NSW Land and Housing Corporation

Detailed Site Investigation
Bonnyrigg Stages 8-11, NSW

30 April 2021

60493-136590 (Rev 0)

JBS&G

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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AHD	Australian Height Datum
Bgs	Below Ground Surface
BTEX	Benzene, toluene, ethylbenzene and xylenes
B(a)P	Benzo(a)pyrene
Council	Fairfield City Council
CSM	Conceptual Site Model
DA	Development Application
DP	Deposited Plan
DQIs	Data Quality Indicators
DQOs	Data Quality Objectives
DSI	Detailed Site Investigation
EIL/ESL	Ecological Investigation/Screening Levels
EPA	NSW Environment Protection Authority
ESA	Environmental Site Assessment
HIL/HSL	Health Investigation/Screening Levels
LAHC	Land and Housing Corporation
LEP	Local Environmental Plan
LOR	Limit of Reporting
NEPC	National Environment Protection Council
OCPs	Organochlorine pesticide
OEH	NSW Office of Environment and Heritage
PAHs	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PFAS	Per- and poly-fluoroalkyl substances
PID	Photo-ionisation Detector
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAQP	Sampling Analysis and Quality Plan
SEPP	State Environmental Planning Policy
TCLP	Toxicity characteristic leaching procedure
TRH	Total Recoverable Hydrocarbons
VOCs	Volatile organic compounds

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by NSW Land and Housing Corporation (LAHC, the client) to conduct a Detailed Site Investigation (DSI) across Stages 8 to 11 (the site) of the Bonnyrigg Housing Estate, NSW, as shown on **Figures 1 and 2**.

A number of historical environmental assessments have been conducted across the Bonnyrigg Housing Estate including a Preliminary Environmental Site Assessment (ESA) (JBS 2007[1])covering the entire Bonnyrigg Housing Estate including the current site area.

The site has historically been used for pastoral uses before being developed into parkland and residential use including associated roadways in the late 1970s. It is understood that the client is working to redevelop Stages 8-11 of the Bonnyrigg Housing Estate to revitalise the area into a modern mixed community of private and social housing. In order for the proposed development works to proceed and as a requirement for development application (DA) submission, a contamination assessment is required in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

The objective of the contamination assessment is to determine if significant surface or subsurface soil contamination is likely to exist on the site that may present a risk to human health and/or the environment as a result of previous and current land use.

Field works were completed by JBS&G on 29th and 30th March 2021 and comprised a site inspection and completion of soil sampling from 30 investigation locations within accessible portions of the site. The investigation locations completed are shown on **Figure 3**.

Surfaces across the site varied from bitumen sealed roadways, grassed open space areas and residential yards, gardens beds, igneous gravel pathways and bare soils.

The soil profile generally comprised of stiff, heterogeneous dark brown, mottled clay fill/topsoils at depths of 0.1 to 0.4 m bgs. The topsoil was underlain with either natural red-grey mottled silty clay, or in areas of deeper fill, a sandy clay with inclusions of gravels, terracotta pipe and brick fragments. Natural material (red-grey mottled silty clay) was observed at depths ranging from 0.1 m bgs to 0.9 m bgs.

No staining, odours or asbestos were observed at any location with the exception of a slight organic odour at TP01 0-0.1, and an ACM fragment at TP28-0.2-0.3.

Anthropogenic materials, such as timber, clay pipe fragments, ceramic tiles, plaster board, broken screen doors, general household rubbish, hub caps, scrap metal and some bricks, were observed at various locations across each of the stages

Selected soil samples collected during the investigation were analysed for a range of contaminants of potential concern (COPC) including heavy metals, total recoverable hydrocarbon (TRH), benzene, toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs) and asbestos. Contaminant concentrations were compared to NEPC (2013) human health and ecological land use suitability adopted for the proposed residential and open space land uses.

The reported concentrations of COPC in soil samples analysed were all below the laboratory limits of reporting (LOR) and/or the human health and ecological criteria adopted with the exception of the asbestos fragment identified at TP28 0.2-0.3.

[1] *Preliminary Environmental Site Assessment Report*, Bonnyrigg Living Communities Project, Bonnyrigg, NSW, Becton Property Group, c/o Aver Pty Ltd, JBS, September 2007 (JBS 2007).

Based on the findings of this assessment and subject to the limitations in **Section 12**, the following conclusions are made:

- Minor volumes of fill materials were observed across the site with inclusions of igneous gravels, timber, concrete, PVC pipe, brick, plastic, and glass. Fill materials were generally observed from the surface to depths of between 0.1 and 0.9 m bgs. The foreign materials will require consideration for aesthetics during future development works.
- Bonded ACM was identified in fill materials at location TP28 0.2-0.3m, and due to the presence of fill with anthropogenic inclusions there is the potential for asbestos in other locations.
- All other contaminant concentrations of soils samples analysed within investigation locations conducted (heavy metals, TRH, BTEX, PAHs, OCPs and asbestos) were all below the LOR and/or the adopted site criteria.
- There were no indications of gross or widespread contamination and impact identified at the site. There is the potential for ACM elsewhere in fill based on the observations at TP28 0.2-0.3m, noting ACM was only observed/detected at one out of 30 locations during the current investigation.
- As such, it is considered the site can be suitable for the intended land uses subject to investigations in areas that were inaccessible and preparation and successful implementation of a remedial action plan (RAP) to manage identified impacts.

Based on the conclusions presented, it is recommended the following actions are undertaken:

- Further investigations works, including confirmation of potential asbestos and aesthetic impacts are required within inaccessible areas and building footprints following demolition of site structures and prior to development-related earthworks and civil works, to confirm the suitability of the site for the intended land uses;
- Preparation of a RAP to address unacceptable impacts where identified; and

Standard development controls including an Unexpected Finds Protocol to be prepared prior to civil works commencing to address any potential unexpected contamination encountered during future works.

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by NSW Land and Housing Corporation (LAHC, the client) to conduct a Detailed Site Investigation (DSI) across Stages 8 to 11 (the site) of the Bonnyrigg Housing Estate, NSW, as shown on **Figures 1 and 2**.

A number of historical environmental assessments have been conducted across the Bonnyrigg Housing Estate including a Preliminary Environmental Site Assessment (ESA) (JBS 2007[2]) covering the entire Bonnyrigg Housing Estate including the current site area.

The site has historically been used for pastoral uses before being developed into parkland and residential use including associated roadways in the late 1970s. It is understood that the client is working to redevelop Stages 8-11 of the Bonnyrigg Housing Estate to revitalise the area into a modern mixed community of private and social housing. In order for the proposed development works to proceed and as a requirement for development application (DA) submission, a contamination assessment is required in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objectives

The objective of the contamination assessment is to determine if significant surface or subsurface soil contamination is likely to exist on the site that may present a risk to human health and/or the environment as a result of previous and current land use.

1.3 Scope of Work

To achieve the objectives of the contamination assessment, the following scope of works were undertaken:

- review of available information on the site history from aerial photographs and historical title search from NSW Land and Property Information (LPI);
- search of records of notices by NSW EPA;
- search of information of groundwater boreholes in the area;
- review of Fairfield City Council Section 10.7(2&5) Planning Certificates;
- inspection of the site to identify apparent or suspected areas of environmental (contamination) concern (AECs);
- review of published information on the subsurface conditions in the general area;
- intrusive soil sampling and inspection of subsurface conditions using a backhoe at 30 locations;
- analysis of selected soil samples for a range of contaminants of potential concern (COPCs);
- assessment of environmental data collected, including comparison of field and analytical data against appropriate EPA-made or endorsed investigation / screening levels for the proposed land use(s);
- implementation of a Quality assurance and control (QA/QC) program appropriate to the investigation; and

[2] *Preliminary Environmental Site Assessment Report*, Bonnyrigg Living Communities Project, Bonnyrigg, NSW, Becton Property Group, c/o Aver Pty Ltd, JBS, September 2007 (JBS 2007).

- preparation of this Detailed Site Investigation (DSI) report consistent with EPA made or endorsed guidelines and *State Environmental Planning Policy No.55 – Remediation of Land* (SEPP 55).

2. Site Description and Setting

2.1 Site Identification

Stages 8 to 11 (the site) of the Bonnyrigg Housing Estate Project is located approximately 25km south west of the Sydney CBD, and 6km north west of Liverpool. The site covers an irregular shaped area of approximately 14.5 ha. The site area is bounded by Edensor Road to the north, Humphries Road to the east, Cabramatta Road to the southeast and various internal roads along the western boundary (see **Figure 2**).

The site details are summarised as follows:

Table 2.1 Summary Site Details

Lot Numbers	See **Table B** attached for Lot and DP details
Street Address	Bonnyrigg Stage 8-11, Bonnyrigg, NSW.
Site Area	Approximately 14.5ha
Local Government Authority	Fairfield City Council
Geographic Coordinates (MGA 56)	33.8915 E 150.898 N
Current Land-use	Greenspaces and Residential including roadways
Proposed Land-use	Residential with areas of public open space.

2.2 Site Description

The site was inspected by a qualified JBS&G environmental consultant on Friday 26th March 2021. Photographs of the site are provided in **Appendix A**. The site layout, including the boundaries of development Stages 8 to 11, is shown on **Figure 2.** Some of the key features observed at the site are shown in **Figure 3**.

It is noted that a small number of the properties were vacant and were therefore targeted for intrusive sampling. The majority of occupied residential properties were observed from the adjacent roadways.

Stage 8

Stage 8 was observed to comprise of small areas of open space and approximately 38 residential properties located on Palisade Crescent, Bean Crescent, Joiner Place and Newleaf Parade (**Photographs 1 to 3**). The roadways were all bitumen paved with concrete gutters/stormwater drains and were in relatively good condition. Stage 8 generally sloped downward to the south-east.

An open space area was located within the southern portion of Stage 8, north of Cabramatta Road. The area comprised of a footpath, grassed areas, and trees. Some minor anthropogenic material (e.g. hub cap, scrap metal, etc.) was observed on the ground surface (**Photograph 4**).

Each of the residential properties generally comprised a brick/fibro or weatherboard single storey residence, concrete driveway and path, grass lawns, some with gardens, surrounded by timber or corrugated steel fencing. Some of the residential houses within Stage 8 also comprised either wholly or partially of fibrous cement sheeting (suspected asbestos containing materials (ACM)) (**Photograph 5**). It was suspected that the majority of eaves were ACM (**Photograph 6**), however no damage or degradation of ACM was observed within the properties inspected. Paint on many of the residences was observed to be peeling (**Photograph 7**).

Anthropogenic materials (e.g. timber, clothing, mattresses, furniture and general household waste) was observed across the stage along the road verges and within residential properties(**Photograph 8**).

No staining, odours or ACM were observed on the accessible ground surface within Stage 8.

Stage 9

Stage 9 was observed to comprise of open space and approximately 21 residential type buildings on Palisade Crescent and Mason Place (**Photographs 9 and 10**). The roadways were all bitumen paved with concrete gutters/stormwater drains and were in relatively good condition. Stage 9 generally sloped in a downward direction to the south and east.

The open space areas were located in the northwest between Joiner Place (in Stage 8) and Palisade Crescent, and at the southern boundary north of Cabramatta Road. The areas comprised of concrete footpaths, grassed areas, and a number of native trees. Anthropogenic material was observed across both areas (e.g. plaster board, timber etc. **Photograph 11**). Suspected ACM fragments were found at the southern parkland area (**Photograph 12**) as shown on **Figure 3**.

Each of the residential properties generally comprised a single storey residential building, concrete driveway and pathways, grass lawns, some with gardens surrounded by timber or corrugated steel fencing. Residential houses comprised wholly or partially of fibrous cement sheeting (suspected ACM), brick, and/or weatherboard. The majority of the eaves were observed to comprise of suspected ACM, however no damage or degradation was observed in properties inspected. Paint on many of the properties was peeling. Anthropogenic material was found out the front of a number of properties, stockpiled, and scattered across the grassed lawn areas or adjacent road verges.

No staining, odours or ACM were observed on the accessible ground surface at the residential properties inspected or open space areas.

Stage 10

Stage 10 was observed to comprise of an open space area and approximately 51 residential type buildings on Kennedy Way, Garden Place and Newleaf Parade. The roadways were all bitumen paved with concrete gutters/stormwater drains and were in relatively good condition. Stage 10 generally sloped to the south and east.

An open space area was located in the northern portion of Stage 10 and was somewhat overgrown with weeds and grasses. The area between Rosella Street and Kennedy Way sloped downward from the north to the south and was made up of bare sandy gravel (possibly imported material) clay patches and dry long grasses and weeds (**Photograph 13 and 14**).

Each of the residential properties generally comprised a single storey residential building, concrete driveway and pathways, grass lawns, some with gardens surrounded by timber or corrugated iron (Colourbond) fencing. Residential buildings comprised wholly or partially of fibrous cement sheeting (suspected ACM), brick, and/or weatherboard (**Photograph 17**). The majority of the eaves were observed to comprise of suspected ACM, however no damage or degradation was observed in properties inspected. Paint on many of the properties was peeling. Anthropogenic materials (including rubber tyres and paint tins) was found across a number of properties, both on the road verge and within the property boundary residential properties (**Photograph 16**).

No staining, odours or ACM were observed on accessible surfaces across Stage 10 in either the open space or residential areas inspected. It was noted however that the open space was somewhat overgrown, limiting the ability to identify potential ACM on the ground surface across these areas.

Stage 11

Stage 11 was observed to comprise of an open space area and approximately 53 residential type buildings on Bishop Crescent, Sandilands Road and Newleaf Parade (**Photographs 17-20**). The roadways were all bitumen paved with concrete gutters/stormwater drains and were in relatively good condition. Roadways within Stage 11 generally sloped to the south/east.

The open space area was somewhat overgrown and was located in the western portion of Stage 11 adjacent Bishop Crescent and Newleaf Parade. The area sloped downward from the northwest to the southeast and was overgrown with long grasses and weeds (**Photograph 18**).

Each of the residential properties generally comprised, a single storey residential building, concrete driveway and pathways, grassed lawns, some with gardens surrounded by timber or corrugated steel fencing. Residential buildings comprised wholly or partially of fibrous cement sheeting (suspected ACM), brick, and/or weatherboard. Paint on many of the properties was cracked and flaking. Anthropogenic materials (e.g. timber, broken screen doors) was found across a number of areas both within the road verge and within property boundaries (**Photograph 19**).

No staining, odours or ACM were observed on the surface across Stage 11.

2.3 Surrounding Land Use

The current land use of adjacent properties and across adjacent roads is shown in **Figure 2** and summarised below.

- North – The north of the site is bound by Edensor Road. Residential areas surround the northern portion of the site.
- East – Humphries Road bounds the eastern site boundary. Residential areas including houses and associated roadways are located east of the site. Our Lady of Mount Carmel Public School and Catholic Church are also located to the east of the southern portion of the site.
- South – Cabramatta Road West bounds the southern site boundary. The Indochinese Aged Care Services, residential properties, and Mingyue Lay Buddhist Temple are located south of Cabramatta Road, south to the site.
- West – Previous stages of the Bonnyrigg Housing Estate Project are located to the west of site. Some properties are still under construction while others are complete. Bunker Park is also located west of site, adjacent the northwest boundary of Stage 10.

Based on the surrounding land uses identified from a review of aerial imagery, there does not appear to be any significant potential for offsite sources of contamination adjacent the site. A service station on Cabramatta Road approximately 200 m west of the southwest site boundary is not considered to pose a risk as it is not upgradient of the site based on topography and hydrogeology discussions below.

2.4 Topography

The regional topographic map (NSW LPI) indicates that the site has an elevation of between 36 m Australian Height Datum (AHD) along Humphries Road to the east and 47 m AHD at the western boundary near Bunker Park. The site consists of gently undulating rises and dips with the trend of the site predominantly sloping gently from west to east, towards Green Valley Creek approximately 200 m southeast of the eastern site boundary. The western boundary is close to a topographic ridge from Bunker Park southwest to Cabramatta Rd.

2.5 Geology and Soils

According to the Penrith 1:100,000 Geological and Soil Series Sheet 9030, the site lies on the Cumberland Lowlands. This consists of low lying, gently undulating plains and low hills underlain by the Bringelly Shale of the Wianamatta Group of Triassic Age, comprising shale, claystones, laminate, sandstones, and rare coal and tuff. The Bringelly Shale weathers at the ground surface to form a silty clay residual soil of medium to high plasticity. On ridge crests and upper valley sides the residual soil averages 1-2m thick, increasing to a layer of 3-4m thick in the lower flanks and valley floors.

The site is located on Blacktown Soil Landscape Group, which include soils derived from the weathering of the underlying shales and sandstones of the Wianamatta Group. Soils typically have

low fertility and are often strongly acidic, and the underlying sandstone predominantly provides a dense drainage medium of northward flowing channels.

The above descriptions are consistent with soil profiles observed over the site during the intrusive soil sampling program. Topsoil is generally located in the top 0-0.4 metres, underlain by orange/red/brown/grey clays which vary between sandy, gravely and ironstone in composition, which are underlain by grey or brown Bringelly Shales.

2.6 Hydrology

Two creeks are located within close proximity of the site. Green Valley Creek is situated approximately 200 m to the east of the site and flows in a north-easterly direction. Clear Paddock Creek is located approximately 1 km to the west and north west of the site and runs in a north-easterly direction. Both creeks join Orphan School Creek approximately 3 km to the north east of the site, which is part of the Prospect Creek Catchment covering an area of 98km^2. Prospect Creek Catchment is a sub-catchment of the Georges River Catchment.

2.7 Hydrogeology

A search for registered groundwater bore information was undertaken on Water NSW[3] website and results are included as **Appendix B**. A total of 9 registered bores within a 1.5 km radius of the site boundary, and their relevant information is summarised in **Table 2.2 below**.

The surrounding bores were installed for monitoring purposes. The closest bore was a monitoring well approximately 200 m west of the site at a service station on Cabramatta Road West, with a measured SWL (standing water level) at 1.2 mbgs. No groundwater data was available for the other bores identified.

Table 2.2: Registered Groundwater Bore Search Summary

Bore ID	Use	SWL[1] (m bgs)	Final Drilled Depth (m)	Approximate distance/ direction from site centre	Lithology
GW115042	Monitoring	1.2	6	0.2 km West	-
GW109724	Monitoring	-	15	0.8 km Northwest	0-0.1m Concrete Slab 0.1-0.2m Fill 0.2-15m Shale
GW109725	Monitoring	-	25	0.8 km Northwest	0-0.1m Concrete Slab 0.1-0.2m Fill 0.2-14m Shale 14-14.1m Clay 14.1-25m Shale
GW109726	Monitoring	-	8	0.8 km Northwest	0-1m Topsoil 1-8m Shale
GW109727	Monitoring	-	16	0.8 km Northwest	0-0.1m Concrete 0.1-1m Fill 1-16m Shale
GW109728	Monitoring	-	9	0.8 km Northwest	0-0.1m Concrete Slab 0.1-1m Fill 1-3m Silty Clay 3-9m Shale
GW112610	Monitoring	-	8	0.85 km Southeast	0-0.1m Topsoil

[3] Water NSW website, https://realtimedata.waternsw.com.au/, accessed 12 March 2021

Bore ID	Use	SWL[1] (m bgs)	Final Drilled Depth (m)	Approximate distance/ direction from site centre	Lithology
					0.1-1.6m Fill 1.6-3.9m Clay 3.9-8m Shale
GW112611	Monitoring	-	7	0.85 km Southeast	0-0.1m Crushed rock 0.1-1.1m Fill 1.1-3.3m Clay 3.3-7m Shale
GW112612	Monitoring	-	7	0.85 km Southeast	0-0.1m Concrete 0.1-4.8m Clay 4.8-7m Mudstone

1. SWL: Standing water level

As detailed in the JBS 2007 Preliminary ESA Report, a search of registered groundwater within a greater distance of a 4 km radius was undertaken and 12 monitoring wells were identified at that point in time. The closest of these groundwater bores was approximately 2.5 km SE of the site. The available information for these twelve bores was variable. These bores were used for irrigation, groundwater monitoring and for dewatering purposes. Monitoring wells accessed shallow groundwater at approximately 4m in clay, while the irrigation bore was approximately 150m deep, drawing water from a deep shale aquifer.

Based on local topography and hydrology, shallow perched groundwater at the interface of residual clay soil and shale is expected to flow in a predominantly east to north-easterly direction towards Green Valley Creek. It is anticipated that the groundwater will be shallower in the southeast and east of site due to topography and proximity to Green Valley Creek.

Based on the information provided by the Department of Natural Resources and considering the relative elevation of the site, deeper groundwater is expected to be contained within the fractures and bedding planes of the underlying shale and sandstone. The presence of the relatively impermeable sandy clays and shale layers at the site limits the potential for groundwater contamination, ultimately limiting the potential for contamination (if any) at the site to migrate via groundwater.

2.8 Acid Sulfate Soils

As detailed in JBS 2007, an according to the 1:25,000 Acid Sulfate Soil Risk Map for Liverpool (9030S2) provided by the Soil Conservation Service of NSW, 1997, the site exists in an area of no known occurrences of acid sulfate soils, consistent with the site's elevation and geological setting.

2.9 Salinity

According to the Salinity Potential in Western Sydney provided by the Department of Infrastructure, Planning and Natural Resources of NSW, 2002, the site exists in an area of Moderate Salinity Potential. Areas of Moderate Salinity Potential cover all Wianamatta Group Shales (Ashfield or Bringelly). These areas include observed scattered areas of scalding, salt affected buildings and salinity indicator plants having been noted, but no concentrations have been mapped.

High Potential Salinity occurs in areas surrounding lower slopes and streamlines. The western site boundary is located > 1 km from the Bonnyrigg Wetlands and Clear Paddock Creek. The eastern boundary is approximately 200 m from Green Valley Creek.

During the detailed site inspection, none of the following signs of urban salinity were observed; salt crystals being present on the soil surface; 'puffiness' of soil when dry, or greasiness on soils when wet; black staining on soils; presence of indicator vegetation species; die back of trees; or staining

and marking of house foundations where visible. Minimal bare soil patches were observed across the site, however these were attributed to pedestrian wear and tear and vehicle access factors, not salinity.

3. Summary Site History

3.1 Office of Environment & Heritage Records

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

- NSW *Protection of the Environment Operations Act 1997* (POEO Act) public register of licences, applications and notices (maintained under Section 308 of the POEO Act);
    - Based on search of the NSW POEO Act, the site and immediately surrounding did not have any licences, applications or notices on the public register.
- NSW EPA contaminated land public register of record of notices (under Section 58 of the *Contaminated Land Management Act 1997* (CLM Act));
    - No notices have been issued under the CLM Act for the site;
    - Three former notices were issued to Metro (Formerly United & AP SAVER) Service Station, 100 m west of site. The first two notices in 2016 related to issue and amendment of a Preliminary Investigation Order (No. 20161002) to investigate potential contamination from Petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX), Naphthalene and Lead. The last notice in 2019 (No. 20194434) repealed the investigation order once the investigations were completed. Based on the service station's location relative to the site, with a topographic ridge between, it is considered contamination at the service station is unlikely to impact the site.
- NSW contaminated sites notified to the EPA (under Section 60 of the CLM Act); and
    - The site does not appear on the EPA contaminated land register or list of sites notified to EPA.
    - The Metro (Formerly United & AP SAVER) Service Station described above is on the list of NSW contaminated sites notified to the EPA. The list indicates that EPA has determined regulation under CLM Act is not required.
- NSW EPA Government per- and poly-fluoroalkyl substances (PFAS) Investigation Program.
    - The site and surrounding area were not listed on the NSW Government PFAS Investigation program. The closest PFAS Investigation Programs are at the Kemps Creek Rural Fire Service (9km southwest) and the Holsworthy Barracks (10km southeast). Based on the distance, topography, geology and hydrology, these locations are not considered to pose a risk of PFAS migration to the site.

3.2 Australian and NSW Heritage Register

A search of the Australian Heritage did not identify any heritage listed items at the site. The only surrounding heritage item listed was The Homestead, Brown Road, Bonnyrigg Heights located 1.5 km west of site.

The NSW Heritage database did not identify any heritage listed items at the site or nearby surrounding area. A search of Bonnyrigg returned 8 heritage listed items. The closest heritage listed item was the Cambodian Buddhist Temple, Wat Khemaransaram, located at 26 Bonnyrigg Avenue (Tarlington Parade) 800m west of site.

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

3.3 Section 10.7 Planning Certificate Search

As detailed in JBS 2007, a Section 149 Planning Certificate (now Section 10.7) review was undertaken for a number of representative lots within Stages 8-11 during 2007 including the following properties within the current site area:

- 3 Garden Place Bonnyrigg NSW 2177, Lot 159, DP 262449 (Stage 10),
- 23 Palisade Crescent Bonnyrigg NSW 2177, Lot 204, DP 262449 (Stage 9),
- Bishop Crescent, Bonnyrigg NSW 2177, Lot 102, DP 262456 (Stage 11),
- 2 Devlin Way, Bonnyrigg NSW 2177, Lot 233, DP 262449 (Stage 8).

An additional selection of Section 10.7 (2) and (5) Planning Certificates were obtained for lots not covered by the historical report as part of the current study. Planning Certificates were obtained from Fairfield City Council for the following representative properties:

- 123 Newleaf Parade, Bonnyrigg NSW 2177, Lot 4099 DP 1182418 (Stages 10 and 11).
- 6 Joiner Place, Bonnyrigg NSW 2177, Lot 186, DP 262449 (Stage 8); and
- 6 Palisade Crescent, Bonnyrigg NSW 2177, Lot 218, DP 262449 (Stage 9).

Certificates for the above properties, both historical and recent, are provided in **Appendix E**. Based on review of all planning certificates, the following information pertinent to the site is provided below:

- The Land is predominantly Zoned as Zone R1 General Residential, excluding two small portions of Lot 4099 adjoining Bunker Park that are zoned RE1 Public Recreation;
- The land does not include critical habitat;
- The land is not a conservation area;
- No item of environmental heritage (however described) is situated on the land;
- The land is not affected by Section 15 of the *Mine Subsidence Compensation Act 1961* proclaiming land to be a Mine Subsidence District;
- Development on all or part of the 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 seniors housing) is subject to flood related controls;
- The site is not included on the loose-fill asbestos insulation register maintained under the *Home Building Act 1989*; and
- The land is not bushfire prone land.

Under the *Contaminated Land Management Act 1997* and *Contaminated Land Management Amendment Act 2008*, it was reported that the following information is available to Council:

- The land is not significantly contaminated land;
- The land is not subject to a management order;
- The land is not subject to an approved voluntary management proposal;
- The land is not subject to an ongoing maintenance order; and
- The land is not subject of a site audit statement.

Based on the similar zoning and historical land use, it is anticipated that all properties within the site would have similar information recorded on Planning Certificates.

3.4 Aerial Photograph Review

A review of the historical aerial photographs provided by the Land and Property Information Centre from 1930, 1951, 1961, 1970, 1978, 1986, 1994, 2002 and 2005 were reviewed by JBS in 2007 during the Preliminary Environmental Site Assessment (JBS 2007). As the Stage boundaries have been updated however, historical aerial photographs from 1943, 1955, 1965, 1975, 1983, 1991, 2002 have been reviewed again considering the new boundaries, together with more recent aerials from 2010 and 2021 as shown in **Appendix F**.

A summary of the aerial photographs obtained of the site is included below:

1943	In 1943 the site comprised of rural land with a number of cleared paddocks, residential houses and sheds visible. The north of the site was occupied by numerous sheds/structures of varying sizes. A few small pockets of sparse bushland were visible in the centre, south and south west of the site, with scattered trees in the north. Possible small areas current or former market gardens and were visible in the west and south of the site, and former orchard in the centre. The site was surrounded to the north, east and south by gravel roads running along the same locations as the current Edensor Road (north), Humphries Road (east) and Cabramatta Road (south). A creek (Green Valley Creek) was evident to the east of the site beyond Humphries Road, with some surrounding vegetation. Land use surrounding the site appeared rural residential with some market gardens.
1955	The site and surrounding areas in the 1955 aerial photograph appears similar to the previous aerial photograph with just the addition of a small number of site structures mainly in the south, removal of a small number of structures elsewhere, and removal of some trees in the west and south. Use of the paddocks in the south of the site appears to have changed to market gardens.
1965	The site and surrounding areas in the 1965 aerial photograph appears similar to the previous aerial photograph with just further clearing of the bushland in the south west of the site, removal of large trees in the north, and the construction of a number of large structures to the south east of the site, in the area now occupied by the Catholic Church and Associated Primary School (Our Lady of Mt Carmel's). Numerous structures in the north of the site have been removed and replaced with market gardens
1975	The site and surrounding areas appear similar to the previous aerial photograph, except that market gardening appears to have ceased at the site since 1965, and several residences and other structures have been removed.
1983	By 1983, the site and surrounding area, particularly to the west, have been densely developed for residential purposes. A large number of residential houses have been built across the entire site with associated internal roads consistent with current roads i.e. Bishop Crescent, Sandilands Road, Newleaf Parade, Kennedy Way, Garden Place, Joiner Place, Mason Place, Palisade Crescent and Bean Crescent. The surrounding site areas to the west and north of the site have also been developed also for residential purposes as well as the development of Bunker Park to the west. It looks like the areas to the east and south of the site are still being developed.
1991	The site and surrounding areas to the west and north appear similar to the previous aerial photograph with further residential development having been completed to the east of the site.
2002	The site and surrounding areas to the west and north appear similar to the previous aerial photograph with further residential development having been completed to the east and north of the site.

2010	The site and surrounding areas appear similar to the previous aerial photograph.
2021	The site and surrounding areas appear similar to the previous aerial photograph with the exception of the residential areas and opens space to the north west of the site, which have been replaced by a greater density of housing similar to current conditions. These areas appear to have been redeveloped with new residential housing blocks visible directly across Bishop Crescent from the site. Similar new housing development is occurring west of the site. Bunker Park has been redeveloped to its current configuration.

3.5 Historical Title Review

A review of the historical title documents for a number of properties within the current site area was completed by JBS&G in 2007. The properties included:

- Stage 8 - 2/1-22 Devlin Way Bonnyrigg;
- Stage 9 - 23 Palisade Crescent, Bonnyrigg;
- Stage 10 - 3 Garden Place, Bonnyrigg;
- Stage 10 and 11 - 123 Newleaf Parade, Bonnyrigg;
- Stage 11 - 3-53 Bishop Crescent Bonnyrigg.

As detailed in JBS 2007, originally the entire estate was a Grant to Nathaniel George Bull of Liverpool in 1875. Following this, the estate was sub-divided and the smaller, historical lots were owned by a variety of people, but predominantly by farmers, market gardeners, fruit growers, poultry farmers and grocers. This information is consistent with the evidence provided by the aerial photographs. Other owners of land in this area included machinists, carpenters, saddlers, labourers, tailors, mariners, clerks, engravers and boilermakers. In 1973 the Housing Commission of New South Wales held the titles to all the land, and the titles were amalgamated in 1982 to form the current lots.

The majority of Lots in the current Lot configuration encompass several historically smaller Lots within their boundaries, a few encompassing over 10 historical Lots. Between 1880 and 1973 these Lots changed hands through transfers several times each, such that for any present day Lot selected, over 100 title transfers may be documented.

Additional representative historical title documentation was requested for the current investigation covering each of the stages within the current site area. Specifically, the following lots were selected:

- Stage 8 - 6 Joiner Place, Bonnyrigg (Lot 186, DP 262449);
- Stage 9 - 36 Palisade Crescent, Bonnyrigg (Lot 218, DP 262449); and
- Stage 10 and 11 - 123 Newleaf Parade, Bonnyrigg (Lot 4099, DP 1182418).

Based on review of the historical title records, each of the sites above were originally acquired by private proprietors in 1893. They were then owned by a variety of people, including hairdressers, insurance agents, married women, gardeners, poultry farmers and finally the Housing Commission of New South Wales from 1973.

Historical title documentation requested as part of the current investigation are provided in **Appendix G**.

3.6 Integrity Assessment

Based on the range of sources and the general consistency of the historical information, as well as historical aerial photographs, it is considered that the historical assessment has an acceptable level of accuracy with respect to the potentially contaminating activities historically occurring at the site.

4. Previous Investigations

4.1 Preliminary Environmental Site Assessment, Parsons Brinckerhoff, May 2005 (PB 2005a)

In 2005 Parsons Brinckerhoff (PB) produced a Preliminary ESA of the Bonnyrigg Estate (PB 2005a) for the Department of Housing (DoH). This assessment was based on the public and open spaces located across the Bonnyrigg Housing Estate, between Bonnyrigg Avenue and Humphries Road. The investigation area included the current site area however focused on open space parkland areas, none of which are located within the current site area.

The objectives for this assessment were to identify any past or present site activities/practices having the potential to cause contamination; to identify areas of potential contamination and the associated contaminants of concern; to undertake limited sampling and identify additional investigative work requirements.

Eight main parkland/open space areas formed the study area, with a total approximate area of 15ha. Current features of the study areas are identified to include playing fields, trees, footpaths, streetlights, stormwater drains and a disused amenities block.

Historical photographs and land titles records indicate that the sites were used as rural properties from at least the early 1900s. In the late 1970s the DoH redeveloped the rural lands into the present day public housing estate and open spaces. Based upon the review of the site history, the potential contaminants of concern were identified to include heavy metals, organochlorine pesticides (OCPs), total petroleum hydrocarbons (TPH), BTEX compounds (benzene, toluene, ethylbenzene and xylenes), polycyclic aromatic hydrocarbons (PAHs) and asbestos.

PB reported that NSW EPA *Contaminated Sites: Sampling Design Guidelines* (EPA 1995), recommends approximately 150 sampling locations to characterise a site of 15ha in area, however due to the preliminary nature of the investigation, a limited sampling and analysis plan was developed.

The limited sampling and analysis plan was developed as part of an entire Housing Estate geotechnical investigation, encompassing a total of thirty boreholes being drilled, with soil samples being analysed from a total of five boreholes across the entire estate. Of the 30 boreholes, only three encountered evidence of fill. Two boreholes in Bunker Reserve (BH22 and BH23) contained evidence of a fill layer up to 1.1 metres depth, comprising clay with traces of brick, concrete and plastic, and Borehole 3 (BH3) located in Tarlington Reserve contained 0.5m of fill, consisting of clay with wire fragments. These locations are west and northwest of the current site area.

No analysis was conducted on boreholes BH23 and BH3, therefore no conclusions regarding the contamination aspect of this fill material were provided. Analysis was undertaken for Borehole BH22, and although all analytes were below the acceptance criteria, TPH/BTEX concentrations were present.

Several boreholes encountered weathered rock starting at depths ranging from 1.1 to 2.5 metres depth. No free groundwater was encountered during the investigation (up to 2.8 metres below ground level (mbgl)). No odours or visual staining were observed during the drilling of any of the boreholes. A visual inspection indicated that no fibrous cement pieces (potentially containing asbestos) were noted at the surface of the site.

PB identified no significant potential for contamination resulting from current or past land uses. Only minimal amounts of fill were encountered during the intrusive investigations, and no other signs of contamination were evident. The limited analysis of the soil and fill did not identify any contamination, and PB concluded that there is a low risk of contamination on site.

4.2 Bonnyrigg Living Communities Geotechnical Investigation Report, Parsons Brinckerhoff, May 2005 (PB 2005b),

PB produced a Geotechnical Investigation Report for the Bonnyrigg Estate in 2005 (PB 2005b) for the NSW Department of Housing, in conjunction with the ESA (PB 2005a). This geotechnical investigation also occurred on the public open spaces located between Bonnyrigg Avenue and Humphries Road, none of which specifically fall within the current site areas.

The investigation consisted of boreholes being drilled across the eight open spaces that made up the study area of the assessment. Thirty boreholes were drilled to a maximum depth of 2.8 mbgl. Subsurface strata encountered during the investigation generally comprised medium to high plasticity clay, pale grey, red brown, or orange/yellow brown in colour. Of the 30 boreholes, only three encountered evidence of fill. Two boreholes located in Bunker Reserve contained evidence of a fill layer up to 1.1 metres depth, which comprised clay with traces of brick, concrete and plastic. BH3 also contained evidence of a fill layer half a metre deep, comprising clay and containing fragments of wire. Several boreholes encountered weathered rock starting at depths ranging from 1.1m to 2.5 metres below ground level.

Geotechnical laboratory testing results recorded the natural clays to have a high potential for reactive (shrink/swell) movements from moisture changes, indicating a “Class H” site classification. However, in above-mentioned locations where fill material was encountered, PB considered the site classification to be “Class P” in accordance with AS2870. “Class P” sites include soft soils, such as soft clay or silt or loose sands; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise.

No free groundwater was encountered during the investigation.

4.3 Preliminary Environmental Site Assessment (JBS 2007)

In 2007 JBS (now JBS&G) completed a Preliminary ESA (JBS 2007). This report covered the entire Bonnyrigg Housing Estate including the current site area.

The objective of the preliminary investigation was to identify potential contamination issues across the Housing Estate and to determine if the area was suitable for the continued residential land use with gardens and accessible soil without further assessment or provide recommendations to enable such conclusions.

The scope of work comprised: a detailed site inspection; a review of all previous investigation reports, aerial photographs, land title information and regulatory notices; a desktop review of the site geology, hydrogeology and acid sulphate soils maps; a desktop salinity information review; a review of available information relating to the historic use of the site, resulting in the identification of areas of environmental concern and associated potential contaminants of concern; and preparation of a Preliminary ESA report, in accordance with relevant regulatory guidelines in place at the time.

At the time the report was prepared (2007), the Housing Estate was utilised as a public housing estate, encompassing 933 residences (833 Social Housing dwellings, 100 privately owned properties) and was home to approximately 3,300 people. The Housing Estate comprised of 81 hectares of open space/recreational parkland areas surrounded by residential housing. The residential structures consisted of attached and freestanding dwellings, constructed of fibrous cement sheeting and brick. The parklands encompassed open spaces, basketball courts, soccer fields, children’s play equipment and thoroughfares.

Historically the Housing Estate encompassed residential and open spaces/recreational parks since the late 1970s, and prior to this, the Estate and surrounding areas were used for rural purposes. Historical evidence suggests the Estate was occupied with market gardens, poultry farmers,

orchards, and low density residential. Several creek beds were formerly located across the area prior to 1980 (completion of the Housing Estate).

It was concluded that the entire Housing Estate encompassed areas of environmental concern, including: areas of indiscriminately dumped material; potential unknown fill material in specific areas (open spaces/ recreational parklands, residential areas, and former creek beds); the recreational use and maintenance of the soccer fields (Bunker and Tarlington Reserves); areas of present residential land use; areas of past rural land use; footprint of former buildings (former residential structures, demolished amenities blocks, etc); and sharing a boundary with an electrical substation and a petrol station.

It was recommended that in order to draw conclusions regarding the suitability of the Housing Estate (including the current Stage 8-11 site area) for the proposed sensitive land uses, further intrusive investigation be conducted, focusing on the areas of environmental concern identified as part of the investigation.

5. Conceptual Site Model

5.1 Potential Areas of Environmental Concern

Based on the site history, review of historical reports, together with the detailed site inspection observations, areas, media and contaminants of concern have been identified in **Table 5.1** below.

Table 4.1 Areas of Environmental Concern and associated Contaminants of Potential Concern

Area of Environmental Concern	Contaminants of Potential Concern
Potential fly tipped material and/or fill material.	Heavy metals, TRH, BTEX, PAHs, OCPs and asbestos
Footprints of former and current site structures such as housing and sheds, including former market garden/orchard areas*	Heavy metals, OCPs and asbestos
Former internal access road alignment	Heavy metals, TRH, BTEX, PAHs and asbestos
Fill material	Heavy metals, TRH, BTEX, PAHs, OCPs and asbestos

*Impacts from former structures and rural use, which would largely have been surficial, may have been removed or redistributed when the site was redeveloped from agricultural to residential estate in the late 1970s to early 1980s.

5.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Fill material; and
- Natural soils.

Based on the site history and observations made indicates the potential for fill material around the site is as follows;

- Around anthropogenic structures such as sheds and houses;
- On or near access roads/paths throughout the site;
- Within former building footprints;
- Fly-tipping within vacant and open space areas, particularly across park/open space areas of the site.

The source of potential fill material is unknown and is therefore considered to be a potentially contaminated medium. In addition to the potential for contamination in fill there is the potential for aesthetic impacts relating to unidentified areas of building rubble, staining or odours.

Given the former rural use of the land, and based on the relatively shallow depth to natural soil below fill where present, COPCs that may be present at the site may have potentially migrated vertically into natural soils. Natural soil material is therefore considered to be a potentially contaminated medium.

As there are no permanent water bodies located at the site, surface water is not considered to be a potentially contaminated media.

Groundwater impact at the site is considered to be unlikely (from **Section 2.7**). considering the presence of the relatively impermeable residual clay soils and shale layers at the site limits the potential for groundwater contamination via infiltration/leaching, ultimately limiting the potential for contamination (if any) at the site to migrate via groundwater.

Vapours are not likely to be impacted given the historical use of the land does not appear to have involved activities involving significant use or storage of fuels/chemicals of a volatile nature.

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.

Due to the isolated nature of the suspected AEC and the inert and or surficial nature of primary COPCs (i.e. asbestos, metals) potential for migration of contaminants is considered low.

There is however some potential for migration of COPCs to occur through windblown migration of ground surface contamination such as fly-tipping and ACM. Given that the majority of the site is grassed or covered by structures and roads however, this is considered to be low.

5.4 Potential Exposure Pathways

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

- Potential inhalation of airborne asbestos fibres and/or impacted dust particles; and/or
- Potential dermal contact with and ingestion of impacted soils as present at shallow depths and/or accessible by future excavations.

Inhalation of vapours, dermal contact or ingestion of groundwater are not considered potential exposure pathways based on the above.

5.5 Receptors

Potential receptors of environmental impact within the site which will need to be addressed with respect to the suitability of the site for the proposed use include:

- Current and future site occupants and landowners who may potentially be exposed to COPC through direct contact with impacted soils and/or inhalation of dusts / fibres associated with impacted soils; and/or
- Excavation/ construction/ maintenance workers conducting activities at the site, who may potentially be exposed to COPC through direct contact with impacted soils present within excavations and/ or inhalation of dusts/ fibres associated with impacted soils; and/or
- Existing and/ or future users/ occupants of adjoining residential properties should contamination be identified to be migrating from the current site; and/or
- Ecological receptors include vegetation on the site soils.

6. Sampling and Analysis Plan

6.1 Data Quality Objectives

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

6.1.1 State the Problem

It is understood that the site is proposed to be redeveloped into a mixture of land uses including residential and open space. To facilitate planning decisions, environmental investigation is required to assess the site for potential contamination issues and provide recommendations to manage any potential contamination risk during the proposed development.

6.1.2 Identify the Decision

To meet the specific project objectives, the following decisions must be made:

- Are there any unacceptable risks to future onsite receptors?
- Are there any issues relating to background soil concentrations that exceed appropriate site soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues at the site?
- Is there any evidence of, or potential for, migration of contaminants from the site?
- Is the site suitable or can it be made suitable for the intended land use?
- Is a site management strategy required?

6.1.3 Identify the Inputs to the Decision

Inputs to the decision are:

- Identified areas of concern and contaminants of potential concern at the site;
- Previous site contamination information including physical observations;
- Soil environmental data consisting of assessment for identified COPC in soil;
- Development of appropriate assessment criteria for evaluation of soil impacts;
- Confirmation that data generated by sampling and analysis are of an acceptable quality to allow reliable comparison to assessment criteria as undertaken by assessment of quality assurance / quality control (QA/QC) as per the data quality indicators (DQIs) established in **Section 6.1.6**.

6.1.4 Define the Study Boundaries

The study boundaries are limited to the site boundary as shown in **Figures 1** and **2**.

Due to the project objectives, seasonality will not be assessed as part of this investigation. Data will therefore be representative of the timing and duration of the current investigation.

6.1.5 Develop a Decision Rule

The decision rules adopted to answer the decisions identified in **Section 6.1.2** are summarised in **Table 6.1**.

