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

18 PAPER SUBDIVISION INFORMATION

(1) THE NAME OF ANY DEVELOPMENT PLAN ADOPTED BY A RELEVANT AUTHORITY THAT APPLIES TO THIS LAND OR THAT IS PROPOSED TO BE SUBJECT TO A CONSENT BALLOT.

Nil

(2) THE DATE OF ANY SUBDIVISION ORDER THAT APPLIES TO THIS LAND.

Not applicable

Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19 SITE VERIFICATION CERTIFICATE

Council is not aware of a Site Verification Certificate having been issued by the Director-General of the Department of Planning and Environment in respect to this land.

Note: A site verification certificate sets out the Director-General's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

20 LOOSE-FILL ASBESTOS INSULATION

This land does not include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division. That register lists residential premises that contain or have contained loose-fill asbestos insulation.

21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICFATION ORDERS (Building Products Safety Act 2017)

1. Is there any affected building notice of which the council is aware that is in force in respect of the land?

No

2.a Is there any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

2.b Is there any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

No

22 CONTAMINATED LAND MANAGEMENT ACT 1997

Note. The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates is significantly contaminated land within the meaning of that Act - if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No

(b) The land to which the certificate relates is subject to a management order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(c) The land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act - if it is the subject of such an approved proposal at the date when the certificate is issued,

No

(d) The land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(e) The land to which the certificate relates is the subject of a site audit statement within the meaning of that Act - if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No

23 ADVICE PROVIDED PURSUANT TO S.10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

23.1 Prescribed Streams

Approval of the NSW Office of Water is required before the removal of any native vegetation within 20 metres of a prescribed stream. Contact the Office of Water for details.

*****

For any enquiries regarding this Certificate please contact Council's Customer Contact Centre on 4350 5555.

Tim Ennis
Signed on Behalf of Council

LAND USE TABLE

Zone RE2 Private Recreation

Wyong Local Environmental Plan 2013

1 Objectives of zone

- To enable land to be used for private open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To offer opportunities for tourism development that is compatible with the natural environment.
- To allow for alternative uses of open space areas for community purposes that are compatible with surrounding areas.
- To enable land uses that are compatible with, and complementary to, recreational uses.

2 Permitted without consent

Nil

3 Permitted with consent

Amusement centres; Aquaculture; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roads; Sewerage systems; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

DRAFT LAND USE TABLE

Zone RE2 Private Recreation

Draft Central Coast Local Environmental Plan

1 Objectives of zone

- To enable land to be used for private open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To offer opportunities for community and/or tourist development that is compatible with the natural environment.

2 Permitted without consent

Nil

3 Permitted with consent

Amusement centres; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roads; Sewerage systems; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

ABN 73 149 644 003
Certificate No:24834
Reference No: 56387:147536

Mr R Lill
1/50 Margaret St
SYDNEY NSW 2000

SECTION 10.7(2) AND (5) PLANNING CERTIFICATE

This Planning Certificate is issued on 22 August 2019 in respect to the land described below, pursuant to s.10.7 of the Environmental Planning and Assessment Act 1979

Fee paid:	$133.00
Receipt No:	13989063
Receipt Date:	22 August 2019

DESCRIPTION OF LAND
COUNTY OF NORTHUMBERLAND

Property Address:	Doyalson RSL Club, 100 Pacific Highway, DOYALSON NSW 2262
Property Description:	Lot 49 DP 707586
Property Owner:	Doyalson Wyee RSL Club Ltd

The information contained within this certificate relates to the land.

1 RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments which apply to the land

Wyong Local Environmental Plan 2013

State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Primary Production and Rural Development) 2019
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy No 64 – Advertising and Signage
State Environmental Planning Policy No 21 – Caravan Parks
State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development
State Environmental Planning Policy (State Significant Precincts) 2005
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy No 44 – Koala Habitat Protection

State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy No 36 – Manufactured Home Estates
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes)
State Environmental Planning Policy No 50 – Canal Estate Development
State Environmental Planning Policy No 55 – Remediation of Land
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

1.2 Proposed Environmental Planning Instruments which will apply to the land and is or has been the subject of community consultation or public exhibition

The land is subject to an amendment to *Wyong Local Environmental Plan 2013*
2Draft Central Coast Local Environmental Plan will replace Gosford Local Environmental Plan 2014, Interim Development Order No. 122 – Gosford, Gosford Planning Scheme Ordinance and Wyong Local Environmental Plan 2013.

Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
Draft Amendment to State Environmental Planning Policy No 44 – Koala Habitat Protection

1.3 Development Control Plans

Development Control Plan 2013 applies to this land.

2 ZONING AND LAND USE

a Identity of the Zone

Lot 49 DP 707586

RU6 Transition

Identity of the zone in Proposed Environmental Planning Instrument

Lot 49 DP 707586

Proposed RU6 Transition

For each of the environmental planning instruments referred to in clause 1, please refer to the attached land use table to determine (b), (c) and (d) listed below:

b development that may be carried out within the zone without the need for development consent,

c development which may not be carried out within the zone except with development consent and

d development which is prohibited within the zone

e Development Standards applying to the land

Development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on this land.

The minimum land dimension so fixed is 40ha.

Notwithstanding the above, reference should be made to Clause 4.2B of the Local Environmental Plan, which may contain other provisions enabling or restricting the erection of Dual Occupancies and Dwelling Houses on the land.

Development Standards in Proposed Environmental Planning Instrument

There are no development standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house on the land. However there are minimum lot sizes applying to the subdivision of land, and in some zones the entitlement to erect a dwelling-house, or carry out other types of residential development, is linked to that minimum lot size.

f Critical Habitat

Nil

g Conservation Area

Nil

h Environmental Heritage

Nil

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Not applicable

3 COMPLYING DEVELOPMENT

Whether or not the land is land on which complying development can be carried out under each of the codes for complying development because of the provisions of clause 1.17A (c) and (d) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008?*

1. PART 3 – HOUSING CODE

a Complying Development under the General Housing Code **may** be carried out

on the land.

2. PART 3A – RURAL HOUSING CODE

a Complying development under the Rural Housing Code **may** be carried out on the land providing the land is not less than the minimum lot size for the erection of a dwelling house under the Wyong Local Environmental Plan 2013.

3. PART 3B – LOW RISE MEDIUM DENSITY HOUSING CODE

a Complying Development under the Low Rise Medium Density Housing Code **may** be carried out on the land.

4. PART 4 – HOUSING ALTERATIONS CODE

a Complying development under the Housing Alterations Code **may** be carried out on the land.

5. PART 4A – GENERAL DEVELOPMENT CODE

a Complying development under the General Development Code **may** be carried out on the land.

6. PART 5 – COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

a Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

7. PART 5A – COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

a Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

8. PART 5B – CONTAINER RECYCLING FACILITIES CODE

a Complying Development under the Container Recycling Facilities Code **may** be carried out on the land.

9. PART 6 – SUBDIVISIONS CODE

a Complying development under the Subdivisions Code **may** be carried out on the land.

10. PART 7 – DEMOLITION CODE

a Complying development under the Demolition code **may** be carried out on the land.

11. PART 8 – FIRE SAFETY CODE

a Complying development under the Fire Safety Code **may** be carried out on the land.

4, 4A (Repealed)

4B ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

5 MINE SUBSIDENCE

The land is within a proclaimed mine subsidence district under the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING OR ROAD ALIGNMENT

(a) DIVISION 2 SECTION 25 OF THE ROADS ACT 1993

The land is not affected by road realignment or road widening under the above.

(b) ENVIRONMENTAL PLANNING INSTRUMENT

The land is not affected by road widening or road re-alignment under the above.

(c) COUNCIL RESOLUTIONS

The land is not affected by road widening or road re-alignment under the above.

However, it should be noted that this parcel either fronts or abuts a road under the control of the Roads and Maritime Services. For further details regarding road widening please refer to that agency.

7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES TO RESTRICT DEVELOPMENT DUE TO RISK

This land is affected by a policy adopted by the council or other public authority that restricts the development of the land because of the likelihood of risk restrictions. This land is affected because:

The land is classed as being Acid Sulfate Soil Class 4

The land is classed as being Acid Sulfate Soil Class 5

7A FLOOD RELATED DEVELOPMENT CONTROLS

1. Development on this land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or senior housing) is **not** subject to flood related development controls.