Table 6.1 Summary of Decision Rules

Decision Required to be made	Decision Rule
1. Are there any unacceptable risks to future onsite receptors?	The additional soil analytical data will be compared against adopted EPA endorsed criteria. Statistical analyses in accordance with relevant guidance documents will be undertaken if appropriate to facilitate the decisions including 95% upper confidence limits (UCLs). Are contaminants present at concentrations exceeding the published guidelines or 95% UCLs? If the criteria stated above are satisfied, the decision is Yes. Otherwise, the decision is No.
2. Are there any issues relating to background soil concentrations that exceed appropriate site soil criteria?	If COPC concentrations in soils exceeded published background concentrations (NEPC 2013), the answer to the decision is Yes. Otherwise the answer to the decision is No.
3. Are there any impacts of chemical mixtures?	Were there more than one group of contaminants present which increase the risk of harm? If there is, the answer to the decision is Yes. Otherwise, the answer to the decision is No.
4. Are there any aesthetic issues at the site?	If there are any unacceptable amounts of building rubble, odours or soil discolouration, the decision is Yes. Otherwise, the decision is No.
5. Is there any evidence of, or potential for, migration of contaminants from the site?	Consideration will be given to whether there are any elevated contaminant concentrations in soil in proximity to or at site boundaries and where site conditions may lead to the potential to migrate off site. If there is the potential for offsite contaminant migration the decision is Yes. Otherwise, the decision is No.
6. Is the site suitable or can it be made suitable for the intended land use	If the answer to all of the above decisions is No, then the site is suitable for the intended land use. If the answer to any of the above decisions is Yes, then a site management strategy may be required to make the site suitable.
7. Is a site management strategy required?	If the answer to decisions 1 to 3 is yes, a site management strategy is required.

Statistical analyses of the data will be undertaken, if required, in accordance with relevant guidance documents. The following statistical criteria shall be adopted:

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

6.1.6 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 QA/QC) and standard JBS&G's 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 Data Quality Indicators (DQIs) for completeness, comparability, representativeness, precision and accuracy. The acceptable limit on decision error is 95% compliance with DQIs.

The pre-determined Data Quality Indicators (DQIs) established for the project are discussed below in relation to precision, accuracy, representativeness, comparability and completeness (PARCC parameters), and are shown in **Table 6.2**.

- Precisions - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- 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; 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.

If any of the DQIs are not met, further assessment will be necessary to determine whether the non-conformance will significantly affect the usefulness of the data. Corrective actions may include requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of the data.

Table 6.2 Summary of Quality Assurance / Quality Control

Data Quality Objective	Frequency	Data Quality Indicator
Precision		
Blind duplicates (intra laboratory)	1 / 20 samples	<50% RPD
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes		-
Samples extracted and analysed within holding times.	-	organics (14 days), inorganics (6 months)
Trip spike (for volatiles)	1 per sampling event when sampling for volatile or semi-volatile COPC	70-130% recovery
Trip blank	1 per sampling event	<LOR
Rinsate	1 per sampling event where reusable sampling equipment used	<LOR
Comparability		

Data Quality Objective	Frequency	Data Quality Indicator
Standard operating procedures for sample collection & handling	All Samples	All samples
Standard analytical methods used for all analyses	All Samples	All samples
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples
Limits of reporting appropriate and consistent	All Samples	All samples
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples
Appropriate documentation	All Samples	All samples
Satisfactory frequency and result for QC samples	All QA/QC samples	-
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

6.1.7 Optimise the Design for Obtain Data

Various strategies for developing a statistically based sampling plan are identified in EPA (1995), including judgemental, random, systematic and stratified sampling patterns. As the site is mostly comprised of occupied residential areas, sampling was completed to provide coverage in accessible areas in vacant/unoccupied lots, road verges, parkland and walkways.

A combined systematic and judgemental sampling pattern was adopted in accessible areas, with systematic sampling where possible to provide representative site coverage where possible, and targeted sampling focussed towards areas of potential contamination such as fly-tipping or potential fill/mounding. Sampling targeted shallow surface fill and disturbed topsoils which is where COPC associated with the identified AECs are largely anticipated.

6.2 Soil Sampling Methodology

For soil investigation works, sampling was conducted using a backhoe to excavate testpits as well as hand tools (hand auger) for 2 of the locations. The soil sampling locations conducted are shown on **Figure 4**.

Soil samples were generally collected at the surface (ranging in depths between 0.0 and 0.1 m), and approximate 0.5 m intervals below the surface. Locations were extended to a minimum depth of 0.3 m into natural soils. Generally, locations were excavated to depths ranging between 0.5 m to 1.8 m below ground surface (bgs). During the collection of soil samples, observations regarding the presence or absence of groundwater seepage, discolouration, staining, odours, visible ACM or other indicators of contamination were noted. Observations made are provided on logs included in **Appendix H**.

The sample jars and 500 mL asbestos bags (as per NEPC 2013 requirements) were transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory. Based upon field observations, samples were analysed in accordance with the laboratory schedule (**Table 6.4**).

Not all samples collected were analysed. All samples will remain at the primary laboratory for a period of two months for possible future analysis (subject to holding times) if required following the receipt of sample results.

6.2.1 Decontamination

Prior to the commencement of sampling activities, any non-disposable sampling equipment (i.e. the hand auger), was cleaned with a water/ detergent spray, rinsed with water and then air dried. The equipment was inspected to ensure that no soil, oil, debris or other contaminants were apparent on

the equipment prior to the commencement of works. Sampling equipment was subsequently decontaminated using the above process between each sampling location.

6.3 Visual Inspections (Bonded ACM)

A visual inspection was undertaken across the surface of accessible areas of the site by an appropriate qualified and experienced environmental consultant trained in the identification of asbestos (i.e. competent person). No visible ACM was observed on the surface, however visible ACM (1 fragment) was observed within shallow fill material at testpit location TP28 0.2-0.3.

6.4 Laboratory Analysis

JBS&G contracted Eurofins | MGT (Eurofins) as the primary laboratory for all the required analyses. The secondary laboratory for these analytes was Envirolab. All laboratories are NATA registered for the required analyses.

In addition, the laboratories will be required to meet JBS&G's internal QA/QC requirements. Laboratory analysis of samples will be conducted as summarised in **Table 6.4**.

Table 6.4 Proposed Sampling and Analytical Program

Area & Sample IDs	No. of Sampling Locations	Analyses (inc. QA/QC)
Stage 8	9 locations (TP14, TP15, TP19, TP20, TP21, TP22, TP23, TP25 and HA02)	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 27 samples Total PAH – 20 soil samples TRH/BTEX – 20 soil samples OCPs – 20 soil samples Asbestos - 35 soil samples (500 mL NEPC 2013) Asbestos ID – 1 material sample CEC, EC, TOC and pH – 4 samples
Stage 9	6 locations (TP16, TP17, TP24, TP26, TP27 and TP28)	
Stage 10	5 locations (TP9, TP12, TP13, TP18 and HA01)	
Stage 11	10 locations (TP01, 02, 03, 04, 05, 06, 07, 08, TP10 and TP11)	

For QA/QC purposes field duplicates and triplicates were analysed at a rate of 1/20 primary samples. A trip spike and trip blank sample also accompanied the soil samples.

7. Assessment Criteria

7.1 Regulatory Guidelines

The investigation was undertaken with consideration to aspects of the following guidelines, as relevant:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999* as amended 2013, National Environment Protection Council (NEPC 2013);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995);
- *Consultants Reporting on Contaminated Land, Contaminated Land Guidelines*, NSW EPA, 2020 (EPA 2020);
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 3rd Edition*, NSW EPA, 2017 (EPA 2017);
- *Guidelines for the Assessment Remediation and Management of Asbestos-Contaminated Sites in Western Australia, May 2009*. Western Australia Department of Health 2009 (DOH 2009); and
- *Waste Classification Guidelines, NSW EPA*, November 2014 (EPA 2014).

7.2 Soil Criteria

Based on the proposed mixed land use for the site, including low-density residential with gardens and accessible soil, concentrations of contaminants in soil will be compared against published levels presented in **Tables A**, sourced from the following:

- Health based investigation Levels (HILs) for Residential with gardens/accessible soil (HIL-A) – NEPC 2013;
- Health Screening Levels (HSLs) for vapour intrusion, specific levels will vary depending on land use, soil type and depth;
- HSLs for asbestos in soil (NEPC 2013);
- Generic and site derived ecological investigation levels (EILs) based on NEPC 2013; and
- Ecological Screening Levels (ESLs) for TRH fractions, BTEX and benzo(a)pyrene for residential land use (NEPC 2013).

Where there are no NSW EPA endorsed thresholds, the laboratory limit of detection has been adopted as an initial screening value for the purposes of this assessment.

Consideration will also be given to aesthetic aspects, consistent with EPA 2017 and NEPC 2013 guidance.

Site specific ecological investigation levels presented in **Table A** were derived using an average pH of 6.65, a cation exchange capacity (CEC) of 16.75 MEQ/100G, a Total Organic Carbon (TOC) of 1.45 mg/kg and an assumption that any identified impacts would be aged.

8. Quality Assurance / Quality Control

8.1 Soil QA / QC Results

The QA/QC results for soil samples collected at the site are summarised in **Table 8.1** and discussed in **Section 8.2** below. Detailed QA/QC results are included in the laboratory reports in **Appendix I**.

Table 8.1 Data Quality Indicator Assessment

Data Quality Indicator	Results	DQO met?
Precision		
Duplicates (intra laboratory)	0-23% RPD Intra laboratory samples were analysed at a rate of 2 in 31, greater than 1 in 20 samples.	Yes
Triplicates (inter laboratory)	0-82% RPD Inter laboratory samples were analysed at a rate of 2 in 31, greater than 1 in 20 samples.	Partial[1]
Laboratory Duplicates	0-76% RPD	Partial[1]
Accuracy		
Surrogate spikes	57 - 137 % recovery	Partial[1]
Laboratory control samples	70 – 130% recovery	Yes
Matrix spikes	70 – 130% recovery	Yes
Representativeness		
Samples extracted and analysed within holding times.	All primary and duplicate samples were extracted within 14 days of sampling.	Yes
Trip spike	70-130% Recovery	Yes
Trip blank	<LOR	Yes
Rinsate	NA	NR
Standard operating procedures for sample collection & handling	Field scientist used the same standard operating procedures throughout works.	Yes
Comparability		
Standard analytical methods used for all analyses	Standard analytical methods used	Yes
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted by the same field scientist. Standard operating procedures were conducted throughout the works. Field conditions remained the same throughout the works. The primary and secondary labs remained consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	Soil limits of reporting were consistent and appropriate.	Yes
Completeness		
Soil description and COCs completed and appropriate	All bore logs and COCs were completed appropriately.	Yes
Appropriate documentation	All appropriate field documentation is included in the Appendices.	Yes
Satisfactory frequency and result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples	Samples were analysed at locations where potential for contamination was observed.	Yes
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	Analytical methods and limits of recovery were considered appropriate for media and adopted site assessment criteria for all soil analytes.	Yes

1. See discussion of DQI exceedances in **Section 8.2.**

8.2 Soil QA/QC Discussion

8.2.1 Precision

Soil Duplicate (intra-laboratory) and Triplicate (inter-laboratory)

Soil field blind duplicate (intra-laboratory) and triplicate (inter-laboratory) samples were collected at a rate of 2 per 31 primary samples analysed, meeting the 1/20 DQI frequency. All blind duplicate samples were within the range of 0-50% RPD.

Soil field blind triplicate (inter-laboratory) samples results were within the range of 0-50% RPD for all samples analysed with the following exceptions:

- Benzo(a)pyrene TEQ between primary sample TP01 0-0.1 and duplicate sample QA01 with RPD of 82%;
- Arsenic between primary sample TP20 0-0.1 and duplicate sample QA04 with RPD of 60%;
- Zinc between primary sample TP20 0-0.1 and duplicate sample QA04 with RPD of 60%;
- Benzo(a)pyrene TEQ between primary sample TP20 0-0.1 and duplicate sample QA04 with RPD of 82%;
- 4,4-DDE between primary sample TP20 0-0.1 and duplicate sample QA04 with RPD of 71%;
- DDT between primary sample TP20 0-0.1 and duplicate sample QA04 with RPD of 133%; and
- DDT+DDE+DDD between primary sample TP20 0-0.1 and duplicate sample QA04 with RPD of 151%.

The elevated RPDs are considered to be associated with heterogeneous nature of fill soils encountered at this site. Additionally, some elevated RPDs are due to either the duplicate or triplicate result being close to LOR, which when halved increases the RPD. Based on this, and the fact that all results were well below the adopted site criteria, the RPDs above the DQI are not considered to affect the precision of the data set.

Laboratory Duplicates

Laboratory duplicate samples were mostly all below the acceptable limit of 50% RPD with the exception of 2 results of 76 and 62 percent, marginally above the JBS&G limits. However these were deemed suitable by the NATA certified testing laboratory and therefore not deemed to affect the reliability of the data set.

8.2.2 Accuracy

Soil Surrogate Spikes

Surrogate spikes were used for all required organic analyses. Surrogate spike recoveries were all reported within JBS&G's preferred range of 70-130% with some minor outliers of 57 and 137%. Although outside the JBS&G limits these results still fall within the NATA certified laboratory's acceptable range and therefore are not considered to affect the reliability of the data set.

Soil Laboratory Control Samples

Laboratory control samples analysed reported recoveries within the acceptable range.

Soil Matrix Spikes

Matrix spike samples analysed reported recoveries within the acceptable range.

8.2.3 Representativeness

Sampling appropriate for media and analytes

All soil sampling works completed during the investigation were conducted in accordance with JBS&G standard operating procedures. Soil sampling was conducted as described in **Section 6.2**.

Holding Times

All samples were extracted within the recommended holding times for all analytes.

Rinsate Blank

A rinsate blank was not collected as the majority of sample locations (28 out of 30) were sampled from the centre of the excavator bucket and therefore decontamination was not required.

A new pair of disposable nitrile gloves were used for the collection of each sample.

Trip Spike

A trip spike was submitted with the soil samples. All trip spike recoveries were within the acceptable limit of 70-130%, indicating that the adopted assessment sample preservation methods were appropriate to result in a low risk of contaminant concentration loss during transport of the sampling.

Trip Blank

A single storage blank sample was carried out during the soil sampling event and was submitted with the soil samples to the testing laboratory. There were no reported concentrations of BTEX compounds above the laboratory LOR, achieving the nominated DQIs.

Decontamination and Calibration

A backhoe was used at the majority of sampling locations with samples collected from the centre of the excavator bucket. It was ensured that a new pair of disponible nitrile gloves were used for the collection of each sample. A hand auger was used at 2 locations and was decontaminated between each location as detailed in **Section 6.2.1**.

The photo ionisation detector used had been calibrated and a spot check was completed whilst being used on site.

Field decontamination and calibration records are provided in **Appendix I**.

Comparability

One experienced JBS&G field scientists undertook all sampling in accordance with standard JBS&G sampling methods. Field works and sampling were undertaken by the same JBS&G field scientists throughout the works.

All field documentation was appropriately completed. The nominated laboratories undertook all analysis in accordance with the relevant National Association of Testing Authorities (NATA) accredited methods.

8.2.4 Completeness

Samples were transported under full chain of custody (COC) documentation. The COC documentation was completed correctly and the selected analyses were correctly conducted.

All field documentation was completed appropriately including borehole logs (**Appendix H**).

The frequency of analysis and result for all QC samples were appropriate.

8.2.5 Sensitivity

Laboratory analysis methods for all contaminants in soil adopted during the investigation used limits of reporting significantly less than the site assessment criteria to ensure the contaminant concentrations could be confidently identified as being less than the adopted soil site assessment criteria.

8.3 QA/QC Assessment

The field sampling and handling procedures produced QA/QC results which indicate that the soil data are of an acceptable quality and suitable for use in site characterisation.

The NATA certified laboratory results sheets indicate that the project laboratory was generally achieving levels of performance within its recommended control limits during the period when the samples of this program were analysed.

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality upon which to draw conclusions regarding the environmental condition of the site.

9. Investigation Results

9.1 Soil Field Observations

The lithology encountered at the site during the field works is summarised below. Detailed logs are included in **Appendix H**. A total of 30 soil sampling locations were conducted by JBS&G within accessible portions of the site on 29 and 30 March 2021. The majority of locations were conducted with a backhoe (TP01 to TP28) with just two locations (HA01 and HA02) completed with a hand auger. Sample locations are shown on **Figure 4**.

Surfaces across the site varied from bitumen sealed roadways, grassed open space areas and residential yards, gardens beds, igneous gravel pathways, concrete driveways and paths and bare soils.

The soil profile generally comprised of stiff, heterogeneous dark brown, mottled clay fill/topsoils at depths of 0.1 to 0.4 m bgs. The topsoil was underlain with either natural red-grey mottled silty clay, or in areas of deeper fill, a sandy clay with inclusions of gravels, terracotta pipe and brick fragments. Natural material (red-grey mottled silty clay) was observed at depths ranging from 0.1 m bgs (TP06, TP10) to 0.9 m bgs (TP08, TP15).

No staining, odours or asbestos were observed at any location with the exception of the following:

- Slight organic odour observed at TP01 0-0.1; and
- One bonded (non-friable) ACM fragment observed at TP28-0.2-0.3.

Anthropogenic materials, such as timber, clay pipe fragments, ceramic tiles, plaster board, broken screen doors, general household rubbish, hub caps, scrap metal and some bricks, were observed at various locations across each of the stages, as shown on **Figures 3** and **4**.

9.2 Soil Laboratory Results

Representative samples were collected across the site targeting the areas of environmental concern (AECs) and were analysed for a range of COPCs. The summarised laboratory results are presented in **Table A** and are discussed below. Detailed laboratory reports and chain of custody documentation are provided in **Appendix J.**

9.2.1 Heavy Metals

Heavy metals concentrations, in the samples selected for analysis, were all reported below the adopted human health (HIL) and generic and site-specific ecological investigation level (EIL).

Site specific ecological investigation levels (EILs) were however calculated using laboratory results from representative soil samples collected across the site (see **Section 7** for further details). No heavy metal exceedances of derived site-specific EILs were detected across the site.

9.2.2 TRH/BTEX

TRH and BTEX concentrations in all samples selected for analysis were reported below both the LOR and the adopted human health and ecological criteria including at sample location TP01 0.0-0.1 where a slight organic odour was noted.

9.2.3 PAH

PAH concentrations in all samples selected for analysis were reported below the LOR and below the adopted assessment criteria.

9.2.4 OCP

All OCP concentrations in the analysed samples were reported below the LOR and below the adopted assessment criteria.

9.2.5 Asbestos

Laboratory analysis for asbestos did not report any asbestos as ACM or asbestos fines (AF)/ fibrous asbestos (FA) in soil samples analysed.

Chrysotile, amosite and crocidolite asbestos was detected within a small bonded fragment (85 x 40 x 5 mm sample TP28-F1) collected from within fill material at testpit location TP28 (0.2-0.3m). No asbestos fibres or AF/FA were detected in a soil sample collected adjacent the fragment (i.e. TP28 0.2-0.3m).

10. Site Characterisation

Section 6.1.5 provides decision rules applicable to determine if contamination is present at the site that may be potentially unacceptable for the proposed development from a health and ecological health perspective. Discussion of each of these points is provided in the following sections.

10.1 Are There Any Unacceptable Risks to Future onsite Receptors?

Based on review of laboratory results from the intrusive investigation, all results were either below the LOR or the adopted health-based or ecological site criteria.

ACM was however identified within fill materials at location TP28 0.2-0.3m which may present a potential human health risk if exposed. Given the presence of fill materials with anthropogenic inclusions possibly relating to historical demolition of former site structures, there is the potential for further ACM to be present at the site.

It is noted that the investigation was limited to vacant areas, front yards of vacant properties, parks and around active roadways due to occupied residencies which cover the majority of the site. Further investigation is required to confirm the potential for further asbestos or other contamination at the site.

10.2 Are there any issues relating to the local area background soil concentrations that exceed appropriate Soil Criteria

Soil samples collected from natural soils indicated that the majority of metal concentrations were below the background concentrations within NEPC (2013). On this basis, there are considered to be no outstanding issues in relation to local area background soil conditions that require further consideration.

10.3 Are there any Chemical Mixtures?

There were no potential chemical mixtures identified during the investigation that may increase the risk of harm at the site or require special management.

10.4 Are There any Aesthetic Issues at the Site?

A minor organic odour was noted on the ground surface at sample location TP01, possibly due to organic matter in the soil. The odour was identified as slight however and is not considered to be a significant aesthetic issue. No other staining or odours were identified during the assessment.

Anthropogenic materials were observed on the ground surface at a number of locations across the site. These included timber, clay pipe fragments, ceramic tiles, plaster board, broken screen doors, general household rubbish, hub caps, scrap metal and some bricks as shown on **Figures 3** and **4**.

Inclusions of foreign materials such as igneous gravels, timber, concrete, PVC pipe, brick, plastic, and glass were observed in shallow fill materials across the site. ACM was confirmed as being present in fill materials at location TP28, and elsewhere where filling has occurred.

Based on these findings, aesthetic issues will require consideration during future works.

10.5 Is There Any Evidence of, or Potential for, Migration of Contaminants from the Site?

Based on this investigation, no impact has been identified which has potential to migrate from the site. Given the condition of the surface soils was relatively stable, it is considered that the potential for off-site migration of such contamination is low.

10.6 Is the Site Suitable or Can it be Made Suitable for the Intended Landuse?

Based on the results of the investigation and subject to the limitations presented in **Section 12**, it is considered that the site can be made suitable for the intended land use, subject to further investigation and possible management of asbestos and aesthetic issues identified above and any

potential unexpected finds identified during future works and subject to the additional investigations of inaccessible areas.

10.7 Is a Site Management Strategy Required?

Further works are required, following demolition of site structures and prior to development-related earthworks and civil works, to identify potential impact within areas inaccessible during the current contamination assessment. These shall include intrusive investigations including testpitting to allow for comprehensive inspection for potential asbestos and anthropogenic material in fill and to confirm the suitability of the site or make recommendations to achieve that outcome. On completion of these works, a remedial action plan (RAP) will be required where unacceptable contamination and aesthetic impacts are identified, as well as standard development controls including an Unexpected Finds Protocol to address potential unexpected contamination potentially uncovered during future works.

11. Conclusions and Recommendations

11.1 Conclusions

Based on the findings of this assessment and subject to the limitations in **Section 12**, the following conclusions are made:

- Minor volumes of fill materials were observed across the site with inclusions of igneous gravels, timber, concrete, PVC pipe, brick, plastic, and glass. Fill materials were generally observed from the surface to depths of between 0.1 and 0.9 m bgs. The foreign materials will require consideration for aesthetics during future development works.
- Bonded ACM was identified in fill materials at location TP28 0.2-0.3m, and due to the presence of fill with anthropogenic inclusions there is the potential for asbestos in other locations.
- All other contaminant concentrations of soils samples analysed within investigation locations conducted (heavy metals, TRH, BTEX, PAHs, OCPs and asbestos) were all below the LOR and/or the adopted site criteria.
- There were no indications of gross or widespread contamination and impact identified at the site. There is the potential for ACM elsewhere in fill based on the observations at TP28 0.2-0.3m, noting ACM was only observed/detected at one out of 30 locations during the current investigation.
- As such, it is considered the site can be suitable for the intended land uses subject to investigations in areas that were inaccessible and preparation and successful implementation of a remedial action plan (RAP) to manage identified impacts.

11.2 Recommendations

Based on the conclusions presented, it is recommended the following actions are undertaken:

- Further investigations works, including confirmation of potential asbestos and aesthetic impacts are required within inaccessible areas and building footprints following demolition of site structures and prior to development-related earthworks and civil works, to confirm the suitability of the site for the intended land uses;
- Preparation of a RAP to address unacceptable impacts where identified; and
- Standard development controls including an Unexpected Finds Protocol to be prepared prior to civil works commencing to address any potential unexpected contamination encountered during future works.

12. Limitations

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

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

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

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

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

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

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

Figures

JBS&G

Job No: 60493	
Client: LAHC	
Version: R01 Rev A	Date 6/04/2021
Drawn By: JA	Checked By: KL

Scale 1:5,000

0 75 150
metres

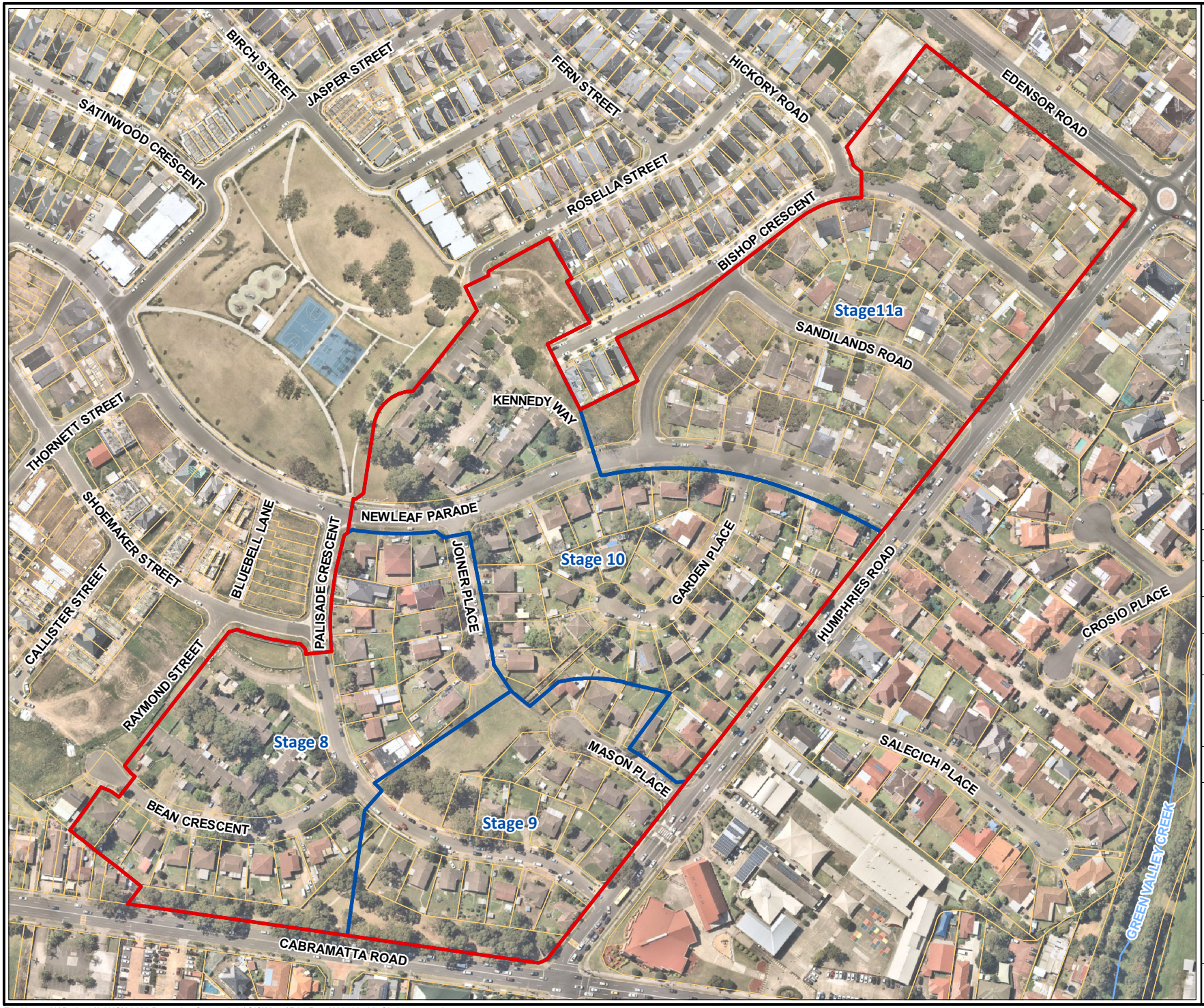
Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11,
Bonnyrigg, NSW

SITE LOCATION

FIGURE 1

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\R01 Rev A\60439_01_SiteLocation.mxd
Reference: © OpenStreetMap (and) contributors, CC-BY-SA



Legend

- Approximate Site Boundary
- NSW Cadastre (DFSI, 2021)
- Stage Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: R01 Rev A	Date 6/04/2021
Drawn By: JA	Checked By: KL

Scale 1:3,000

0 50 100
metres

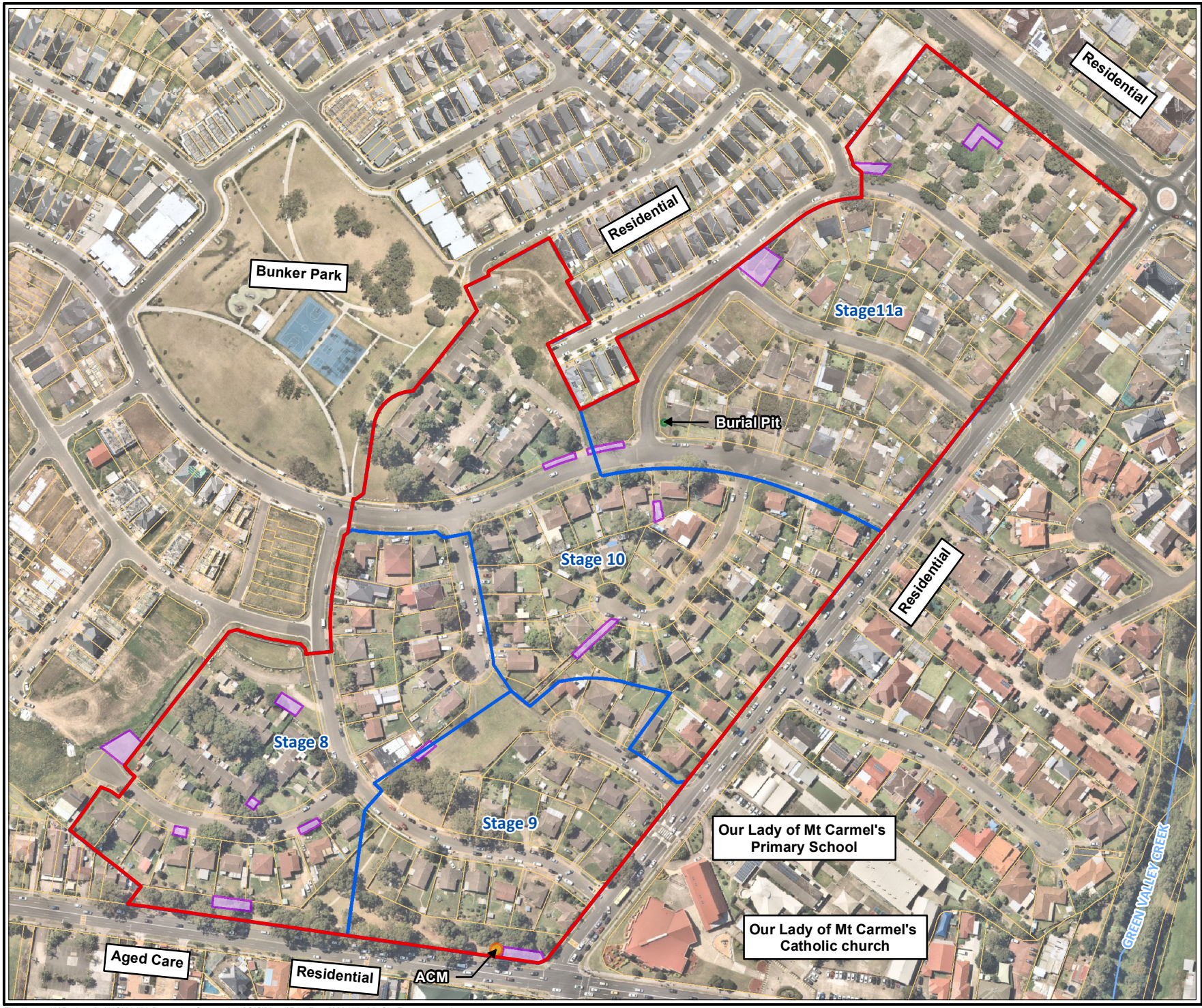
Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11,
Bonnyrigg, NSW

SITE LAYOUT

FIGURE 2

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\R01 Rev A\60439_02_SiteLayout.mxd
Reference: Nearmap - www.nearmap.com.au (Capture Date: 26/01/2021)



Legend

- Approximate Site Boundary
- NSW Cadastre (DFSI, 2021)

Stages

- Stage Boundary

Site Features

- ACM Fragment
- Burried Timber
- Fly-Tipped Material

JBS&G

Job No: 60493	
Client: LAHC	
Version: R01 Rev A	Date 21/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 50 100
metres

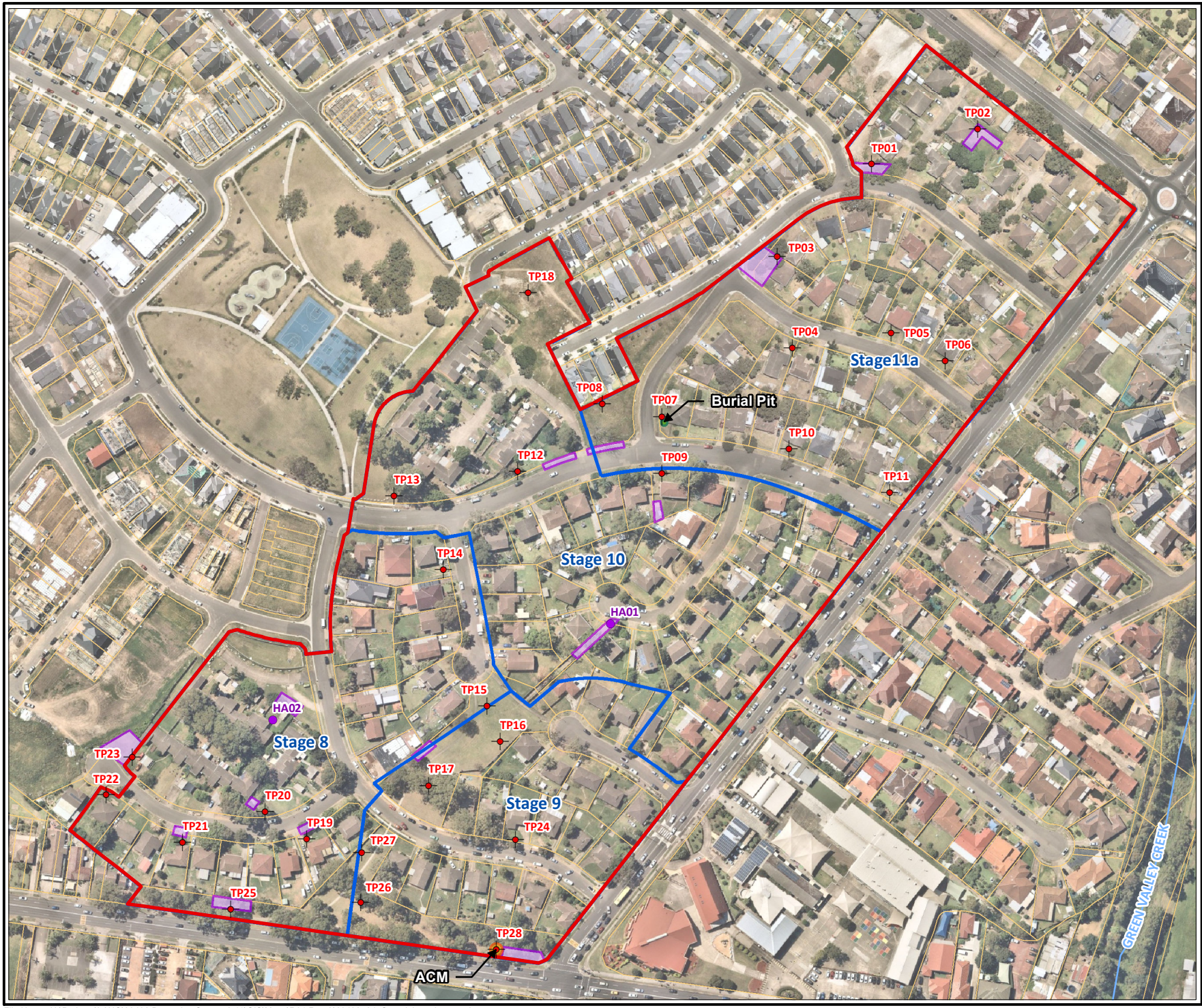
Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11, Bonnyrigg, NSW

SITE FEATURES

FIGURE 3

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\R01 Rev A\60493_03_SiteFeatures.mxd
Reference: Nearmap - www.nearmap.com.au (Capture Date: 26/01/2021)



Legend

- Approximate Site Boundary
- NSW Cadastre (DFSI, 2021)

Stages

- Stage Boundary

Site Features

- ACM Fragment
- Buried Timber
- Fly-Tipped Material

Sample Location

- Hand Auger, JBS&G 2021
- Test Pit, JBS&G 2021

JBS&G

Job No: 60493	
Client: LAHC	
Version: R01 Rev A	Date 21/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 50 100
metres

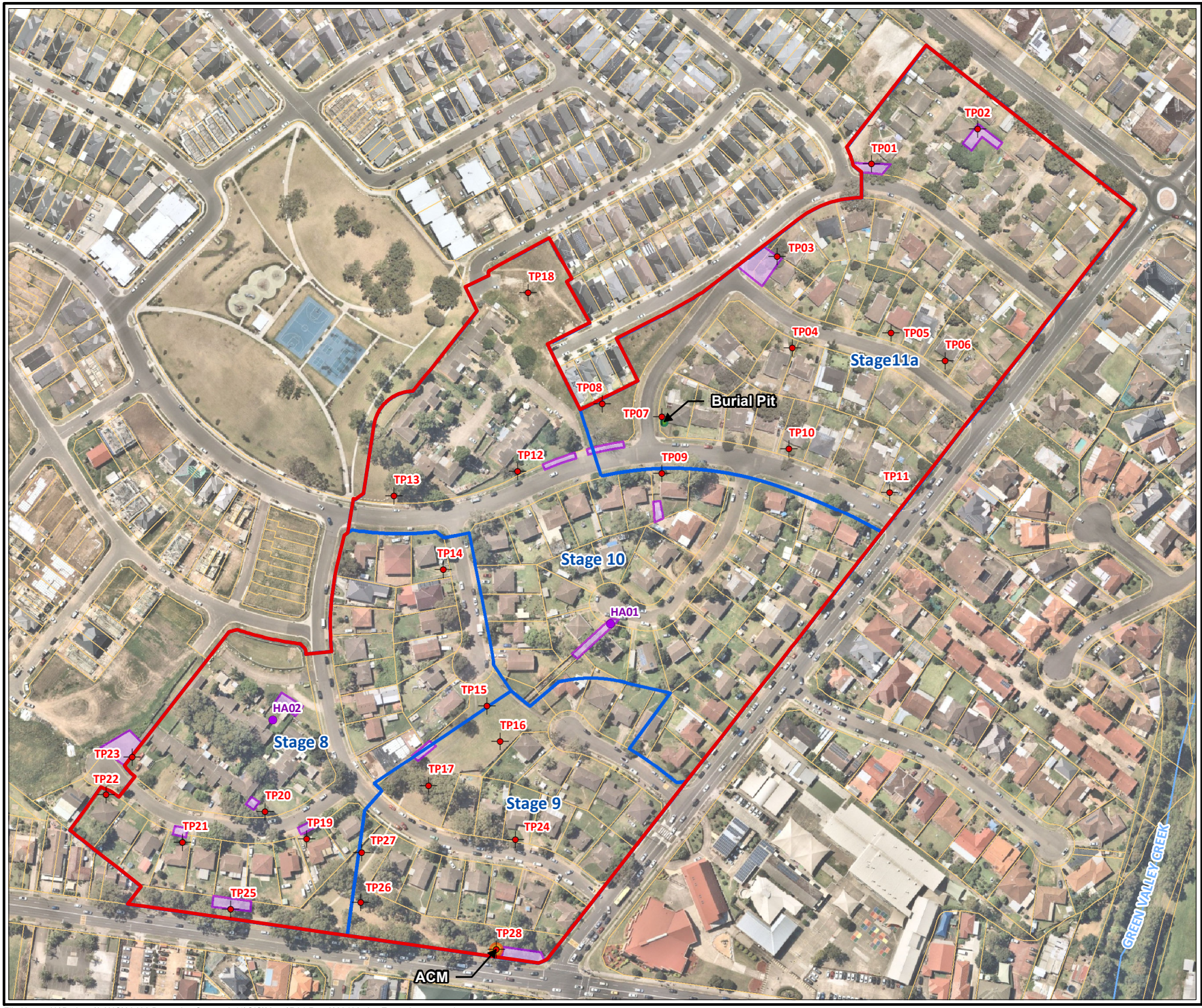
Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11,
Bonnyrigg, NSW

SAMPLE LOCATIONS

FIGURE 4

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\R01 Rev A\60493_04_SampleLocations.mxd
Reference: Nearmap - www.nearmap.com.au (Capture Date: 26/01/2021)



Legend

- Approximate Site Boundary
- NSW Cadastre (DFSI, 2021)

Stages

- Stage Boundary

Site Features

- ACM Fragment
- Burried Timber
- Fly-Tipped Material

Sample Location

- Hand Auger, JBS&G 2021
- Test Pit, JBS&G 2021

JBS&G

Job No: 60493	
Client: LAHC	
Version: R01 Rev A	Date 21/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 50 100
metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11, Bonnyrigg, NSW

EXCEEDANCES

FIGURE 5

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\R01 Rev A\60493_05_Exceedances.mxd
Reference: Nearmap - www.nearmap.com.au (Capture Date: 26/01/2021)

Tables

Table A: Soil Anayltical Table
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

				Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN								PAH																					
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene	Naphthalene - MAH	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene - PAH	Phenanthrene	Pyrene	PAHs (Sum of total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	5	5	5	0.1	5	5	20	20	50	50	50	20	50	100	100	100	20	50	0.1	0.1	0.1	0.1	0.2	0.3	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	0.5	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil				100	20	100	6000	300	40	400	7400																									3	3	3															300
NEPM 2013 Table 1B(1-5) Generic EIL - Urban Residential and Public Open Space																														170	170																			170			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																			1300	5600		180	120	65	105	125			45							0.7																	
NEPM 2013 Table 7 Res A Soil HSL for Asbestos in Soil																																																					
NEPC 2013 EIL, Urban Residential and public open space (site specific)				100		410	220	1100		240	620																																											
Location	**Field_ID**	**Sampled Date**	**Lab Report**																																																		
HA01	HA01_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02	HA02_0.2-0.3	30/03/2021	784428	9.1	<0.4	21	28	20	<0.1	9.3	48	<20	<20	<50	75	75	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01	TP01_0-0.1	29/03/2021	784145	12	<0.4	15	19	28	<0.1	12	160	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01	QA01	29/03/2021	788112	13	<0.4	19	20	29	<0.1	12	190	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01	QA01	29/03/2021	265444	10	<0.4	13	14	20	<0.1	9	200	<25	<50	<100	<100	-	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<1	<2	<3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.05
TP02	TP02_0.2-0.3	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02	TP02_0-0.1	29/03/2021	784145	5.7	<0.4	13	33	90	<0.1	9.2	110	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03	TP03_0-0.1	29/03/2021	784145	5.8	<0.4	20	18	22	<0.1	9.9	66	<20	<20	<50	52	52	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP04	TP04_0.2-0.3	29/03/2021	784145	8.9	<0.4	20	15	36	<0.1	7.5	64	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP05	TP05_0-0.1	29/03/2021	784145	9.8	<0.4	24	16	24	<0.1	9.5	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06	TP06_0-0.1	29/03/2021	784145	19	<0.4	38	23	40	<0.1	8.1	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07	TP07_0-0.1	29/03/2021	784145	12	<0.4	21	20	22	<0.1	12	50	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<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	TP08_0.4-0.5	29/03/2021	784145	14	<0.4	25	22	28	<0.1	12	71	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<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	TP09_0-0.1	29/03/2021	784145	17	<0.4	43	19	33	<0.1	12	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10	TP10_0-0.1	29/03/2021	784145	9.2	<0.4	22	21	30	<0.1	7.4	100	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP11	TP11_0-0.1	29/03/2021	784145	13	<0.4	28	19	34	<0.1	8	60	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP12	TP12_0-0.1	29/03/2021	784145	12	<0.4	21	26	26	<0.1	9.5	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	TP13_0-0.1	29/03/2021	784145	12	<0.4	15	12	14	<0.1	6.6	26	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14	TP14_0-0.1	29/03/2021	784145	21	<0.4	23	58	65	<0.1	10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP15	TP15_0.4-0.5	29/03/2021	784145	11	<0.4	29	20	24	<0.1	16	59	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP16	TP16_0-0.1	29/03/2021	784145	16	<0.4	26	25	34	<0.1	9.7	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP17	TP17_0-0.1	29/03/2021	784145	26	<0.4	30	26	68	<0.1	8.2	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18	TP18_0.5-0.6	29/03/2021	784145	9.9	<0.4	15	34	9.8	<0.1	7.6	43	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<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	TP19_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP20	TP20_0-0.1	30/03/2021	784428	26	<0.4	25	32	60	<0.1	9.8	370	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<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	QA04	30/03/2021	265548	14	<0.4	19	34	42	0.1	10	200	<25	<50	<100	<100	-	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<1	<2	<3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.05
TP20	QC04	30/03/2021	784428	21	<0.4	29	30	49	<0.1	12	360	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP21	TP21_0-0.1	30/03/2021	784428	3.4	<0.4	17	21	57	<0.1	9.3	110	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP22	TP22_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP23	TP23_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP24	TP24_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP25	TP25_0-0.1	30/03/2021	784428	13	<0.4	16	18	23	<0.1	7.4	32	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP26	TP26_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP27	TP27_0-0.1	30/03/2021	784428	18	<0.4	29	20	28	<0.1	9.7	56	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP28	TP28_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP28	TP28_0.2-0.3	30/03/2021	788140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP28-F1	TP28-F1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A: Soil Anayltical Table
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

				Organochlorine Pesticides																										Ionic Balance			PA VIC - IWRG62		Asbestos - Eurofins																	
				4,4-DDE	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Aldrin	Dieldrin	Aldrin + Dieldrin	Chlordane	Chlordane (cis)	Chlordane (trans)	DDT	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	Hexachlorobenzene	CEC	Conductivity (1:5 aqueous extract)	pH (aqueous extract)	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic	Approximate Sample Mass	Asbestos Sample Dimensions	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in Soil	Mass FA	Mass Asbestos in FA	Mass AF	Mass asbestos in AF	Asbestos from FA & AF in Soil	Mass Asbestos in FA & AF	ACM - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthetic Fibres - Comment	Asbestos Reported Result	TOC
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MEQ/100G	US/CM	pH Units	mg/kg	mg/kg	g	Comment	g	mg	% (w/w)	g	g	g	g	% (w/w)	g	Comment	Comment	Comment	Comment	Comment	mg/kg
EQL				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.1	0.05	0.05	10	0.1	0.1	0.1																	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil											6	50					240				10			6		300	20	10																					
NEPM 2013 Table 1B(1-5) Generic EIL - Urban Residential and Public Open Space															180																																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																																
NEPM 2013 Table 7 Res A Soil HSL for Asbestos in Soil																																					0.01					0.001						
NEPC 2013 EIL, Urban Residential and public open space (site specific)																																																
Location	**Field_ID**	**Sampled Date**	**Lab Report**																																													
HA01	HA01_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	646	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
HA02	HA02_0.2-0.3	30/03/2021	784428	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	17	34	6.6	<0.2	<0.2	583	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	1
TP01	TP01_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	618	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP01	QA01	29/03/2021	788112	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	59	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP01	QA01	29/03/2021	265444	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No visible asbestos	Organic fibre detected.	-	-	No asbestos detected at the reporting limit of 0.1g/kg	-
TP02	TP02_0.2-0.3	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	597	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP02	TP02_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	567	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP03	TP03_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	547	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP04	TP04_0.2-0.3	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	14	19	6.4	<0.2	<0.2	657	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	1.3
TP05	TP05_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	558	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP06	TP06_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	593	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP07	TP07_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	585	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP08	TP08_0.4-0.5	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	0.19	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	597	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP09	TP09_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	638	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP10	TP10_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	535	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP11	TP11_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	18	31	6.9	<0.2	<0.2	767	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	1.8
TP12	TP12_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	679	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP13	TP13_0-0.1	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	665	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP14	TP14_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	643	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP15	TP15_0.4-0.5	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	780	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP16	TP16_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	470	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP17	TP17_0-0.1	29/03/2021	784145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	594	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP18	TP18_0.5-0.6	29/03/2021	784145	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	754	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP19	TP19_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	584	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP20	TP20_0-0.1	30/03/2021	784428	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	0.5	<0.05	0.71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	18	21	6.7	0.71	<0.2	622	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	1.7
TP20	QA04	30/03/2021	265548	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No visible asbestos	Organic fibre detected.	-	-	No asbestos detected at the reporting limit of 0.1g/kg	-
TP20	QC04	30/03/2021	784428	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	1.9	<0.05	2.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	2.12	<0.2	556	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP21	TP21_0-0.1	30/03/2021	784428	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	574	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP22	TP22_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	634	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP23	TP23_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	643	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP24	TP24_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	642	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP25	TP25_0-0.1	30/03/2021	784428	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	654	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP26	TP26_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	678	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP27	TP27_0-0.1	30/03/2021	784428	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.05	-	-	-	<0.2	<0.2	613	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP28	TP28_0-0.1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	703	-	0	0	0	0	0	0	0	0	No trace asbestos	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP28	TP28_0.2-0.3	30/03/2021	788140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	567	-	0	0	0	0	0	0	0	0	No trace asbestos detected	Organic fibre detected.	1	1	No asbestos detected at the reporting limit of 0.001% w/w	-
TP28-F1	TP28-F1	30/03/2021	784428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	85 x 40 x 5 mm	26	0	0	0	0	0	0	0	-	-	1	1	**Chrysotile, amosite and crocidolite asbestos detected**	-

Table B: Site Adress Details
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

LOT and DP	Address	Suburb
Stage 8		
Lot 186 DP262449	6 JOINER PLACE	BONNYRIGG NSW 2177
Lot 187 DP262449	7 JOINER PLACE	BONNYRIGG NSW 2177
Lot 188 DP262449	8 JOINER PLACE	BONNYRIGG NSW 2177
Lot 189 DP262449	9 JOINER PLACE	BONNYRIGG NSW 2177
Lot 190 DP262449	10 JOINER PLACE	BONNYRIGG NSW 2177
Lot 191 DP262449	11 JOINER PLACE	BONNYRIGG NSW 2177
Lot 192 DP262449	46 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 193 DP262449	1 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 194 DP262449	3 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 195 DP262449	5 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 196 DP262449	7 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 197 DP262449	9 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 198 DP262449	11 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 199 DP262449	13 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 200 DP262449	15 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 219 DP262449	55 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 220 DP262449	53 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 221 DP262449	51 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 222 DP262449	49 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 223 DP262449	47 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 224 DP262449	45 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 225 DP262449	43 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 226 DP262449	41 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 227 DP262449	39 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 228 DP262449	37 BEAN CRESCENT	BONNYRIGG NSW 2177
Lot 416 DP262449	4A PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 6225 DP1242892	26 BEAN CRESCENT	BONNYRIGG NSW 2177
Stage 9		
Lot 143 DP262449	7 MASON PLACE	BONNYRIGG NSW 2177
Lot 144 DP262449	8 MASON PLACE	BONNYRIGG NSW 2177
Lot 185 DP262449	6 MASON PLACE	BONNYRIGG NSW 2177
Lot 201 DP262449	17 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 202 DP262449	19 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 203 DP262449	21 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 204 DP262449	23 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 205 DP262449	25 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 206 DP262449	27 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 207 DP262449	1 MASON PLACE	BONNYRIGG NSW 2177
Lot 208 DP262449	2 MASON PLACE	BONNYRIGG NSW 2177
Lot 209 DP262449	3 MASON PLACE	BONNYRIGG NSW 2177
Lot 210 DP262449	4 MASON PLACE	BONNYRIGG NSW 2177
Lot 211 DP262449	5 MASON PLACE	BONNYRIGG NSW 2177
Lot 212 DP262449	18 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 213 DP262449	16 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 214 DP262449	14 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 215 DP262449	12 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 216 DP262449	10 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 217 DP262449	8 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 218 DP262449	6 PALISADE CRESCENT	BONNYRIGG NSW 2177
Lot 415 DP262449	15A-15B PALISADE CRESCENT	BONNYRIGG NSW 2177

Table B: Site Adress Details
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

LOT and DP	Address	Suburb
Stage 10		
Lot 145 DP262449	9 MASON PLACE	BONNYRIGG NSW 2177
Lot 146 DP262449	10 MASON PLACE	BONNYRIGG NSW 2177
Lot 147 DP262449	217 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 148 DP262449	215 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 149 DP262449	213 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 150 DP262449	211 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 151 DP262449	209 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 152 DP262449	207 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 153 DP262449	205 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 154 DP262449	203 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 155 DP262449	70 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 156 DP262449	68 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 157 DP262449	66 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 158 DP262449	2 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 159 DP262449	3 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 160 DP262449	4 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 161 DP262449	5 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 162 DP262449	6 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 163 DP262449	7 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 164 DP262449	8 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 165 DP262449	9 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 166 DP262449	10 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 167 DP262449	11 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 168 DP262449	12 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 169 DP262449	13 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 170 DP262449	14 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 171 DP262449	15 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 172 DP262449	16 GARDEN PLACE	BONNYRIGG NSW 2177
Lot 173 DP262449	64 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 174 DP262449	62 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 175 DP262449	60 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 176 DP262449	58 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 177 DP262449	56 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 178 DP262449	54 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 179 DP262449	52 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 180 DP262449	50 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 181 DP262449	2 JOINER PLACE	BONNYRIGG NSW 2177
Lot 182 DP262449	3 JOINER PLACE	BONNYRIGG NSW 2177
Lot 183 DP262449	4 JOINER PLACE	BONNYRIGG NSW 2177
Lot 184 DP262449	5 JOINER PLACE	BONNYRIGG NSW 2177
Lot 4099 DP1182418	1 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	10 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	11 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	12 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	123 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 4099 DP1182418	13 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	14 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	15 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	16 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	17 KENNEDY WAY	BONNYRIGG NSW 2177

Table B: Site Adress Details
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

LOT and DP	Address	Suburb
Lot 4099 DP1182418	18 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	19 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	2 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	3 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	4 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	5 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	6 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	7 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	8 KENNEDY WAY	BONNYRIGG NSW 2177
Lot 4099 DP1182418	9 KENNEDY WAY	BONNYRIGG NSW 2177
Stage 11a		
Lot 103 DP262456	185 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 104 DP262456	187 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 105 DP262456	189 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 106 DP262456	191 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 107 DP262456	26 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 108 DP262456	24 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 109 DP262456	22 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 110 DP262456	20 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 111 DP262456	18 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 112 DP262456	16 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 113 DP262456	14 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 114 DP262456	12 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 115 DP262456	10 BISHOP CRESCENT	BONNYRIGG NSW 2177
Lot 116 DP262456	3 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 117 DP262456	5 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 118 DP262456	7 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 119 DP262456	9 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 120 DP262456	11 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 121 DP262456	13 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 122 DP262456	195 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 123 DP262456	193 HUMPHRIES ROAD	BONNYRIGG NSW 2177
Lot 124 DP262456	16 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 125 DP262456	14 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 126 DP262456	12 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 127 DP262456	10 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 128 DP262456	8 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 129 DP262456	6 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 130 DP262456	4 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 131 DP262456	2 SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 132 DP262456	2A SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 133 DP262456	2B SANDILANDS ROAD	BONNYRIGG NSW 2177
Lot 134 DP262456	125 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 135 DP262456	127 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 136 DP262456	129 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 137 DP262456	131 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 138 DP262456	133 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 139 DP262456	135 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 140 DP262456	137 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 141 DP262456	139 NEWLEAF PARADE	BONNYRIGG NSW 2177
Lot 142 DP262456	141 NEWLEAF PARADE	BONNYRIGG NSW 2177

Table B: Site Adress Details
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

LOT and DP	Address	Suburb
Lot 41 DP1172246	53 BISHOP CRESCENT	BONNYRIGG NSW 2177

Appendix A Photographic Log

Photograph 1 – Open space within Southern Boundary of Stage 8, North of Cabramatta Road.

Photograph 2 – Residential property located on Bean Crescent, Stage 8.

Photograph 3 – Residential property located on Joiner Place, Stage 8.

Photograph 4 – Flytipping of general rubbish in the southern open space, Stage 8.

JBS&G

Job No: 60593	
Client: LAHC	
Version: Rev 0	Date: 01/04/2021
Drawn By: AS	Checked By: KL
Not to Scale	
Coord. Sys n/a	

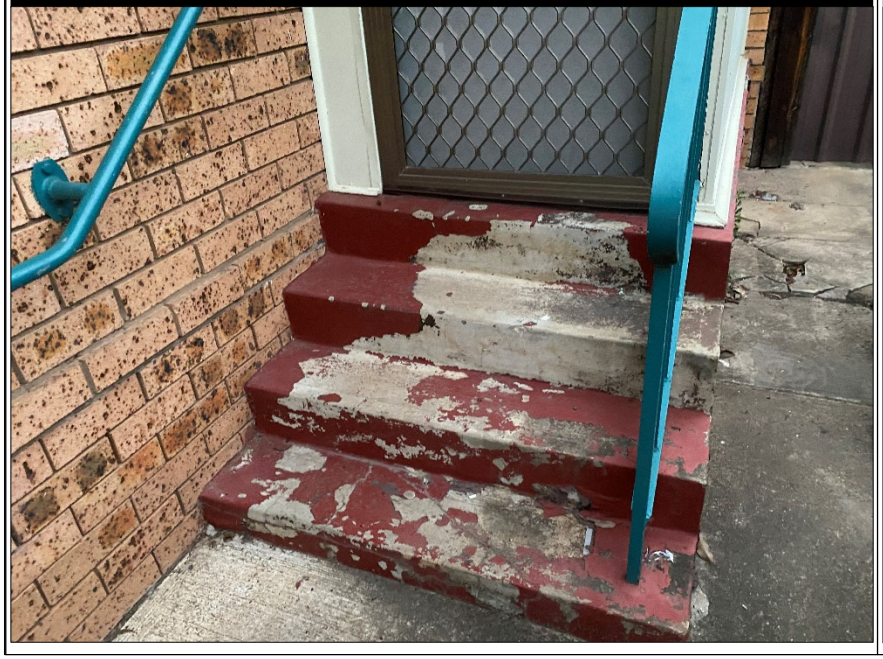
Stages 8 to 11
Bonnyrigg, NSW

APPENDIX A

Photograph 5 – Residential property partially containing ACM, located on Bean Crescent, Stage 8.

Photograph 6 – ACM Eaves on a property located on Bean Crescent, Stage 8.

Photograph 7– Paint peeling on Property located within Stage 8.



Photograph 8 – Stockpiling of Anthropogenic Material on Bean Crescent, Stage 8.

JBS&G

Job No: 60593	
Client: LAHC	
Version: Rev 0	Date: 01/04/2021
Drawn By: AS	Checked By: KL
Not to Scale	
Coord. Sys n/a	

Stages 8 to 11
Bonnyrigg, NSW

APPENDIX A

Photograph 9 – Open Space located Northwest within Stage 9.

Photograph 10 – Property partially made of ACM located on Palisade Crescent, Stage 9.

Photograph 11– Flytipped material within Northwestern open space, Stage 9.

Photograph 12 – ACM fragment found in southern parkland, Stage 9.

JBS&G

Job No: 60593	
Client: LAHC	
Version: Rev 0	Date: 01/04/2021
Drawn By: AS	Checked By: KL
Not to Scale	
Coord. Sys n/a	

Stages 8 to 11

Bonnyrigg, NSW

APPENDIX A

Photograph 13 – Bare ground within overgrown area, Stage 10.

Photograph 14 – Overgrown area, sloping from North to South, Stage 10.

Photograph 15 – Front of property located on Newleaf Parade within Stage 10, showing grass road verge, concrete footpath and guttering.

Photograph 16 – Flytipped anthropogenic material along Newleaf Parade, Stage 10.

JBS&G

Job No: 60593	
Client: LAHC	
Version: Rev 0	Date: 01/04/2021
Drawn By: AS	Checked By: KL
Not to Scale	
Coord. Sys n/a	

Stages 8 to 11
Bonnyrigg, NSW

APPENDIX A

Photograph 17 – Residential property located on Bishop Crescent, Stage 11.

Photograph 18 – Overgrown area, sloping downward from Northwest to Southeast, Stage 11.

Photograph 19 – Flytipped anthropogenic material located at a property located on Bishop Crescent, Stage 11.

Photograph 20 – Burial pit located at property on the corner of Sandilands Road and Newleaf Parade, Stage 11.

JBS&G

Job No: 60593	
Client: LAHC	
Version: Rev 0	Date: 01/04/2021
Drawn By: AS	Checked By: KL
Not to Scale	
Coord. Sys n/a	

Stages 8 to 11
Bonnyrigg, NSW

APPENDIX A

Appendix B Groundwater Bore Search

Registered Groundwater Bore Search

4/1/2021, 11:05:37 AM

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Maxar

Registered Bores (National Groundwater Information System, BoM, 2020/04) _Query result

JBS&G PSI Service

JBS&G, 2019

WaterNSW
Work Summary

GW109724

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 14/10/2003
Final Depth: 15.00 m
Drilled Depth: 15.00 m

Contractor Name: IT ENVIRONMENTAL
Driller: Craig Williams
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	9876//839367
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6248681.000
Easting: 305056.000
Latitude: 33°53'03.2"S
Longitude: 150°53'31.4"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	15.00	100			Unknown
1	1	Casing	Pvc Class 18	0.00	5.50	50	49		

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE SLAB	Conglomerate	
0.10	0.20	0.10	FILL BROWN,MOIST,LOOSE,NO ODOUR	Fill	
0.20	1.00	0.80	SHALE,SIKLTY CLAY,GREY AND IRONISH RED,FIRM,NO ODOUR	Shale	
1.00	5.00	4.00	SHALE,GREY,SOME SILTY CLAY AND GRAVEL,FIRM TO STIFF	Shale	
5.00	15.00	10.00	SHALE DARK GREY,STIFF,DRY,NO ODOUR.	Shale	

***** End of GW109724 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW109725

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 14/10/2003
Final Depth: 25.00 m
Drilled Depth: 25.00 m

Contractor Name: IT ENVIRONMENTAL
Driller: Craig Williams
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	9876//839367
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6248702.000
Easting: 305051.000
Latitude: 33°53'02.5"S
Longitude: 150°53'31.2"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	25.00	100			Unknown
1	1	Casing	Pvc Class 18	0.00	3.00	50			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE SLAB	Conglomerate	
0.10	0.20	0.10	FILL,BROWN,LOOSE,MOIST NO ODOUR	Fill	
0.20	0.50	0.30	SHALE,SILTY CLAY,GREY AND IRONISH RED,FIRM,MOIST,NO ODOUR	Shale	
0.50	4.00	3.50	SHALE,GREY AND IRONISH,RED,FIRM,DAM TO DRY,NO ODOUR	Shale	
4.00	14.00	10.00	SHALE,DARK GREY,STIFF,DRY,NO ODOUR	Shale	
14.00	14.10	0.10	CLAY,GREY,FIRM,DAMP,NO ODOUR	Clay	
14.10	25.00	10.90	SHALE,DARK GREY,STIFF,DRY,NO ODOUR.	Shale	

***** End of GW109725 *****

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WaterNSW
Work Summary

GW109726

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 14/10/2003
Final Depth: 8.00 m
Drilled Depth: 8.00 m

Contractor Name: IT ENVIRONMENTAL
Driller: Craig Williams
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	9876//839367
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6248713.000
Easting: 305016.000
Latitude: 33°53'02.1"S
Longitude: 150°53'29.9"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	100			Unknown
1	1	Casing	Pvc Class 18	0.00	1.52	50			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.00	1.00	TOPSOIL,YELLOWISH BROWN,COMPACT,DAMP,NO ODOUR.	Topsoil	
1.00	4.00	3.00	SHALE,LITTLE SILTY CLAY,GREY AND IRONISH RED,FIRM,DAMP,NO ODOUR	Shale	
4.00	6.00	2.00	SHALE,GREY,STIF,DRY, NO ODOUR.	Shale	
6.00	8.00	2.00	SHALE,DARK GREY,STIFF,DRY,NO ODOUR.	Shale	

***** End of GW109726 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW109727

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 14/10/2003
Final Depth: 16.00 m
Drilled Depth: 16.00 m

Contractor Name: IT ENVIRONMENTAL
Driller: Craig Williams
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	9876//839367
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6248718.000
Easting: 305031.000
Latitude: 33°53'02.0"S
Longitude: 150°53'30.5"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	16.00	100			Unknown
1	1	Casing	Pvc Class 18	0.00	10.50	50			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE SLAB	Conglomerate	
0.10	1.00	0.90	FILL,BROWN,LOOSE,MOIST,NO ODOUR	Fill	
1.00	3.00	2.00	SHALE,SILTY CLAY,GREY AND IRONISH RED,DAMP,NO ODOUR	Shale	
3.00	7.00	4.00	SHALE,GREY,STIFF,DRY,NO ODOUR	Shale	
7.00	16.00	9.00	SHALE,DARK GREY,STIFF,DRY,NO ODOUR.	Shale	

***** End of GW109727 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW109728

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 16/10/2003
Final Depth: 9.00 m
Drilled Depth: 9.00 m

Contractor Name: IT ENVIRONMENTAL
Driller: Craig Williams
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	9876//839367
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6248714.000
Easting: 305034.000
Latitude: 33°53'02.1"S
Longitude: 150°53'30.6"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.00	100			Unknown
1	1	Casing	Pvc Class 18	0.00	2.00	50			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE SLAB	Conglomerate	
0.10	1.00	0.90	FILL, BROWN,MOIST,LOOSE,NO ODOUR,SAND,SILTY CLAY	Fill	
1.00	3.00	2.00	SILTY CLAY,SHALE,GREY AND IRONISH RED, DAMP,FIRM,NO ODOUR	Silty Clay	
3.00	7.00	4.00	SHALE,GREY,STIFF,DRY,NO ODOUR.	Shale	
7.00	9.00	2.00	SHALE,DARK GREY, STIFF,DRY,NO ODOUR.	Shale	

***** End of GW109728 *****

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WaterNSW
Work Summary

GW112610

Licence: 10BL603688
Licence Status: ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger - Solid
Owner Type: Local Govt

Commenced Date:
Completion Date: 25/11/2009
Final Depth: 8.00 m
Drilled Depth: 8.00 m

Contractor Name: Numac Drilling Services
Driller: Unkown Unknown
Assistant Driller:

Property: 7 ELEVEN 167 Meadows Rd MOUNT PRITCHARD 2170 NSW
GWMA: -
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	6//570963
Licensed:	CUMBERLAND	ST LUKE	Whole Lot 6//570963

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6246640.000
Easting: 305506.000
Latitude: 33°54'09.7"S
Longitude: 150°53'47.3"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	150			Auger - Solid Flight
1		Annulus	Bentonite/Grout	2.00	7.00				
1		Annulus	Waterworn/Rounded	3.00	8.00				Graded
1	1	Casing	Pvc Class 18	0.00	4.00	61	50		Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	4.00	8.00	61		0	Casing - Machine Slotted, PVC Class 18, Screwed

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	GRASS SURFACE	Topsoil	
0.10	1.60	1.50	FILL, DRY,BROWN,SAND,CLAY,GRAVELS	Fill	
1.60	3.90	2.30	CLAY,MOIST,HIGH PLASTICITY,FIRM	Clay	
3.90	8.00	4.10	SHALE,DRY,L/BROWN,WEATERED,CLAY	Shale	

Remarks

22/07/2014: Nat Carling, 22-July-2014; Added status & work name, updated owner type, fixed drill log error.

***** End of GW112610 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW112611

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger - Solid
Owner Type: Local Govt

Commenced Date:
Completion Date: 25/11/2009
Final Depth: 7.00 m
Drilled Depth: 7.00 m

Contractor Name: Numac Drilling Services
Driller: Unkown Unknown
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	6//570963
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6246650.000
Easting: 305477.000
Latitude: 33°54'09.4"S
Longitude: 150°53'46.2"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.00	150			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	2.00	7.00				Graded
1	1	Casing	Pvc Class 18	0.00	3.00	61	50		Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	3.00	7.00	61		0	Casing - Machine Slotted, PVC Class 18, Screwed

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CRUSHED ROCK	Fill	
0.10	1.10	1.00	FILL,DRY BROWN,SAND,CLAY	Fill	
1.10	3.30	2.20	CLAY, MOIST, BROWN	Clay	
3.30	7.00	3.70	SHALE/ MUDSTONE, DRY TO MOIST,CLAY	Shale	

Remarks

22/07/2014: Nat Carling, 22-July-2014; Added status & work name, updated owner type, fixed drill log error.

***** End of GW112611 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW112612

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger - Solid
Owner Type: Local Govt

Commenced Date:
Completion Date: 25/11/2009
Final Depth: 7.00 m
Drilled Depth: 7.00 m

Contractor Name: Numac Drilling Services
Driller: Unkown Unknown
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	6//570963
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6246655.000
Easting: 305474.000
Latitude: 33°54'09.2"S
Longitude: 150°53'46.1"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.00	150			Auger - Solid Flight
1		Annulus	Waterworn/Rounded	2.00	7.00				Graded
1	1	Casing	Pvc Class 18	0.00	3.00	61	50		Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	3.00	7.00	61		0	Casing - Machine Slotted, PVC Class 18, Screwed

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	CONCRETE	Fill	
0.10	4.80	4.70	CLAY,MOIST,RED,GREY,H/PLASTICITY	Clay	
4.80	7.00	2.20	MUDSTONE,DRY, L/BROWN,WETHERED,CLAY	Mudstone	

Remarks

22/07/2014: Nat Carling, 22-July-2014; Added status & work name, updated owner type, fixed drill log error.

***** End of GW112612 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW115042

Licence: 10BL605197
Licence Status: ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 28/08/2015
Final Depth: 6.00 m
Drilled Depth: 6.00 m

Contractor Name: Tightsight Investigations
Driller: Ian David Drever
Assistant Driller:

Property: CALTEX - BONNYRIGG 709
Cabramatta Road West
BONNYRIGG 2177 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 1.200
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST LUKE	507//853006
Licensed:	CUMBERLAND	ST LUKE	Whole Lot 507//853006

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247712.000
Easting: 305125.000
Latitude: 33°53'34.7"S
Longitude: 150°53'33.3"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	6.00	0			Unknown
1	1	Casing	P.V.C.	0.00	0.00	75			
1	1	Opening	Slots	3.00	6.00			0	PVC

Remarks

28/08/2015: Form A Remarks:
Coordinates provided by LAS.
14/09/2015: Nat Carling, 14-Sept-2015; Added coordinate source & drilled depth, updated drill method.

***** End of GW115042 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix C EPA Searches

Home Public registers Contaminated land record of notices

Site and notice details

Your search for: Suburb: BONNYRIGG 3 notices on 1 site were matched.
Return to list of search results Search Again Refine Search

Area No: 3400

The information below was correct at the time the notices were issued.

Site: Metro (Formerly United & AP SAVER) Service Station Bonnyrigg
Address: 709 Cabramatta (W) ROAD, BONNYRIGG
LGA: FAIRFIELD

Occupier: DJS Group Australia Pty Ltd
Owner: Mandaean Pty Ltd

Notices relating to this site (0 current and 3 former)

(Map) where available, maps show the part of the site affected by the notice
* notice matched search criteria

Notice recipient	Notice type & number	Status	Date
Mandaean Pty Ltd	Amendment or Repeal of Order or Notice * 20194434	Former	Issued 24 Sep 2019
Mandaean Pty Ltd	Amendment or Repeal of Order or Notice * 20164419	Former	Issued 05 Jul 2016
Mandaean Pty Ltd	Preliminary Investigation Order * 20161002	Former	Issued 23 Jun 2016

25 March 2021

For business and industry

For local government

Contact us

131 555 (tel:131555)

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

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

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

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on

Search results

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

Suburb - Bonnyrigg

returned 0 result

Search Again

For business and industry

For local government

Contact us

131 555 (tel:131555)

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

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

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

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on

Background

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

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

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

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

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

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

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

Frequently asked questions

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

Your land may appear on the list because:

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

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

Does the list contain all contaminated sites in NSW?

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

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

How are notified contaminated sites managed by the EPA?

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

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

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

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

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

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

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

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

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

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

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

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

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

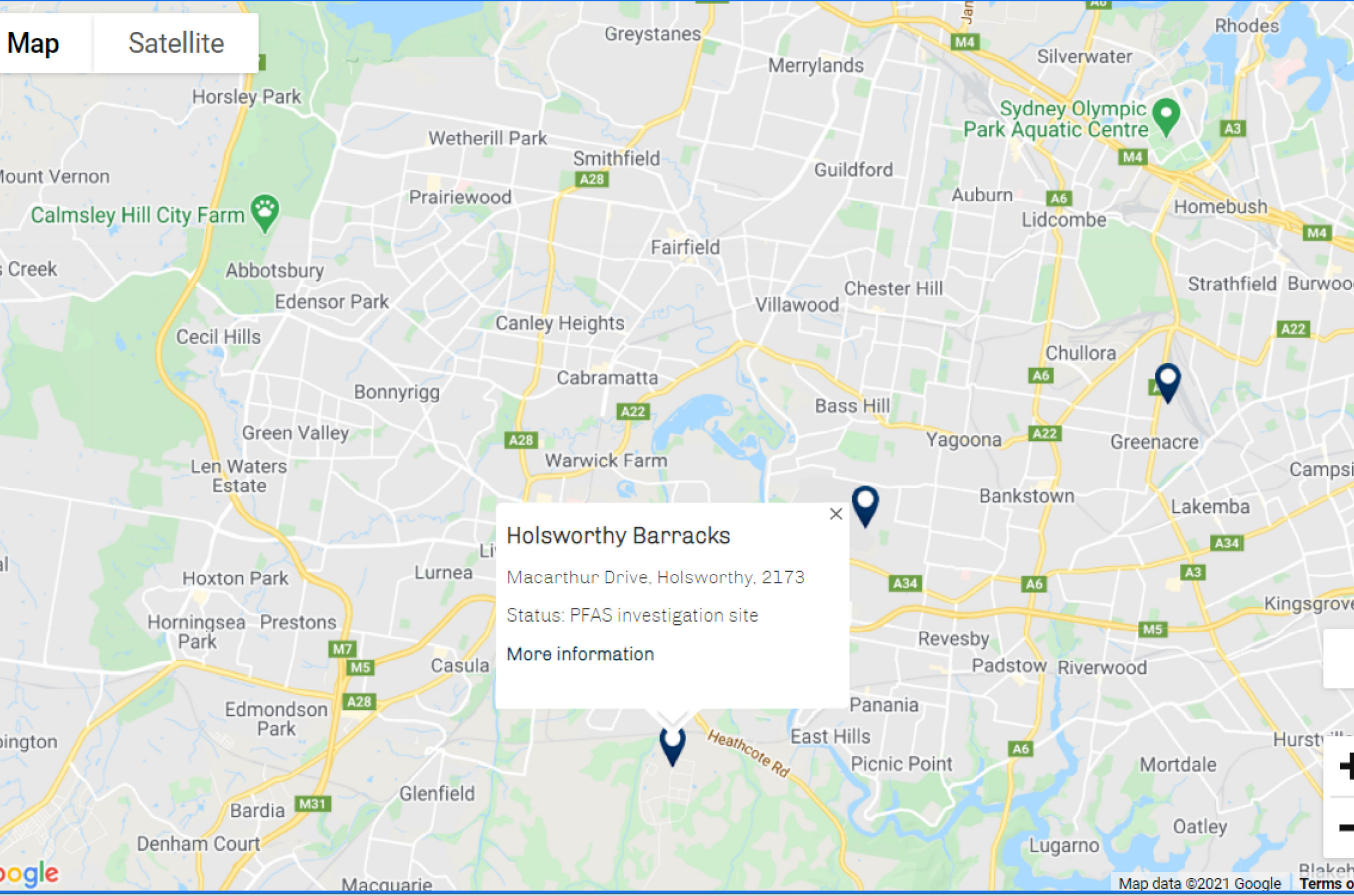
1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

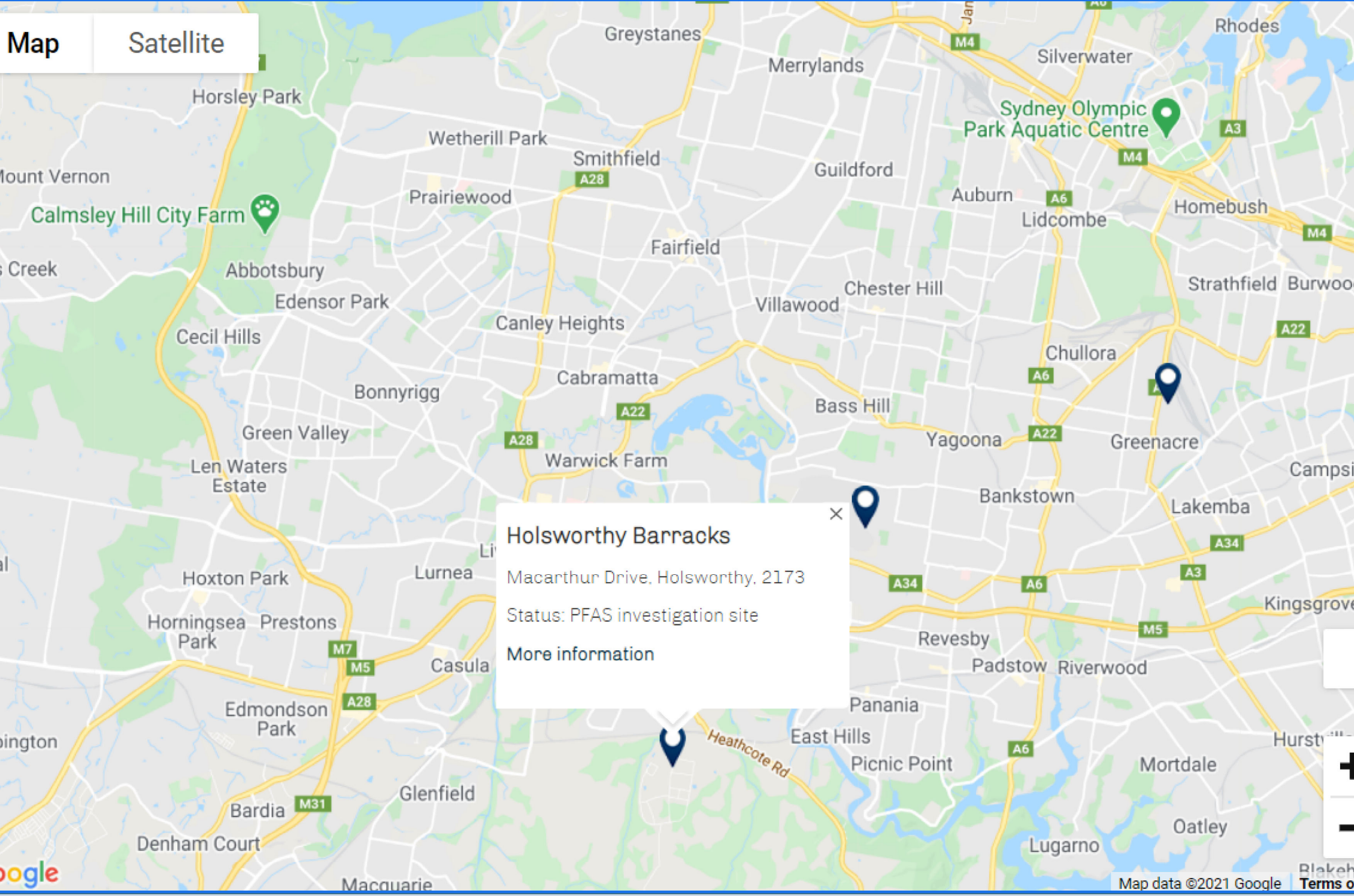
Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection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

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

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

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BOMADERRY	Former Mobil Emoleum Depot	7 Victa WAY	Other Petroleum	Regulation under CLM Act not required	-34.84454618	150.6139462
BOMADERRY	Former Shell Depot	44 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-34.85193621	150.6117038
BOMADERRY	SRA Land	Lot 2 Meroo STREET	Unclassified	Regulation under CLM Act not required	-34.85314813	150.6099573
BOMADERRY	Bomaderry Works Depot	10 McIntyre WAY	Other Petroleum	Regulation under CLM Act not required	-34.84576748	150.6131411
BOMADERRY	Commercial Land	320 Princes HIGHWAY	Other Industry	Contamination currently regulated under CLM Act	-34.84424073	150.5958149
BOMBALA	Caltex Service Station Bombala	159-161 Maybe STREET	Service Station	Regulation under CLM Act not required	-36.91234945	149.2374622
BOMBALA	Former Bright Street Timber Mill	Bright STREET	Other Industry	Regulation under CLM Act not required	-36.91547645	149.2302454
BOMBALA	Caltex Bombala Service Station	High Street corner Stephen STREET	Service Station	Regulation under CLM Act not required	-36.90447935	149.241292
BOMBALA	Prime Pine site	Sandy LANE	Other Industry	Regulation under CLM Act not required	-36.9315425	149.2110959
BOMEN	Caltex Terminal	34 Lewington STREET	Other Petroleum	Regulation under CLM Act not required	-35.0700202	147.4121955
BOMEN	Enirgi Power Storage Recycling	509 Byrnes ROAD	Other Industry	Under assessment	-35.085432	147.404735
BONDI	BP-branded Service Station	185 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.89432208	151.2647671
BONDI	Caltex Service Station Bondi	51 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.8936307	151.260001
BONDI JUNCTION	Waverley Bus Depot	1-15 Oxford STREET	Other Industry	Regulation under CLM Act not required	-33.89165341	151.2421246
BONNY HILLS	Bonny View Store	923 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.59075636	152.8392935
BONNYRIGG	Metro (Formerly United & AP SAVER) Service Station Bonnyrigg	709 Cabramatta (W) ROAD	Service Station	Regulation under CLM Act not required	-33.89297085	150.8925935


Map
Satellite
Greystanes
Merrylands
Rhodes
Silverwater
Horsley Park
Sydney Olympic Park Aquatic Centre
Wetherill Park
Smithfield
Guildford
Auburn
Lidcombe
Homebush
Prairiewood
Calmsley Hill City Farm
Fairfield
Abbotsbury
Edensor Park
Chester Hill
Villawood
Strathfield
Canley Heights
Cecil Hills
Chullora
Cabramatta
Bonnyrigg
Bass Hill
Green Valley
Yagoona
Greenacre
Warwick Farm
Len Waters Estate
Bankstown
Lakemba
Holsworthy Barracks
Macarthur Drive, Holsworthy, 2173
Status: PFAS investigation site
More information
Hoxton Park
Lurnea
Horningsea Park
Prestons
Revesby
Padstow
Riverwood
Casula
Edmondson Park
Panania
East Hills
Heathcote Rd
Picnic Point
Mortdale
Glenfield
Bardia
Oatley
Denham Court
Lugarno
Macquarie
Map data ©2021 Google
PFAS investigation site
Multiple sites


Map
Satellite
Greystanes
Merrylands
Rhodes
Silverwater
Horsley Park
Sydney Olympic Park Aquatic Centre
Wetherill Park
Smithfield
Guildford
Auburn
Lidcombe
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Calmsley Hill City Farm
Fairfield
Abbotsbury
Edensor Park
Chester Hill
Villawood
Strathfield
Canley Heights
Cecil Hills
Chullora
Cabramatta
Bonnyrigg
Bass Hill
Green Valley
Yagoona
Greenacre
Warwick Farm
Len Waters Estate
Bankstown
Lakemba
Holsworthy Barracks
Macarthur Drive, Holsworthy, 2173
Status: PFAS investigation site
More information
Hoxton Park
Lurnea
Horningsea Park
Prestons
Revesby
Padstow
Riverwood
Casula
Edmondson Park
Panania
East Hills
Heathcote Rd
Picnic Point
Mortdale
Glenfield
Bardia
Oatley
Denham Court
Lugarno
Macquarie
Map data ©2021 Google
PFAS investigation site
Multiple sites

Appendix D Heritage Searches

Search Results

1 result found.

The Homestead Brown Rd	Bonnyrigg Heights, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Report Produced: Thu Mar 25 16:25:18 2021

Accessibility | Disclaimer | Privacy | © Commonwealth of Australia (cc) BY

Heritage NSW

Search the State Heritage Inventory

Search for NSW heritage

Return to search page where you can refine/broaden your search.

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by Heritage NSW.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the Heritage Act. This information is provided by Heritage NSW.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

Section 2. Items listed under the Heritage Act.

Your search returned 2 records.

Item name	Address	Suburb	LGA	SHR
Bonnyrigg House	Cartwright Street	Bonnyrigg	Fairfield	00281
Land Next to Male Orphan School	Lot 1 Cartwright Street	Bonnyrigg	Fairfield	01390

Section 3. Items listed by Local Government and State Agencies.

Your search returned 6 records.

Item name	Address	Suburb	LGA	Information source
Bonnyrigg Turkish Mosque	10-12 Bibbys Place	Bonnyrigg	Fairfield	LGOV
Cambodian Buddhist Temple, Wat Khemaransaram	26 Bonnyrigg Avenue (akaTarlington Parade)	Bonnyrigg	Fairfield	LGOV
Land Next To Male Orphan School	Lot 1 Cartwright Street	Bonnyrigg Heights	Fairfield	SGOV
Land Surrounding Bonnyrigg House		Bonnyrigg	Fairfield	LGOV
Male Orphan School Bonnyrigg House	19-21 Cartwright Street	Bonnyrigg	Fairfield	LGOV
Temple	Bibbys Place	Bonnyrigg	Fairfield	LGOV

There was a total of 8 records matching your search criteria.

Key:

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

Note: While Heritage NSW seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

Appendix E Section 10.7 Certificate

01/04/2021

Alison Smith
Level 1, 50 Margaret Street
Sydney NSW 2000

Dear Sir/ Madam,

Following is your planning certificate as requested. Should you have any further queries please contact Council on (02) 9725 0821.

PLANNING CERTIFICATE
(under section 10.7 of the Environmental Planning and Assessment Act 1979 as amended)

Applicant:	**Alison Smith**
Certificate No.:	**1312/2021**
Applicant's Reference:	**60593**
Issue Date:	**01/04/2021**
Receipt No.:	

PROPERTY ADDRESS:	**123 Newleaf Parade BONNYRIGG NSW 2177**
LEGAL DESCRIPTION:	**Lot: 4099 DP: 1182418**

Marcus Rowan
MANAGER STRATEGIC LAND USE PLANNING

PLEASE NOTE: This is page 1 of 24. Should this certificate or any subsequent copy not contain this many pages, please confirm with Council prior to acting on the basis of information contained in this certificate under Section 10.7(2) & (5) and inclusive of Flood Information Sheet.

Information provided under
Section 10.7(2) of the Environmental Planning and Assessment Act 1979

Notes:

(1) The following prescribed matters may apply to the land to which this certificate relates.

(2) Where this certificate refers to a specific allotment (or allotments) within a strata plan, the certificate is issued for the whole of the land within the strata plan, not just the specific allotment(s) referred to, and any information contained in the certificate may relate to the whole, or any part, of the strata plan.

(3) The following information is provided pursuant to Section 10.7(2) of the Environmental Planning and Assessment Act 1979 as prescribed by Schedule 4 of the Environmental Planning and Assessment Regulation 2000 and is applicable as at the date of this certificate.

(4) Information provided in this certificate should be interpreted in conjunction with the relevant plans, policies and documents held at Council. In order to obtain copies of these documents you may purchase them by either contacting Council on (02) 9725 0821 or attending Council's Administration Centre at 86 Avoca Road, Wakeley.

1. Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

State Environmental Planning Policies (SEPP)

SEPP (Housing for Seniors or People with a Disability) 2004

SEPP No. 33 - Hazardous and Offensive Development

SEPP (Major Development) 2005

SEPP No. 50 - Canal Estate Development

SEPP No. 55 - Remediation of Land

SEPP No. 64 - Advertising and Signage

SEPP No. 65 - Design Quality of Residential Flat Development

SEPP No. 19 - Bushland in Urban Areas

SEPP No. 21 - Caravan Parks

SEPP (Primary Production and Rural Development) 2019

SEPP (Infrastructure) 2007

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Affordable Rental Housing) 2009

SEPP (State and Regional Development) 2011

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

SEPP (Miscellaneous Consent Provisions) 2007

SEPP (Building Sustainability Index: BASIX) 2004

SEPP (Vegetation in Non-Rural Areas) 2017

SEPP (Educational Establishments and Child Care Facilities) 2017

SEPP (Western Sydney Aerotropolis) 2020

Regional Environmental Plans (Deemed SEPP)

Sydney Regional Environmental Plan No. 9 - Extractive Industry (No 2-1995)
The Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment

Local Environmental Plans (LEP)

Fairfield Local Environmental Plan 2013
Published on NSW Legislation Website: 17/05/2013.
In Force from: 31/05/2013.
As Amended.