2. Development on this land or part of the land for any other purpose is **not** subject to flood related development controls.

A word or expression used in this clause has the same meaning as it has in the *Floodplain Development Manual* (ISBN 0 7347 5476 0), published by the NSW Government in April 2005, unless it is otherwise defined in this Plan.

8 LAND RESERVED FOR ACQUISITION

The following environmental planning instruments and proposed environmental planning instruments make provisions for the acquisition of land by a public authority as referred to in Section 3.15 of the Act:

Nil

9 CONTRIBUTION PLANS

This land is subject to the Section 94 Contributions Plan for Wyong Shire No. 11 - Shirewide Infrastructure, Services and Facilities.

This land is subject to the Wyong Shire Section 94A Levy Development Contributions Plan.

9A BIODIVERSITY CERTIFIED LAND

The land **is not** biodiversity certified land within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*.

10 BIOBANKING AGREEMENTS

Council has not been notified by the Director-General of the Department of Planning and Environment of an agreement issued under Part 7A of the *Threatened Species Conservation Act 1995*.

11 BUSHFIRE PRONE LAND

The information currently available to Council indicates **all** of the land is shown as bush fire prone land according to the Act.

12 PROPERTY VEGETATION PLAN

This land is not subject to a property vegetation plan under the Native Vegetation Act 2003.

NOTE: The advice provided in this section is based on notification by the Local Land Services - Greater Sydney of the approval of a plan. Further information about property vegetation plans should be obtained from that Authority.

13 ORDER UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Council has not been notified of an Order issued under the Trees (Disputes between Neighbours) Act 2006.

NOTE: This advice is based on information provided by the Land and Environment Court.

14 DIRECTIONS UNDER PART 3A

Not Applicable

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTUCTURE

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

17 SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

18 PAPER SUBDIVISION INFORMATION

(1) THE NAME OF ANY DEVELOPMENT PLAN ADOPTED BY A RELEVANT AUTHORITY THAT APPLIES TO THIS LAND OR THAT IS PROPOSED TO BE SUBJECT TO A CONSENT BALLOT.

Nil

(2) THE DATE OF ANY SUBDIVISION ORDER THAT APPLIES TO THIS LAND.

Not applicable

Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19 SITE VERIFICATION CERTIFICATE

Council is not aware of a Site Verification Certificate having been issued by the Director-General of the Department of Planning and Environment in respect to this land.

Note: A site verification certificate sets out the Director-General's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

20 LOOSE-FILL ASBESTOS INSULATION

This land does not include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division. That register lists residential premises that contain or have contained loose-fill asbestos insulation.

21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICFATION ORDERS (Building Products Safety Act 2017)

1. Is there any affected building notice of which the council is aware that is in force in respect of the land?

No

2.a Is there any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

2.b Is there any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

No

22 CONTAMINATED LAND MANAGEMENT ACT 1997

Note. The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates is significantly contaminated land within the meaning of that Act - if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No

(b) The land to which the certificate relates is subject to a management order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(c) The land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act - if it is the subject of such an approved proposal at the date when the certificate is issued,

No

(d) The land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(e) The land to which the certificate relates is the subject of a site audit statement within the meaning of that Act - if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No

23 ADVICE PROVIDED PURSUANT TO S.10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

23.1 Prescribed Streams

Approval of the NSW Office of Water is required before the removal of any native vegetation within 20 metres of a prescribed stream. Contact the Office of Water for details.

*****

For any enquiries regarding this Certificate please contact Council's Customer Contact Centre on 4350 5555.

Tim Ennis
Signed on Behalf of Council

LAND USE TABLE

Zone RU6 Transition

Wyong Local Environmental Plan 2013

1 Objectives of zone

- To protect and maintain land that provides a transition between rural and other land uses of varying intensities or environmental sensitivities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To ensure that interim land uses do not have an adverse impact on the conservation or development potential of land identified for future investigation in the North Wyong Shire Structure Plan or Wyong Settlement Strategy.

2 Permitted without consent

Nil

3 Permitted with consent

Air transport facilities; Animal boarding or training establishments; Bed and breakfast accommodation; Building identification signs; Business identification signs; Community facilities; Dual occupancies; Dwelling houses; Electricity generating works; Emergency services facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Home-based child care; Home businesses; Home industries; Home occupations; Horticulture; Information and education facilities; Oyster aquaculture; Recreation areas; Recreation facilities (outdoor); Research stations; Roads; Tank-based aquaculture; Waste or resource management facilities; Water recreation structures; Water supply systems

4 Prohibited

Pond-based aquaculture; Any other development not specified in item 2 or 3

DRAFT LAND USE TABLE

Zone RU6 Transition

Draft Central Coast Local Environmental Plan

1 Objectives of zone

- To protect and maintain land that provides a transition between rural and other land uses of varying intensities or environmental sensitivities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To ensure that interim land uses do not have an adverse impact on the conservation or development potential of land identified for future investigation.

2 Permitted without consent

Nil

3 Permitted with consent

Air transport facilities; Animal boarding or training establishments; Bed and breakfast accommodation; Building identification signs; Business identification signs; Community facilities; Dual occupancies; Dwelling houses; Electricity generating works; Emergency services facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Home-based child care; Home businesses; Home industries; Home occupations; Horticulture; Information and education facilities; Recreation areas; Recreation facilities (outdoor); Research stations; Roads; Sewage reticulation systems; Vehicle sales or hire premises; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

ABN 73 149 644 003
Certificate No:24835
Reference No: 56387:147536

Mr R Lill
1/50 Margaret St
SYDNEY NSW 2000

SECTION 10.7(2) AND (5) PLANNING CERTIFICATE

This Planning Certificate is issued on 22 August 2019 in respect to the land described below, pursuant to s.10.7 of the Environmental Planning and Assessment Act 1979

Fee paid:	$133.00
Receipt No:	13989063
Receipt Date:	22 August 2019

DESCRIPTION OF LAND
COUNTY OF NORTHUMBERLAND

Property Address:	Doyalson RSL Club, 110 Pacific Highway, DOYALSON NSW 2262
Property Description:	Lot 7 DP 240685
Property Owner:	Doyalson Wyee RSL Club Ltd

The information contained within this certificate relates to the land.

1 RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments which apply to the land

Wyong Local Environmental Plan 2013

State Environmental Planning Policy (Primary Production and Rural Development) 2019
State Environmental Planning Policy No 64 – Advertising and Signage
State Environmental Planning Policy No 21 – Caravan Parks
State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development
State Environmental Planning Policy No 44 – Koala Habitat Protection
State Environmental Planning Policy No 36 – Manufactured Home Estates
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy No 50 – Canal Estate Development

State Environmental Planning Policy No 55 – Remediation of Land
State Environmental Planning Policy (State Significant Precincts) 2005
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011

1.2 Proposed Environmental Planning Instruments which will apply to the land and is or has been the subject of community consultation or public exhibition

The land is subject to an amendment to *Wyong Local Environmental Plan 2013*
2Draft Central Coast Local Environmental Plan will replace Gosford Local Environmental Plan 2014, Interim Development Order No. 122 – Gosford, Gosford Planning Scheme Ordinance and Wyong Local Environmental Plan 2013.

Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
Draft Amendment to State Environmental Planning Policy No 44 – Koala Habitat Protection

1.3 Development Control Plans

Development Control Plan 2013 applies to this land.

2 ZONING AND LAND USE

a Identity of the Zone

Lot 7 DP 240685

RU6 Transition

Identity of the zone in Proposed Environmental Planning Instrument

Lot 7 DP 240685

Proposed RU6 Transition

For each of the environmental planning instruments referred to in clause 1, please refer to the attached land use table to determine (b), (c) and (d) listed below:

b development that may be carried out within the zone without the need for development consent,

c development which may not be carried out within the zone except with development consent and

d development which is prohibited within the zone

e Development Standards applying to the land

Development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on this land.

The minimum land dimension so fixed is 40ha.

Notwithstanding the above, reference should be made to Clause 4.2B of the Local Environmental Plan, which may contain other provisions enabling or restricting the erection of Dual Occupancies and Dwelling Houses on the land.