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Director-General has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved)

There is no draft SEPP applying to this land.

There is no other draft LEP applying to this land.

(3) The name of each development control plan that applies to the carrying out of development on the land.

The land is subject to adopted Development Control Plans. (See attached schedule).

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

2. Zoning and land use under relevant LEP

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a)WHAT IS THE IDENTITY OF THE ZONE?

Zone RE1 Public Recreation

(b)WHAT IS PERMITTED WITHOUT DEVELOPMENT CONSENT?
Environmental protection works; Markets.

(c)WHAT IS PERMITTED ONLY WITH DEVELOPMENT CONSENT?
Boat building and repair facilities; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Charter and tourism boating facilities; Community facilities; Environmental facilities; Flood mitigation works; Function centres; Heliports; Information and education facilities; Jetties; Kiosks; Marinas; Mooring pens; Moorings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Restaurants or cafes; Roads; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities.

(a) WHAT IS PROHIBITED?

Any other development not specified in item b or c.
(a) WHAT IS THE IDENTITY OF THE ZONE?

Zone R1 General Residential

(b) WHAT IS PERMITTED WITHOUT DEVELOPMENT CONSENT?

Environmental protection works; Home-based child care; Home occupations.

(c) WHAT IS PERMITTED ONLY WITH DEVELOPMENT CONSENT?

Attached dwellings; Boarding houses; Centre-based child care facilities; Community facilities; Dwelling houses; Group homes; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Any other development not specified in item b or d.

(d) WHAT IS PROHIBITED?

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Environmental facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home businesses; Home industries; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Recreation facilities (indoor); Recreation facilities

(major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers dwellings; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies.

Additional uses that are permitted with development consent.

There are no additional uses permitted with consent.

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the minimum land dimensions so fixed.

No development standards that fix the minimum land dimensions for the erection of a dwelling house apply to this land. Controls in other policies and plans may apply.

(f) Whether the land includes or comprises critical habitat.

No.

(g) Whether the land is in a conservation area (however described).

No

(h) Whether an item of environmental heritage (however described) is situated on the land.

No.

Attention is drawn however to Clause 5.10(5) of Fairfield Local Environmental Plan 2013:
"The consent authority may, before granting consent to any development:
(a) on land on which a heritage item is located, or
(b) on land that is within a heritage conservation area, or
(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),
require a heritage management document to be prepared to assess the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned."

2A. Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

Not applicable.

3. Complying development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4) 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Housing Code:
Complying development under the Housing Code may be carried out on the land.

Low Rise Housing Diversity Code
Complying development under the Low Rise Medium Density Housing Code may be carried out on the land.

Housing Alterations Code:
Complying development under the Housing Alterations Code may be carried out on the land.

Commercial and Industrial Alterations Code:
Complying development under the Commercial and Industrial Alterations Code may be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code:
No. The Commercial and Industrial (New Buildings and Additions) Code does not apply to the land.

Subdivision Code:
Complying development under the Subdivision Code may be carried out on the land.

Rural Housing Code:
No. The Rural Housing Code does not apply to this land.

General Development Code:
Complying development under the General Development Code may be carried out on the land.

Demolition Code:
Complying development under the Demolition Code may be carried out on the land.

Fire Safety Code:
Complying development under the Fire Safety Code may be carried out on the land.

Container Recycling Facilities Code:
No. The Container Recycling Facilities Code does not apply to the land.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

None Relevant.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Council does not have any relevant statement to make in relation to any further restrictions that may apply to complying development being carried out on the land. All information in relation to the extent that complying development can be carried out on the land is provided under Part 3(1) & (2) of this certificate.

Note: Clause 3 refers only to land based exclusions as listed in Clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP (Exempt and Complying Development Codes) 2008. To be complying development, the development must be complying development that meets the standards and other requirements specified for that development as required by the SEPP. Please contact your accredited certifier or Council for further information.

4. Coastal Protection

Whether or not the land is affected by the operation of section 38 or 39 of the *Coastal Protection Act* 1979, but only to the extent that the council has been notified by the Department of Public Works.

No, this land is not affected.

4A Information relating to beaches and coasts

(1) In relation to a coastal council - whether an order has been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of that Act) on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with.

No order under Part 4D of the *Coastal Protection Act 1979*, has been made.

(2) In relation to a coastal council:

(a) whether the Council has been notified under section 55X of the *Coastal Protection Act 1979* that temporary costal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land), and

Council has not received any such notification.

(b) if works have been so placed—whether the council is satisfied that the works have been removed and the land restored in accordance with that Act.

Not applicable.

4B Annual charges under *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

In relation to a coastal council – whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges

under section 946B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).
Note: "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993*.

No annual charges under section 553B of the *Local Government Act 1993*, are applicable to the land.

5. Mine Subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act* 1961.

No, this land is not affected.

6. Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under Division 2 or Part 3 of the *Roads Act* 1993, any environmental planning instrument, or any resolution of the council.

The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act or Fairfield Local Environmental Plan 2013.

7. Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:
(a) adopted by the Council, or
(b) adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk, other than flooding.

Council's policies on hazard risk restrictions are as follows:

(i) Landslip

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of landslide risk or subsidence.

(ii) Bushfire

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979.

(iii) Tidal Inundation

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of tidal inundation.

(iv) Subsidence

No, the land is not so affected

(v) Acid Sulfate Soils

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of acid sulfate soils.

(vi) Any other risks

No, the land is not so affected

7A. Flood related development controls information

1. Whether or not development on that land or part of the 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 seniors housing) is subject to flood related development controls.

   This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.

   Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.

   Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

   Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

2. Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

   This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.

Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.

Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Note: The flood information is the current information to date. However, Council reviews flood studies on an on-going basis and new information may become available in future. Please contact Council's Catchment Planning Division on 9725 0222 for any updated information.

Note:

3. Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

The land is not reserved for acquisition under Fairfield Local Environmental Plan 2013.

9. Contributions plans

The name of each contributions plan applying to the land.

Fairfield City Council indirect (Section 7.12) Development Contributions Plan 2011 applies to all land within the City of Fairfield.
Fairfield City Council direct (Section 7.11) Development Contributions Plan 2011 applies to this land.

9A. Biodiversity certified land

If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

Note: "Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

The land is not biodiversity certified land.

10. Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016*, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

Note: "Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

No such agreement applies to the land.

10A. Native vegetation clearing set asides

If the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section)

Not applicable.

11. Bush fire prone land

If any of the land is bush fire prone land (as defined in Act), a statement that all or, as the case may be, some of the land is bush fire prone land. If none of the land is bush fire prone land, a statement to that effect.

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979.

12. Property vegetation plans

If the land to which a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) applies, a statement to that effect (but on if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

No.

13. Orders under Trees (Disputes between Neighbours) Act 2006

Whether an order has been made under the Trees (Disputes between Neighbours) Act 2006 to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

No

14. Directions under Part 3A

If there is a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect, a statement to that effect identifying the provision that does not have effect.

No such direction applies to the land.

15. Site compatibility certificates and conditions for seniors housing

If the land is land to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies -
(a) a statement of whether there is a current site compatibility certificate (seniors housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include -
(i) the period for which the certificate is current, and
(ii) that a copy may be obtained from the head office of the Department, and

No such certificate applies to the land.

(b) a statement setting out any terms of a kind referred to in clause 18(2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

No such terms apply to the land.

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

A statement of whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:
(a) the period for which the certificate is valid, and
(b) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land.

17. Site compatibility certificates and conditions for affordable rental housing

(1) A statement to the whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:
(a) the period for which the certificate is current, and
(b) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land.

(2) A statement setting out any terms of a kind referred to in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that has been imposed as a condition of consent to a development application in respect of the land.

No such terms apply to the land.

18. Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

(2) The date of any subdivision order that applies to the land.

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

No such plan or order applies to the land

19. Site verification certificates

A statement of whether there is a current site verification certificate, of which the council is aware, in respect of the land and, if there is a certificate, the statement is to include:

(a) the matter certified by the certificate, and

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.

(b) the date on which the certificate ceases to be current (if any), and

(c) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land

20. Loose-fill asbestos insulation

If the land includes 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, a statement to that effect.

Not Applicable.

21. Affected building notices and building product rectification orders

(1) A statement of whether there is any affected building notice of which the council is aware that is in force in respect of the land.

(2) A statement of:

(a) whether there is 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, and

(b) whether 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.

None Relevant.

22. State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

For land to which *State Environmental Planning Policy (Western Sydney Aerotropolis) 2020* applies, whether the land is –

(a) in an ANEF or ANEC contour of 20 or greater as referred to in clause 19 of that Policy, or

No

(b) shown on the Lighting Intensity and Wind Shear Map under that Policy, or

No

(c) shown on the Obstacle Limitation Surface Map under that Policy, or

No

(d) in the "public safety area" on the Public Safety Area Map under that Policy, or

No

(e) in the “3 kilometre wildlife buffer zone” or the “13 kilometre wildlife buffer zone” on the Wildlife Buffer Zone Map under that Policy.

No

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) that 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,
(b) that 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,
(c) that 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,
(d) that 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,
(e) that 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.

Continuously updated information in relation to the above matters can also be found by searching the records of the Environmental Protection Authority (EPA) at the website of the EPA. The search page can be found at: http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx.

The following information is available to Council but may not be current:

Council has adopted by resolution a policy (commencing 1 August 2000), on contaminated land which may restrict the development of land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under the State Legislation is warranted.

The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.

The land is not subject to an investigation order or a remediation order within the meaning of the Contaminated Land Management Act 1997.

The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under Section 19 or 26 of the Contaminated Land Management Act 1997.

The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.

Note 2: Any advice received by Council pursuant to section 26(2) of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009, is included below.

No such certificate applies to the land.

The following additional information is provided under Section 10.7(5) of the Environmental Planning and Assessment Act 1979

Note:

(1) When information pursuant to section 10.7(5) is requested, the Council is under no obligation to furnish any of the information supplied herein pursuant to that section.
(2) Council draws your attention to section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to subsection (5).
(3) The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

Cumberland Plain Critically Endangered Ecological Community - Contains or in Close Proximity to Community

Council is in receipt of information by the NSW National Parks and Wildlife Service indicating the land either contains or is in close proximity to an area possibly containing remnant vegetation associated with a Cumberland Plain Critically Endangered Ecological Community that is listed under the Biodiversity Conservation Act 2016 (NSW). On request Council will supply such information available from its records,however interested parties must take and rely on their own advice and enquiries.

Cumberland Plain Critically Endangered Ecological Community - Contains or in Close Proximity to Community with an Area Greater than 0.5 hectares and Tree Cover

Information from NSW National Parks and Wildlife Service indicates that the land either contains or is in close proximity to an area possibly containing remnant vegetation associated with a Cumberland Plain Critically Endangered Ecological Community. NPWS have identified the community as Cumberland Plain Woodland (Shale Hills Woodland, Shale Plains Woodland) that is listed as critically endangered under the Biodiversity Conservation Act 2016 (NSW).
NPWS mapping indicates that the remnant vegetation is part of an area that is greater than 0.5 hectares and tree cover with urban development.

The land is subject to the provisions of the SEPP (Vegetation in Non-Rural Areas) 2017 and Fairfield LEP 2013.

Land must not be cleared or filled except with the consent of Council.

The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).
Council's policy 'Building in Saline Environments', applies to all areas of Fairfield City and requires use of construction measures and materials in new development to minimise risk of salt damage to buildings from urban salinity.

On 15th April 2014, the Australian Government announced that it intends to proceed with an airport at Badgerys Creek in the Liverpool City Council area. The Western Sydney Airport draft Environmental Impact Statement (EIS) was released for public exhibition on Monday 19 October 2015. You should make

your own enquiries with the Commonwealth Government Department responsible via the website http://westernsydneyairport.gov.au/.

Clause 2.7 of Fairfield Local Environmental Plan 2013 requires development consent for the demolition of a building or work.

There is no draft SEPP applying to this land.

FAIRFIELD CITY COUNCIL
DEVELOPMENT CONTROL PLANS

Fairfield Citywide Development Control Plan

Title	Adopted by Council*	Effective Date
Fairfield Citywide Development Control Plan 2013	13 November 2012	31 May 2013
Amendment No.1 change maximum height permissible for detached secondary dwellings, clarify requirements and correct various anomalies, incorporate outdoor dining policy into a number of site specific DCPs (see table below)	11 February 2014	5 March 2014
Amendment No.2 amend chapter 2 to reference Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Amendment No.3 Introduce Chapter 4B - Secondary Dwellings in Rural Area - Horsley Park and Cecil Park	11 December 2013	14 March 2014
Amendment No. 4 amends Chapter 9 Industrial Development Site Specific Controls for 449 Victoria Street and 96 Newton Road, Wetherill Park	24 September 2013	21 March 2014
Amendment No.5 amends Chapters 2 and 10 and Appendix B to ensure provisions within the DCP are in line with the SEPP (Exempt and Complying Development Codes) 2008.	13 May 2014	28 May 2014
Amendment No. 5A amends Chapter 6A – Multi Dwelling Housing – Town house and Villas: Site Specific DCP – 46 & 50 Cobbett Street, Wetherill Park.	12 March 2013	22 August 2014
Amendment No. 6 including increase to building heights for detached granny flats, removal of reference to minimum lot sizes for R1 zoned lands, inclusion of new controls and provisions relating to neighbourhood shops and pad mounted sub stations, clarify requirements and correct a number of anomalies associated with secondary dwellings, dual occupancy, narrow lots and residential flat buildings and other minor inconsequential amendments.	12 August 2014	3 September 2014
Amendment No. 6A amends Chapter 14 Subdivision – Applying to land located on 630 Elizabeth Drive and 9-10 Schubert Place, Bonnyrigg Heights to facilitate a future road link between Stivala Place and Schubert Place.	12 August 2014	3 September 2014
Amendment No.7 proposed amendments include – Additional Controls for Child Care Centres, Boarding Houses and Granny Flats; Revised Heritage Chapter; New provisions relating to CCTV for specific land uses, and; Acoustic measures for development in the Rural Area.	25 November 2014	3 December 2014
Amendment No. 7A amends Chapter 10 Miscellaneous Development - applying to land located on 1 Bartley Street, Cabramatta to facilitate the development of a hotel or motel accommodation at the Cabravale Diggers site.	26 August 2014	16 January 2015
Amendment 8 amends Chapter 9 – Industrial Development. This amendment includes provisions for industrial/employment development proposals in close proximity to residential land. The amended controls cover the following issues: General Design Requirements (including setback considerations, driveways, loading and storage areas, etc); Bulk and scale; Vehicular and Pedestrian Access Privacy; Light Spill; Noise and Vibration; and Landscaping.	10 March 2015	1 April 2015
Amendment 9 includes new provisions relating to various forms of residential development including: Building Appearance, Landscaping, Private Open space, Minimum Lot Width, Car Parking Rates and Notification of S82A Applications.	12 May 2015	27 May 2015
Amendment 10 including amendments to: • the intent of the Development Control Plan and Development Application process – the DA Guide • provisions for rural zone development • residential flat building setbacks • heritage advice • road classifications	14 July 2015	5 August 2015
Amendment No.11 includes site specific development controls (private open space, car parking and dwelling density) for 46-50 Cobbett Street, Wetherill Park included in Chapter 6A Multi Dwelling Housing – Townhouses and Villas.	1 December 2015	16 December 2015
Amendment No. 12 addresses anomalies in the DCP including but not limited to providing clarity on minimum room sizes, updated acoustic proofing measures for new dwellings in rural areas, car parking rates for disabled parking, and provisions for site servicing and loading requirements in neighbourhood shops in residential zones.	10 May 2016	25 May 2016

Amendment No. 13 Clarification to requirements for acoustic measures for development in the rural areas, location of alfresco areas for secondary dwellings, car parking rates for restaurants & amendments to ensure controls for residential flat buildings are consistent with the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development & associated Apartment Design Guide.	14 March 2017	5 April 2017
Amendment No. 14 Site specific provisions for 620 Elizabeth Drive, Bonnyrigg Heights.	27 June 2017	15 September 2017
Amendment No. 15 Amendment to Appendix G, and addition of Appendix H to introduce Aboriginal Heritage Management controls for development across Fairfield City	12 September 2017	28 February 2018
Amendment No. 16 Amendments provide clarity relating to alfresco areas and carports provisions for secondary dwellings, lot width provisions for dual occupancy and multi dwelling housing on cul-de-sac heads, setbacks for residential flat buildings on corner sites, removal of Chapter 8B Neighbourhood and Local Centres – Mixed Use (Up to 2 storeys) to ensure consistency with the Apartment Design Guide, inclusion of accessibility requirements, inclusion of Council's Stormwater Management Policy, and guidelines for acknowledging petitions.	27 February 2018	21 March 2018
Amendment No. 18 Amendment to Chapter 10.11 to revise existing site specific DCP in relation to the Cabravale Diggers Club site at 1 Bartley Street, Canley Vale	14 November 2017	28 February 2018
Amendment No. 19 Amendment to introduce site specific development controls for 17-23 Longfield Street, Cabramatta.	11 September 2018	28 February 2019
Amendment No. 20 Amendment No. 20 provides clarity on controls and guidelines within the following chapters: • Chapter 3 – Environmental Management and Constraints; • Chapter 4A – Development in the Rural Zones; • Chapter 5A – Dwelling Houses; • Chapter 5B – Secondary Dwellings; • Chapter 6A – Multi Dwelling Housing; • Chapter 6B – Dual Occupancy; • Chapter 9 – Industrial Development; and • Chapter 14 – Subdivision	12 February 2019	13 March 2019
Amendment No. 22 Amendment No. 22 provides clarity on control and guidelines within the following chapters: • Appendix A – Definitions • Chapter 2 – Development Application Process • Chapter 3 – Environmental Management and Constraints • Chapter 5A – Dwelling Houses • Chapter 5B – Secondary Dwellings • Chapter 5C – Dwelling Houses on Narrow Lots • Chapter 7 – Residential Flat Buildings and Shop Top Housing • Chapter 8 – Neighbourhood and Local Centres Business Use • Chapter 12 – Car Parking, Vehicle and Access Management • Chapter 13 – Child Care Centres • Chapter 14 - Subdivision	9 June 2020	21 September 2020

Place Based and Site Specific Development Control Plans

Title	Adopted by Council*	Effective Date
Bonnyrigg Town Centre DCP 2018	6 August 2019	4 September 2020
Cabramatta Town Centre DCP (5/2000) - Amendment No.1 (Outdoor Dining Controls –5.3.2014) - Amendment No. 2 (New clause regarding Model Submission – 3.09.2014) - Amendment No. 3 (Amended clauses and map regarding Precinct 2- Dutton Lane Car Park)	11 October 2016	10 March 2017
Fairfield City Centre DCP 2013 - Amendment No.1 (Outdoor Dining Controls – 5.3. 2014) - Amendment No. 2 (Remove reference to Public Art Guide and update signage controls reference – 3.09.2014) - Amendment No. 3 (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Canley Corridor DCP No.37 (2013) (Canley Vale and Canley Heights town centres) - Amendment No.1: (Development Controls for Adams Reserve 12.9.2006) - Amendment No.2: (Development Controls for 45-47 Peel St, Canley Heights 9.4.2008) - Amendment No.3: (Awnings controls 3.11.2010) - Amendment No.4: (Development Controls for 190 Canley Vale Rd, Canley Heights 19.4.2011) - Amendment No.5: (References to Fairfield LEP 2013 31.5.2013) - Amendment No.6: (Outdoor Dining Controls –5.3.2014) - Amendment No. 7 (Remove reference to Public Art Guide – 3.09.2014) - Amendment No. 8 (Include 46 Derby Street, Canley Heights into Town Centre Catchment – 01.07.2015) - Amendment No. 9 (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Prairiewood Town Centre – Southern Precinct DCP 2013	13 November 2012	31 May 2013
Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Fairfield Heights Town Centre DCP 2018	06 August 2019	05 June 2020
Villawood Town Centre DCP 2020	28 April 2020	05 June 2020

Master Plans

Title	Adopted by Council*	Effective Date
Prairiewood Masterplan (December 2005)	13 November 2012	31 May 2013
Fairfield Town Centre Masterplans – The Crescent and Barbara Street Precincts (May 2007)		May 2007

Urban Design Studies

Title	Adopted by Council
Fairfield City Centre Key Sites Urban Design Study	27 March 2018
Fairfield Heights Town Centre Urban Design Study	27 March 2018
Villawood Town Centre Urban Design Study	27 March 2018

***** Note: Some *"In Force"* Development Control Plans may be under review, check with Council for date of last amendment.

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Flood Information Sheet

Applicant: **Alison Smith**
Certificate No.: **1312/2021**
Applicant's Reference: **60593**
Issue Date: **01/04/2021**
Receipt No.:

PROPERTY ADDRESS: **123 Newleaf Parade BONNYRIGG NSW 2177**
LEGAL DESCRIPTION: **Lot: 4099 DP: 1182418**

Council has adopted a policy on flooding which may restrict the development of land. The Fairfield City-Wide Development Control Plan 2013 (which includes provisions for flood management) applies to all of the Fairfield Local Government area.

Important Notes:

Not Applicable values indicate that the subject land is not known to be subject to flooding.

Not Available values indicate that Council does not have the required flood information for the subject land.

A Glossary is also attached at the end of this Flood Information Sheet.

MAINSTREAM FLOODING

Description

Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

Mainstream Flood Details

Size of Flood	Flood Level (m AHD)
PMF minimum	**Not Applicable**
PMF maximum	**Not Applicable**
1 in 100 year minimum	**Not Applicable**
1 in 100 year maximum	**Not Applicable**
1 in 20 year minimum	**Not Applicable**
1 in 20 year maximum	**Not Applicable**

LOCAL OVERLAND FLOODING

Description

Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Local Overland Flood Details

Size of Flood	Flood Level (m AHD)
PMF minimum	**Not Applicable**
PMF maximum	**Not Applicable**
1 in 100 year minimum	**Not Applicable**
1 in 100 year maximum	**Not Applicable**
1 in 20 year minimum	**Not Applicable**
1 in 20 year maximum	**Not Applicable**

GLOSSARY	
m AHD	metres Australian Height Datum (AHD).
Australian Height Datum (AHD)	A common national plane of level approximately equivalent to the height above sea level. All flood levels, floor levels and ground levels are normally provided in metres AHD.
Average Recurrence Interval (ARI)	The long term average number of years between the occurrence of a flood as big as the selected event. For example, floods with a discharge as great as the 20 year ARI event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
Flood	A relatively high stream flow that overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam. It also includes local overland flooding associated with major drainage before entering a watercourse, or coastal inundation resulting from raised sea levels, or waves overtopping the coastline.
Flood risk precinct	An area of land with similar flood risks and where similar development controls may be applied by a Council to manage the flood risk. The flood risk is determined based on the existing development in the precinct or assuming the precinct is developed with normal residential uses. Usually the floodplain is categorised into three flood risk precincts 'low', 'medium' and 'high', although other classifications can sometimes be used. **High Flood Risk:** This has been defined as the area of land below the 100-year flood event that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties. **Medium Flood Risk:** This has been defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties. **Low Flood Risk:** This has been defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.
Local overland flooding	The inundation of normally dry land by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
Mainstream flooding	The inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.
Probable Maximum Flood (PMF)	The largest flood that could conceivably occur at a particular location.

01/04/2021

Alison Smith
Level 1 50 Margaret Street Sydney 2000

Dear Sir/ Madam,

Following is your planning certificate as requested. Should you have any further queries please contact Council on (02) 9725 0821.

PLANNING CERTIFICATE
(under section 10.7 of the Environmental Planning and Assessment Act 1979 as amended)

Applicant:	**Alison Smith**
Certificate No.:	**1313/2021**
Applicant's Reference:	**60593**
Issue Date:	**01/04/2021**
Receipt No.:	

PROPERTY ADDRESS:	**6 Joiner Place BONNYRIGG NSW 2177**
LEGAL DESCRIPTION:	**Lot: 186 DP: 262449**

Marcus Rowan
MANAGER STRATEGIC LAND USE PLANNING

PLEASE NOTE: This is page 1 of 23. Should this certificate or any subsequent copy not contain this many pages, please confirm with Council prior to acting on the basis of information contained in this certificate under Section 10.7(2) & (5) and inclusive of Flood Information Sheet.

Information provided under
Section 10.7(2) of the Environmental Planning and Assessment Act 1979

Notes:

(1) The following prescribed matters may apply to the land to which this certificate relates.

(2) Where this certificate refers to a specific allotment (or allotments) within a strata plan, the certificate is issued for the whole of the land within the strata plan, not just the specific allotment(s) referred to, and any information contained in the certificate may relate to the whole, or any part, of the strata plan.

(3) The following information is provided pursuant to Section 10.7(2) of the Environmental Planning and Assessment Act 1979 as prescribed by Schedule 4 of the Environmental Planning and Assessment Regulation 2000 and is applicable as at the date of this certificate.

(4) Information provided in this certificate should be interpreted in conjunction with the relevant plans, policies and documents held at Council. In order to obtain copies of these documents you may purchase them by either contacting Council on (02) 9725 0821 or attending Council's Administration Centre at 86 Avoca Road, Wakeley.

1. Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

State Environmental Planning Policies (SEPP)

SEPP (Housing for Seniors or People with a Disability) 2004

SEPP No. 33 - Hazardous and Offensive Development

SEPP (Major Development) 2005

SEPP No. 50 - Canal Estate Development

SEPP No. 55 - Remediation of Land

SEPP No. 64 - Advertising and Signage

SEPP No. 65 - Design Quality of Residential Flat Development

SEPP No. 19 - Bushland in Urban Areas

SEPP (Infrastructure) 2007

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Affordable Rental Housing) 2009

SEPP (State and Regional Development) 2011

SEPP (Primary Production and Rural Development) 2019

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

SEPP (Miscellaneous Consent Provisions) 2007

SEPP No. 21 - Caravan Parks

SEPP (Building Sustainability Index: BASIX) 2004

SEPP (Vegetation in Non-Rural Areas) 2017

SEPP (Educational Establishments and Child Care Facilities) 2017

SEPP (Western Sydney Aerotropolis) 2020

Regional Environmental Plans (Deemed SEPP)

Sydney Regional Environmental Plan No. 9 - Extractive Industry (No 2-1995)
The Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment

Local Environmental Plans (LEP)

Fairfield Local Environmental Plan 2013
Published on NSW Legislation Website: 17/05/2013.
In Force from: 31/05/2013.
As Amended.

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Director-General has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved)

There is no draft SEPP applying to this land.

There is no other draft LEP applying to this land.

(3) The name of each development control plan that applies to the carrying out of development on the land.

The land is subject to adopted Development Control Plans. (See attached schedule).

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

2. Zoning and land use under relevant LEP

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a) WHAT IS THE IDENTITY OF THE ZONE?

Zone R1 General Residential

(b) WHAT IS PERMITTED WITHOUT DEVELOPMENT CONSENT?

Environmental protection works; Home-based child care; Home occupations.

(c) WHAT IS PERMITTED ONLY WITH DEVELOPMENT CONSENT?

Attached dwellings; Boarding houses; Centre-based child care facilities; Community facilities; Dwelling houses; Group homes; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Any other development not specified in item b or d.

(d) WHAT IS PROHIBITED?

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Environmental facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home businesses; Home industries; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers dwellings; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies.

Additional uses that are permitted with development consent.

There are no additional uses permitted with consent.

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the minimum land dimensions so fixed.

No development standards that fix the minimum land dimensions for the erection of a dwelling house apply to this land. Controls in other policies and plans may apply.

(f) Whether the land includes or comprises critical habitat.

No.

(g) Whether the land is in a conservation area (however described).

No

(h) Whether an item of environmental heritage (however described) is situated on the land.

No.

Attention is drawn however to Clause 5.10(5) of Fairfield Local Environmental Plan 2013:
"The consent authority may, before granting consent to any development:
(a) on land on which a heritage item is located, or
(b) on land that is within a heritage conservation area, or
(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),
require a heritage management document to be prepared to assess the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned."

2A. Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

Not applicable.

3. Complying development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4) 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Housing Code:
Complying development under the Housing Code may be carried out on the land.

Low Rise Housing Diversity Code
Complying development under the Low Rise Medium Density Housing Code may be carried out on the land.

Housing Alterations Code:
Complying development under the Housing Alterations Code may be carried out on the land.

Commercial and Industrial Alterations Code:
Complying development under the Commercial and Industrial Alterations Code may be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code:

No. The Commercial and Industrial (New Buildings and Additions) Code does not apply to the land.

Subdivision Code:
Complying development under the Subdivision Code may be carried out on the land.

Rural Housing Code:
No. The Rural Housing Code does not apply to this land.

General Development Code:
Complying development under the General Development Code may be carried out on the land.

Demolition Code:
Complying development under the Demolition Code may be carried out on the land.

Fire Safety Code:
Complying development under the Fire Safety Code may be carried out on the land.

Container Recycling Facilities Code:
No. The Container Recycling Facilities Code does not apply to the land.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

None Relevant.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Council does not have any relevant statement to make in relation to any further restrictions that may apply to complying development being carried out on the land. All information in relation to the extent that complying development can be carried out on the land is provided under Part 3(1) & (2) of this certificate.

Note: Clause 3 refers only to land based exclusions as listed in Clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP (Exempt and Complying Development Codes) 2008. To be complying development, the development must be complying development that meets the standards and other requirements specified for that development as required by the SEPP. Please contact your accredited certifier or Council for further information.

4. Coastal Protection

Whether or not the land is affected by the operation of section 38 or 39 of the *Coastal Protection Act* 1979, but only to the extent that the council has been notified by the Department of Public Works.

No, this land is not affected.

4A Information relating to beaches and coasts

(1) In relation to a coastal council - whether an order has been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of that Act) on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with.

No order under Part 4D of the *Coastal Protection Act 1979*, has been made.

(2) In relation to a coastal council:

(a) whether the Council has been notified under section 55X of the *Coastal Protection Act 1979* that temporary costal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land), and

Council has not received any such notification.

(b) if works have been so placed—whether the council is satisfied that the works have been removed and the land restored in accordance with that Act.

Not applicable.

4B Annual charges under *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

In relation to a coastal council – whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 946B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).
Note: "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993*.

No annual charges under section 553B of the *Local Government Act 1993*, are applicable to the land.

5. Mine Subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act* 1961.

No, this land is not affected.

6. Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under Division 2 or Part 3 of the *Roads Act* 1993, any environmental planning instrument, or any resolution of the council.

The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act or Fairfield Local Environmental Plan 2013.

7. Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:
(a) adopted by the Council, or
(b) adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk, other than flooding.

Council's policies on hazard risk restrictions are as follows:

(i) Landslip

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of landslide risk or subsidence.

(ii) Bushfire

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979.

(iii) Tidal Inundation

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of tidal inundation.

(iv) Subsidence

No, the land is not so affected

(v) Acid Sulfate Soils

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of acid sulfate soils.

(vi) Any other risks

No, the land is not so affected

7A. Flood related development controls information

1. Whether or not development on that land or part of the 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 seniors housing) is subject to flood related development controls.

   This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.

   Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.

   Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

   Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

2. Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

   This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.

   Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.

   Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

   Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Note: The flood information is the current information to date. However, Council reviews flood studies on an on-going basis and new information may become available in future. Please contact Council's Catchment Planning Division on 9725 0222 for any updated information.

Note:

3. Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

The land is not reserved for acquisition under Fairfield Local Environmental Plan 2013.

9. Contributions plans

The name of each contributions plan applying to the land.

Fairfield City Council indirect (Section 7.12) Development Contributions Plan 2011 applies to all land within the City of Fairfield.
Fairfield City Council direct (Section 7.11) Development Contributions Plan 2011 applies to this land.

9A. Biodiversity certified land

If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

Note: "Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

The land is not biodiversity certified land.

10. Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016*, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

Note: "Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

No such agreement applies to the land.

10A. Native vegetation clearing set asides

If the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section)

Not applicable.

11. Bush fire prone land

If any of the land is bush fire prone land (as defined in Act), a statement that all or, as the case may be, some of the land is bush fire prone land. If none of the land is bush fire prone land, a statement to that effect.

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land

referred to in this certificate is not bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979.

12. Property vegetation plans

If the land to which a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) applies, a statement to that effect (but on if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

No.

13. Orders under Trees (Disputes between Neighbours) Act 2006

Whether an order has been made under the Trees (Disputes between Neighbours) Act 2006 to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

No

14. Directions under Part 3A

If there is a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect, a statement to that effect identifying the provision that does not have effect.

No such direction applies to the land.

15. Site compatibility certificates and conditions for seniors housing

If the land is land to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies -
(a) a statement of whether there is a current site compatibility certificate (seniors housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include -
(i) the period for which the certificate is current, and
(ii) that a copy may be obtained from the head office of the Department, and

No such certificate applies to the land.

(b) a statement setting out any terms of a kind referred to in clause 18(2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

No such terms apply to the land.

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

A statement of whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:
(a) the period for which the certificate is valid, and
(b) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land.

17. Site compatibility certificates and conditions for affordable rental housing

(1) A statement to the whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:
(a) the period for which the certificate is current, and
(b) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land.

(2) A statement setting out any terms of a kind referred to in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that has been imposed as a condition of consent to a development application in respect of the land.

No such terms apply to the land.

18. Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

(2) The date of any subdivision order that applies to the land.

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

No such plan or order applies to the land

19. Site verification certificates

A statement of whether there is a current site verification certificate, of which the council is aware, in respect of the land and, if there is a certificate, the statement is to include:
(a) the matter certified by the certificate, and
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.
(b) the date on which the certificate ceases to be current (if any), and
(c) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land

20. Loose-fill asbestos insulation

If the land includes 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, a statement to that effect.

Not Applicable.

21. Affected building notices and building product rectification orders

(1) A statement of whether there is any affected building notice of which the council is aware that is in force in respect of the land.

(2) A statement of:

(a) whether there is 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, and

(b) whether 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.

None Relevant.

22. State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

For land to which *State Environmental Planning Policy (Western Sydney Aerotropolis) 2020* applies, whether the land is –

(a) in an ANEF or ANEC contour of 20 or greater as referred to in clause 19 of that Policy, or

No

(b) shown on the Lighting Intensity and Wind Shear Map under that Policy, or

No

(c) shown on the Obstacle Limitation Surface Map under that Policy, or

No

(d) in the "public safety area" on the Public Safety Area Map under that Policy, or

No

(e) in the "3 kilometre wildlife buffer zone" or the "13 kilometre wildlife buffer zone" on the Wildlife Buffer Zone Map under that Policy.

No

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) that 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,

(b) that 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,

(c) that 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,

(d) that 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,

(e) that 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.

Continuously updated information in relation to the above matters can also be found by searching the records of the Environmental Protection Authority (EPA) at the website of the EPA. The search page can be found at: http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx.

The following information is available to Council but may not be current:

Council has adopted by resolution a policy (commencing 1 August 2000), on contaminated land which may restrict the development of land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under the State Legislation is warranted.

The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.

The land is not subject to an investigation order or a remediation order within the meaning of the Contaminated Land Management Act 1997.

The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under Section 19 or 26 of the Contaminated Land Management Act 1997.

The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.

Note 2: Any advice received by Council pursuant to section 26(2) of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009, is included below.

No such certificate applies to the land.

The following additional information is provided under Section 10.7(5) of the Environmental Planning and Assessment Act 1979

Note:

(1) When information pursuant to section 10.7(5) is requested, the Council is under no obligation to furnish any of the information supplied herein pursuant to that section.
(2) Council draws your attention to section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to subsection (5).
(3) The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

The land is subject to the provisions of the SEPP (Vegetation in Non-Rural Areas) 2017 and Fairfield LEP 2013.

Land must not be cleared or filled except with the consent of Council.

The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).
Council's policy 'Building in Saline Environments', applies to all areas of Fairfield City and requires use of construction measures and materials in new development to minimise risk of salt damage to buildings from urban salinity.

On 15th April 2014, the Australian Government announced that it intends to proceed with an airport at Badgerys Creek in the Liverpool City Council area. The Western Sydney Airport draft Environmental Impact Statement (EIS) was released for public exhibition on Monday 19 October 2015. You should make your own enquiries with the Commonwealth Government Department responsible via the website http://westernsydneyairport.gov.au/.

Clause 2.7 of Fairfield Local Environmental Plan 2013 requires development consent for the demolition of a building or work.

There is no draft SEPP applying to this land.

FAIRFIELD CITY COUNCIL
DEVELOPMENT CONTROL PLANS

Fairfield Citywide Development Control Plan

Title	Adopted by Council*	Effective Date
Fairfield Citywide Development Control Plan 2013	13 November 2012	31 May 2013
Amendment No.1 change maximum height permissible for detached secondary dwellings, clarify requirements and correct various anomalies, incorporate outdoor dining policy into a number of site specific DCPs (see table below)	11 February 2014	5 March 2014
Amendment No.2 amend chapter 2 to reference Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Amendment No.3 Introduce Chapter 4B - Secondary Dwellings in Rural Area - Horsley Park and Cecil Park	11 December 2013	14 March 2014
Amendment No. 4 amends Chapter 9 Industrial Development Site Specific Controls for 449 Victoria Street and 96 Newton Road, Wetherill Park	24 September 2013	21 March 2014
Amendment No.5 amends Chapters 2 and 10 and Appendix B to ensure provisions within the DCP are in line with the SEPP (Exempt and Complying Development Codes) 2008.	13 May 2014	28 May 2014
Amendment No. 5A amends Chapter 6A – Multi Dwelling Housing – Town house and Villas: Site Specific DCP – 46 & 50 Cobbett Street, Wetherill Park.	12 March 2013	22 August 2014
Amendment No. 6 including increase to building heights for detached granny flats, removal of reference to minimum lot sizes for R1 zoned lands, inclusion of new controls and provisions relating to neighbourhood shops and pad mounted sub stations, clarify requirements and correct a number of anomalies associated with secondary dwellings, dual occupancy, narrow lots and residential flat buildings and other minor inconsequential amendments.	12 August 2014	3 September 2014
Amendment No. 6A amends Chapter 14 Subdivision – Applying to land located on 630 Elizabeth Drive and 9-10 Schubert Place, Bonnyrigg Heights to facilitate a future road link between Stivala Place and Schubert Place.	12 August 2014	3 September 2014
Amendment No.7 proposed amendments include – Additional Controls for Child Care Centres, Boarding Houses and Granny Flats; Revised Heritage Chapter; New provisions relating to CCTV for specific land uses, and; Acoustic measures for development in the Rural Area.	25 November 2014	3 December 2014
Amendment No. 7A amends Chapter 10 Miscellaneous Development - applying to land located on 1 Bartley Street, Cabramatta to facilitate the development of a hotel or motel accommodation at the Cabravale Diggers site.	26 August 2014	16 January 2015
Amendment 8 amends Chapter 9 – Industrial Development. This amendment includes provisions for industrial/employment development proposals in close proximity to residential land. The amended controls cover the following issues: General Design Requirements (including setback considerations, driveways, loading and storage areas, etc); Bulk and scale; Vehicular and Pedestrian Access Privacy; Light Spill; Noise and Vibration; and Landscaping.	10 March 2015	1 April 2015
Amendment 9 includes new provisions relating to various forms of residential development including: Building Appearance, Landscaping, Private Open space, Minimum Lot Width, Car Parking Rates and Notification of S82A Applications.	12 May 2015	27 May 2015
Amendment 10 including amendments to: • the intent of the Development Control Plan and Development Application process – the DA Guide • provisions for rural zone development • residential flat building setbacks • heritage advice • road classifications	14 July 2015	5 August 2015
Amendment No.11 includes site specific development controls (private open space, car parking and dwelling density) for 46-50 Cobbett Street, Wetherill Park included in Chapter 6A Multi Dwelling Housing – Townhouses and Villas.	1 December 2015	16 December 2015
Amendment No. 12 addresses anomalies in the DCP including but not limited to providing clarity on minimum room sizes, updated acoustic proofing measures for new dwellings in rural areas, car parking rates for disabled parking, and provisions for site servicing and loading requirements in neighbourhood shops in residential zones.	10 May 2016	25 May 2016

Amendment No. 13 Clarification to requirements for acoustic measures for development in the rural areas, location of alfresco areas for secondary dwellings, car parking rates for restaurants & amendments to ensure controls for residential flat buildings are consistent with the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development & associated Apartment Design Guide.	14 March 2017	5 April 2017
Amendment No. 14 Site specific provisions for 620 Elizabeth Drive, Bonnyrigg Heights.	27 June 2017	15 September 2017
Amendment No. 15 Amendment to Appendix G, and addition of Appendix H to introduce Aboriginal Heritage Management controls for development across Fairfield City	12 September 2017	28 February 2018
Amendment No. 16 Amendments provide clarity relating to alfresco areas and carports provisions for secondary dwellings, lot width provisions for dual occupancy and multi dwelling housing on cul-de-sac heads, setbacks for residential flat buildings on corner sites, removal of Chapter 8B Neighbourhood and Local Centres – Mixed Use (Up to 2 storeys) to ensure consistency with the Apartment Design Guide, inclusion of accessibility requirements, inclusion of Council's Stormwater Management Policy, and guidelines for acknowledging petitions.	27 February 2018	21 March 2018
Amendment No. 18 Amendment to Chapter 10.11 to revise existing site specific DCP in relation to the Cabravale Diggers Club site at 1 Bartley Street, Canley Vale	14 November 2017	28 February 2018
Amendment No. 19 Amendment to introduce site specific development controls for 17-23 Longfield Street, Cabramatta.	11 September 2018	28 February 2019
Amendment No. 20 Amendment No. 20 provides clarity on controls and guidelines within the following chapters: • Chapter 3 – Environmental Management and Constraints; • Chapter 4A – Development in the Rural Zones; • Chapter 5A – Dwelling Houses; • Chapter 5B – Secondary Dwellings; • Chapter 6A – Multi Dwelling Housing; • Chapter 6B – Dual Occupancy; • Chapter 9 – Industrial Development; and • Chapter 14 – Subdivision	12 February 2019	13 March 2019
Amendment No. 22 Amendment No. 22 provides clarity on control and guidelines within the following chapters: • Appendix A – Definitions • Chapter 2 – Development Application Process • Chapter 3 – Environmental Management and Constraints • Chapter 5A – Dwelling Houses • Chapter 5B – Secondary Dwellings • Chapter 5C – Dwelling Houses on Narrow Lots • Chapter 7 – Residential Flat Buildings and Shop Top Housing • Chapter 8 – Neighbourhood and Local Centres Business Use • Chapter 12 – Car Parking, Vehicle and Access Management • Chapter 13 – Child Care Centres • Chapter 14 - Subdivision	9 June 2020	21 September 2020

Place Based and Site Specific Development Control Plans

Title	Adopted by Council*	Effective Date
Bonnyrigg Town Centre DCP 2018	6 August 2019	4 September 2020
Cabramatta Town Centre DCP (5/2000) - Amendment No.1 (Outdoor Dining Controls –5.3.2014) - Amendment No. 2 (New clause regarding Model Submission – 3.09.2014) - Amendment No. 3 (Amended clauses and map regarding Precinct 2- Dutton Lane Car Park)	11 October 2016	10 March 2017
Fairfield City Centre DCP 2013 - Amendment No.1 (Outdoor Dining Controls – 5.3. 2014) - Amendment No. 2 (Remove reference to Public Art Guide and update signage controls reference – 3.09.2014) - Amendment No. 3 (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Canley Corridor DCP No.37 (2013) (Canley Vale and Canley Heights town centres) - Amendment No.1: (Development Controls for Adams Reserve 12.9.2006) - Amendment No.2: (Development Controls for 45-47 Peel St, Canley Heights 9.4.2008) - Amendment No.3: (Awnings controls 3.11.2010) - Amendment No.4: (Development Controls for 190 Canley Vale Rd, Canley Heights 19.4.2011) - Amendment No.5: (References to Fairfield LEP 2013 31.5.2013) - Amendment No.6: (Outdoor Dining Controls –5.3.2014) - Amendment No. 7 (Remove reference to Public Art Guide – 3.09.2014) - Amendment No. 8 (Include 46 Derby Street, Canley Heights into Town Centre Catchment – 01.07.2015) - Amendment No. 9 (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Prairiewood Town Centre – Southern Precinct DCP 2013	13 November 2012	31 May 2013
Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Fairfield Heights Town Centre DCP 2018	06 August 2019	05 June 2020
Villawood Town Centre DCP 2020	28 April 2020	05 June 2020

Master Plans

Title	Adopted by Council*	Effective Date
Prairiewood Masterplan (December 2005)	13 November 2012	31 May 2013
Fairfield Town Centre Masterplans – The Crescent and Barbara Street Precincts (May 2007)		May 2007

Urban Design Studies

Title	Adopted by Council
Fairfield City Centre Key Sites Urban Design Study	27 March 2018
Fairfield Heights Town Centre Urban Design Study	27 March 2018
Villawood Town Centre Urban Design Study	27 March 2018

***** Note: Some *"In Force"* Development Control Plans may be under review, check with Council for date of last amendment.

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Flood Information Sheet

Applicant: **Alison Smith**
Certificate No.: **1313/2021**
Applicant's Reference: **60593**
Issue Date: **01/04/2021**
Receipt No.:

PROPERTY ADDRESS: **6 Joiner Place BONNYRIGG NSW 2177**
LEGAL DESCRIPTION: **Lot: 186 DP: 262449**

Council has adopted a policy on flooding which may restrict the development of land. The Fairfield City-Wide Development Control Plan 2013 (which includes provisions for flood management) applies to all of the Fairfield Local Government area.

Important Notes:

Not Applicable values indicate that the subject land is not known to be subject to flooding.

Not Available values indicate that Council does not have the required flood information for the subject land.

A Glossary is also attached at the end of this Flood Information Sheet.

MAINSTREAM FLOODING

Description

Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

Mainstream Flood Details

Size of Flood	Flood Level (m AHD)
PMF minimum	**Not Applicable**
PMF maximum	**Not Applicable**
1 in 100 year minimum	**Not Applicable**
1 in 100 year maximum	**Not Applicable**
1 in 20 year minimum	**Not Applicable**
1 in 20 year maximum	**Not Applicable**

LOCAL OVERLAND FLOODING

Description

Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Local Overland Flood Details

Size of Flood	Flood Level (m AHD)
PMF minimum	**Not Applicable**
PMF maximum	**Not Applicable**
1 in 100 year minimum	**Not Applicable**
1 in 100 year maximum	**Not Applicable**
1 in 20 year minimum	**Not Applicable**
1 in 20 year maximum	**Not Applicable**

GLOSSARY	
m AHD	metres Australian Height Datum (AHD).
Australian Height Datum (AHD)	A common national plane of level approximately equivalent to the height above sea level. All flood levels, floor levels and ground levels are normally provided in metres AHD.
Average Recurrence Interval (ARI)	The long term average number of years between the occurrence of a flood as big as the selected event. For example, floods with a discharge as great as the 20 year ARI event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
Flood	A relatively high stream flow that overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam. It also includes local overland flooding associated with major drainage before entering a watercourse, or coastal inundation resulting from raised sea levels, or waves overtopping the coastline.
Flood risk precinct	An area of land with similar flood risks and where similar development controls may be applied by a Council to manage the flood risk. The flood risk is determined based on the existing development in the precinct or assuming the precinct is developed with normal residential uses. Usually the floodplain is categorised into three flood risk precincts 'low', 'medium' and 'high', although other classifications can sometimes be used. **High Flood Risk:** This has been defined as the area of land below the 100-year flood event that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties. **Medium Flood Risk:** This has been defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties. **Low Flood Risk:** This has been defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.
Local overland flooding	The inundation of normally dry land by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
Mainstream flooding	The inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.
Probable Maximum Flood (PMF)	The largest flood that could conceivably occur at a particular location.

01/04/2021

Alison Smith
Level 1 50 Margaret Street Sydney 2000

Dear Sir/ Madam,

Following is your planning certificate as requested. Should you have any further queries please contact Council on (02) 9725 0821.

PLANNING CERTIFICATE
(under section 10.7 of the Environmental Planning and Assessment Act 1979 as amended)

Applicant:	**Alison Smith**
Certificate No.:	**1314/2021**
Applicant's Reference:	**60593**
Issue Date:	**01/04/2021**
Receipt No.:	

PROPERTY ADDRESS:	**6 Palisade Crescent BONNYRIGG NSW 2177**
LEGAL DESCRIPTION:	**Lot: 218 DP: 262449**

Marcus Rowan
MANAGER STRATEGIC LAND USE PLANNING

PLEASE NOTE: This is page 1 of 24. Should this certificate or any subsequent copy not contain this many pages, please confirm with Council prior to acting on the basis of information contained in this certificate under Section 10.7(2) & (5) and inclusive of Flood Information Sheet.

Information provided under
Section 10.7(2) of the Environmental Planning and Assessment Act 1979

Notes:

(1) The following prescribed matters may apply to the land to which this certificate relates.

(2) Where this certificate refers to a specific allotment (or allotments) within a strata plan, the certificate is issued for the whole of the land within the strata plan, not just the specific allotment(s) referred to, and any information contained in the certificate may relate to the whole, or any part, of the strata plan.

(3) The following information is provided pursuant to Section 10.7(2) of the Environmental Planning and Assessment Act 1979 as prescribed by Schedule 4 of the Environmental Planning and Assessment Regulation 2000 and is applicable as at the date of this certificate.

(4) Information provided in this certificate should be interpreted in conjunction with the relevant plans, policies and documents held at Council. In order to obtain copies of these documents you may purchase them by either contacting Council on (02) 9725 0821 or attending Council's Administration Centre at 86 Avoca Road, Wakeley.

1. Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

State Environmental Planning Policies (SEPP)

SEPP (Housing for Seniors or People with a Disability) 2004

SEPP No. 33 - Hazardous and Offensive Development

SEPP (Major Development) 2005

SEPP No. 50 - Canal Estate Development

SEPP No. 55 - Remediation of Land

SEPP No. 64 - Advertising and Signage

SEPP No. 65 - Design Quality of Residential Flat Development

SEPP No. 19 - Bushland in Urban Areas

SEPP (Infrastructure) 2007

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Affordable Rental Housing) 2009

SEPP (State and Regional Development) 2011

SEPP (Primary Production and Rural Development) 2019

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

SEPP (Miscellaneous Consent Provisions) 2007

SEPP No. 21 - Caravan Parks

SEPP (Building Sustainability Index: BASIX) 2004

SEPP (Vegetation in Non-Rural Areas) 2017

SEPP (Educational Establishments and Child Care Facilities) 2017

SEPP (Western Sydney Aerotropolis) 2020

Regional Environmental Plans (Deemed SEPP)

Sydney Regional Environmental Plan No. 9 - Extractive Industry (No 2-1995)
The Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment

Local Environmental Plans (LEP)

Fairfield Local Environmental Plan 2013
Published on NSW Legislation Website: 17/05/2013.
In Force from: 31/05/2013.
As Amended.

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Director-General has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved)

There is no draft SEPP applying to this land.

There is no other draft LEP applying to this land.

(3) The name of each development control plan that applies to the carrying out of development on the land.

The land is subject to adopted Development Control Plans. (See attached schedule).

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

2. Zoning and land use under relevant LEP

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a) WHAT IS THE IDENTITY OF THE ZONE?

Zone R1 General Residential

(b) WHAT IS PERMITTED WITHOUT DEVELOPMENT CONSENT?

Environmental protection works; Home-based child care; Home occupations.

(c) WHAT IS PERMITTED ONLY WITH DEVELOPMENT CONSENT?

Attached dwellings; Boarding houses; Centre-based child care facilities; Community facilities; Dwelling houses; Group homes; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Any other development not specified in item b or d.

(d) WHAT IS PROHIBITED?

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Environmental facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home businesses; Home industries; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers dwellings; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies.

Additional uses that are permitted with development consent.

There are no additional uses permitted with consent.

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the minimum land dimensions so fixed.

No development standards that fix the minimum land dimensions for the erection of a dwelling house apply to this land. Controls in other policies and plans may apply.

(f) Whether the land includes or comprises critical habitat.

No.

(g) Whether the land is in a conservation area (however described).

No

(h) Whether an item of environmental heritage (however described) is situated on the land.

No.

Attention is drawn however to Clause 5.10(5) of Fairfield Local Environmental Plan 2013:
"The consent authority may, before granting consent to any development:
(a) on land on which a heritage item is located, or
(b) on land that is within a heritage conservation area, or
(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),
require a heritage management document to be prepared to assess the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned."

2A. Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

Not applicable.

3. Complying development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4) 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Housing Code:
Complying development under the Housing Code may be carried out on the land.

Low Rise Housing Diversity Code
Complying development under the Low Rise Medium Density Housing Code may be carried out on the land.

Housing Alterations Code:
Complying development under the Housing Alterations Code may be carried out on the land.

Commercial and Industrial Alterations Code:
Complying development under the Commercial and Industrial Alterations Code may be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code:

No. The Commercial and Industrial (New Buildings and Additions) Code does not apply to the land.

Subdivision Code:
Complying development under the Subdivision Code may be carried out on the land.

Rural Housing Code:
No. The Rural Housing Code does not apply to this land.

General Development Code:
Complying development under the General Development Code may be carried out on the land.

Demolition Code:
Complying development under the Demolition Code may be carried out on the land.

Fire Safety Code:
Complying development under the Fire Safety Code may be carried out on the land.

Container Recycling Facilities Code:
No. The Container Recycling Facilities Code does not apply to the land.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

None Relevant.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Council does not have any relevant statement to make in relation to any further restrictions that may apply to complying development being carried out on the land. All information in relation to the extent that complying development can be carried out on the land is provided under Part 3(1) & (2) of this certificate.

Note: Clause 3 refers only to land based exclusions as listed in Clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of the SEPP (Exempt and Complying Development Codes) 2008. To be complying development, the development must be complying development that meets the standards and other requirements specified for that development as required by the SEPP. Please contact your accredited certifier or Council for further information.

4. Coastal Protection

Whether or not the land is affected by the operation of section 38 or 39 of the *Coastal Protection Act* 1979, but only to the extent that the council has been notified by the Department of Public Works.

No, this land is not affected.

4A Information relating to beaches and coasts

(1) In relation to a coastal council - whether an order has been made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of that Act) on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with.

No order under Part 4D of the *Coastal Protection Act 1979*, has been made.

(2) In relation to a coastal council:

(a) whether the Council has been notified under section 55X of the *Coastal Protection Act 1979* that temporary costal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land), and

Council has not received any such notification.

(b) if works have been so placed—whether the council is satisfied that the works have been removed and the land restored in accordance with that Act.

Not applicable.

4B Annual charges under *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

In relation to a coastal council – whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 946B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).
Note: "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993*.

No annual charges under section 553B of the *Local Government Act 1993*, are applicable to the land.

5. Mine Subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act* 1961.

No, this land is not affected.

6. Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under Division 2 or Part 3 of the *Roads Act* 1993, any environmental planning instrument, or any resolution of the council.

The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act or Fairfield Local Environmental Plan 2013.

7. Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:
(a) adopted by the Council, or
(b) adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk, other than flooding.

Council's policies on hazard risk restrictions are as follows:

(i) Landslip

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of landslide risk or subsidence.

(ii) Bushfire

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979.

(iii) Tidal Inundation

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of tidal inundation.

(iv) Subsidence

No, the land is not so affected

(v) Acid Sulfate Soils

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of acid sulfate soils.

(vi) Any other risks

No, the land is not so affected

7A. Flood related development controls information

1. Whether or not development on that land or part of the 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 seniors housing) is subject to flood related development controls.

   This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.

   Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.

   Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

   Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

2. Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

   This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.

   Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.

   Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

   Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Note: The flood information is the current information to date. However, Council reviews flood studies on an on-going basis and new information may become available in future. Please contact Council's Catchment Planning Division on 9725 0222 for any updated information.

Note:

3. Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

The land is not reserved for acquisition under Fairfield Local Environmental Plan 2013.

9. Contributions plans

The name of each contributions plan applying to the land.

Fairfield City Council indirect (Section 7.12) Development Contributions Plan 2011 applies to all land within the City of Fairfield.
Fairfield City Council direct (Section 7.11) Development Contributions Plan 2011 applies to this land.

9A. Biodiversity certified land

If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

Note: "Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

The land is not biodiversity certified land.

10. Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016*, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

Note: "Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

No such agreement applies to the land.

10A. Native vegetation clearing set asides

If the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section)

Not applicable.

11. Bush fire prone land

If any of the land is bush fire prone land (as defined in Act), a statement that all or, as the case may be, some of the land is bush fire prone land. If none of the land is bush fire prone land, a statement to that effect.

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land

referred to in this certificate is not bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979.

12. Property vegetation plans

If the land to which a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) applies, a statement to that effect (but on if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

No.

13. Orders under Trees (Disputes between Neighbours) Act 2006

Whether an order has been made under the Trees (Disputes between Neighbours) Act 2006 to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

No

14. Directions under Part 3A

If there is a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect, a statement to that effect identifying the provision that does not have effect.

No such direction applies to the land.

15. Site compatibility certificates and conditions for seniors housing

If the land is land to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies -
(a) a statement of whether there is a current site compatibility certificate (seniors housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include -
(i) the period for which the certificate is current, and
(ii) that a copy may be obtained from the head office of the Department, and

No such certificate applies to the land.

(b) a statement setting out any terms of a kind referred to in clause 18(2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

No such terms apply to the land.

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

A statement of whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:
(a) the period for which the certificate is valid, and
(b) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land.

17. Site compatibility certificates and conditions for affordable rental housing

(1) A statement to the whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:
(a) the period for which the certificate is current, and
(b) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land.

(2) A statement setting out any terms of a kind referred to in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that has been imposed as a condition of consent to a development application in respect of the land.

No such terms apply to the land.

18. Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

(2) The date of any subdivision order that applies to the land.

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

No such plan or order applies to the land

19. Site verification certificates

A statement of whether there is a current site verification certificate, of which the council is aware, in respect of the land and, if there is a certificate, the statement is to include:
(a) the matter certified by the certificate, and
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.
(b) the date on which the certificate ceases to be current (if any), and
(c) that a copy may be obtained from the head office of the Department.

No such certificate applies to the land

20. Loose-fill asbestos insulation

If the land includes 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, a statement to that effect.

Not Applicable.

21. Affected building notices and building product rectification orders

(1) A statement of whether there is any affected building notice of which the council is aware that is in force in respect of the land.

(2) A statement of:

(a) whether there is 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, and

(b) whether 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.

None Relevant.

22. State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

For land to which *State Environmental Planning Policy (Western Sydney Aerotropolis) 2020* applies, whether the land is –

(a) in an ANEF or ANEC contour of 20 or greater as referred to in clause 19 of that Policy, or

No

(b) shown on the Lighting Intensity and Wind Shear Map under that Policy, or

No

(c) shown on the Obstacle Limitation Surface Map under that Policy, or

No

(d) in the "public safety area" on the Public Safety Area Map under that Policy, or

No

(e) in the "3 kilometre wildlife buffer zone" or the "13 kilometre wildlife buffer zone" on the Wildlife Buffer Zone Map under that Policy.

No

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) that 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,

(b) that 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,

(c) that 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,

(d) that 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,

(e) that 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.

Continuously updated information in relation to the above matters can also be found by searching the records of the Environmental Protection Authority (EPA) at the website of the EPA. The search page can be found at: http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx.

The following information is available to Council but may not be current:

Council has adopted by resolution a policy (commencing 1 August 2000), on contaminated land which may restrict the development of land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under the State Legislation is warranted.

The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.

The land is not subject to an investigation order or a remediation order within the meaning of the Contaminated Land Management Act 1997.

The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under Section 19 or 26 of the Contaminated Land Management Act 1997.

The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.

Note 2: Any advice received by Council pursuant to section 26(2) of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009, is included below.

No such certificate applies to the land.

The following additional information is provided under Section 10.7(5) of the Environmental Planning and Assessment Act 1979

Note:

(1) When information pursuant to section 10.7(5) is requested, the Council is under no obligation to furnish any of the information supplied herein pursuant to that section.
(2) Council draws your attention to section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to subsection (5).
(3) The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

Cumberland Plain Critically Endangered Ecological Community - Contains or in Close Proximity to Community

Council is in receipt of information by the NSW National Parks and Wildlife Service indicating the land either contains or is in close proximity to an area possibly containing remnant vegetation associated with a Cumberland Plain Critically Endangered Ecological Community that is listed under the Biodiversity Conservation Act 2016 (NSW). On request Council will supply such information available from its records,however interested parties must take and rely on their own advice and enquiries.

Cumberland Plain Critically Endangered Ecological Community - Contains or in Close Proximity to Community with an Area Greater than 0.5 hectares and Tree Cover

Information from NSW National Parks and Wildlife Service indicates that the land either contains or is in close proximity to an area possibly containing remnant vegetation associated with a Cumberland Plain Critically Endangered Ecological Community. NPWS have identified the community as Cumberland Plain Woodland (Shale Hills Woodland, Shale Plains Woodland) that is listed as critically endangered under the Biodiversity Conservation Act 2016 (NSW).
NPWS mapping indicates that the remnant vegetation is part of an area that is greater than 0.5 hectares and tree cover with urban development.

The land is subject to the provisions of the SEPP (Vegetation in Non-Rural Areas) 2017 and Fairfield LEP 2013.

Land must not be cleared or filled except with the consent of Council.

The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).
Council's policy 'Building in Saline Environments', applies to all areas of Fairfield City and requires use of construction measures and materials in new development to minimise risk of salt damage to buildings from urban salinity.

On 15th April 2014, the Australian Government announced that it intends to proceed with an airport at Badgerys Creek in the Liverpool City Council area. The Western Sydney Airport draft Environmental Impact Statement (EIS) was released for public exhibition on Monday 19 October 2015. You should make

your own enquiries with the Commonwealth Government Department responsible via the website http://westernsydneyairport.gov.au/.

Clause 2.7 of Fairfield Local Environmental Plan 2013 requires development consent for the demolition of a building or work.

There is no draft SEPP applying to this land.

FAIRFIELD CITY COUNCIL
DEVELOPMENT CONTROL PLANS

Fairfield Citywide Development Control Plan

Title	Adopted by Council*	Effective Date
Fairfield Citywide Development Control Plan 2013	13 November 2012	31 May 2013
Amendment No.1 change maximum height permissible for detached secondary dwellings, clarify requirements and correct various anomalies, incorporate outdoor dining policy into a number of site specific DCPs (see table below)	11 February 2014	5 March 2014
Amendment No.2 amend chapter 2 to reference Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Amendment No.3 Introduce Chapter 4B - Secondary Dwellings in Rural Area - Horsley Park and Cecil Park	11 December 2013	14 March 2014
Amendment No. 4 amends Chapter 9 Industrial Development Site Specific Controls for 449 Victoria Street and 96 Newton Road, Wetherill Park	24 September 2013	21 March 2014
Amendment No.5 amends Chapters 2 and 10 and Appendix B to ensure provisions within the DCP are in line with the SEPP (Exempt and Complying Development Codes) 2008.	13 May 2014	28 May 2014
Amendment No. 5A amends Chapter 6A – Multi Dwelling Housing – Town house and Villas: Site Specific DCP – 46 & 50 Cobbett Street, Wetherill Park.	12 March 2013	22 August 2014
Amendment No. 6 including increase to building heights for detached granny flats, removal of reference to minimum lot sizes for R1 zoned lands, inclusion of new controls and provisions relating to neighbourhood shops and pad mounted sub stations, clarify requirements and correct a number of anomalies associated with secondary dwellings, dual occupancy, narrow lots and residential flat buildings and other minor inconsequential amendments.	12 August 2014	3 September 2014
Amendment No. 6A amends Chapter 14 Subdivision – Applying to land located on 630 Elizabeth Drive and 9-10 Schubert Place, Bonnyrigg Heights to facilitate a future road link between Stivala Place and Schubert Place.	12 August 2014	3 September 2014
Amendment No.7 proposed amendments include – Additional Controls for Child Care Centres, Boarding Houses and Granny Flats; Revised Heritage Chapter; New provisions relating to CCTV for specific land uses, and; Acoustic measures for development in the Rural Area.	25 November 2014	3 December 2014
Amendment No. 7A amends Chapter 10 Miscellaneous Development - applying to land located on 1 Bartley Street, Cabramatta to facilitate the development of a hotel or motel accommodation at the Cabravale Diggers site.	26 August 2014	16 January 2015
Amendment 8 amends Chapter 9 – Industrial Development. This amendment includes provisions for industrial/employment development proposals in close proximity to residential land. The amended controls cover the following issues: General Design Requirements (including setback considerations, driveways, loading and storage areas, etc); Bulk and scale; Vehicular and Pedestrian Access Privacy; Light Spill; Noise and Vibration; and Landscaping.	10 March 2015	1 April 2015
Amendment 9 includes new provisions relating to various forms of residential development including: Building Appearance, Landscaping, Private Open space, Minimum Lot Width, Car Parking Rates and Notification of S82A Applications.	12 May 2015	27 May 2015
Amendment 10 including amendments to: • the intent of the Development Control Plan and Development Application process – the DA Guide • provisions for rural zone development • residential flat building setbacks • heritage advice • road classifications	14 July 2015	5 August 2015
Amendment No.11 includes site specific development controls (private open space, car parking and dwelling density) for 46-50 Cobbett Street, Wetherill Park included in Chapter 6A Multi Dwelling Housing – Townhouses and Villas.	1 December 2015	16 December 2015
Amendment No. 12 addresses anomalies in the DCP including but not limited to providing clarity on minimum room sizes, updated acoustic proofing measures for new dwellings in rural areas, car parking rates for disabled parking, and provisions for site servicing and loading requirements in neighbourhood shops in residential zones.	10 May 2016	25 May 2016

Amendment No. 13 Clarification to requirements for acoustic measures for development in the rural areas, location of alfresco areas for secondary dwellings, car parking rates for restaurants & amendments to ensure controls for residential flat buildings are consistent with the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development & associated Apartment Design Guide.	14 March 2017	5 April 2017
Amendment No. 14 Site specific provisions for 620 Elizabeth Drive, Bonnyrigg Heights.	27 June 2017	15 September 2017
Amendment No. 15 Amendment to Appendix G, and addition of Appendix H to introduce Aboriginal Heritage Management controls for development across Fairfield City	12 September 2017	28 February 2018
Amendment No. 16 Amendments provide clarity relating to alfresco areas and carports provisions for secondary dwellings, lot width provisions for dual occupancy and multi dwelling housing on cul-de-sac heads, setbacks for residential flat buildings on corner sites, removal of Chapter 8B Neighbourhood and Local Centres – Mixed Use (Up to 2 storeys) to ensure consistency with the Apartment Design Guide, inclusion of accessibility requirements, inclusion of Council's Stormwater Management Policy, and guidelines for acknowledging petitions.	27 February 2018	21 March 2018
Amendment No. 18 Amendment to Chapter 10.11 to revise existing site specific DCP in relation to the Cabravale Diggers Club site at 1 Bartley Street, Canley Vale	14 November 2017	28 February 2018
Amendment No. 19 Amendment to introduce site specific development controls for 17-23 Longfield Street, Cabramatta.	11 September 2018	28 February 2019
Amendment No. 20 Amendment No. 20 provides clarity on controls and guidelines within the following chapters: • Chapter 3 – Environmental Management and Constraints; • Chapter 4A – Development in the Rural Zones; • Chapter 5A – Dwelling Houses; • Chapter 5B – Secondary Dwellings; • Chapter 6A – Multi Dwelling Housing; • Chapter 6B – Dual Occupancy; • Chapter 9 – Industrial Development; and • Chapter 14 – Subdivision	12 February 2019	13 March 2019
Amendment No. 22 Amendment No. 22 provides clarity on control and guidelines within the following chapters: • Appendix A – Definitions • Chapter 2 – Development Application Process • Chapter 3 – Environmental Management and Constraints • Chapter 5A – Dwelling Houses • Chapter 5B – Secondary Dwellings • Chapter 5C – Dwelling Houses on Narrow Lots • Chapter 7 – Residential Flat Buildings and Shop Top Housing • Chapter 8 – Neighbourhood and Local Centres Business Use • Chapter 12 – Car Parking, Vehicle and Access Management • Chapter 13 – Child Care Centres • Chapter 14 - Subdivision	9 June 2020	21 September 2020

Place Based and Site Specific Development Control Plans

Title	Adopted by Council*	Effective Date
Bonnyrigg Town Centre DCP 2018	6 August 2019	4 September 2020
Cabramatta Town Centre DCP (5/2000) - Amendment No.1 (Outdoor Dining Controls –5.3.2014) - Amendment No. 2 (New clause regarding Model Submission – 3.09.2014) - Amendment No. 3 (Amended clauses and map regarding Precinct 2- Dutton Lane Car Park)	11 October 2016	10 March 2017
Fairfield City Centre DCP 2013 - Amendment No.1 (Outdoor Dining Controls – 5.3. 2014) - Amendment No. 2 (Remove reference to Public Art Guide and update signage controls reference – 3.09.2014) - Amendment No. 3 (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Canley Corridor DCP No.37 (2013) (Canley Vale and Canley Heights town centres) - Amendment No.1: (Development Controls for Adams Reserve 12.9.2006) - Amendment No.2: (Development Controls for 45-47 Peel St, Canley Heights 9.4.2008) - Amendment No.3: (Awnings controls 3.11.2010) - Amendment No.4: (Development Controls for 190 Canley Vale Rd, Canley Heights 19.4.2011) - Amendment No.5: (References to Fairfield LEP 2013 31.5.2013) - Amendment No.6: (Outdoor Dining Controls –5.3.2014) - Amendment No. 7 (Remove reference to Public Art Guide – 3.09.2014) - Amendment No. 8 (Include 46 Derby Street, Canley Heights into Town Centre Catchment – 01.07.2015) - Amendment No. 9 (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Prairiewood Town Centre – Southern Precinct DCP 2013	13 November 2012	31 May 2013
Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Fairfield Heights Town Centre DCP 2018	06 August 2019	05 June 2020
Villawood Town Centre DCP 2020	28 April 2020	05 June 2020

Master Plans

Title	Adopted by Council*	Effective Date
Prairiewood Masterplan (December 2005)	13 November 2012	31 May 2013
Fairfield Town Centre Masterplans – The Crescent and Barbara Street Precincts (May 2007)		May 2007

Urban Design Studies

Title	Adopted by Council
Fairfield City Centre Key Sites Urban Design Study	27 March 2018
Fairfield Heights Town Centre Urban Design Study	27 March 2018
Villawood Town Centre Urban Design Study	27 March 2018

***** Note: Some *"In Force"* Development Control Plans may be under review, check with Council for date of last amendment.

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Flood Information Sheet

Applicant:	**Alison Smith**
Certificate No.:	**1314/2021**
Applicant's Reference:	**60593**
Issue Date:	**01/04/2021**
Receipt No.:	

PROPERTY ADDRESS:	**6 Palisade Crescent BONNYRIGG NSW 2177**
LEGAL DESCRIPTION:	**Lot: 218 DP: 262449**

Council has adopted a policy on flooding which may restrict the development of land. The Fairfield City-Wide Development Control Plan 2013 (which includes provisions for flood management) applies to all of the Fairfield Local Government area.

Important Notes:

Not Applicable values indicate that the subject land is not known to be subject to flooding.

Not Available values indicate that Council does not have the required flood information for the subject land.

A Glossary is also attached at the end of this Flood Information Sheet.

MAINSTREAM FLOODING

Description

Based on the information currently available to Council, this land is not affected by mainstream flooding. However, this is subject to future flood studies and reviews.

Mainstream Flood Details

Size of Flood	Flood Level (m AHD)
PMF minimum	**Not Applicable**
PMF maximum	**Not Applicable**
1 in 100 year minimum	**Not Applicable**
1 in 100 year maximum	**Not Applicable**
1 in 20 year minimum	**Not Applicable**
1 in 20 year maximum	**Not Applicable**

LOCAL OVERLAND FLOODING

Description

Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Local Overland Flood Details

Size of Flood	Flood Level (m AHD)
PMF minimum	**Not Applicable**
PMF maximum	**Not Applicable**
1 in 100 year minimum	**Not Applicable**
1 in 100 year maximum	**Not Applicable**
1 in 20 year minimum	**Not Applicable**
1 in 20 year maximum	**Not Applicable**

GLOSSARY	
m AHD	metres Australian Height Datum (AHD).
Australian Height Datum (AHD)	A common national plane of level approximately equivalent to the height above sea level. All flood levels, floor levels and ground levels are normally provided in metres AHD.
Average Recurrence Interval (ARI)	The long term average number of years between the occurrence of a flood as big as the selected event. For example, floods with a discharge as great as the 20 year ARI event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
Flood	A relatively high stream flow that overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam. It also includes local overland flooding associated with major drainage before entering a watercourse, or coastal inundation resulting from raised sea levels, or waves overtopping the coastline.
Flood risk precinct	An area of land with similar flood risks and where similar development controls may be applied by a Council to manage the flood risk. The flood risk is determined based on the existing development in the precinct or assuming the precinct is developed with normal residential uses. Usually the floodplain is categorised into three flood risk precincts 'low', 'medium' and 'high', although other classifications can sometimes be used. **High Flood Risk:** This has been defined as the area of land below the 100-year flood event that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties. **Medium Flood Risk:** This has been defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties. **Low Flood Risk:** This has been defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.
Local overland flooding	The inundation of normally dry land by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
Mainstream flooding	The inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.
Probable Maximum Flood (PMF)	The largest flood that could conceivably occur at a particular location.

FairfieldCity
Celebrating diversity

Fairfield City Council, Administration Centre, 86 Avoca Road, Wakeley 2176
Tel: (02) 9725 0222 Fax: (02) 9725 4249 ABN: 83 140 439 239
All communications to:
Fairfield City Council, PO Box 21, Fairfield NSW 1860
Email address: mail@fairfieldcity.nsw.gov.au

PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.

Cert. No.: 2519/2007
Page No.: 1
Receipt 200236
Date: 10/08/2007

Applicant:
Jbs Environmental
C/- Wakeley Office
Danielle Ord
0418 611 322

Property Description: **3 Garden Pl**
Bonnyrigg 2177
DP 262449 Lot 159

PLANNING CERTIFICATE
INFORMATION UNDER SECTION 149(2) :

PLANNING INSTRUMENT	LOCAL ENVIRONMENTAL PLAN 1994 GOVERNMENT GAZETTE NO. 104 12TH AUGUST, 1994 AS AMENDED
INSTRUMENT ZONING	Residential A

1. The following State Environmental Planning Policies (SEPP), Regional Environmental Plans (REP) affect land in the City of Fairfield in the manner described.
2. The provisions of the local planning instrument (copy/extract attached) detail the purposes for which development may be carried out without consent, the purposes for which development may be carried out only with consent, and the purposes for which the carrying out of development is prohibited. Development Control Plan (DCP) No. 29 came into force on the 17 December 1999, and allow certain forms of development to be carried out (subject to a range of criteria) as either exempt or complying development. Further details on exempt and complying development can be gained by obtaining a copy of DCP No. 29 or contacting Council's Customer Service Branch.
3. Local Environmental Plan (Amendment 71), Gazetted 8 June 2001, (Gaz No. 95), expanded the definitions of brothels and telecommunications facilities so that they relate to a wider range of premises and facilities.
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31. Draft S.E.P.P. (Application of Development Standards) 2004
32. Draft S.E.P.P. No. 66 - Land Use And Transport
33. Draft S.E.P.P. (Infrastructure) 2006
34. The Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment (GMREP 2)
35. Sydney Regional Environmental Plan No.9 - Extractive Industries
36. The land is subject to Draft & adopted Development Control Plans. (See attached schedule).
37. Council's Retail and Commercial Centres/Activities Policy No.1-203 applies to the whole of Fairfield City. It sets out a range of criteria that must be addressed for all rezoning proposals and range of development applications involving new retail/commercial development or expansion of existing retail/commercial development.

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PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.

38. Fairfield City Council Section 94 Developer Contributions Plan No. 1999 applies to all land within the City of Fairfield.

    Fairfield City Council Section 94A Levy Development Contributions Plan 2006 applies to all land within the City of Fairfield.
39. Council has resolved to prepare a draft Local Environmental Plan (DLEP) affecting the land, pursuant to Section 66 1(b) of the Environmental Planning & Assessment Act (E.P. & A.), 1979. (See attached Draft L.E.P. list.)
40. The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act, the Environmental Planning and Assessment Act, 1979 or any resolution of the Council.
41. No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority as referred to in section 27 of the EP & A Act.
42. Fairfield Local Environmental Plan 1994 requires development consent for the demolition of a building.
43. No structure must be erected within 20 metres of the top of the bank or mean high water mark of any creek or waterway except with the consent of Council.
44. Clause 22A(1) of Fairfield LEP 94, provides that the Council may consent to the subdivision of land within Zone 2(a) only if each allotment to be created will have an area of not less than 450m2. Otherwise under Fairfield LEP 1994 there are no other minimum or maximum land dimension requirements for a dwelling house on the land.
45. Council has adopted by resolution a policy (commencing 1 August 2000), on contaminated land which may restrict the development of land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under the State Legislation is warranted.
46. The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.
47. The land is not subject to an investigation order or a remediation order within the meaning of the Contaminated Land Management Act 1997.
48. The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.
49. The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under Section 19 or 26 of the Contaminated Land Management Act 1997.
50. The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of land slip, tidal inundation, subsidence, acid sulfate soils or any other risk.
51. Council's policy 'Building in Saline Environments', applies to all areas of Fairfield City and requires use of construction measures and materials in new development to minimise risk of salt damage to buildings from urban salinity.
52. Land must not be cleared or filled except with the consent of Council.
53.

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54. There has been no notification from the Department of Public Works that the land is subject to the operation of Section 38 or 39 of the Coastal Protection Act, 1979.
55. Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in section 4 of the Environmental Planning and Assessment Act , 1979.
56. The land does not include or comprise critical habitat.
57. The land is not in a conservation area.
58. There is no item of environmental heritage situated on the land.

Attention is drawn however to Clause 31 of Fairfield LEP 1994:
"When determining an application for consent to carry out development on land in the vicinity of a heritage item, the Council must take into consideration the likely effect of the proposed development on the heritage significance of that heritage item and on its setting."

FLOODING

59. Development on the subject land (or part) for the purposes of dwelling houses, dual occupancies, multi-unit housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to the Fairfield City-Wide Development Control Plan 2006 (which includes provisions for flood management) and applies to all of the Fairfield Local Government Area. Development controls will apply to residential development of the above types if the land (or part of the land) is within the floodplain.

    Development for any other purpose on the subject land (or part) is also subject to the Fairfield City-Wide Development Control Plan 2006 (which includes provisions for flood management) and applies to all of the Fairfield Local Government Area. Development controls will apply to development for any other purpose if the land (or part of the land) is within the floodplain.

    NOTE: These controls apply to development only if that form of development is permissible on the subject land. Please refer to the land use zone indicated in this certificate and then determine, based on the objectives of that zone and the list of prohibited uses, whether the proposed use is permissible.

60. Based on the information currently available to Council, this land is not affected by mainstream or overland flooding and is not identified as being within any floodplain. However, this is subject to future flood studies and reviews.

61. Local Environmental Plan (Amendment 86), Gazetted 11 October 2002 (Gaz No.170), amends the permissibility criteria in relation to filling of land (which now includes drainage

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works) and clarifies "reasonable economic use" for filling of land in Zone 1(a).

62. The Environmental Planning and Assessment Amendment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998.

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64. The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).

PURSUANT TO SECTION 149(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979 THE COUNCIL PROVIDES THE FOLLOWING ADVICE CONCERNING:

1. The land is subject to Draft & adopted Development Control Plans. (See attached schedule)
2. The subject land is affected by a Tree Preservation Order.
3. The land is not affected by a Residential District Proclamation.

For further information, please contact
Environment Services Ph.9725-0848

A. Young
City Manager, per

ZONE 2(a) RESIDENTIAL A

1. What are the objectives of the zone?

The objectives of the zone are:

(a) to set aside land primarily for the purposes of housing and associated facilities;

(b) to provide for the orderly development of detached housing, essentially domestic in scale and character;

(c) to achieve attractive high quality residential development;

(d) to allow people to carry out a reasonable range of business activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours; and

(e) to allow a range of non-residential uses that:

  (i) are capable of integration with the immediate locality;

  (ii) serve the demands of the surrounding population; and

  (iii) do not place demands on services beyond the level reasonably required for residential use.

2. What is permitted without development consent?

Nil.

3. What is permitted only with development consent?

Any purpose other than a purpose included in item 2 or 4.

4. What is prohibited?

Abattoirs
Advertisements
Agriculture
Amusement centres
Amusement parks
Animal establishments
Brothels
Bulky goods salesrooms or showrooms
Business premises
Camping grounds and caravan parks
Carparks other than those provided by the Council
Communication facilities
Entertainment facilities
Extractive industry
Forestry
Gaming Taverns
Generating works
Hazardous industry
Hazardous storage establishments
Helicopter landing sites
Heliports
Hotels
Industry
Institutions
Intensive agriculture
Junkyards
Light industry
Medical centres
Mines
Motels
Motor showrooms
Multi-unit housing
Offensive industry
Offensive storage establishments
Plant hire
Plant nurseries
Recreation facilities
Refreshment rooms
Residential flat buildings
Roadside stalls
Rural industry
Sawmills
Service stations
Serviced apartments
Shops
Stock and sales yards
Transport Depots
Transport Terminals
Vehicle body repair workshops
Vehicle repair stations
Veterinary hospitals
Warehouses

DEVELOPMENT CONTROL PLANS - As at 11 April 2007 (*Note: Some *"In Force"* Development Control Plans may be under review, check with Council for date of last amendment)

TITLE	STATUS*	DATE APPLIES FROM
GENERAL		
Fairfield City-Wide Development Control Plan 2006	In Force	July 2006
Fairfield City-Wide Development Control Plan 2006 - **Amendment 1** (Chapter 5 – Single Dwelling)	**Adopted August 2006**	**Effective September 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 2** (Chapter 6 – Multi-Unit Housing)	**Adopted November 2006**	**Effective December 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 3** (Subdivision and other anomalies)	**Adopted November 2006**	**Effective December 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 4** (Anomalies found in Chapter 10 - Miscellaneous Development)	**Adopted March 2007**	**Effective April 2007**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 5** (Child Care Centres and Subdivision)	**Adopted March 2007**	**Effective April 2007**
Exempt and Complying Development (No.29)	In Force	Oct 1999
Development Standards Relating to Public Roads (No.32)	In Force	Dec 1999
SITE SPECIFIC		
Fairfield Town Centre (2006)	In Force	Dec 2006
Cabramatta Town Centre (5/2000)	In Force	Aug-2000
Canley Corridor DCP No. 37 – Canley Vale and Canley Heights Local Town Centres - **Amendment No. 1**: Development controls for Master Plan Site No. 2, Adams Reserve, Canley Vale Road, Canley Vale	In Force **Adopted September 2006**	March 2006 **Effective October 2006**
Fairfield Heights Town Centre (10/94)	In Force	October 1994
Bonnyrigg Town Centre (28)	In Force	May 2004
PROPOSED AMENDMENTS TO DCPs		
Site Specific (Sunnybrook Hotel)	Not to commence until gazettal of LEP 106.	To be advised

Fairfield City Council
Draft LEP Register
(Exhibited Draft Plans or Draft Plans on Exhibition)

As at 11 May 2007

Draft LEP No.	Purpose	Subject land
47	Rezone part of site from 6(a) Existing & Proposed Recreation to 4(a) General Industrial	10-16 Robert Street, Smithfield (lots 1-4, DP499648)
82	Clarify certain requirements in relation to heritage items and include an additional property as a heritage item	All heritage listed items in Fairfield City. Property at 112 Cumberland St (lot 1, DP771455) – include as a heritage item
84	Permit the additional use of mixed use development comprising professional office suites on the ground floor level of rsidential flat buildings.	Street block bounded by Hughes and Hill Streets, Park and Mcburney Roads, Cabramatta
96	Permit business premises, car parking and shops (provided subject site is amalgamated with adjoining parcel at 154 The Boulevarde	181 Station Street, Fairfield Heights (Lot P, DP 383407)
102	To: • rezone properties bounded by Nelson Street, Court Road, Spencer Street and the eastern side of the Nelson Lane as Business 3(a1) – Sub-Regional Business Centre – Retail / Commercial which will not permit residential development. • amend the existing Business 3(a) – Sub Regional Business Centre by renaming it the Business 3(a) Sub-Regional Business Centre - Mixed Use and amending the objectives of this zone so they reflect the objectives in the Strategic Plan for the Fairfield Town Centre • prohibit Strata subdivision of existing buildings whilst still permitting subdivision of newer building stock or future redevelopments.	Applies to the Fairfield Town Centre which is the area currently zoned Business 3(a) – Sub Regional Business Centre.
106	To establish site-specific development standards and principles that promote the orderly development of the Sunnybrook Hotel site, and to rezone part of the land to which this plan applies to 2(b)	Sunnybrook Hotel, cnr of Hume Highway and Liverpool Street, Cabramatta, being lot 1, DP 583848, lot 2, DP 617315 and lot 10, DP 748219
112	Adjust references within the Local Environmental Plan that refer to Development Control Plans that will become obsolete, or require updated referencing, for when the new City-Wide Development Control Plan comes into effect. This LEP is prepared in accordance with Section 73A of the Environmental Planning and Assessment Act 1979	Applies to all land in the City of Fairfield.

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PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.

Cert. No.: 2489/2007
Page No.: 1
Receipt 200236
Date: 07/08/2007

-

Applicant:
Jbs Environmental
C/- Wakeley Office
Danielle Ord
0418 611 322

Property Description: **23 Palisade Cres**
Bonnyrigg 2177
DP 262449 Lot 204

PLANNING CERTIFICATE
INFORMATION UNDER SECTION 149(2) :

PLANNING INSTRUMENT	LOCAL ENVIRONMENTAL PLAN 1994 GOVERNMENT GAZETTE NO. 104 12TH AUGUST, 1994 AS AMENDED
INSTRUMENT ZONING	Residential A

-

1. The following State Environmental Planning Policies (SEPP), Regional Environmental Plans (REP) affect land in the City of Fairfield in the manner described.
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64. The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).

PURSUANT TO SECTION 149(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979 THE COUNCIL PROVIDES THE FOLLOWING ADVICE CONCERNING:

1. The land is subject to Draft & adopted Development Control Plans. (See attached schedule)
2. The subject land is affected by a Tree Preservation Order.
3. The land is not affected by a Residential District Proclamation.

For further information, please contact
Environment Services Ph.9725-0848

per A. Young
City Manager, per

ZONE 2(a) RESIDENTIAL A

1. What are the objectives of the zone?

The objectives of the zone are:

(a) to set aside land primarily for the purposes of housing and associated facilities;

(b) to provide for the orderly development of detached housing, essentially domestic in scale and character;

(c) to achieve attractive high quality residential development;

(d) to allow people to carry out a reasonable range of business activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours; and

(e) to allow a range of non-residential uses that:

  (i) are capable of integration with the immediate locality;

  (ii) serve the demands of the surrounding population; and

  (iii) do not place demands on services beyond the level reasonably required for residential use.

2. What is permitted without development consent?

Nil.

3. What is permitted only with development consent?

Any purpose other than a purpose included in item 2 or 4.