Development Standards in Proposed Environmental Planning Instrument

There are no development standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house on the land. However there are minimum lot sizes applying to the subdivision of land, and in some zones the entitlement to erect a dwelling-house, or carry out other types of residential development, is linked to that minimum lot size.

f Critical Habitat

Nil

g Conservation Area

Nil

h Environmental Heritage

Nil

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Not applicable

3 COMPLYING DEVELOPMENT

Whether or not the land is land on which complying development can be carried out under each of the codes for complying development because of the provisions of clause 1.17A (c) and (d) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008?*

1. PART 3 – HOUSING CODE

a Complying Development under the General Housing Code **may** be carried out

on the land.

2. PART 3A – RURAL HOUSING CODE

a Complying development under the Rural Housing Code **may** be carried out on the land providing the land is not less than the minimum lot size for the erection of a dwelling house under the Wyong Local Environmental Plan 2013.

3. PART 3B – LOW RISE MEDIUM DENSITY HOUSING CODE

a Complying Development under the Low Rise Medium Density Housing Code **may** be carried out on the land.

4. PART 4 – HOUSING ALTERATIONS CODE

a Complying development under the Housing Alterations Code **may** be carried out on the land.

5. PART 4A – GENERAL DEVELOPMENT CODE

a Complying development under the General Development Code **may** be carried out on the land.

6. PART 5 – COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

a Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

7. PART 5A – COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

a Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

8. PART 5B – CONTAINER RECYCLING FACILITIES CODE

a Complying Development under the Container Recycling Facilities Code **may** be carried out on the land.

9. PART 6 – SUBDIVISIONS CODE

a Complying development under the Subdivisions Code **may** be carried out on the land.

10. PART 7 – DEMOLITION CODE

a Complying development under the Demolition code **may** be carried out on the land.

11. PART 8 – FIRE SAFETY CODE

a Complying development under the Fire Safety Code **may** be carried out on the land.

4, 4A (Repealed)

4B ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

5 MINE SUBSIDENCE

The land is within a proclaimed mine subsidence district under the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING OR ROAD ALIGNMENT

(a) DIVISION 2 SECTION 25 OF THE ROADS ACT 1993

The land is not affected by road realignment or road widening under the above.

(b) ENVIRONMENTAL PLANNING INSTRUMENT

The land is not affected by road widening or road re-alignment under the above.

(c) COUNCIL RESOLUTIONS

The land is not affected by road widening or road re-alignment under the above.

However, it should be noted that this parcel either fronts or abuts a road under the control of the Roads and Maritime Services. For further details regarding road widening please refer to that agency.

7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES TO RESTRICT DEVELOPMENT DUE TO RISK

This land is affected by a policy adopted by the council or other public authority that restricts the development of the land because of the likelihood of risk restrictions. This land is affected because:

The land is classed as being Acid Sulfate Soil Class 5

7A FLOOD RELATED DEVELOPMENT CONTROLS

1. Development on this land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or senior housing) is **not** subject to flood related development controls.

2. Development on this land or part of the land for any other purpose is **not** subject to flood related development controls.

A word or expression used in this clause has the same meaning as it has in the *Floodplain Development Manual* (ISBN 0 7347 5476 0), published by the NSW Government in April 2005, unless it is otherwise defined in this Plan.

8 LAND RESERVED FOR ACQUISITION

The following environmental planning instruments and proposed environmental planning instruments make provisions for the acquisition of land by a public authority as referred to in Section 3.15 of the Act:

Nil

9 CONTRIBUTION PLANS

This land is subject to the Wyong Shire Section 94A Levy Development Contributions Plan.

This land is subject to the Section 94 Contributions Plan for Wyong Shire No. 11 - Shirewide Infrastructure, Services and Facilities.

9A BIODIVERSITY CERTIFIED LAND

The land **is not** biodiversity certified land within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*.

10 BIOBANKING AGREEMENTS

Council has not been notified by the Director-General of the Department of Planning and Environment of an agreement issued under Part 7A of the *Threatened Species Conservation Act 1995*.

11 BUSHFIRE PRONE LAND

The information currently available to Council indicates **some** of the land is shown as bush fire prone land according to the Act.

12 PROPERTY VEGETATION PLAN

This land is not subject to a property vegetation plan under the Native Vegetation Act 2003.

NOTE: The advice provided in this section is based on notification by the Local Land Services - Greater Sydney of the approval of a plan. Further information about property vegetation plans should be obtained from that Authority.