4. What is prohibited?

Abattoirs
Advertisements
Agriculture
Amusement centres
Amusement parks
Animal establishments
Brothels
Bulky goods salesrooms or showrooms
Business premises
Camping grounds and caravan parks
Carparks other than those provided by the Council
Communication facilities
Entertainment facilities
Extractive industry
Forestry
Gaming Taverns
Generating works
Hazardous industry
Hazardous storage establishments
Helicopter landing sites
Heliports
Hotels
Industry
Institutions
Intensive agriculture
Junkyards
Light industry
Medical centres
Mines
Motels
Motor showrooms
Multi-unit housing
Offensive industry
Offensive storage establishments
Plant hire
Plant nurseries
Recreation facilities
Refreshment rooms
Residential flat buildings
Roadside stalls
Rural industry
Sawmills
Service stations
Serviced apartments
Shops
Stock and sales yards
Transport Depots
Transport Terminals
Vehicle body repair workshops
Vehicle repair stations
Veterinary hospitals
Warehouses

DEVELOPMENT CONTROL PLANS - As at 11 April 2007 (*Note: Some *"In Force"* Development Control Plans may be under review, check with Council for date of last amendment)

TITLE	STATUS*	DATE APPLIES FROM
GENERAL		
Fairfield City-Wide Development Control Plan 2006	In Force	July 2006
Fairfield City-Wide Development Control Plan 2006 - **Amendment 1** (Chapter 5 – Single Dwelling)	**Adopted August 2006**	**Effective September 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 2** (Chapter 6 – Multi-Unit Housing)	**Adopted November 2006**	**Effective December 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 3** (Subdivision and other anomalies)	**Adopted November 2006**	**Effective December 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 4** (Anomalies found in Chapter 10 - Miscellaneous Development)	**Adopted March 2007**	**Effective April 2007**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 5** (Child Care Centres and Subdivision)	**Adopted March 2007**	**Effective April 2007**
Exempt and Complying Development (No.29)	In Force	Oct 1999
Development Standards Relating to Public Roads (No.32)	In Force	Dec 1999
SITE SPECIFIC		
Fairfield Town Centre (2006)	In Force	Dec 2006
Cabramatta Town Centre (5/2000)	In Force	Aug-2000
Canley Corridor DCP No. 37 – Canley Vale and Canley Heights Local Town Centres - **Amendment No. 1**: Development controls for Master Plan Site No. 2, Adams Reserve, Canley Vale Road, Canley Vale	In Force **Adopted September 2006**	March 2006 **Effective October 2006**
Fairfield Heights Town Centre (10/94)	In Force	October 1994
Bonnyrigg Town Centre (28)	In Force	May 2004
PROPOSED AMENDMENTS TO DCPs		
Site Specific (Sunnybrook Hotel)	Not to commence until gazettal of LEP 106.	To be advised

Fairfield City Council
Draft LEP Register
(Exhibited Draft Plans or Draft Plans on Exhibition)

As at 11 May 2007

Draft LEP No.	Purpose	Subject land
47	Rezone part of site from 6(a) Existing & Proposed Recreation to 4(a) General Industrial	10-16 Robert Street, Smithfield (lots 1-4, DP499648)
82	Clarify certain requirements in relation to heritage items and include an additional property as a heritage item	All heritage listed items in Fairfield City. Property at 112 Cumberland St (lot 1, DP771455) – include as a heritage item
84	Permit the additional use of mixed use development comprising professional office suites on the ground floor level of rsidential flat buildings.	Street block bounded by Hughes and Hill Streets, Park and Mcburney Roads, Cabramatta
96	Permit business premises, car parking and shops (provided subject site is amalgamated with adjoining parcel at 154 The Boulevarde	181 Station Street, Fairfield Heights (Lot P, DP 383407)
102	To: • rezone properties bounded by Nelson Street, Court Road, Spencer Street and the eastern side of the Nelson Lane as Business 3(a1) – Sub-Regional Business Centre – Retail / Commercial which will not permit residential development. • amend the existing Business 3(a) – Sub Regional Business Centre by renaming it the Business 3(a) Sub-Regional Business Centre - Mixed Use and amending the objectives of this zone so they reflect the objectives in the Strategic Plan for the Fairfield Town Centre • prohibit Strata subdivision of existing buildings whilst still permitting subdivision of newer building stock or future redevelopments.	Applies to the Fairfield Town Centre which is the area currently zoned Business 3(a) – Sub Regional Business Centre.
106	To establish site-specific development standards and principles that promote the orderly development of the Sunnybrook Hotel site, and to rezone part of the land to which this plan applies to 2(b)	Sunnybrook Hotel, cnr of Hume Highway and Liverpool Street, Cabramatta, being lot 1, DP 583848, lot 2, DP 617315 and lot 10, DP 748219
112	Adjust references within the Local Environmental Plan that refer to Development Control Plans that will become obsolete, or require updated referencing, for when the new City-Wide Development Control Plan comes into effect. This LEP is prepared in accordance with Section 73A of the Environmental Planning and Assessment Act 1979	Applies to all land in the City of Fairfield.

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PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.

Cert. No.: 2516/2007
Page No.: 1
Receipt 200236
Date: 15/08/2007

-

Applicant:
Jbs Environmental
C/- Wakeley Office
Danielle Ord
0418 611 322

Property Description: **Bishop Cres**
2163
DP 262456 Lot 102

PLANNING CERTIFICATE INFORMATION UNDER SECTION 149(2) :

PLANNING INSTRUMENT	LOCAL ENVIRONMENTAL PLAN 1994 GOVERNMENT GAZETTE NO. 104 12TH AUGUST, 1994 AS AMENDED
INSTRUMENT ZONING	Residential A

-

1. The following State Environmental Planning Policies (SEPP), Regional Environmental Plans (REP) affect land in the City of Fairfield in the manner described.
2. The provisions of the local planning instrument (copy/extract attached) detail the purposes for which development may be carried out without consent, the purposes for which development may be carried out only with consent, and the purposes for which the carrying out of development is prohibited. Development Control Plan (DCP) No. 29 came into force on the 17 December 1999, and allow certain forms of development to be carried out (subject to a range of criteria) as either exempt or complying development. Further details on exempt and complying development can be gained by obtaining a copy of DCP No. 29 or contacting Council's Customer Service Branch.
3. Local Environmental Plan (Amendment 71), Gazetted 8 June 2001, (Gaz No. 95), expanded the definitions of brothels and telecommunications facilities so that they relate to a wider range of premises and facilities.
4. Local Environmental Plan (amendment 59), Gazetted 12 May 2000 (Gaz No. 57), introduced changes to Fairfield LEP in light of changes to State Planning Legislation and to rationalise local planning controls. Changes include; requiring development consent for dwellings and group homes in zones 1(a), 2(a), 2(a1) and 2(b), allowing ancillary development under or over roads as identified in DCP 32, introducing planning provisions in relation to bus shelters, temporary use of Council land and development near zone boundaries, modifying the definition of "Light industry" and introducing a definition for

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"Telecommunications facility".

5. Local environmental Plan (amendment 92), Gazetted 24 October 2003, (Gaz No.43), introduced new requirements covering exempt and complying development, clarifies areas to where the narrow lot housing restrictions apply, highlights the need for a footpath license for outdoor seating in Cabramatta and Fairfield and clarifies meaning of motor orientated activities as referred to under the objectives applying to industrial zones.
6. Local Environmental Plan (amendment 93), Gazetted 28 May 2004 (Gaz No.92), (see attached schedule), applies to the land and establishes a range of specific objectives, requirements and restrictions on development (including restrictions on access to arterial roads). Clause 25H(3) permits some additional uses on certain land in Bonnyrigg Town Centre. Detailed requirements also apply under the LEP through DCP No.28-Bonnyrigg Town Centre.
7. Local Environmental Plan (amendment 98), Gazetted 28 May 2004 (Gaz No. 92), permits granny flat housing in the Residential 2(a) zone of Fairfield City subject to development consent and compliance with minimum development standards and requirements.
8. State Environmental Planning Policy (Seniors Living) 2004
9. State Environmental Planning Policy No. 1 - Development Standards
10. State Environmental Planning Policy No. 4 - Development Without Consent and Miscellaneous Exempt and Complying Development
11. State Environmental Planning Policy No. 6 - Number of Storeys In A Building.
12. State Environmental Planning Policy No. 10 - Retention of Low-Cost Rental Accommodation
13. State Environmental Planning Policy No. 21 - Caravan Parks
14. State Environmental Planning Policy No. 11 - Traffic Generating Developments.
15. State Environmental Planning Policy No. 27 - Prison Sites
16. State Environmental Planning Policy No. 30 - Intensive Agriculture
17. State Environmental Planning Policy No. 33 - Hazardous and Offensive Development
18. State Environmental Planning Policy No. 35 - Maintenance Dredging of Tidal Waterways.
19. State Environmental Planning Policy No. 37 - Continued Mines and Extractive Industries
20. State Environmental Planning Policy No. 55 - Remediation of Land
21. State Environmental Planning Policy No. 45 - Permissibility of Mining
22. State Environmental Planning Policy No. 48 - Major Putrescible Landfill Sites
23. State Environmental Planning Policy No. 50 - Canal EstateS
24. State Environmental Planning Policy No. 63 - Major Transport Projects
25. State Environmental Planning Policy No. 64 - Advertising and Signage
26. State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
27. State Environmental Planning Policy - Building Sustainability Index: BASIX 2004
28. State Environmental Planning Policy (Sydney Metropolitan Water Supply) 2004
29. State Environmental Planning Policy (ARTC Rail Infrastructure) 2004
30. State Environmental Planning Policy - Major Projects.
31. Draft State Environmental Planning Policy - Subdivision
32. Draft S.E.P.P. (Application of Development Standards) 2004
33. Draft S.E.P.P. No. 66 - Land Use And Transport
34. Draft S.E.P.P. (Infrastructure) 2006
35. The Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment (GMREP 2)
36. Sydney Regional Environmental Plan No.9 - Extractive Industries

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37. The land is subject to Draft & adopted Development Control Plans. (See attached schedule).
38. Council's Retail and Commercial Centres/Activities Policy No.1-203 applies to the whole of Fairfield City. It sets out a range of criteria that must be addressed for all rezoning proposals and range of development applications involving new retail/commercial development or expansion of existing retail/commercial development.

39. Fairfield City Council Section 94 Developer Contributions Plan No. 1999 applies to all land within the City of Fairfield.

    Fairfield City Council Section 94A Levy Development Contributions Plan 2006 applies to all land within the City of Fairfield.
40. Council has resolved to prepare a draft Local Environmental Plan (DLEP) affecting the land, pursuant to Section 66 1(b) of the Environmental Planning & Assessment Act (E.P. & A.), 1979. (See attached Draft L.E.P. list.)
41. The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act, the Environmental Planning and Assessment Act, 1979 or any resolution of the Council.
42. No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority as referred to in section 27 of the EP & A Act.
43. Fairfield Local Environmental Plan 1994 requires development consent for the demolition of a building.
44. No structure must be erected within 20 metres of the top of the bank or mean high water mark of any creek or waterway except with the consent of Council.
45. Clause 22A(1) of Fairfield LEP 94, provides that the Council may consent to the subdivision of land within Zone 2(a) only if each allotment to be created will have an area of not less than 450m2. Otherwise under Fairfield LEP 1994 there are no other minimum or maximum land dimension requirements for a dwelling house on the land.
46. The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.
47. Council has adopted by resolution a policy (commencing 1 August 2000), on contaminated land which may restrict the development of land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under the State Legislation is warranted.
48. The land is not subject to an investigation order or a remediation order within the meaning of the Contaminated Land Management Act 1997.
49. The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.
50. The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under Section 19 or 26 of the Contaminated Land Management Act 1997.
51. The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of land slip, tidal inundation, subsidence, acid sulfate

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soils or any other risk.

52. Council's policy 'Building in Saline Environments', applies to all areas of Fairfield City and requires use of construction measures and materials in new development to minimise risk of salt damage to buildings from urban salinity.
53. Land must not be cleared or filled except with the consent of Council.
54. Council is in receipt of information by the NSW National Parks and Wildlife Service indicating the land either contains or is in close proximity to an area possibly containing remnant vegetation associated with a Cumberland Plains Endangered Ecological Community that is listed under the Threatened Species Conservation Act. On request Council will supply such information available from its records; however, interested parties must take and rely on their own advice and enquiries.
55. The land is not within an area proclaimed to be a Mine Subsidence District within the meaning of Section 15 of the Mine Subsidence Compensation Act, 1961.
56. There has been no notification from the Department of Public Works that the land is subject to the operation of Section 38 or 39 of the Coastal Protection Act, 1979.
57. Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in section 4 of the Environmental Planning and Assessment Act , 1979.
58. The land does not include or comprise critical habitat.
59. The land is not in a conservation area.
60. There is no item of environmental heritage situated on the land.

Attention is drawn however to Clause 31 of Fairfield LEP 1994:
"When determining an application for consent to carry out development on land in the vicinity of a heritage item, the Council must take into consideration the likely effect of the proposed development on the heritage significance of that heritage item and on its setting."

FLOODING

61. Development on the subject land (or part) for the purposes of dwelling houses, dual occupancies, multi-unit housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to the Fairfield City-Wide Development Control Plan 2006 (which includes provisions for flood management) and applies to all of the Fairfield Local Government Area. Development controls will apply to residential development of the above types if the land (or part of the land) is within the floodplain.

    Development for any other purpose on the subject land (or part) is also subject to the Fairfield City-Wide Development Control Plan 2006 (which includes provisions for flood management) and applies to all of the Fairfield Local Government Area. Development controls will apply to development for any other purpose if the land (or part of the land) is within the floodplain.

    NOTE: These controls apply to development only if that form of development is permissible

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on the subject land. Please refer to the land use zone indicated in this certificate and then determine, based on the objectives of that zone and the list of prohibited uses, whether the proposed use is permissible.

62. Based on the information currently available to Council, this land is not affected by mainstream or overland flooding and is not identified as being within any floodplain. However, this is subject to future flood studies and reviews.

-

63. Local Environmental Plan (Amendment 86), Gazetted 11 October 2002 (Gaz No.170), amends the permissibility criteria in relation to filling of land (which now includes drainage works) and clarifies "reasonable economic use" for filling of land in Zone 1(a).
64. The Environmental Planning and Assessment Amendment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998.

SPECIAL INFORMATION UNDER S.149(5) E.P.A.ACT,1979

65. The Proposed Second Sydney International Airport:
The Commonwealth Department of Transport and Regional Development is considering the establishment of another International airport at Badgerys Creek. Preliminary flight path information received suggests that the subject land may be affected by the operations (including noise) of such an airport. You should make your own enquiries concerning possible effects on the above property with the Commonwealth Department of Transport and Regional Development (telephone: 02-62747111) or Fax (02) 62746719.

66. The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).

PURSUANT TO SECTION 149(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979 THE COUNCIL PROVIDES THE FOLLOWING ADVICE CONCERNING:

1. The land is subject to Draft & adopted Development Control Plans. (See attached schedule)
2. The subject land is affected by a Tree Preservation Order.
3. Information from NSW National Parks and Wildlife Service indicates that the land either contains or is in close proximity to an area possibly containing remnant vegetation associated with a Cumberland Plain Endangered Ecological Community. NPWS have identified the community as Cumberland Plain Woodland (Shale Hills Woodland, Shale Plains Woodland) that is listed as endangered under Pt. 3 Sch. 1 of the NSW Threatened Species Conservation Act 1995 and the Commonwealth Environmental Protection and

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Biodiversity Conservation Act 1999.

4. NPWS mapping indicates that the remnant vegetation is part of an area that is greater than 0.5 hectares and tree cover with urban development.
5. The land is not affected by a Residential District Proclamation.

For further information, please contact
Environment Services Ph.9725-0848

A. Young
City Manager, per

ZONE 2(a) RESIDENTIAL A

1. What are the objectives of the zone?

The objectives of the zone are:

(a) to set aside land primarily for the purposes of housing and associated facilities;

(b) to provide for the orderly development of detached housing, essentially domestic in scale and character;

(c) to achieve attractive high quality residential development;

(d) to allow people to carry out a reasonable range of business activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours; and

(e) to allow a range of non-residential uses that:

  (i) are capable of integration with the immediate locality;

  (ii) serve the demands of the surrounding population; and

  (iii) do not place demands on services beyond the level reasonably required for residential use.

2. What is permitted without development consent?

Nil.

3. What is permitted only with development consent?

Any purpose other than a purpose included in item 2 or 4.

4. What is prohibited?

Abattoirs
Advertisements
Agriculture
Amusement centres
Amusement parks
Animal establishments
Brothels
Bulky goods salesrooms or showrooms
Business premises
Camping grounds and caravan parks
Carparks other than those provided by the Council
Communication facilities
Entertainment facilities
Extractive industry
Forestry
Gaming Taverns
Generating works
Hazardous industry
Hazardous storage establishments
Helicopter landing sites
Heliports
Hotels
Industry
Institutions
Intensive agriculture
Junkyards
Light industry
Medical centres
Mines
Motels
Motor showrooms
Multi-unit housing
Offensive industry
Offensive storage establishments
Plant hire
Plant nurseries
Recreation facilities
Refreshment rooms
Residential flat buildings
Roadside stalls
Rural industry
Sawmills
Service stations
Serviced apartments
Shops
Stock and sales yards
Transport Depots
Transport Terminals
Vehicle body repair workshops
Vehicle repair stations
Veterinary hospitals
Warehouses

Bonnyrigg Town Centre

25H (1) This clause applies to Bonnyrigg Town Centre, as shown edged heavy black on Sheets 1, 2 and 3 of the map marked "Fairfield Local Environmental Plan 1994 (Amendment No 93)".

(2) The objectives for the redevelopment of the Bonnyrigg Town Centre (the Town Centre) are as follows:

(a) to ensure that Part 3 (Master Plan of the Bonnyrigg Town Centre) of *Fairfield Development Control Plan No 28—Bonnyrigg Town Centre* (as adopted by the Council on 24 February 2004) (the ***Town Centre DCP***)is considered by the consent authority before consent is granted to proposed development,

(b) to create a clearly defined urban structure for the Town Centre that is sympathetic to the scale and appearance of surrounding areas, integrating the existing public housing estate with surrounding residential areas and featuring clearly defined entrance points to the Town Centre,

(c) to allow for a mix of integrated land uses and activities that support the retail, commercial, cultural and social vitality and viability of the Town Centre,

(d) to restore the natural setting of Clear Paddock Creek and establish a vegetated riparian corridor along either side of that creek and an off-line stormwater treatment system, promoting opportunities for sustainable biodiversity and biological linkages between areas of remnant native vegetation,

(e) to enhance the use and enjoyment of urban spaces and restored open space areas in the Town Centre through landscape design measures,

(f) to minimise the potential impacts of flooding, urban waste and stormwater on the Town Centre and surrounding neighbourhoods,

(g) to create a distinctive landscape character that enhances the image of the Town Centre, incorporating connections to public gathering places in Clear Paddock Creek Park and opportunities for focal points through landscape design, and highlighting the culture of the local community,

(h) to promote opportunities for infill development, ensuring that the form, appearance, size and placement of any such development helps to enhance the character of the Town Centre and emphasise the distinctiveness of local cultural environments,

(i) to enhance vehicular access and linkages within, and to and from, the Town Centre,

(j) to increase opportunities for the provision of, and access to and from, public transport,

(k) to improve access within, and to and from, the Town Centre for people with disabilities,

(l) to improve pedestrian access and amenity within, and to and from, the Town Centre,

(m) to create a pedestrian and cycleway network that:
  (i) links all surrounding residential areas, public transport interchanges and areas of open space with the Town Centre, and
  (ii) minimises any potential impact on the natural environment by locating primary pedestrian pathways away from the proposed (or, after its establishment, the existing) vegetated riparian corridor along either side of Clear Paddock Creek and away from areas of remnant native vegetation,

(n) to provide sufficient parking, and servicing access, to customers of the Town Centre, ensuring that parking and service areas are accessible to users and managed effectively,

(o) to allow development that incorporates a variety of housing, increasing housing choice and flexibility, to accommodate a range of income groups and encourage social diversity.

(3) Despite the other provisions of this plan, development for the following purposes may be carried out with development consent on land within the Town Centre that is shown by vertical hatching on Sheet2 of the map marked "Fairfield Local Environmental Plan 1994 (Amendment No 93)":
(a) multi-unit housing,

(b) residential flat buildings,

(c) two or more of the following, incorporated within the ground or first floors of a building (for example, a residential flat building):
  (i) business premises,
  (ii) community facilities,
  (iii) dwellings,
  (iv) entertainment facilities,
  (v) refreshment rooms,
  (vi) shops.

(4) Despite the other provisions of this plan, development for the purposes of multi-unit housing may be carried out with development consent on land within the Town Centre that is shown by cross hatching on Sheet 2 of the map marked "Fairfield Local Environmental Plan 1994 (Amendment No93)".

(5) Development for any of the purposes referred to in subclauses (3) and (4) is required to comply with the height controls detailed in section 5.1.4 of the Town Centre DCP.

(6) *State Environmental Planning Policy No 1—Development Standards* applies to subclause (5) in the same way as that Policy applies to a development standard.

(7) Despite the other provisions of this plan, development for the purposes of a bulky goods salesroom or showroom may be carried out with development consent at 685 Smithfield Road (Lot 114, DP 1327), as shown edged heavy black on Sheet 3of the map marked "Fairfield Local Environmental Plan 1994 (Amendment No 93)".

(8) Before granting consent to the carrying out of any development within the Town Centre, the consent authority must consider the objectives set out in subclause (2) that are of relevance to the proposed development.

(9) Before granting consent to the carrying out of any development within the Town Centre on a site that is greater than 2,000 square metres, the consent authority must consider a site master plan, unless satisfied that the proposed development is minor.

(10) For the purposes of subclause (9), a ***site master plan*** is a document, consisting of written information, maps and diagrams, that:

(a) demonstrates how the design and configuration of proposed development achieves consistency with the objectives set out in subclause (2) that are of relevance to the proposed development, and

(b) includes information about measures to mitigate any environmental impacts of the proposed development, including measures for any of the following that are of relevance to the proposed development:
  (i) noise attenuation,
  (ii) flood mitigation and attenuation,
  (iii) water management,
  (iv) soil management, and

(c) includes information about any measures to enhance the natural environment, including any of the following measures that are of relevance to the proposed development:
  (i) measures to establish a vegetated riparian corridor along either side of Clear Paddock Creek,
  (ii) measures to protect or regenerate any remnant native vegetation,
  (iii) measures to promote biological linkages between remnant native vegetation, and

(d) provides details in relation to urban design considerations (such as privacy, security, identified views and the relationship of the proposed development to the public domain), drawn from an analysis of the site and its context, together with an explanation of how the proposed development relates to provisions of the Town Centre DCP, and

(e) incorporates information about the staging of the proposed development.

(11) The consent authority must not consent to the carrying out of development on land within the Town Centre that adjoins an arterial road and would enable vehicular access to or from the land by the arterial road, unless:

(a) it is satisfied that there is no other practicable means of vehicular access to or from the land, and

(b) it has consulted with the RTA.

DEVELOPMENT CONTROL PLANS - As at 11 April 2007 (*Note: Some *"In Force"* Development Control Plans may be under review, check with Council for date of last amendment)

TITLE	STATUS*	DATE APPLIES FROM
GENERAL		
Fairfield City-Wide Development Control Plan 2006	In Force	July 2006
Fairfield City-Wide Development Control Plan 2006 - **Amendment 1** (Chapter 5 – Single Dwelling)	**Adopted August 2006**	**Effective September 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 2** (Chapter 6 – Multi-Unit Housing)	**Adopted November 2006**	**Effective December 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 3** (Subdivision and other anomalies)	**Adopted November 2006**	**Effective December 2006**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 4** (Anomalies found in Chapter 10 - Miscellaneous Development)	**Adopted March 2007**	**Effective April 2007**
Fairfield City-Wide Development Control Plan 2006 - **Amendment 5** (Child Care Centres and Subdivision)	**Adopted March 2007**	**Effective April 2007**
Exempt and Complying Development (No.29)	In Force	Oct 1999
Development Standards Relating to Public Roads (No.32)	In Force	Dec 1999
SITE SPECIFIC		
Fairfield Town Centre (2006)	In Force	Dec 2006
Cabramatta Town Centre (5/2000)	In Force	Aug-2000
Canley Corridor DCP No. 37 – Canley Vale and Canley Heights Local Town Centres - **Amendment No. 1**: Development controls for Master Plan Site No. 2, Adams Reserve, Canley Vale Road, Canley Vale	In Force **Adopted September 2006**	March 2006 **Effective October 2006**
Fairfield Heights Town Centre (10/94)	In Force	October 1994
Bonnyrigg Town Centre (28)	In Force	May 2004
PROPOSED AMENDMENTS TO DCPs		
Site Specific (Sunnybrook Hotel)	Not to commence until gazettal of LEP 106.	To be advised

Fairfield City Council
Draft LEP Register
(Exhibited Draft Plans or Draft Plans on Exhibition)

As at 11 May 2007

Draft LEP No.	Purpose	Subject land
47	Rezone part of site from 6(a) Existing & Proposed Recreation to 4(a) General Industrial	10-16 Robert Street, Smithfield (lots 1-4, DP499648)
82	Clarify certain requirements in relation to heritage items and include an additional property as a heritage item	All heritage listed items in Fairfield City. Property at 112 Cumberland St (lot 1, DP771455) – include as a heritage item
84	Permit the additional use of mixed use development comprising professional office suites on the ground floor level of rsidential flat buildings.	Street block bounded by Hughes and Hill Streets, Park and Mcburney Roads, Cabramatta
96	Permit business premises, car parking and shops (provided subject site is amalgamated with adjoining parcel at 154 The Boulevarde	181 Station Street, Fairfield Heights (Lot P, DP 383407)
102	To: • rezone properties bounded by Nelson Street, Court Road, Spencer Street and the eastern side of the Nelson Lane as Business 3(a1) – Sub-Regional Business Centre – Retail / Commercial which will not permit residential development. • amend the existing Business 3(a) – Sub Regional Business Centre by renaming it the Business 3(a) Sub-Regional Business Centre - Mixed Use and amending the objectives of this zone so they reflect the objectives in the Strategic Plan for the Fairfield Town Centre • prohibit Strata subdivision of existing buildings whilst still permitting subdivision of newer building stock or future redevelopments.	Applies to the Fairfield Town Centre which is the area currently zoned Business 3(a) – Sub Regional Business Centre.
106	To establish site-specific development standards and principles that promote the orderly development of the Sunnybrook Hotel site, and to rezone part of the land to which this plan applies to 2(b)	Sunnybrook Hotel, cnr of Hume Highway and Liverpool Street, Cabramatta, being lot 1, DP 583848, lot 2, DP 617315 and lot 10, DP 748219
112	Adjust references within the Local Environmental Plan that refer to Development Control Plans that will become obsolete, or require updated referencing, for when the new City-Wide Development Control Plan comes into effect. This LEP is prepared in accordance with Section 73A of the Environmental Planning and Assessment Act 1979	Applies to all land in the City of Fairfield.

ZONE 2(a) RESIDENTIAL A

1. What are the objectives of the zone?

The objectives of the zone are:

(a) to set aside land primarily for the purposes of housing and associated facilities;

(b) to provide for the orderly development of detached housing, essentially domestic in scale and character;

(c) to achieve attractive high quality residential development;

(d) to allow people to carry out a reasonable range of business activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours; and

(e) to allow a range of non-residential uses that:

  (i) are capable of integration with the immediate locality;

  (ii) serve the demands of the surrounding population; and

  (iii) do not place demands on services beyond the level reasonably required for residential use.

2. What is permitted without development consent?

Nil.

3. What is permitted only with development consent?

Any purpose other than a purpose included in item 2 or 4.

4. What is prohibited?

Abattoirs
Advertisements
Agriculture
Amusement centres
Amusement parks
Animal establishments
Brothels
Bulky goods salesrooms or showrooms
Business premises
Camping grounds and caravan parks
Carparks other than those provided by the Council
Communication facilities
Entertainment facilities
Extractive industry
Forestry
Gaming Taverns
Generating works
Hazardous industry
Hazardous storage establishments
Helicopter landing sites
Heliports
Hotels
Industry
Institutions
Intensive agriculture
Junkyards
Light industry
Medical centres
Mines
Motels
Motor showrooms
Multi-unit housing
Offensive industry
Offensive storage establishments
Plant hire
Plant nurseries
Recreation facilities
Refreshment rooms
Residential flat buildings
Roadside stalls
Rural industry
Sawmills
Service stations
Serviced apartments
Shops
Stock and sales yards
Transport Depots
Transport Terminals
Vehicle body repair workshops
Vehicle repair stations
Veterinary hospitals
Warehouses

Fairfield City Council
Draft LEP Register
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As at 11 May 2007

Draft LEP No.	Purpose	Subject land
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106	To establish site-specific development standards and principles that promote the orderly development of the Sunnybrook Hotel site, and to rezone part of the land to which this plan applies to 2(b)	Sunnybrook Hotel, cnr of Hume Highway and Liverpool Street, Cabramatta, being lot 1, DP 583848, lot 2, DP 617315 and lot 10, DP 748219
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FairfieldCity
Celebrating diversity

Fairfield City Council, Administration Centre, 86 Avoca Road, Wakeley 2176
Tel: (02) 9725 0222 Fax: (02) 9725 4249 ABN: 83 140 439 239
All communications to:
Fairfield City Council, PO Box 21, Fairfield NSW 1860
Email address: mail@fairfieldcity.nsw.gov.au

PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.

Cert. No.: 2488/2007
Page No.: 1
Receipt 200236
Date: 07/08/2007

Applicant:
Jbs Environmental
C/- Wakeley Office
Danielle Ord
0418 611 322

Property Description: **2 Devlin Way**
Bonnyrigg 2177
DP 262449 Lot 233

PLANNING CERTIFICATE
INFORMATION UNDER SECTION 149(2) :

PLANNING INSTRUMENT	LOCAL ENVIRONMENTAL PLAN 1994 GOVERNMENT GAZETTE NO. 104 12TH AUGUST, 1994 AS AMENDED
INSTRUMENT ZONING	Residential A

1. The following State Environmental Planning Policies (SEPP), Regional Environmental Plans (REP) affect land in the City of Fairfield in the manner described.
2. The provisions of the local planning instrument (copy/extract attached) detail the purposes for which development may be carried out without consent, the purposes for which development may be carried out only with consent, and the purposes for which the carrying out of development is prohibited. Development Control Plan (DCP) No. 29 came into force on the 17 December 1999, and allow certain forms of development to be carried out (subject to a range of criteria) as either exempt or complying development. Further details on exempt and complying development can be gained by obtaining a copy of DCP No. 29 or contacting Council's Customer Service Branch.
3. Local Environmental Plan (Amendment 71), Gazetted 8 June 2001, (Gaz No. 95), expanded the definitions of brothels and telecommunications facilities so that they relate to a wider range of premises and facilities.
4. Local Environmental Plan (amendment 59), Gazetted 12 May 2000 (Gaz No. 57), introduced changes to Fairfield LEP in light of changes to State Planning Legislation and to rationalise local planning controls. Changes include; requiring development consent for dwellings and group homes in zones 1(a), 2(a), 2(a1) and 2(b), allowing ancillary development under or over roads as identified in DCP 32, introducing planning provisions in relation to bus shelters, temporary use of Council land and development near zone boundaries, modifying the definition of "Light industry" and introducing a definition for

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"Telecommunications facility".

5. Local environmental Plan (amendment 92), Gazetted 24 October 2003, (Gaz No.43), introduced new requirements covering exempt and complying development, clarifies areas to where the narrow lot housing restrictions apply, highlights the need for a footpath license for outdoor seating in Cabramatta and Fairfield and clarifies meaning of motor orientated activities as referred to under the objectives applying to industrial zones.
6. Local Environmental Plan (amendment 98), Gazetted 28 May 2004 (Gaz No. 92), permits granny flat housing in the Residential 2(a) zone of Fairfield City subject to development consent and compliance with minimum development standards and requirements.
7. State Environmental Planning Policy (Seniors Living) 2004
8. State Environmental Planning Policy No. 1 - Development Standards
9. State Environmental Planning Policy No. 4 - Development Without Consent and Miscellaneous Exempt and Complying Development
10. State Environmental Planning Policy No. 6 - Number of Storeys In A Building.
11. State Environmental Planning Policy No. 10 - Retention of Low-Cost Rental Accommodation
12. State Environmental Planning Policy No. 21 - Caravan Parks
13. State Environmental Planning Policy No. 11 - Traffic Generating Developments.
14. State Environmental Planning Policy No. 27 - Prison Sites
15. State Environmental Planning Policy No. 30 - Intensive Agriculture
16. State Environmental Planning Policy No. 33 - Hazardous and Offensive Development
17. State Environmental Planning Policy No. 35 - Maintenance Dredging of Tidal Waterways.
18. State Environmental Planning Policy No. 37 - Continued Mines and Extractive Industries
19. State Environmental Planning Policy No. 55 - Remediation of Land
20. State Environmental Planning Policy No. 45 - Permissibility of Mining
21. State Environmental Planning Policy No. 48 - Major Putrescible Landfill Sites
22. State Environmental Planning Policy No. 50 - Canal EstateS
23. State Environmental Planning Policy No. 63 - Major Transport Projects
24. State Environmental Planning Policy No. 64 - Advertising and Signage
25. State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
26. State Environmental Planning Policy - Building Sustainability Index: BASIX 2004
27. State Environmental Planning Policy (Sydney Metropolitan Water Supply) 2004
28. State Environmental Planning Policy (ARTC Rail Infrastructure) 2004
29. State Environmental Planning Policy - Major Projects.
30. Draft State Environmental Planning Policy - Subdivision
31. Draft S.E.P.P. (Application of Development Standards) 2004
32. Draft S.E.P.P. No. 66 - Land Use And Transport
33. Draft S.E.P.P. (Infrastructure) 2006
34. The Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment (GMREP 2)
35. Sydney Regional Environmental Plan No.9 - Extractive Industries
36. The land is subject to Draft & adopted Development Control Plans. (See attached schedule).
37. Council's Retail and Commercial Centres/Activities Policy No.1-203 applies to the whole of Fairfield City. It sets out a range of criteria that must be addressed for all rezoning proposals and range of development applications involving new retail/commercial development or expansion of existing retail/commercial development.

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PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.

38. Fairfield City Council Section 94 Developer Contributions Plan No. 1999 applies to all land within the City of Fairfield.

    Fairfield City Council Section 94A Levy Development Contributions Plan 2006 applies to all land within the City of Fairfield.
39. Council has resolved to prepare a draft Local Environmental Plan (DLEP) affecting the land, pursuant to Section 66 1(b) of the Environmental Planning & Assessment Act (E.P. & A.), 1979. (See attached Draft L.E.P. list.)
40. The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act, the Environmental Planning and Assessment Act, 1979 or any resolution of the Council.
41. No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority as referred to in section 27 of the EP & A Act.
42. Fairfield Local Environmental Plan 1994 requires development consent for the demolition of a building.
43. No structure must be erected within 20 metres of the top of the bank or mean high water mark of any creek or waterway except with the consent of Council.
44. Clause 22A(1) of Fairfield LEP 94, provides that the Council may consent to the subdivision of land within Zone 2(a) only if each allotment to be created will have an area of not less than 450m2. Otherwise under Fairfield LEP 1994 there are no other minimum or maximum land dimension requirements for a dwelling house on the land.
45. Council has adopted by resolution a policy (commencing 1 August 2000), on contaminated land which may restrict the development of land. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under the State Legislation is warranted.
46. The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.
47. The land is not subject to an investigation order or a remediation order within the meaning of the Contaminated Land Management Act 1997.
48. The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.
49. The land is not subject to a voluntary investigation proposal (or voluntary remediation proposal) that is the subject of the Environment Protection Authority's agreement under Section 19 or 26 of the Contaminated Land Management Act 1997.
50. The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of land slip, tidal inundation, subsidence, acid sulfate soils or any other risk.
51. Council's policy 'Building in Saline Environments', applies to all areas of Fairfield City and requires use of construction measures and materials in new development to minimise risk of salt damage to buildings from urban salinity.
52. Land must not be cleared or filled except with the consent of Council.
53.

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The land is not within an area proclaimed to be a Mine Subsidence District within the meaning of Section 15 of the Mine Subsidence Compensation Act, 1961.

54. There has been no notification from the Department of Public Works that the land is subject to the operation of Section 38 or 39 of the Coastal Protection Act, 1979.
55. Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is not bush fire prone as defined in section 4 of the Environmental Planning and Assessment Act , 1979.
56. The land does not include or comprise critical habitat.
57. The land is not in a conservation area.
58. There is no item of environmental heritage situated on the land.

Attention is drawn however to Clause 31 of Fairfield LEP 1994:
"When determining an application for consent to carry out development on land in the vicinity of a heritage item, the Council must take into consideration the likely effect of the proposed development on the heritage significance of that heritage item and on its setting."

FLOODING

59. Development on the subject land (or part) for the purposes of dwelling houses, dual occupancies, multi-unit housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to the Fairfield City-Wide Development Control Plan 2006 (which includes provisions for flood management) and applies to all of the Fairfield Local Government Area. Development controls will apply to residential development of the above types if the land (or part of the land) is within the floodplain.

    Development for any other purpose on the subject land (or part) is also subject to the Fairfield City-Wide Development Control Plan 2006 (which includes provisions for flood management) and applies to all of the Fairfield Local Government Area. Development controls will apply to development for any other purpose if the land (or part of the land) is within the floodplain.

    NOTE: These controls apply to development only if that form of development is permissible on the subject land. Please refer to the land use zone indicated in this certificate and then determine, based on the objectives of that zone and the list of prohibited uses, whether the proposed use is permissible.

60. Based on the information currently available to Council, this land is not affected by mainstream or overland flooding and is not identified as being within any floodplain. However, this is subject to future flood studies and reviews.

61. Local Environmental Plan (Amendment 86), Gazetted 11 October 2002 (Gaz No.170), amends the permissibility criteria in relation to filling of land (which now includes drainage

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works) and clarifies "reasonable economic use" for filling of land in Zone 1(a).

62. The Environmental Planning and Assessment Amendment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998.

SPECIAL INFORMATION UNDER S.149(5) E.P.A.ACT,1979

63. The Proposed Second Sydney International Airport:
The Commonwealth Department of Transport and Regional Development is considering the establishment of another International airport at Badgerys Creek. Preliminary flight path information received suggests that the subject land may be affected by the operations (including noise) of such an airport. You should make your own enquiries concerning possible effects on the above property with the Commonwealth Department of Transport and Regional Development (telephone: 02-62747111) or Fax (02) 62746719.

64. The applicant's attention is drawn to the Department of Infrastructure, Planning and Natural Resources map at the 1:100,000 scale 'Salinity Potential in Western Sydney 2002' that indicates there is potential for salinity in the Region. The map can be viewed at Council's Customer Service Centre (86 Avoca Road Wakeley).

PURSUANT TO SECTION 149(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979 THE COUNCIL PROVIDES THE FOLLOWING ADVICE CONCERNING:

1. The land is subject to Draft & adopted Development Control Plans. (See attached schedule)
2. The subject land is affected by a Tree Preservation Order.
3. The land is not affected by a Residential District Proclamation.

For further information, please contact
Environment Services Ph.9725-0848

per A. Young
City Manager, per

ZONE 2(a) RESIDENTIAL A

1. What are the objectives of the zone?

The objectives of the zone are:

(a) to set aside land primarily for the purposes of housing and associated facilities;
(b) to provide for the orderly development of detached housing, essentially domestic in scale and character;
(c) to achieve attractive high quality residential development;
(d) to allow people to carry out a reasonable range of business activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours; and
(e) to allow a range of non-residential uses that:
    (i) are capable of integration with the immediate locality;
    (ii) serve the demands of the surrounding population; and
    (iii) do not place demands on services beyond the level reasonably required for residential use.

2. What is permitted without development consent?

Nil.

3. What is permitted only with development consent?

Any purpose other than a purpose included in item 2 or 4.

4. What is prohibited?

Abattoirs
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Agriculture
Amusement centres
Amusement parks
Animal establishments
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Communication facilities
Entertainment facilities
Extractive industry
Forestry
Gaming Taverns
Generating works
Hazardous industry
Hazardous storage establishments
Helicopter landing sites
Heliports
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Veterinary hospitals
Warehouses

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Appendix F Historical Aerial Photographs

Legend

Approximate Site Boundary

JBS&G

Job No: 60493

Client: LAHC

Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL

Scale 1:3,000

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 1943

AERIAL 1943

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_1943_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 1955

AERIAL 1955

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_1955_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493

Client: LAHC

Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL

Scale 1:3,000

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 1965

AERIAL 1965

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_1965_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 1975

AERIAL 1975

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_1975_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 1983

AERIAL 1983

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_1983_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493

Client: LAHC

Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL

Scale 1:3,000

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 1991

AERIAL 1991

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_1991_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 2002

AERIAL 2002

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_2002_Aerial.mxd
Reference: NSW DFSI

Legend

Approximate Site Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 2010

AERIAL 2010

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_2010_Aerial.mxd
Reference: Nearmap - www.nearmap.com.au (Capture Date: 22/04/2010)

Legend

Approximate Site Boundary

JBS&G

Job No: 60493	
Client: LAHC	
Version: Aerials	Date 6/04/2021
Drawn By: JA	Checked By: KL
Scale 1:3,000	

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

Stage 8 - 11

HISTORICAL AERIAL PHOTOGRAPH - 2021

AERIAL 2021

File Name: N:\Projects\LAHC\60493 Bonnyrigg Stages 8-11\GIS\Maps\Aerials\60439_2021_Aerial.mxd
Reference: Nearmap - www.nearmap.com.au (Capture Date: 26/01/2021)

Appendix G Land Titles Records

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

Address: -

Description: - Lot 218 D.P. 262449, Lot 186 D.P. 262449 & Lot 4099 D.P. 1182418

As regards Lot 218 D.P. 262449

As regards the part numbered (1) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
17.01.1893 (1893 to 1927)	John Henry Smith (Hairdresser)	Vol 1082 Fol 59
28.06.1927 (1927 to 1929)	Ada Matilda Hall (Married Woman)	Vol 1082 Fol 59 Now Vol 4057 Fol 17
08.04.1929 (1929 to 1936)	William James Sutherland (Insurance Agent)	Vol 4057 Fol 17
16.06.1936 (1936 to 1942)	Pasko Kronja (Gardener) Amalija Kronja (Married Woman)	Vol 4057 Fol 17
18.02.1942 (1942 to 1947)	Ivan Prcevich (Gardener)	Vol 4057 Fol 17
13.02.1947 (1947 to 1973)	Adrian Bradbury (Clerk) Rosina Defina (Spinster)	Vol 4057 Fol 17 Now Vol 6550 Fol 101
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 6550 Fol 101 Now 218/262449

Denotes current registered proprietor

As regards the part numbered (2) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
17.01.1893 (1893 to 1927)	John Henry Smith (Hairdresser)	Vol 1082 Fol 59
28.06.1927 (1927 to 1929)	Ada Matilda Hall (Married Woman)	Vol 1082 Fol 59 Now Vol 4057 Fol 17
08.04.1929 (1929 to 1936)	William James Sutherland (Insurance Agent)	Vol 4057 Fol 17
16.06.1936 (1936 to 1942)	Pasko Kronja (Gardener) Amalija Kronja (Married Woman)	Vol 4057 Fol 17
18.02.1942 (1942 to 1947)	Ivan Prcevich (Gardener)	Vol 4057 Fol 17
13.02.1947 (1947 to 1957)	Adrian Bradbury (Clerk) Rosina Defina (Spinster)	Vol 4057 Fol 17 Now Vol 6550 Fol 102

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Continued as regards the part numbered (2) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
24.01.1957 (1957 to 1973)	Guiseppe Musico (Machinist)	Vol 6550 Fol 102
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 6550 Fol 102 Now 218/262449

Denotes current registered proprietor

Easements: - NIL

Leases: -

- 15.01.2008 (AD 701276) – surrendered, not investigated

As regards Lot 186 D.P. 262449

As regards the part numbered (1) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
17.01.1893 (1893 to 1927)	John Henry Smith (Hairdresser)	Vol 1082 Fol 59
28.06.1927 (1927 to 1929)	Ada Matilda Hall (Married Woman)	Vol 1082 Fol 59 Now Vol 4057 Fol 17
08.04.1929 (1929 to 1936)	William James Sutherland (Insurance Agent)	Vol 4057 Fol 17
16.06.1936 (1936 to 1942)	Pasko Kronja (Gardener) Amalija Kronja (Married Woman)	Vol 4057 Fol 17
18.02.1942 (1942 to 1947)	Ivan Prcevich (Gardener)	Vol 4057 Fol 17
13.02.1947 (1947 to 1957)	Adrian Bradbury (Clerk) Rosina Defina (Spinster)	Vol 4057 Fol 17 Now Vol 6550 Fol 102
24.01.1957 (1957 to 1973)	Guiseppe Musico (Machinist)	Vol 6550 Fol 102
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 6550 Fol 102 Now 186/262449

Denotes current registered proprietor

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards the part numbered (2) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
17.01.1893 (1893 to 1927)	John Henry Smith (Hairdresser)	Vol 1082 Fol 59
20.06.1927 (1927 to 1940)	Ethel Luvina Armstrong (Married Woman)	Vol 1082 Fol 59 Now Vol 4057 Fol 18
19.11.1940 (1940 to 1960)	Arthur Brown (Poultry Farmer)	Vol 4057 Fol 18
16.12.1960 (1960 to 1972)	Jane Annie Brown (Widow) (Section 94 Application not investigated)	Vol 4057 Fol 18
20.06.1972 (1972 to 1973)	Arthur Brown (Public Servant) (Section 93 Application not investigated)	Vol 4057 Fol 18
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 4057 Fol 18 Now 186/262449

Denotes current registered proprietor

Leases: -

- 15.01.2008 (AD 701276) – surrendered, not investigated

Easements: -

- (D.P. 644711) Easement to Drain Water over existing line of pipes

---

As regards Lot 4099 D.P. 1182418

As regards the part numbered (1) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
01.06.1933 (1933 to 1950)	Grgo Satara (Farmer) Manda Satara (Married Woman)	Vol 824 Fol 92
29.05.1950 (1950 to 1973)	Joze Yelash (Market Gardener) Manda Yelash (Married Woman)	Vol 824 Fol 92
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 824 Fol 92 Now 4099/1182418

Denotes current registered proprietor

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards the part numbered (2) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
27.05.1920 (1920 to 1955)	Sarah Harris (Married Woman)	Vol 2732 Fol 122
09.11.1955 (1955 to 1959)	Samuel Henry Harris (Fisherman) (Transmission Application not investigated)	Vol 2732 Fol 122
30.05.1959 (1959 to 1973)	Salvatori Leotta (Field Hand)	Vol 2732 Fol 122
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 2732 Fol 122 Now 4099/1182418

Denotes current registered proprietor

As regards the part numbered (3) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
08.09.1913 (1913 to 1925)	John Turton (Engineer) Eliza Mary Turton (Married Woman)	Vol 2343 Fol 113
12.06.1925 (1925 to 1955)	William Harris (Engine Driver)	Vol 2343 Fol 113
09.11.1955 (1955 to 1957)	Samuel Henry Harris (Fisherman) (Section 94 Application not investigated)	Vol 2343 Fol 113
09.08.1957 (1957 to 1973)	Vaclaw Mlynarik (Labourer) Tatana Mlynarik (Married Woman)	Vol 2343 Fol 113
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 2343 Fol 113 Now 4099/1182418

Denotes current registered proprietor

As regards the part numbered (4) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.08.1928 (1928 to 1929)	Mary Doris McStay (Spinster) Vera Alice McStay (Spinster)	Vol 1014 Fol 176 Now Vol 4295 Fol 131
30.04.1929 (1929 to 1945)	John Rogers (Farmer)	Vol 4295 Fol 131
25.08.1945 (1945 to 1947)	Duncan St Clair Maclardy McIntyre (Poultry Farmer) Vera Franklin McIntyre (Married Woman)	Vol 4295 Fol 131
03.10.1947 (1947 to 1950)	Albert Maher (Farmer)	Vol 4295 Fol 131
14.06.1950 (1950 to 1964)	Charles Oscar Gabriel (Enameller) Linda May Gabriel (Married Woman)	Vol 4295 Fol 131
10.07.1964 (1964 to 1969)	Kevin Ralph Gabriel (Storeman) (Section 94 Application not investigated)	Vol 4295 Fol 131

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Continued as regards the part numbered (4) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.05.1969 (1969 to 1973)	Victor Vaclan Mlynarik (Plant Operator) Yatana Mlynarik (Married Woman)	Vol 4295 Fol 131 Now Vol 11126 Fol 210
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 11126 Fol 210 Now 4099/1182418

Denotes current registered proprietor

As regards the part numbered (5) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
17.01.1893 (1893 to 1927)	John Henry Smith (Hairdresser)	Vol 1082 Fol 59
20.06.1927 (1927 to 1940)	Ethel Luvina Armstrong (Married Woman)	Vol 1082 Fol 59 Now Vol 4057 Fol 18
19.11.1940 (1940 to 1960)	Arthur Brown (Poultry Farmer)	Vol 4057 Fol 18
16.12.1960 (1960 to 1972)	Jane Annie Brown (Widow) (Section 94 Application not investigated)	Vol 4057 Fol 18
20.06.1972 (1972 to 1973)	Arthur Brown (Public Servant) (Section 93 Application not investigated)	Vol 4057 Fol 18
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 4057 Fol 18 Now 4099/1182418

Denotes current registered proprietor

As regards the part numbered (6) on the attached Cadastral Records Enquiry Report

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.08.1926 (1926 to 1932)	Alfred Bate (Accountant)	Vol 1559 Fol 176
05.09.1932 (1932 to 1941)	Mary Ann Ramsden (Married Woman)	Vol 1559 Fol 176 Now Vol 4546 Fol 139
20.12.1941 (1941 to 1947)	Mick Matulovich Medo (Carpenter)	Vol 4546 Fol 139
22.08.1947 (1947 to 1951)	Vincenzo Romco (Market Gardener)	Vol 4546 Fol 139
13.08.1951 (1951 to 1973)	Rosa Romco (Widow) (Transmission Application not investigated)	Vol 4546 Fol 139
03.12.1973 (1973 to date)	# Housing Commission of New South Wales Now # New South Wales Land and Housing Corporation	Vol 4057 Fol 18 Now 4099/1182418

Denotes current registered proprietor

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Denotes current registered proprietor

Leases: -

- 15.01.2008 (AD 701276) – surrendered, not investigated

Easements: -

- 20.02.2018 (D.P. 1182418) Easement for Access and Maintenance 1 metre wide (numbered 2)
- 20.02.2018 (D.P. 1182418) Easement for Access and Maintenance 1 metre wide (numbered 3)
- 20.02.2018 (D.P. 1182418) Easement for Access and Maintenance 1 metre wide (numbered 4)
- 20.02.2018 (D.P. 1182418) Easement to Drain Water 1.5 metres wide
- 20.02.2018 (D.P. 1182418) Easement for Padmount Substation 2.75 metres wide
- 20.02.2018 (D.P. 1182418) Easement for Access, Maintenance and Retaining Wall Support 1 metre wide

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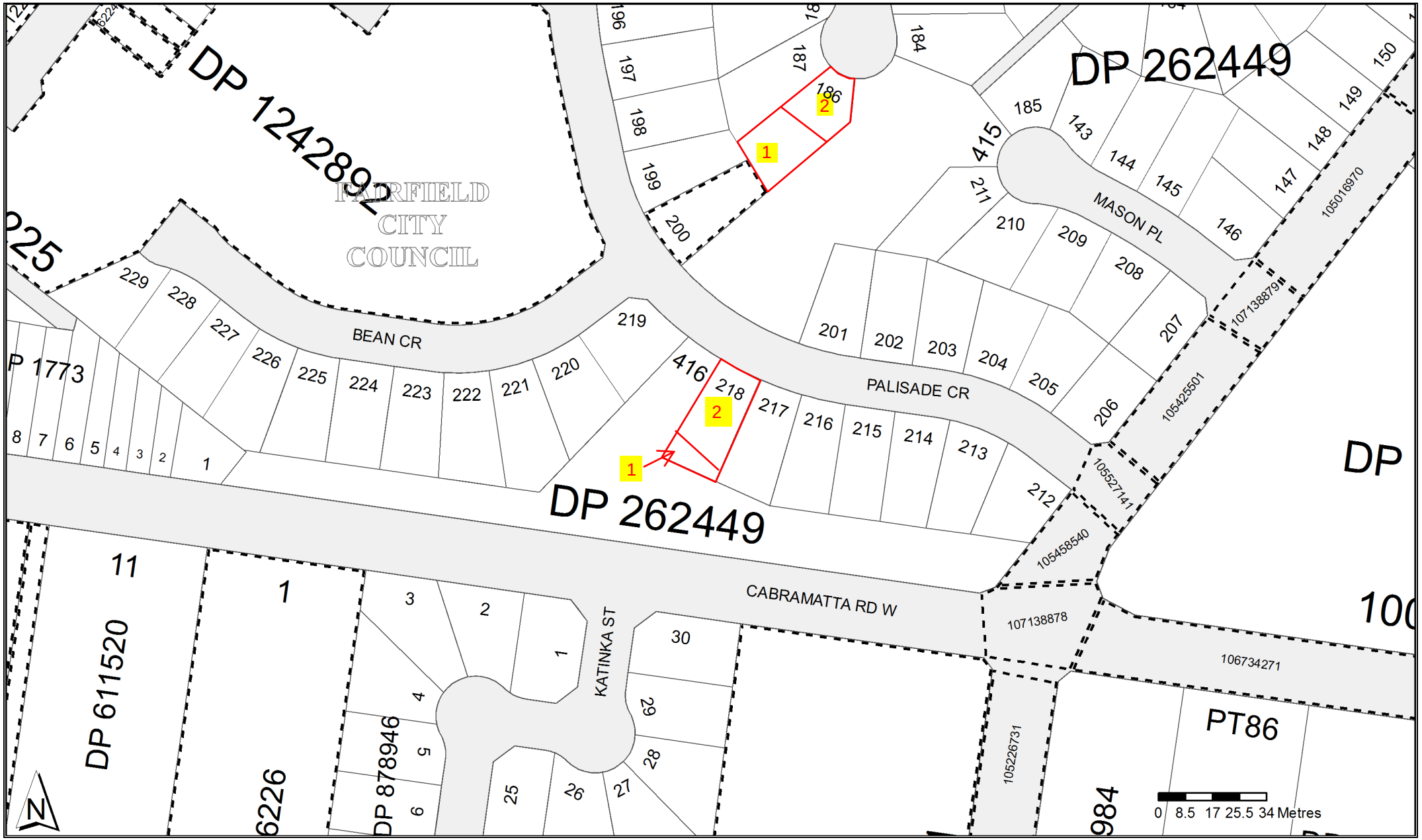
Yours Sincerely,
Mark Groll
23 April 2021

Cadastral Records Enquiry Report : Lot 218 DP 262449

Locality : BONNYRIGG
Parish : ST LUKE
LGA : FAIRFIELD
County : CUMBERLAND



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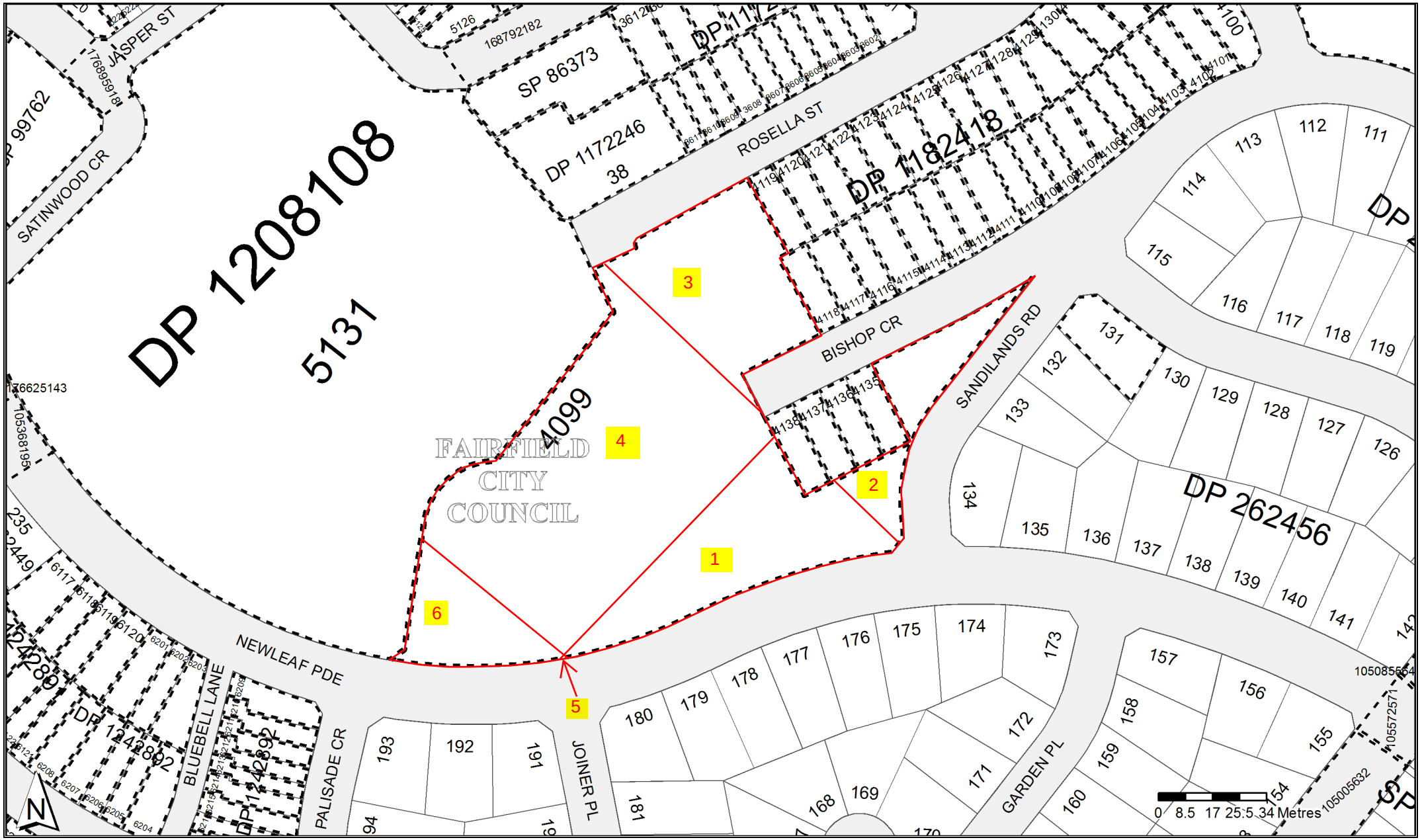
Cadastral Records Enquiry Report : Lot 4099 DP 1182418

Locality : BONNYRIGG
Parish : ST LUKE
LGA : FAIRFIELD
County : CUMBERLAND



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InfoTrack

PLAN FORM 1 — Plan Drawing only to appear in this space — *OFFICE USE ONLY

DP 644711

Registered: 21-5-1991

C.A:

Title System: TORRENS

Purpose: EASEMENT

Ref. Map: U8245-64

Last Plan: DP 262449

PLAN OF EASEMENT TO DRAIN WATER OVER EXISTING LINE OF PIPES WITHIN LOTS 186, 187, 188, 189, 190, 192 AND 415 IN D.P. 262449.

Lengths are in metres. Reduction Ratio 1: 800

~~Mun./Shire~~ City: FAIRFIELD

Locality: BONNYRIGG

Parish: ST. LUKE

County: CUMBERLAND

Plans used in preparation of ~~survey~~/compilation.
D.P. 262449

I, MICHAEL JOHN MORGAN
RYAN FIRTH & CO
of 10 MOORE AVENUE WEST LINDFIELD
a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that ~~the survey represented in this~~ plan HAS BEEN COMPILED is accurate and has been made in accordance with the Survey Practice Regulations, 1933 and any special requirements of the Department of Lands, and was completed on
31st January 1990
Signature M.J. Morgan
Surveyor registered under Surveyors Act, 1929, as amended.
~~Datum Line of Azimuth~~
#Insert date of survey.

Y O O O F I B

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 IT IS INTENDED TO CREATE:

1. EASEMENT TO DRAIN WATER OVER EXISTING LINE OF PIPES.

05966

PERMANENT TRUSTEE COMPANY LIMITED (A.C.N. 000 000 993) by its Attorneys who state that they have no notice of the revocation of the Power of Attorney dated 23rd June, 1976 Registered Number 679 Book 3073 which executed this instrument

Group A — Signature: ... Name: WENDY HOPKINS Title: ASSISTANT MANAGER

Group B — Signature: ... Name: ... Title: ...

SIGNED by ... as Delegate ... duly authorised

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....

Paper No. .....

Plan Book ..... pages .....

Council Clerk's Certificate

I hereby certify that —

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

*(b) the requirements of section 24B of the † Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, † Hunter District Water, Sewerage, and Drainage Act, 1938, as amended

have been complied with by the applicant in relation to the proposed ..... (Insert "new road", "subdivision" or "consolidated lot") set out herein

Subdivision No. .....

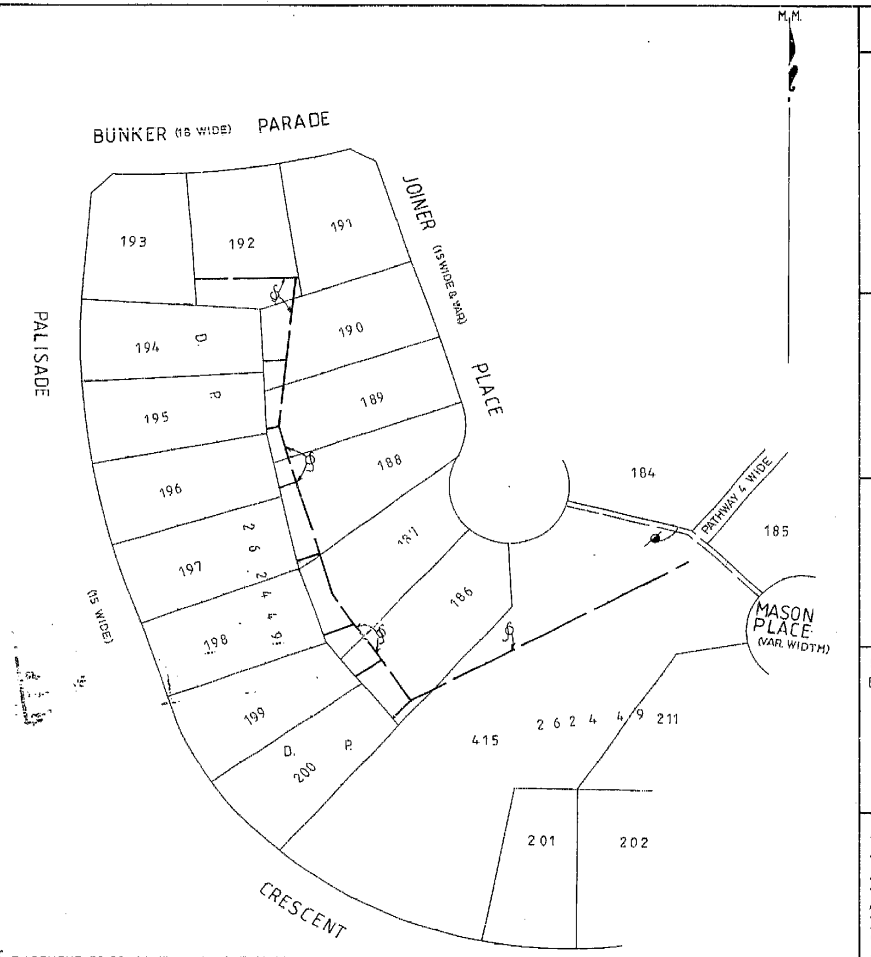
Date .....

(Signature) ..... Council Clerk

Council File No. .....

*This part of certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board.

†Delete if inapplicable.



EASEMENT TO DRAIN WATER OVER EXISTING LINE OF PIPES. (APPROXIMATE POSITION)

EASEMENT FOR ELECTRICITY PURPOSES. 1 WIDE

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 Table of mm

SURVEYOR'S REFERENCE: H1133 S7550 E544 INST. No. P1005/A **WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION** MPD

10 20 30 40 50 60 70 Table of mm 110 120 130 140

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day. 22nd May, 1991

Req:R728317 /Doc:DP 0644711 P /Rev:06-Jan-1993 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 11:19 /Seq:1 of 1
© Office of the Registrar-General /Src:INFOTRACK /Ref:Bonnyrigg 60593

InfoTrack M.G.A. NORTH

SURVEYING & SPATIAL INFORMATION REGULATION 2012 CLAUSE 61(2)

M.G.A. CO ORDINATES (ZONE 56)

MARK	EASTING	NORTHING	CLASS	ORDER	METHOD
SSM39408	305 328.327	6 247 944.225	B	2	SCIMS
SSM39409	305 433.387	6 247 870.562	B	2	SCIMS
SSM39422	305 599.263	6 247 900.122	B	2	SCIMS
SSM141731	305 666.649	6 248 000.452	B	2	SCIMS
SSM180946	305 526.817	6 248 017.247	C	3	SCIMS
SSM180944	305 690.704	6 248 129.530	C	3	SCIMS
SSM198225	305 653.332	6 248 016.739	U	U	CAD.TRAV
SSM198224	305 740.311	6 248 072.232	U	U	CAD.TRAV
SSM180945	305 466.766	6 248 062.877	C	3	SCIMS

COMBINED SEA LEVEL AND SCALE FACTOR 1.000056

SOURCE M.G.A. CO ORDINATES ADOPTED FOR ESTABLISHED MARKS FROM S.C.I.M.S. 5th FEBRUARY, 2017.

SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	CHORD	ARC	RADIUS
1	190°47'40"	4.16		
2	100°48'35"	3.175		
3	155°56'25"	16.55		
4	64°25'05"	15		
5	17°45'50"	3.43	3.785	2.5
6	221°45'20"	5.525		
7	218°16'40"	11.41		
8	229°08'35"	29.77	32.38	23
9	279°56'35"	1.26	1.26	154.355
10	154°25'10"	15.455		
11	244°29'20"	8.845		
12	85°31'45"	15		
13	85°31'45"	15		
14	295°10'50"	86.04	87.035	166
15	241°06'40"	3.3		
16	60°37'45"	31.39	31.405	337.5
17	196°47'50"	36.195	37.04	49.945
18	175°31'45"	8.145		
19	219°09'15"	5.785		
20	253°21'25"	60.265	60.505	195.9
21	270°56'05"	47.09	47.27	154.355
22	82°04'25"	21.95	22.025	75.5
23	147°44'05"	27.34	27.835	42.5
24	240°34'05"	34.59	34.9	75.5
25	235°17'25"	89.81	90.1	322.5
26	52°12'10"	17.81	17.88	57.5
27	211°43'20"	4.375		
28	86°08'	4.4		
29	253°20'40"	47.32	47.505	154.355
30	308°45'45"	6.115		
31	341°07'40"	11.515	11.53	57.5
32	322°10'35"	26.27	26.505	57.5
33	232°37'30"	62.805	62.895	337.5
34	248°53'25"	44.55	45.62	60.5
35	180°29'35"	15		

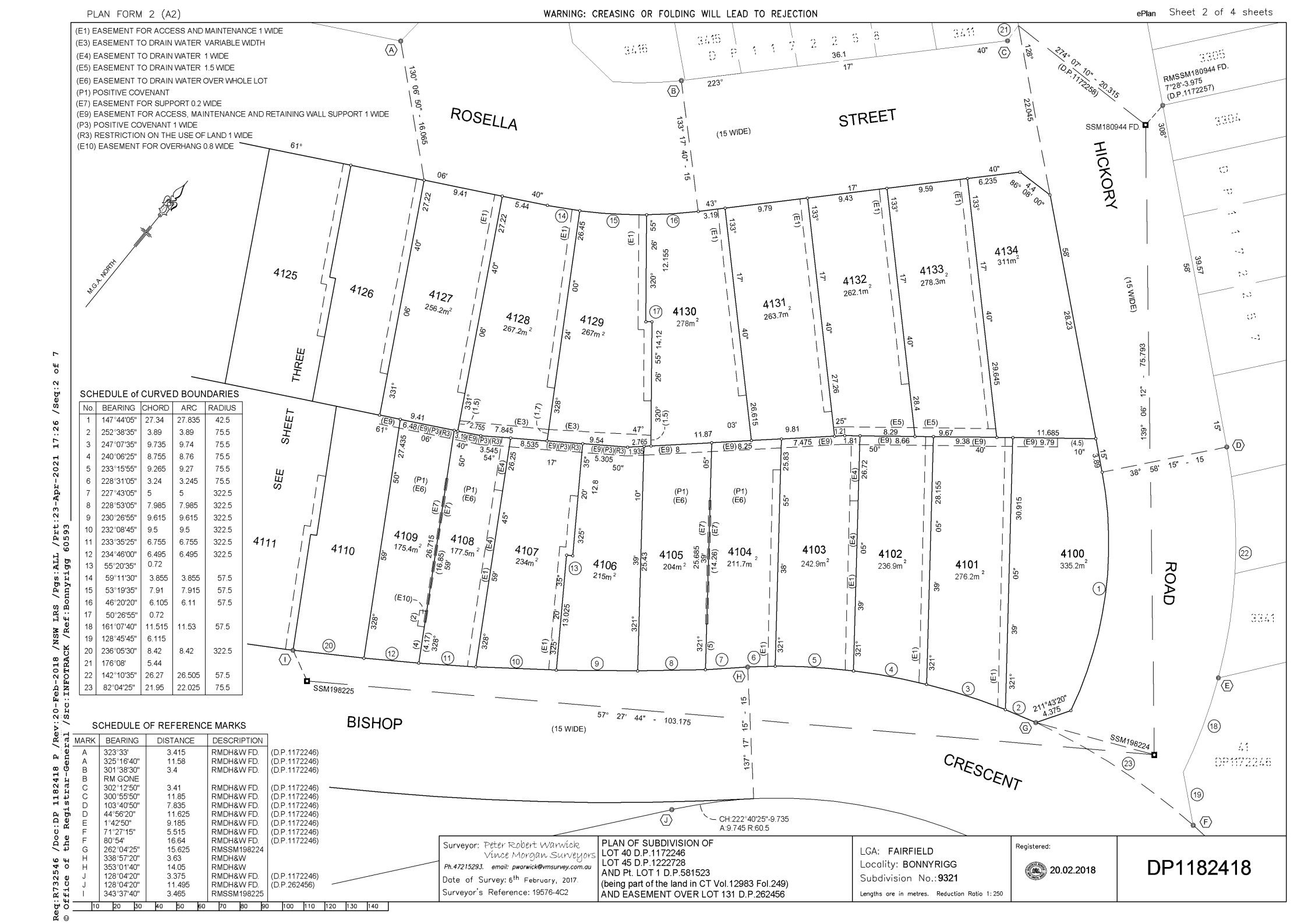
SCHEDULE OF REFERENCE MARKS FOUND FROM D.P.1172246

No.	BEARING	DISTANCE	DESCRIPTION
C	302°12'50"	3.41	DH&W IN KERB
C	300°55'50"	11.85	DH&W IN KERB
D	103°40'50"	7.835	DH&W IN KERB
D	44°56'20"	11.625	DH&W IN KERB
E	1°42'50"	9.185	DH&W IN KERB
F	71°27'15"	5.515	DH&W IN KERB
F	80°54'	16.64	DH&W IN KERB
B	301°38'30"	3.4	DH&W IN KERB
B			RM GONE

Surveyor: Peter Robert Warwick, Vince Morgan Surveyors Ph.47215293. email: pwarwick@vmsurvey.com.au Date of Survey: 6th February, 2017. Surveyor's Reference: 19576-4C2	PLAN OF SUBDIVISION OF LOT 40 D.P.1172246 LOT 45 D.P.1222728 AND Pt. LOT 1 D.P.581523 (being part of the land in CT Vol.12983 Fol.249) AND EASEMENT OVER LOT 131 D.P.262456	LGA: FAIRFIELD Locality: BONNYRIGG Subdivision No.: 9321 Lengths are in metres. Reduction Ratio 1: 1000	Registered: 20.02.2018	DP1182418

Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:1 of 7
© Office of the Registrar-General /Src:INFOTRACK /Ref:Bonnyrigg 60593

(E1) EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE
(E3) EASEMENT TO DRAIN WATER VARIABLE WIDTH
(E4) EASEMENT TO DRAIN WATER 1 WIDE
(E5) EASEMENT TO DRAIN WATER 1.5 WIDE
(E6) EASEMENT TO DRAIN WATER OVER WHOLE LOT
(P1) POSITIVE COVENANT
(E7) EASEMENT FOR SUPPORT 0.2 WIDE
(E9) EASEMENT FOR ACCESS, MAINTENANCE AND RETAINING WALL SUPPORT 1 WIDE
(P3) POSITIVE COVENANT 1 WIDE
(R3) RESTRICTION ON THE USE OF LAND 1 WIDE
(E10) EASEMENT FOR OVERHANG 0.8 WIDE



SCHEDULE of CURVED BOUNDARIES

No.	BEARING	CHORD	ARC	RADIUS
1	147°44'05"	27.34	27.835	42.5
2	252°38'35"	3.89	3.89	75.5
3	247°07'35"	9.735	9.74	75.5
4	240°06'25"	8.755	8.76	75.5
5	233°15'55"	9.265	9.27	75.5
6	228°31'05"	3.24	3.245	75.5
7	227°43'05"	5	5	322.5
8	228°53'05"	7.985	7.985	322.5
9	230°26'55"	9.615	9.615	322.5
10	232°08'45"	9.5	9.5	322.5
11	233°35'25"	6.755	6.755	322.5
12	234°46'00"	6.495	6.495	322.5
13	55°20'35"	0.72		
14	59°11'30"	3.855	3.855	57.5
15	53°19'35"	7.91	7.915	57.5
16	46°20'20"	6.105	6.11	57.5
17	50°26'55"	0.72		
18	161°07'40"	11.515	11.53	57.5
19	128°45'45"	6.115		
20	236°05'30"	8.42	8.42	322.5
21	176°08'	5.44		
22	142°10'35"	26.27	26.505	57.5
23	82°04'25"	21.95	22.025	75.5

SCHEDULE OF REFERENCE MARKS

MARK	BEARING	DISTANCE	DESCRIPTION	
A	323°33'	3.415	RMDH&W FD.	(D.P.1172246)
A	325°16'40"	11.58	RMDH&W FD.	(D.P.1172246)
B	301°38'30"	3.4	RMDH&W FD.	(D.P.1172246)
B	RM GONE			
C	302°12'50"	3.41	RMDH&W FD.	(D.P.1172246)
C	300°55'50"	11.85	RMDH&W FD.	(D.P.1172246)
D	103°40'50"	7.835	RMDH&W FD.	(D.P.1172246)
D	44°56'20"	11.625	RMDH&W FD.	(D.P.1172246)
E	1°42'50"	9.185	RMDH&W FD.	(D.P.1172246)
F	71°27'15"	5.515	RMDH&W FD.	(D.P.1172246)
F	80°54'	16.64	RMDH&W FD.	(D.P.1172246)
G	262°04'25"	15.625	RMSSM198224	
H	338°57'20"	3.63	RMDH&W	
H	353°01'40"	14.05	RMDH&W	
J	128°04'20"	3.375	RMDH&W FD.	(D.P.1172246)
J	128°04'20"	11.495	RMDH&W FD.	(D.P.262456)
I	343°37'40"	3.465	RMSSM198225	

10 20 30 40 50 60 70 80 90 100 110 120 130 140

Surveyor: Peter Robert Warwick
Vince Morgan Surveyors
Ph.47215293. email: pwarwick@vmsurvey.com.au
Date of Survey: 6th February, 2017.
Surveyor's Reference: 19576-4C2

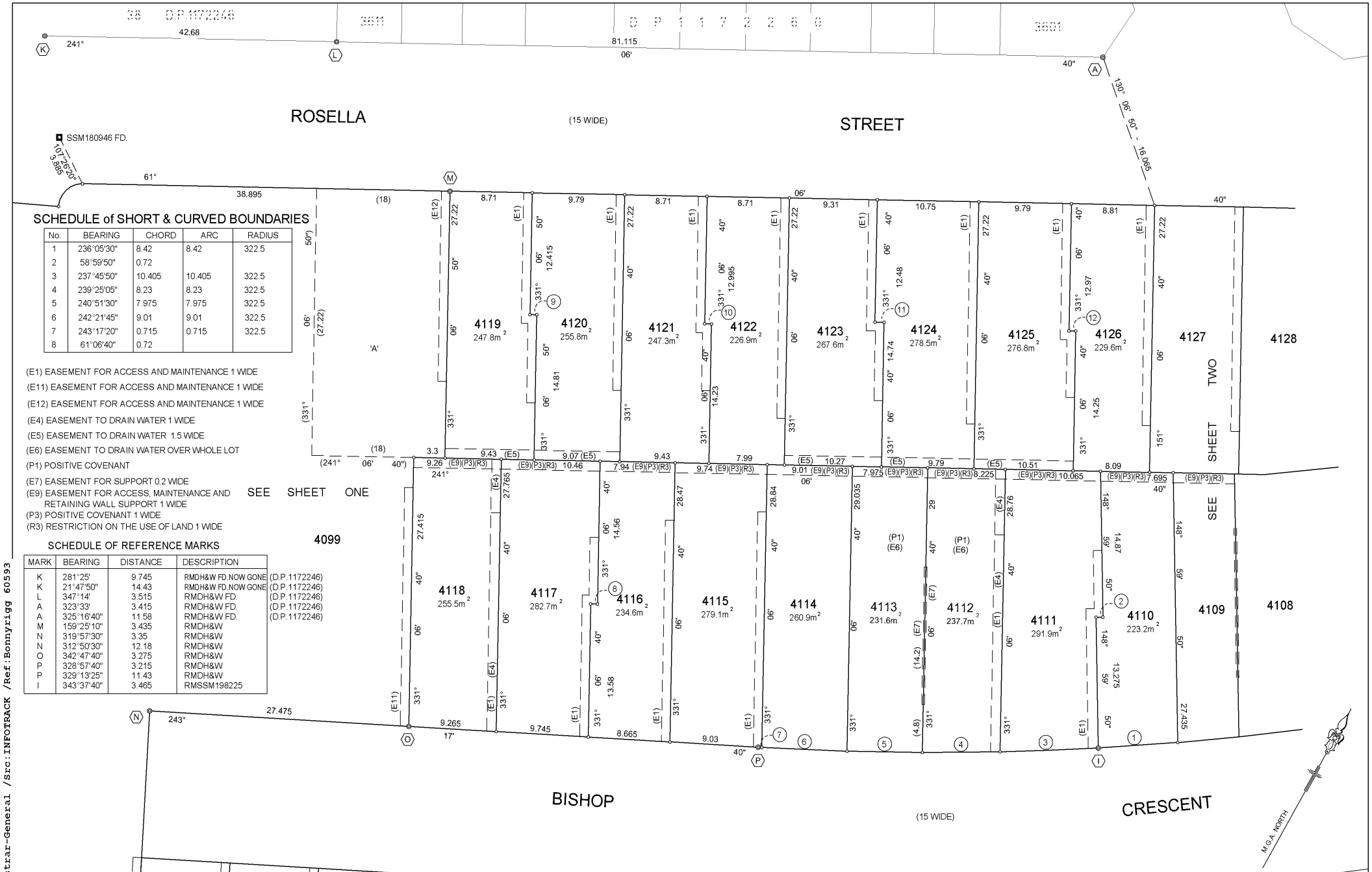
PLAN OF SUBDIVISION OF
LOT 40 D.P.1172246
LOT 45 D.P.1222728
AND Pt. LOT 1 D.P.581523
(being part of the land in CT Vol.12983 Fol.249)
AND EASEMENT OVER LOT 131 D.P.262456

LGA: FAIRFIELD
Locality: BONNYRIGG
Subdivision No.: 9321
Lengths are in metres. Reduction Ratio 1:250

Registered: 20.02.2018

DP1182418

Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:2 of 7
© Office of the Registrar-General /Src:INFOTRACK /Ref:Bonnyrigg 60593



SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	CHORD	ARC	RADIUS
1	236°05'30"	8.42	8.42	322.5
2	58°59'50"	0.72		
3	237°45'50"	10.405	10.405	322.5
4	239°25'05"	8.23	8.23	322.5
5	240°51'30"	7.975	7.975	322.5
6	242°21'45"	9.01	9.01	322.5
7	243°17'20"	0.715	0.715	322.5
8	61°06'40"	0.72		

(E1) EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE
(E11) EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE
(E12) EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE
(E4) EASEMENT TO DRAIN WATER 1 WIDE
(E5) EASEMENT TO DRAIN WATER 1.5 WIDE
(E6) EASEMENT TO DRAIN WATER OVER WHOLE LOT
(P1) POSITIVE COVENANT
(E7) EASEMENT FOR SUPPORT 0.2 WIDE
(E9) EASEMENT FOR ACCESS, MAINTENANCE AND RETAINING WALL SUPPORT 1 WIDE
(P3) POSITIVE COVENANT 1 WIDE
(R3) RESTRICTION ON THE USE OF LAND 1 WIDE

SCHEDULE OF REFERENCE MARKS

MARK	BEARING	DISTANCE	DESCRIPTION
K	281°25'	9.745	RMDH&W FD.NOW GONE (D.P.1172246)
K	21°47'50"	14.43	RMDH&W FD.NOW GONE (D.P.1172246)
L	347°14'	3.515	RMDH&W FD. (D.P.1172246)
A	323°33'	3.415	RMDH&W FD. (D.P.1172246)
A	325°16'40"	11.58	RMDH&W FD. (D.P.1172246)
M	159°25'10"	3.435	RMDH&W
N	319°57'30"	3.35	RMDH&W
N	312°50'30"	12.18	RMDH&W
O	342°47'40"	3.275	RMDH&W
P	328°57'40"	3.215	RMDH&W
P	329°13'25"	11.43	RMDH&W
I	343°37'40"	3.465	RMSSM198225

10 20 30 40 50 60 70 80 90 100 110 120 130 140

Surveyor: Peter Robert Warwick
Vince Morgan Surveyors
Ph.47215293. email: pwarwick@vmsurvey.com.au
Date of Survey: 6th February, 2017.
Surveyor's Reference: 19576-4C2

PLAN OF SUBDIVISION OF
LOT 40 D.P.1172246
LOT 45 D.P.1222728
AND Pt. LOT 1 D.P.581523
(being part of the land in CT Vol.12983 Fol.249)
AND EASEMENT OVER LOT 131 D.P.262456

LGA: FAIRFIELD
Locality: BONNYRIGG
Subdivision No.: 9321
Lengths are in metres. Reduction Ratio 1:250

Registered: 20.02.2018

DP1182418

Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:3 of 7
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(E1) EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE

(E13) EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE

(E5) EASEMENT TO DRAIN WATER 1.5 WIDE

(E2) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE

(R1) RESTRICTION ON THE USE OF LAND

(R2) RESTRICTION ON THE USE OF LAND

(E9) EASEMENT FOR ACCESS, MAINTENANCE AND RETAINING WALL SUPPORT 1 WIDE

Surveyor: Peter Robert Warwick, Vince Morgan Surveyors Ph.47215293. email: pwarwick@vmsurvey.com.au Date of Survey: 6th February, 2017. Surveyor's Reference: 19576-4C2	PLAN OF SUBDIVISION OF LOT 40 D.P.1172246 LOT 45 D.P.1222728 AND Pt. LOT 1 D.P.581523 (being part of the land in CT Vol.12983 Fol.249) AND EASEMENT OVER LOT 131 D.P.262456	LGA: FAIRFIELD Locality: BONNYRIGG Subdivision No.: 9321 Lengths are in metres. Reduction Ratio 1:200	Registered: 20.02.2018	DP1182418

10 20 30 40 50 60 70 80 90 100 110 120 130 140

Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:4 of 7
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Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:5 of 7
© Office of the Registrar-General /Src:INFOTRACK /Ref:Bonnyrigg 60593

PLAN FORM 6(2013) WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Registered: 20.02.2018 Office Use Only

Title System: TORRENS

Purpose: SUBDIVISION

Office Use Only

DP1182418

PLAN OF SUBDIVISION OF
LOT 40 D.P.1172246
LOT 45 D.P.1222728
AND Pt. LOT 1 D.P.581523
(being part of the land in CT Vol.12983 Fol.249)
AND EASEMENT OVER LOT 131 D.P.262456

L G A: FAIRFIELD

Locality: BONNYRIGG

Parish: ST. LUKE

County: CUMBERLAND

Crown Lands NSW/Western Lands Office Approval

I, ...in approving this plan certify
Authorised Officer
that all necessary approvals in regard to the allocation of the land shown hereon have been given.

Signature .....

Date:.....

File No: .....

Office:.....

Survey Certificate

I, PETER ROBERT WARWICK
of VINCE MORGAN SURVEYORS PTY.LTD.
Ph.47215293. email: pwarwick@vmsurvey.com.au
a surveyor registered under the Surveying & Spatial Information Act, 2002 certify that:

(a) The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation, 2012, is accurate and the survey was completed on 6th February, 2017.

~~*(b) The part of the land shown in the plan being (*being/excluding^*~~
.....
was surveyed in accordance with the Surveying and Spatial Information Regulation, 2012, is accurate and the survey was completed on ..... the part not surveyed was compiled in accordance with that Regulation.

~~*(c) The land shown in the plan was compiled / in accordance with the Surveying and Spatial Information Regulation, 2012.*~~

Signature: Dated: 6th February, 2017.

Surveyor ID: 2207

Datum Line: ('X'-'Y') SSM39408 - SSM39422

Type: URBAN

The terrain is level–undulating

* Strike through if inapplicable.

^ Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Subdivision Certificate

I, Nicoleta Diacopoulos

*Authorised Person/~~*General Manager/*Accredited Certifier~~, certify that the provisions of s.109J of the Environmental Planning and Assessment Act, 1979 have been satisfied in relation to the proposed subdivision, new road or reserve set out herein

Signature: .....

Accreditation Number.....

Consent Authority Fairfield City Council

Date of endorsement 24 October 2017

Subdivision Certificate Number 9321

File Number DA 1098.1/2011

* strike through if inapplicable

Statements of intention to dedicate public roads, public reserves and drainage reserves.

IT IS INTENDED TO DEDICATE THE EXTENSION OF BISHOP CRESCENT TO THE PUBLIC AS PUBLIC ROAD

Plans used:–

D.P.1172246
D.P.1222728
D.P.1172258
D.P.1172257
D.P.262456
D.P.1172260

If space is insufficient continue on PLAN FORM 6A

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

SURVEYOR'S REFERENCE: 19576-4C2

Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:6 of 7
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PLAN FORM 6A (2012) WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Office Use Only

Registered: 20.02.2018

Office Use Only

DP1182418

PLAN OF SUBDIVISION OF
LOT 40 D.P.1172246
LOT 45 D.P.1222728
AND Pt. LOT 1 D.P.581523
(being part of the land in CT Vol.12983 Fol.249)
AND EASEMENT OVER LOT 131 D.P.262456

Subdivision Certificate No.: 9321

Date of Endorsement: 24 October 2017

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses – See 60(c) SSI Regulation 2012
- Statements of intention to create and release affecting interests in accordance with section 88B Conveyancing Act, 1919.
- Signatures and seals – See 195D Conveyancing Act, 1919.
- Any information which cannot fit in the appropriate panel of sheet 1 of the Administration sheets.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919-1964 AS AMENDED IT IS INTENDED TO CREATE:-

1. EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE (E1)
2. EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE (E11)
3. EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE (E12)
4. EASEMENT FOR ACCESS AND MAINTENANCE 1 WIDE (E13)
5. EASEMENT TO DRAIN WATER 1 WIDE (E4)
6. EASEMENT TO DRAIN WATER 1.5 WIDE (E5)
7. EASEMENT TO DRAIN WATER VARIABLE WIDTH (E3)
8. EASEMENT TO DRAIN WATER OVER WHOLE LOT (E6)
9. POSITIVE COVENANT (P1)
10. RESTRICTION ON THE USE OF LAND
11. EASEMENT FOR SUPPORT 0.2 WIDE (E7)
12. EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (E2)
13. RESTRICTION ON THE USE OF LAND (R1)
14. RESTRICTION ON THE USE OF LAND (R2)
15. POSITIVE COVENANT 1 WIDE (P3)
16. RESTRICTION ON THE USE OF LAND 1 WIDE (R3)
17. EASEMENT FOR ACCESS, MAINTENANCE AND RETAINING WALL SUPPORT 1 WIDE (E9)
18. RESTRICTION ON THE USE OF LAND
19. POSITIVE COVENANT
20. RESTRICTION ON THE USE OF LAND
21. EASEMENT FOR OVERHANG 0.8 WIDE (E10)

RELEASE:-

1. EASEMENT FOR ELECTRICITY PURPOSES 2.75 WIDE (Z91523)

STREET ADDRESSES NOT AVAILABLE

SURVEYOR'S REFERENCE: 19576-4C2

Req:R732546 /Doc:DP 1182418 P /Rev:20-Feb-2018 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 17:26 /Seq:7 of 7
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PLAN FORM 6A (2012) WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Office Use Only

Registered: 20.02.2018

Office Use Only

DP1182418

PLAN OF SUBDIVISION OF
LOT 40 D.P.1172246
LOT 45 D.P.1222728
AND Pt. LOT 1 D.P.581523
(being part of the land in CT Vol.12983 Fol.249)
AND EASEMENT OVER LOT 131 D.P.262456

Subdivision Certificate No.: 9321

Date of Endorsement: 24 October 2017

This sheet is for the provision of the following information as required:

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- Statements of intention to create and release affecting interests in accordance with section 88B Conveyancing Act, 1919.
- Signatures and seals – See 195D Conveyancing Act, 1919.
- Any information which cannot fit in the appropriate panel of sheet 1 of the Administration sheets.