13 ORDER UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Council has not been notified of an Order issued under the Trees (Disputes between Neighbours) Act 2006.

NOTE: This advice is based on information provided by the Land and Environment Court.

14 DIRECTIONS UNDER PART 3A

Not Applicable

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTUCTURE

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

17 SITE COMPATIBILITY CERTIFICATES FOR AFFORDABLE RENTAL HOUSING

Council is not aware of there being a valid Site Compatibility Certificate issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

18 PAPER SUBDIVISION INFORMATION

(1) THE NAME OF ANY DEVELOPMENT PLAN ADOPTED BY A RELEVANT AUTHORITY THAT APPLIES TO THIS LAND OR THAT IS PROPOSED TO BE SUBJECT TO A CONSENT BALLOT.

Nil

(2) THE DATE OF ANY SUBDIVISION ORDER THAT APPLIES TO THIS LAND.

Not applicable

Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19 SITE VERIFICATION CERTIFICATE

Council is not aware of a Site Verification Certificate having been issued by the Director-General of the Department of Planning and Environment in respect to this land.

Note: A site verification certificate sets out the Director-General's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land—see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

20 LOOSE-FILL ASBESTOS INSULATION

This land does not include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division. That register lists residential premises that contain or have contained loose-fill asbestos insulation.

21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICFATION ORDERS (Building Products Safety Act 2017)

1. Is there any affected building notice of which the council is aware that is in force in respect of the land?

No

2.a Is there any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

2.b Is there any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

No

22 CONTAMINATED LAND MANAGEMENT ACT 1997

Note. The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates is significantly contaminated land within the meaning of that Act - if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No

(b) The land to which the certificate relates is subject to a management order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(c) The land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act - if it is the subject of such an approved proposal at the date when the certificate is issued,

No

(d) The land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,

No

(e) The land to which the certificate relates is the subject of a site audit statement within the meaning of that Act - if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No

23 ADVICE PROVIDED PURSUANT TO S.10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

23.1 Prescribed Streams

Approval of the NSW Office of Water is required before the removal of any native vegetation within 20 metres of a prescribed stream. Contact the Office of Water for details.

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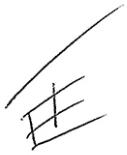
For any enquiries regarding this Certificate please contact Council's Customer Contact Centre on 4350 5555.



Tim Ennis
Signed on Behalf of Council

LAND USE TABLE

Zone RU6 Transition

Wyong Local Environmental Plan 2013

1 Objectives of zone

- To protect and maintain land that provides a transition between rural and other land uses of varying intensities or environmental sensitivities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To ensure that interim land uses do not have an adverse impact on the conservation or development potential of land identified for future investigation in the North Wyong Shire Structure Plan or Wyong Settlement Strategy.

2 Permitted without consent

Nil

3 Permitted with consent

Air transport facilities; Animal boarding or training establishments; Bed and breakfast accommodation; Building identification signs; Business identification signs; Community facilities; Dual occupancies; Dwelling houses; Electricity generating works; Emergency services facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Home-based child care; Home businesses; Home industries; Home occupations; Horticulture; Information and education facilities; Oyster aquaculture; Recreation areas; Recreation facilities (outdoor); Research stations; Roads; Tank-based aquaculture; Waste or resource management facilities; Water recreation structures; Water supply systems

4 Prohibited

Pond-based aquaculture; Any other development not specified in item 2 or 3

DRAFT LAND USE TABLE

Zone RU6 Transition

Draft Central Coast Local Environmental Plan

1 Objectives of zone

- To protect and maintain land that provides a transition between rural and other land uses of varying intensities or environmental sensitivities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To ensure that interim land uses do not have an adverse impact on the conservation or development potential of land identified for future investigation.

2 Permitted without consent

Nil

3 Permitted with consent

Air transport facilities; Animal boarding or training establishments; Bed and breakfast accommodation; Building identification signs; Business identification signs; Community facilities; Dual occupancies; Dwelling houses; Electricity generating works; Emergency services facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Home-based child care; Home businesses; Home industries; Home occupations; Horticulture; Information and education facilities; Recreation areas; Recreation facilities (outdoor); Research stations; Roads; Sewage reticulation systems; Vehicle sales or hire premises; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

Document Distribution

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