SIGNED BY ME - VICKI PONT (SENIOR SOLICITOR)
AS DELEGATE FOR NEW SOUTH WALES LAND
& HOUSING CORPORATION AND I HEREBY
DECLARE I HAVE NO KNOWLEDGE OF REVOCATION OF
SUCH DELEGATION IN THE PRESENCE OF:-

.....
SIGNATURE OF WITNESS

Amanda Alassaad-Brown
NAME OF WITNESS

14/60 Station St, Parramatta
ADDRESS OF WITNESS

SURVEYOR'S REFERENCE: 19576-4C2

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
23/4/2021 10:29AM

FOLIO: 218/262449

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 14897 FOL 150

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
22/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
2/4/1990	DP643264	DEPOSITED PLAN	EDITION 1
15/1/2008	AD701276	LEASE	
15/1/2008	AD701277	MORTGAGE OF LEASE	EDITION 2
12/5/2015	AJ473952	SURRENDER OF LEASE	EDITION 3
1/11/2020	AQ514583	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 218/262449

SEARCH DATE	TIME	EDITION NO	DATE
23/4/2021	10:27 AM	3	12/5/2015

LAND

LOT 218 IN DEPOSITED PLAN 262449
AT BONNYRIGG
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF ST LUKE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP262449

FIRST SCHEDULE

NEW SOUTH WALES LAND AND HOUSING CORPORATION

SECOND SCHEDULE (1 NOTIFICATION)

1 DP643264 EASEMENT TO DRAIN WATER 1.5 WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 23/04/2021 10:27:15

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
23/4/2021 10:29AM

FOLIO: 186/262449

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 14897 FOL 118

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
22/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
22/5/1991	DP644711	DEPOSITED PLAN	EDITION 1
15/1/2008	AD701276	LEASE	
15/1/2008	AD701277	MORTGAGE OF LEASE	EDITION 2
12/5/2015	AJ473952	SURRENDER OF LEASE	EDITION 3
1/11/2020	AQ514583	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 186/262449

SEARCH DATE	TIME	EDITION NO	DATE
23/4/2021	10:27 AM	3	12/5/2015

LAND

LOT 186 IN DEPOSITED PLAN 262449
AT BONNYRIGG
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF ST LUKE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP262449

FIRST SCHEDULE

NEW SOUTH WALES LAND AND HOUSING CORPORATION

SECOND SCHEDULE (2 NOTIFICATIONS)

1 DP644711 EASEMENT TO DRAIN WATER OVER EXISTING LINE OF PIPES AFFECTING THE PART SHOWN SO BURDENED IN DP644711
2 DP644711 EASEMENT TO DRAIN WATER OVER EXISTING LINE OF PIPES APPURTENANT TO THE LAND ABOVE DESCRIBED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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11126210

[redacted]ICATE OF TITLE

[redacted]RTY ACT, 1900, as amended.

NEW SOUTH WALES

Vol. 11126 Fol. 210

CANCELLED W

AS Edition issued 26-8-1969

Crown Grant Vol.242 Fol. 6

Prior Title Vol.4295 Fol.131

L513816

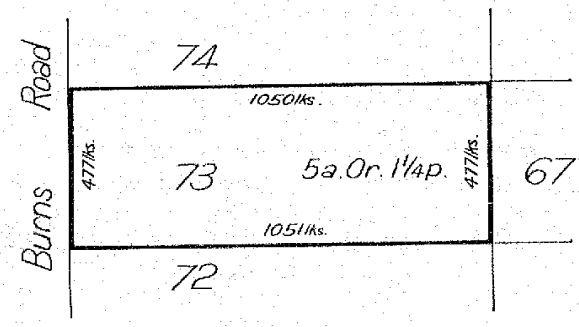
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness B. Hinchey

Registrar General.

(Page 1) Vol. 11126 Fol. 210

PLAN SHOWING LOCATION OF LAND



L513816. S.E. GE

Scale: 4 chains to one inch.

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 73 in Deposited Plan 1327 in the Municipality of Fairfield Parish of St.Luke and County of Cumberland.

FIRST SCHEDULE

~~VICTOR VACLAV MLYNARIK of Bonnyrigg, Plant Operator and TATANA MLYNARIK, his wife as Joint Tenants.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

Registrar General

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE

RG 2/62 NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

, 17 V.C.N. Blight, Government Printer

Vol. 11126 Fol 210

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
The Housing Commission of New South Wales	Resumption	N540267		3-12-1973	

NEW CERTIFICATE(S) OF TITLE ISSUING ON DP581523
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH.

This deed is cancelled as to THE WHOLE
New Certificates of Title have issued on 9-2-1976
for lots in Deposited Plan No. 581523.
Lots 1 & 2 Vol. 12983 Fol. 219 & 220 respectively.

REGISTRAR GENERAL

Cancelled
N540267-N
DP581523
20/1/76

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

Req:R731986 /Doc:CT 11126-210 CT /Rev:19-Jan-2011 /NSW LRS /Pgs:ALL /Prt:23-Apr-2021 16:24 /Seq:2 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:Bonnyrigg 60593

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
23/4/2021 10:29AM

FOLIO: 39/1172246

First Title(s): VOL 242 FOL 5 VOL 242 FOL 6
Prior Title(s): 414/262456

Recorded	Number	Type of Instrument	C.T. Issue
7/2/2013	DP1172246	DEPOSITED PLAN	FOLIO CREATED EDITION 1
7/3/2013	AH596110	DEPARTMENTAL DEALING	
21/9/2016	AK772930	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 2
6/2/2017	DP1222728	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

Bonnyrigg 60593 PRINTED ON 23/4/2021

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Received: 23/04/2021 10:29:15

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
23/4/2021 10:29AM

FOLIO: 101/262456

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 14894 FOL 104

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
8/8/1990	Z91523	TRANSFER GRANTING EASEMENT	EDITION 1
15/1/2008	AD701276	LEASE	
15/1/2008	AD701277	MORTGAGE OF LEASE	EDITION 2
12/5/2015	AJ473952	SURRENDER OF LEASE	EDITION 3
6/2/2017	DP1222728	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

Bonnyrigg 60593 PRINTED ON 23/4/2021

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Received: 23/04/2021 10:29:15

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
23/4/2021 10:29AM

FOLIO: 45/1222728

First Title(s): VOL 242 FOL 5 VOL 242 FOL 6
Prior Title(s): 101/262456 39/1172246

Recorded	Number	Type of Instrument	C.T. Issue
6/2/2017	DP1222728	DEPOSITED PLAN	FOLIO CREATED EDITION 1
24/11/2017	DP1224608	WITHDRAWN - PROPOSED PLAN	
24/11/2017	DP1224609	WITHDRAWN - PROPOSED PLAN	
24/11/2017	DP1224610	WITHDRAWN - PROPOSED PLAN	
24/11/2017	DP1224611	WITHDRAWN - PROPOSED PLAN	
20/2/2018	DP1182418	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

Bonnyrigg 60593 PRINTED ON 23/4/2021

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Received: 23/04/2021 10:29:14

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
23/4/2021 10:29AM

FOLIO: 4099/1182418

First Title(s): VOL 242 FOL 5 VOL 242 FOL 6
Prior Title(s): 45/1222728

Recorded	Number	Type of Instrument	C.T. Issue
20/2/2018	DP1182418	DEPOSITED PLAN	FOLIO CREATED EDITION 1

*** END OF SEARCH ***

Bonnyrigg 60593 PRINTED ON 23/4/2021

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LAND REGISTRY SERVICES Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 4099/1182418

SEARCH DATE	TIME	EDITION NO	DATE
23/4/2021	10:27 AM	1	20/2/2018

LAND

LOT 4099 IN DEPOSITED PLAN 1182418
AT BONNYRIGG
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF ST LUKE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1182418

FIRST SCHEDULE

NEW SOUTH WALES LAND AND HOUSING CORPORATION

SECOND SCHEDULE (11 NOTIFICATIONS)

1	DP1182418	EASEMENT FOR ACCESS AND MAINTENANCE 1 METRE(S) WIDE REFERRED TO AND NUMBERED (2) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
2	DP1182418	EASEMENT FOR ACCESS AND MAINTENANCE 1 METRE(S) WIDE REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
3	DP1182418	EASEMENT FOR ACCESS AND MAINTENANCE 1 METRE(S) WIDE REFERRED TO AND NUMBERED (4) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
4	DP1182418	EASEMENT TO DRAIN WATER 1 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM
5	DP1182418	EASEMENT TO DRAIN WATER 1.5 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
6	DP1182418	EASEMENT TO DRAIN WATER 1.5 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM
7	DP1182418	EASEMENT FOR PADMOUNT SUBSTATION 2.75 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
8	DP1182418	RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (13) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
9	DP1182418	RESTRICTION(S) ON THE USE OF LAND REFERRED TO AND NUMBERED (14) IN THE S.88B INSTRUMENT
10	DP1182418	EASEMENT FOR ACCESS , MAINTENANCE & RETAINING WALL SUPPORT 1 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

END OF PAGE 1 - CONTINUED OVER

SECOND SCHEDULE (11 NOTIFICATIONS) (CONTINUED)
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11 DP1182418 EASEMENT FOR ACCESS , MAINTENANCE & RETAINING WALL SUPPORT 1 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Appendix H Borelogs

HAND AUGER HA01

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY
DRILLING DATE 30-Mar-21
DRILL RIG N/A
DRILLING METHOD Hand Auger
DIMENSIONS 0.2 x 0.2 m

EASTING 305,600.36
NORTHING 6,247,810.58
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
HA		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, high plasticity with inclusions of ceramics on surface		HA01_0-0.1	1.2	No asbestos, odours or staining observed.
		0.2							
		0.3		CH	CLAY - Orange-brown-grey, homogeneous, firm, damp, high plasticity		HA01_0.3-0.4	1.4	No asbestos, odours or staining observed.
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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HAND AUGER HA02

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY
DRILLING DATE 30-Mar-21
DRILL RIG N/A
DRILLING METHOD Hand Auger
DIMENSIONS 0.2 x 0.2 m

EASTING 305,404.31
NORTHING 6,247,754.79
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
HA		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, high plasticity with inclusions of roots and plastics		HA02_0-0.1	0.8	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Brown-red-orange, heterogeneous, firm, damp, high plasticity with inclusions of shale gravels		HA02_0.2-0.3	0.9	No asbestos, odours or staining observed.
		0.3							
		0.4		CH	CLAY - Red-grey, homogeneous, firm, damp, high plasticity		HA02_0.4-0.5	0.8	No asbestos, odours or staining observed.
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP01

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,751.93
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,248,077.62
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low - medium plasticity with inclusions of roots		TP01_0-0.1	1.2	No asbestos, or staining observed. Slight organic odour observed.QAQC_01 taken at TP01_0.0-0.1
		0.2					TP01_0.2-0.3	0.8	No asbestos, odours or staining observed.
		0.3							
		0.4		RWN	RWN - CLAY - Orange-yellow, heterogeneous, soft, damp, high plasticity with inclusions of gravels		TP01_0.4-0.5	1.4	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8							
		0.9		CH	CLAY - Orange-grey, homogeneous, firm, damp, high plasticity		TP01_0.9-1	2	No asbestos, odours or staining observed.
		1							
		1.1							
		1.2			Termination Depth at: 1.2 m.				
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP02

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,813.67
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,248,098.04
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low plasticity with inclusions of roots, timber and metalsClay becomes dark brown-red and firm at 0.2mbgs with inclusions of clay clasts		TP02_0-0.1	1.4	No asbestos, odours or staining observed.
		0.2					TP02_0.2-0.3	1.4	No asbestos, odours or staining observed.
		0.3							
		0.4		RWN	RWN - CLAY - Red, heterogeneous, soft, damp, medium plasticity		TP02_0.4-0.5	1.2	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8							
		0.9		CH	CLAY - Red-grey-orange, homogeneous, firm, damp, medium - high plasticity		TP02_0.9-1	1	No asbestos, odours or staining observed.
		1							
		1.1							
		1.2			Termination Depth at: 1.2 m.				
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP03

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,697.24
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,248,024.14
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low plasticity with inclusions of gravels		TP03_0-0.1	0.8	No asbestos, odours or staining observed.
		0.2		Fill	Fill - Sandy CLAY - Dark brown-red, heterogeneous, soft, damp, medium		TP03_0.2-0.3	1	No asbestos, odours or staining observed.
		0.3							
		0.4		RWN	RWN - CLAY - Grey, heterogeneous, soft, damp, medium plasticity		TP03_0.4-0.5	1.1	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8							
		0.9		RWN	RWN - CLAY - Dark brown-red, heterogeneous, soft, damp, medium plasticity with inclusions of gravels		TP03_0.9-1	1.8	No asbestos, odours or staining observed.
		1							
		1.1							
		1.2							
		1.3							
		1.4		CH	CLAY - Red-orange, homogeneous, mottled, firm, damp, high plasticity		TP03_1.4-1.5	1.9	No asbestos, odours or staining observed.
		1.5							
		1.6							
		1.7							
		1.8							
		1.9			Termination Depth at: 1.8 m.				

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TEST PIT TP04

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,706
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,247,970.76
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low plasticity with inclusions of pebbles and roots		TP04_0-0.1	1.5	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Dark brown-red-orange, heterogeneous, soft, damp, medium plasticity		TP04_0.2-0.3	1	No asbestos, odours or staining observed.
		0.3							
		0.4		CH	CLAY - Red-orange, homogeneous, firm, damp, high plasticity with inclusions of Ironstone fragments		TP04_0.4-0.5	1.5	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP05

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,763.54
NORTHING 6,247,979.76
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low plasticity with inclusions of rootlets		TP05_0-0.1	2	No asbestos, odours or staining observed.
									QAQC_02 taken at TP05_0.0-0.1
		0.2		RWN	RWN - CLAY - Grey-red-orange, heterogeneous, firm, damp, medium plasticity with inclusions of clay pipe		TP05_0.2-0.3	2.3	No asbestos, odours or staining observed.
		0.3							
		0.4		CH	CLAY - Grey-orange, homogeneous, firm, damp, high plasticity		TP05_0.4-0.5	2.2	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP06

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,794.91
NORTHING 6,247,963.39
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low plasticity with inclusions of rootlets and gravels		TP06_0-0.1	0.6	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Red-grey-orange, heterogeneous, firm, damp, medium - high plasticity		TP06_0.2-0.3	0.6	No asbestos, odours or staining observed.
		0.3							
		0.4		CH	CLAY - Red-grey, homogeneous, firm, damp, medium - high plasticity		TP06_0.4-0.5	0.6	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP07

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,630.03
NORTHING 6,247,931.03
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots		TP07_0-0.1	0.8	No asbestos, odours or staining observed. Timber (chip-board) fragments burried adjacent to testpit
		0.2		RWN	RWN - CLAY - Red-grey-orange, heterogeneous, firm, damp, high plasticity		TP07_0.2-0.3	0.9	No asbestos, odours or staining observed.
		0.4		CH	CLAY - Red-grey, homogeneous, firm, damp, high plasticity		TP07_0.4-0.5	1	No asbestos, odours or staining observed.
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP08

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,595.58
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,247,938.25
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - CLAY - Grey-red-orange-brown, heterogeneous, soft - firm, damp, low - high plasticity with inclusions of roots, gravels, clay pipe, glass		TP08_0-0.1	2.1	No asbestos, odours or staining observed.
		0.2		Fill	Fill - Sandy CLAY - Red-grey, heterogeneous, firm, dry - damp, low - high plasticity with inclusions of plastic, clay pipe, gravels, brick		TP08_0.2-0.3	1.8	No asbestos, odours or staining observed.
		0.3							
		0.4					TP08_0.4-0.5	1.8	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8							
		0.9		CH	CLAY - Red-grey, homogeneous, firm, damp, high plasticity		TP08_0.9-1	1.7	No asbestos, odours or staining observed.
		1							
		1.1							
		1.2			Termination Depth at: 1.2 m.				
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP09

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,630.25
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,247,897.8
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, low plasticity with inclusions of roots, glass and gravels		TP09_0-0.1	0.8	No asbestos, odours or staining observed. QAQC_03 taken at TP09_0.0-0.1
		0.2		CH	CLAY - Red, homogeneous, stiff, damp, high plasticity		TP09_0.2-0.3	1	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP10

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,704.05
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,247,912.09
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of brick, gravels, PVC pipe and plastics		TP10_0-0.1	1.2	No asbestos, or staining observed. Slight organic odour observed.
		0.2		CH	CLAY - Red-grey, homogeneous, soft, damp, high plasticity		TP10_0.2-0.3	1.4	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP11

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,762.62
NORTHING 6,247,886.72
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark red-brown, heterogeneous, soft, damp, low plasticity with inclusions of gravels		TP11_0-0.1	1.8	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red, homogeneous, stiff, damp, high plasticity		TP11_0.2-0.3	1.6	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP12

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,546.44
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,247,899.06
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of rootlets and gravels		TP12_0-0.1	1.2	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Red-orange, heterogeneous, firm, damp, medium plasticity		TP12_0.2-0.3	1.8	No asbestos, odours or staining observed.
		0.3							
		0.4		CH	CLAY - Grey-orange, homogeneous, stiff, damp, high plasticity		TP12_0.4-0.5	2.2	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP13

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,474.46
NORTHING 6,247,884.96
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of gravels		TP13_0-0.1	2	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Orange-grey, heterogeneous, firm, damp, medium plasticity with inclusions of shale		TP13_0.2-0.3	1.9	No asbestos, odours or staining observed.
		0.3							
		0.4		CH	CLAY - Grey-orange, homogeneous, stiff, damp, high plasticity with inclusions of shale		TP13_0.4-0.5	2.1	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP14

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,503.19
NORTHING 6,247,841.93
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of gravels and roots		TP14_0-0.1	0.9	No asbestos, odours or staining observed.
		0.2							
		0.3		RWN	RWN - CLAY - Brown-red, heterogeneous, firm, damp, medium plasticity		TP14_0.3-0.4	1.2	No asbestos, odours or staining observed.
		0.4		CH	CLAY - Orange-grey, homogeneous, stiff, damp, high plasticity		TP14_0.4-0.5	1.6	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP15

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,528.48
NORTHING 6,247,762.89
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) - CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of plastic, roots and gravels		TP15_0-0.1	2.1	No asbestos, odours or staining observed.
		0.2		Fill	Fill - CLAY - Brown, heterogeneous, soft, damp, medium plasticity with inclusions of bitumen concrete, brick and glass		TP15_0.2-0.3	2.2	No asbestos, odours or staining observed.
		0.3							
		0.4					TP15_0.4-0.5	2.2	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8							
		0.9		CH	CLAY - Red-grey, homogeneous, stiff, damp, high plasticity		TP15_0.9-1	2.8	No asbestos, odours or staining observed.
		1							
		1.1							
		1.2			Termination Depth at: 1.2 m.				
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP16

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,536.2
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 29-Mar-21	**NORTHING** 6,247,742.17
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots and glass		TP16_0-0.1	0.6	No asbestos, odours or staining observed.
		0.2		Fill	Fill - CLAY - Brown-red, heterogeneous, soft, damp, medium plasticity with the inclusion of gravels		TP16_0.2-0.3	1.3	No asbestos, odours or staining observed.
		0.3							
		0.4		RWN	RWN - CLAY - Red, homogeneous, firm, damp, high plasticity		TP16_0.4-0.5	1.6	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8							
		0.9		RWN	RWN - CLAY - Dark brown-grey, homogeneous, soft, wet, high plasticity		TP16_0.9-1	1.8	No asbestos, odours or staining observed.
		1		RWN	RWN - CLAY - Orange-grey, homogeneous, firm, damp, high plasticity				
		1.1					TP16_1.1-1.2	1.8	No asbestos, odours or staining observed.
		1.2							
		1.3							
		1.4							
		1.5		CH	CLAY - Grey-orange, homogeneous, stiff, damp, high plasticity		TP16_1.5-1.6	2	No asbestos, odours or staining observed.
		1.6							
		1.7							
		1.8							
					Termination Depth at: 1.8 m.				
		1.9							

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TEST PIT TP17

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,494.57
NORTHING 6,247,716.51
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of gravels and rootsClay becomes a light brown with increasing firmness at 0.2mbgs		TP17_0-0.1	1.1	No asbestos, odours or staining observed.
		0.2							
		0.3					TP17_0.2-0.3	1.4	No asbestos, odours or staining observed.
		0.4							
		0.5		CH	CLAY - Red, homogeneous, stiff, damp, high plasticity with inclusions of roots		TP17_0.4-0.5	2.6	No asbestos, odours or staining observed.
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP18

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 29-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,552.58
NORTHING 6,248,003.07
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - Sandy Gravelly CLAY - Yellow-brown, heterogeneous, soft, dry, low plasticity, fine grained with inclusions of glass		TP18_0-0.1	1	No asbestos, odours or staining observed.
		0.2							
		0.3		Fill	Fill - Clayey SAND - Yellow-brown, heterogeneous, well graded, medium grained, loose, dry with inclusions of glass and gravels		TP18_0.3-0.4	0.8	No asbestos, odours or staining observed.
		0.4							
		0.5		CH	CLAY - Red-grey, homogeneous, stiff, dry, high plasticity		TP18_0.5-0.6	1.4	No asbestos, odours or staining observed.
		0.6							
		0.7							
		0.8							
		0.9			Termination Depth at: 0.9 m.				
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP19

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,423.88
NORTHING 6,247,685.46
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, hetergeneous, soft, damp, medium plasticity with inclusions of roots		TP19_0-0.1	0.6	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red, homogeneous, firm, damp, medium - high plasticity		TP19_0.2-0.3	1.2	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP20

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,399.54
NORTHING 6,247,701.3
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots and plastics		TP20_0-0.1	0.5	No asbestos, odours or staining observed.
									QAQC_04 taken at TP20_0.0-0.1
		0.2		RWN	RWN - CLAY - Orange-red, heterogeneous, firm, damp, medium plasticity		TP20_0.2-0.3	0.5	No asbestos, odours or staining observed.
		0.3		CH	CLAY - Red-grey, homogeneous, stiff, damp, high plasticity				
		0.4					TP20_0.4-0.5	1.2	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP21

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,351.66
NORTHING 6,247,683.36
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of glass, ceramics, plastic, fabric and metal		TP21_0-0.1	1.2	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red-grey, homogeneous, firm, damp, high plasticity		TP21_0.2-0.3	1.6	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP22

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,307.32
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 30-Mar-21	**NORTHING** 6,247,710.99
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots		TP22_0-0.1	1.4	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red-grey, homogeneous, firm, damp, high plasticity		TP22_0.2-0.3	1.5	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP23

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,319.84
NORTHING 6,247,735.29
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots and clay pipe		TP23_0-0.1	1.1	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red-grey, homogeneous, firm, damp, high plasticity		TP23_0.2-0.3	1.2	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP24

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,545.04
NORTHING 6,247,685.28
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots		TP24_0-0.1	1.2	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Orange, heterogeneous, firm, damp, high plasticity		TP24_0.2-0.3	1.3	No asbestos, odours or staining observed.
		0.3		CH	CLAY - Red-grey, homogeneous, stiff, damp, high plasticity				
		0.4					TP24_0.4-0.5	1.4	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP25

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,379.63
NORTHING 6,247,644.7
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots		TP25_0-0.1	1.1	No asbestos, odours or staining observed. QAQC_05 taken at TP25_0.0-0.1
		0.2		CH	CLAY - Red-orange, homogeneous, soft, damp, high plasticity with roots		TP25_0.2-0.3	0.8	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP26

PROJECT NUMBER 60439	**DRILLING COMPANY** Ken Coles	**EASTING** 305,455.26
PROJECT NAME Bonnyrigg Stages 8-11	**DRILLING DATE** 30-Mar-21	**NORTHING** 6,247,648.45
CLIENT LAHC	**DRILL RIG**	**COORD SYS** GDA94_MGA_zone_56
ADDRESS Humphries Road, Bonnyrigg, NSW	**DRILLING METHOD** Bucket Excavation	**COORD SOURCE** Map Approximation
	DIMENSIONS 0.3 x 1 m	**LOGGED BY** A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots and gravels		TP26_0-0.1	1.1	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red-orange, homogeneous, firm, damp, high plasticity with roots		TP26_0.2-0.3	1.4	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP27

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,455.83
NORTHING 6,247,677.26
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of roots		TP27_0-0.1	1.2	No asbestos, odours or staining observed.
		0.2		CH	CLAY - Red-orange, homogeneous, firm, damp, high plasticity with roots		TP27_0.2-0.3	1.5	No asbestos, odours or staining observed.
		0.3							
		0.4							
		0.5			Termination Depth at: 0.5 m.				
		0.6							
		0.7							
		0.8							
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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TEST PIT TP28

PROJECT NUMBER 60439
PROJECT NAME Bonnyrigg Stages 8-11
CLIENT LAHC
ADDRESS Humphries Road, Bonnyrigg, NSW

DRILLING COMPANY Ken Coles
DRILLING DATE 30-Mar-21
DRILL RIG
DRILLING METHOD Bucket Excavation
DIMENSIONS 0.3 x 1 m

EASTING 305,534.02
NORTHING 6,247,621.15
COORD SYS GDA94_MGA_zone_56
COORD SOURCE Map Approximation
LOGGED BY A. Smith

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Class	Lithological Description	Moisture	Samples	PID	Additional Observations
BE		0.1		Fill	Fill - (Topsoil) CLAY - Dark brown, heterogeneous, soft, damp, medium plasticity with inclusions of galss, ceramics and roots		TP28_0-0.1	1.6	No asbestos, odours or staining observed.
		0.2		RWN	RWN - CLAY - Brown, heterogeneous, firm, damp, medium plasticity with inclusions of roots		TP28_0.2-0.3	1.5	No odours or staining observed. ACM fragments observed.
		0.3					TP28-F1		
		0.4		CH	CLAY - Grey-red, homogeneous, firm, dampm high plasticity		TP28_0.4-0.5	2.1	No asbestos, odours or staining observed.
		0.5							
		0.6							
		0.7							
		0.8			Termination Depth at: 0.8 m.				
		0.9							
		1							
		1.1							
		1.2							
		1.3							
		1.4							
		1.5							
		1.6							
		1.7							
		1.8							
		1.9							

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Appendix I QA/QC

ESDAT QA Checker
Project:60439
Site:LAHC_Bonnyrigg_NSW
Filter: SDG in('784428','784145')
The following exported Lab Reports are not Accepted: MGT|784145, MGT|784428

Overview Summary
- Count of Samples
- Count of Results

Holding Times
- Holding Time Errors (561)

Blanks
- Field Blanks
- Detects in Lab Blanks (0)
- SDG's without Storage Blanks (2)
- SDG's without Method Blanks (0)

Duplicates
- Field and Interlab Duplicates
- Lab Duplicates with high RPDs (18)
- Duplicate Samples with incorrect or missing Parent Samples (0)
- Samples at the same Location/Depth/Time not specified as duplicates (1)

Surrogates
- Surrogate Variation > 30% or outside lab LCL or UCL (8)

Lab Control Samples
- SDG's without a Laboratory Control Sample (0)
- Laboratory Control Samples, Error > 30% (0)

Certified and Standard Reference Materials
- Certified Reference Materials - Error > 10% (0)

Matrix Spikes
- SDG's without a Matrix Spike (0)
- Trip Spikes with invalid Control Sample (0)
- Less than 1 matrix spike in 20 samples (1)
- Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL (0)
- Trip Spike Recoveries (70% - 130% is acceptable) (6)

Inorganic
- Na + CL > TDS (0)
- BOD > COD (0)
- BOD > COD (0)

Other
- Unit Conversion Problems (0)
- OriginalChemNames Requiring Validation (1)
- Samples with no Results (0)
- Aborted Analysis (2)

INSERT QAQC TABLE NAME
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

Contents
Count of Samples

Matrix Type	soil	water
First Sample Date	29/03/2021	29/03/2021
Last Sample Date	30/03/2021	29/03/2021
Sampling Period (days)	2	1
Number of Samples Submitted	33	1
Number of Non QA Samples Submitted	32	0
Number of Field Blanks	0	0
Number of Trip Blanks	0	1
Number of Rinsates	0	0
Number of Field Duplicates	2	0
Number of Trip Spikes	0	1
Number of Lab Duplicates	10	0
Number of LCSs	11	1
Number of CRMs	0	0
Number of Method Blanks	10	1
Number of Storage Blanks	0	0
Number of Matrix Spikes	12	0
Number of Matrix Spike Dupes	0	0

INSERT QAQC TABLE NAME
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

soil

Field Duplicates (soil)
Filter: SDG in('784428','784145')

				SDG	784145	788112		784145	ENVIROLAB 265444		784428	784428		784428	ENVIROLAB 265548	
				Field ID	TP01_0-0.1	QC01	**RPD**	TP01_0-0.1	QA01	**RPD**	TP20_0-0.1	QC04	**RPD**	TP20_0-0.1	QA04	**RPD**
				Sampled Date/Time	29/03/2021	29/03/2021		29/03/2021	29/03/2021		30/03/2021	30/03/2021		30/03/2021	30/03/2021	
Filter	**Chem_Grou**	**ChemName**	**Units**	**EQL**												
Metals & Metalloids	Metals & M	Arsenic	mg/kg	2 : 4 (Interlab)	12	13	8	12	10	18	26	21	21	**26**	**14**	**60**
Metals & Metalloids		Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
Metals & Metalloids		Chromium (III+VI)	mg/kg	5 : 1 (Interlab)	15	19	23	15	13	14	25	29	15	25	19	27
Metals & Metalloids		Copper	mg/kg	5 : 1 (Interlab)	**19**	20	5	**19**	**14**	**30**	32	30	6	32	34	6
Metals & Metalloids		Lead	mg/kg	5 : 1 (Interlab)	**28**	29	3	**28**	**20**	**33**	60	49	20	**60**	**42**	**35**
Metals & Metalloids		Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	0.1	0
Metals & Metalloids		Nickel	mg/kg	5 : 1 (Interlab)	12	12	0	12	9	29	9.8	12	20	9.8	10	2
Metals & Metalloids		Zinc	mg/kg	5 : 1 (Interlab)	160	190	17	160	200	22	370	360	3	**370**	**200**	**60**
Metals & Metalloids																
TPHs (NEPC 1999)	TPHs (NEPC	C6-C9 Fraction	mg/kg	20 : 25 (Interlab)	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0
TPHs (NEPC 1999)		C10-C14 Fraction	mg/kg	20 : 50 (Interlab)	<20	<20	0	<20	<50	0	<20	<20	0	<20	<50	0
TPHs (NEPC 1999)		C15-C28 Fraction	mg/kg	50 : 100 (Interlab)	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0
TPHs (NEPC 1999)		C29-C36 Fraction	mg/kg	50 : 100 (Interlab)	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0
TPHs (NEPC 1999)		C10-C36 Fraction (Sum of Total)	mg/kg	50							<50	<50	0	<50		
TPHs (NEPC 1999)																
TRHs (NEPC 2013)	TRHs (NEPC	C6-C10	mg/kg	20 : 25 (Interlab)	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0
TRHs (NEPC 2013)		C10-C16	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
TRHs (NEPC 2013)		C16-C34	mg/kg	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
TRHs (NEPC 2013)		C34-C40	mg/kg	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
TRHs (NEPC 2013)		C10-C40 (Sum of total)	mg/kg	100 : 50 (Interlab)	<100	<100	0	<100	<50	0	<100	<100	0	<100	<50	0
TRHs (NEPC 2013)		F1 (C6-C10 minus BTEX)	mg/kg	20 : 25 (Interlab)	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0
TRHs (NEPC 2013)		F2 (C10-C16 less Naphthalene)	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
TRHs (NEPC 2013)																
BTEXN	BTEXN	Benzene	mg/kg	0.1 : 0.2 (Interlab)	<0.1	<0.1	0	<0.1	<0.2	0	<0.1	<0.1	0	<0.1	<0.2	0
BTEXN		Toluene	mg/kg	0.1 : 0.5 (Interlab)	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.5	0
BTEXN		Ethylbenzene	mg/kg	0.1 : 1 (Interlab)	<0.1	<0.1	0	<0.1	<1	0	<0.1	<0.1	0	<0.1	<1	0
BTEXN		Xylene (o)	mg/kg	0.1 : 1 (Interlab)	<0.1	<0.1	0	<0.1	<1	0	<0.1	<0.1	0	<0.1	<1	0
BTEXN		Xylene (m & p)	mg/kg	0.2 : 2 (Interlab)	<0.2	<0.2	0	<0.2	<2	0	<0.2	<0.2	0	<0.2	<2	0
BTEXN		Xylene Total	mg/kg	0.3 : 3 (Interlab)	<0.3	<0.3	0	<0.3	<3	0	<0.3	<0.3	0	<0.3	<3	0
BTEXN		Naphthalene - MAH	mg/kg	0.5							<0.5	<0.5	0	<0.5		
BTEXN																
PAH	PAH	Acenaphthene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Acenaphthylene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Anthracene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Benz(a)anthracene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Benzo(a) pyrene	mg/kg	0.5 : 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.05	0
PAH		Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	**1.2**	**1.2**	0	**1.2**	**<0.5**	**82**	1.2	1.2	0	**1.2**	**<0.5**	**82**
PAH		Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0.6	0	0.6	<0.5	18	0.6	0.6	0	0.6	<0.5	18
PAH		Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
PAH		Benzo(b+j)fluoranthene	mg/kg	0.5							<0.5	<0.5	0	<0.5		
PAH		Benzo(g,h,i)perylene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Benzo(k)fluoranthene	mg/kg	0.5							<0.5	<0.5	0	<0.5		
PAH		Chrysene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Dibenz(a,h)anthracene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Fluoranthene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Fluorene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Indeno(1,2,3-c,d)pyrene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Naphthalene - PAH	mg/kg	0.5							<0.5	<0.5	0	<0.5		
PAH		Phenanthrene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Pyrene	mg/kg	0.5 : 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
PAH		PAHs (Sum of total)	mg/kg	0.5 : 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.05	0
PAH																
Organochlorine Pesticide	Organochlo	4,4-DDE	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	0.21	0.22	5	**0.21**	**0.1**	**71**
Organochlorine Pesticide		a-BHC	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		b-BHC	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		d-BHC	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		g-BHC (Lindane)	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Aldrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Dieldrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Aldrin + Dieldrin	mg/kg	0.05							<0.05	<0.05	0	<0.05		
Organochlorine Pesticide		Chlordane	mg/kg	0.1							<0.1	<0.1	0	<0.1		
Organochlorine Pesticide		DDT	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	**0.5**	**1.9**	**117**	**0.5**	**<0.1**	**133**
Organochlorine Pesticide		DDD	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		DDT+DDE+DDD	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	**0.71**	**2.12**	**100**	**0.71**	**0.1**	**151**
Organochlorine Pesticide		Endosulfan I	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Endosulfan II	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Endosulfan sulphate	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Endrin	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Endrin aldehyde	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Endrin ketone	mg/kg	0.05							<0.05	<0.05	0	<0.05		
Organochlorine Pesticide		Heptachlor	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Organochlorine Pesticide		Heptachlor Epoxide	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0

INSERT QAQC TABLE NAME
Project Number: 60439
Project Name: Bonnyrigg Stages 8-11

soil

Field Duplicates (soil)
Filter: SDG in('784428','784145')

				SDG	784145	788112		784145	ENVIROLAB 265444		784428	784428		784428	ENVIROLAB 265548	
				Field ID	TP01_0-0.1	QC01	**RPD**	TP01_0-0.1	QA01	**RPD**	TP20_0-0.1	QC04	**RPD**	TP20_0-0.1	QA04	**RPD**
				Sampled Date/Time	29/03/2021	29/03/2021		29/03/2021	29/03/2021		30/03/2021	30/03/2021		30/03/2021	30/03/2021	
Organochlorine Pesticide		Methoxychlor	mg/kg	0.2 : 0.1 (Interlab)	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Organochlorine Pesticide		Toxaphene	mg/kg	0.1							<0.1	<0.1	0	<0.1		
Organochlorine Pesticides																
Chlorinated Benzenes	Chlorinated	Hexachlorobenzene	mg/kg	0.05 : 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Chlorinated Benzenes																
EPA VIC - IWRG621	EPA VIC - IW	Organochlorine Pesticides EPAVic	mg/kg	0.1							**0.71**	**2.12**	**100**	0.71		
EPA VIC - IWRG621		Other Organochlorine Pesticides E	mg/kg	0.1							<0.2	<0.2	0	<0.2		
EPA VIC - IWRG621																
Asbestos - Eurofins	Asbestos - E	Approximate Sample Mass	g								622	556	11	622		
Asbestos - Eurofins		Mass ACM	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Mass Asbestos in ACM	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Asbestos from ACM in Soil	% (w/w)								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Mass FA	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Mass Asbestos in FA	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Mass AF	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Mass asbestos in AF	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Asbestos from FA & AF in Soil	% (w/w)								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		Mass Asbestos in FA & AF	g								0.0E0	0.0E0	0	0.0E0		
Asbestos - Eurofins		ACM - Comment	Comment								1	1	0	1		
Asbestos - Eurofins		FA- Comment	Comment								1	1	0	1		
Asbestos - Eurofins		AF - Comment	Comment								1	1	0	1		
Asbestos - Eurofins		Organic Fibres - Comment	Comment								1	1	0	1		
Asbestos - Eurofins		Respirable Fibres - Comment	Comment								1	1	0	1		
Asbestos - Eurofins		Synthetic Fibres - Comment	Comment								1	1	0	1		
Asbestos - Eurofins		Asbestos Reported Result	Comment								1	1	0	1		
Asbestos - Eurofins																
Other	Other	Moisture Content (dried @ 103°C)	%	1							18	19	5	18		

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 30 (1-10 x EQL); 30 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Appendix J Laboratory Reports and Chain of Custody

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Katie Linz**

Report **784145-S**
Project name BONNYRIGG STAGES 8-11
Project ID 60493
Received Date Mar 30, 2021

Client Sample ID			**TP01_0-0.1**	**TP02_0-0.1**	**TP03_0-0.1**	**TP04_0.2-0.3**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Ma56436**	**S21-Ma56437**	**S21-Ma56439**	**S21-Ma56440**
Date Sampled			**Mar 29, 2021**	**Mar 29, 2021**	**Mar 29, 2021**	**Mar 29, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	52	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	52	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	82	82	78	128
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP01_0-0.1	TP02_0-0.1	TP03_0-0.1	TP04_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56436	S21-Ma56437	S21-Ma56439	S21-Ma56440
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	80	77	78	71
p-Terphenyl-d14 (surr.)	1	%	93	84	89	79
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	92	101	99	95
Tetrachloro-m-xylene (surr.)	1	%	101	92	101	91
Heavy Metals						
Arsenic	2	mg/kg	12	5.7	5.8	8.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	13	20	20
Copper	5	mg/kg	19	33	18	15
Lead	5	mg/kg	28	90	22	36
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	9.2	9.9	7.5
Zinc	5	mg/kg	160	110	66	64

Client Sample ID			TP01_0-0.1	TP02_0-0.1	TP03_0-0.1	TP04_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56436	S21-Ma56437	S21-Ma56439	S21-Ma56440
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
% Moisture	1	%	15	16	17	6.5
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	-	19
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	-	6.4
Total Organic Carbon	0.1	%	-	-	-	1.3
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	14

Client Sample ID			TP05_0-0.1	TP06_0-0.1	TP07_0-0.1	TP08_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56441	S21-Ma56442	S21-Ma56443	S21-Ma56444
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	< 50	< 50
TRH C29-C36	50	mg/kg	-	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	99	137
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			TP05_0-0.1	TP06_0-0.1	TP07_0-0.1	TP08_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56441	S21-Ma56442	S21-Ma56443	S21-Ma56444
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	73	70
p-Terphenyl-d14 (surr.)	1	%	-	-	83	79
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	0.19
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	-	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	-	-	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	0.19
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	-	94	84
Tetrachloro-m-xylene (surr.)	1	%	-	-	92	91
Heavy Metals						
Arsenic	2	mg/kg	9.8	19	12	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	38	21	25
Copper	5	mg/kg	16	23	20	22
Lead	5	mg/kg	24	40	22	28
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.5	8.1	12	12
Zinc	5	mg/kg	48	120	50	71
% Moisture	1	%	17	13	20	13

Client Sample ID			TP09_0-0.1	TP10_0-0.1	TP11_0-0.1	TP12_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56445	S21-Ma56446	S21-Ma56447	S21-Ma56448
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	< 20	-
TRH C15-C28	50	mg/kg	-	< 50	< 50	-
TRH C29-C36	50	mg/kg	-	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	115	129	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	-	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	-
TRH >C10-C16	50	mg/kg	-	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	-
TRH >C16-C34	100	mg/kg	-	< 100	< 100	-
TRH >C34-C40	100	mg/kg	-	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	-
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	69	72	-
p-Terphenyl-d14 (surr.)	1	%	-	80	86	-

Client Sample ID			TP09_0-0.1	TP10_0-0.1	TP11_0-0.1	TP12_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56445	S21-Ma56446	S21-Ma56447	S21-Ma56448
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	-
Toxaphene	0.1	mg/kg	-	< 0.1	< 0.1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	-	82	84	-
Tetrachloro-m-xylene (surr.)	1	%	-	91	96	-
Heavy Metals						
Arsenic	2	mg/kg	17	9.2	13	12
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	43	22	28	21
Copper	5	mg/kg	19	21	19	26
Lead	5	mg/kg	33	30	34	26
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	7.4	8.0	9.5
Zinc	5	mg/kg	50	100	60	90
% Moisture	1	%	17	18	17	17
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	31	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	6.9	-
Total Organic Carbon	0.1	%	-	-	1.8	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	18	-

Client Sample ID			TP13_0-0.1	TP14_0-0.1	TP15_0.4-0.5	TP16_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56449	S21-Ma56450	S21-Ma56451	S21-Ma56452
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	< 50	-	< 50	-
TRH C29-C36	50	mg/kg	< 50	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	126	-	129	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	80	-	64	-
p-Terphenyl-d14 (surr.)	1	%	94	-	72	-

Client Sample ID			TP13_0-0.1	TP14_0-0.1	TP15_0.4-0.5	TP16_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma56449	S21-Ma56450	S21-Ma56451	S21-Ma56452
Date Sampled			Mar 29, 2021	Mar 29, 2021	Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	0.1	mg/kg	< 0.1	-	< 0.1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	94	-	57	-
Tetrachloro-m-xylene (surr.)	1	%	106	-	82	-
Heavy Metals						
Arsenic	2	mg/kg	12	21	11	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	23	29	26
Copper	5	mg/kg	12	58	20	25
Lead	5	mg/kg	14	65	24	34
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.6	10	16	9.7
Zinc	5	mg/kg	26	57	59	60
% Moisture	1	%	14	15	19	24

Client Sample ID			TP17_0-0.1	TP18_0.5-0.6
Sample Matrix			Soil	Soil
Eurofins Sample No.			S21-Ma56453	S21-Ma56456
Date Sampled			Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	-	< 20
TRH C10-C14	20	mg/kg	-	< 20
TRH C15-C28	50	mg/kg	-	< 50
TRH C29-C36	50	mg/kg	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	< 50
BTEX				
Benzene	0.1	mg/kg	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	115
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	73
p-Terphenyl-d14 (surr.)	1	%	-	83

Client Sample ID			TP17_0-0.1	TP18_0.5-0.6
Sample Matrix			Soil	Soil
Eurofins Sample No.			S21-Ma56453	S21-Ma56456
Date Sampled			Mar 29, 2021	Mar 29, 2021
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2
Toxaphene	0.1	mg/kg	-	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	81
Tetrachloro-m-xylene (surr.)	1	%	-	99
Heavy Metals				
Arsenic	2	mg/kg	26	9.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	30	15
Copper	5	mg/kg	26	34
Lead	5	mg/kg	68	9.8
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	8.2	7.6
Zinc	5	mg/kg	50	43
% Moisture	1	%	13	15

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Apr 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Apr 07, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Apr 07, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Apr 07, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Apr 07, 2021	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 09, 2021	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
% Moisture	Sydney	Mar 31, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Sydney	Mar 31, 2021	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Apr 09, 2021	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			

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Address: Level 1, 50 Margaret St
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Project Name: BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP01_0-0.1	Mar 29, 2021		Soil	S21-Ma56436	X				X			X		X	
2	TP02_0-0.1	Mar 29, 2021		Soil	S21-Ma56437	X				X			X		X	
3	TP02_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56438	X										
4	TP03_0-0.1	Mar 29, 2021		Soil	S21-Ma56439	X				X			X		X	
5	TP04_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56440	X		X	X	X			X	X	X	
6	TP05_0-0.1	Mar 29, 2021		Soil	S21-Ma56441	X					X		X			
7	TP06_0-0.1	Mar 29, 2021		Soil	S21-Ma56442	X					X		X			
8	TP07_0-0.1	Mar 29, 2021		Soil	S21-Ma56443	X				X			X		X	
9	TP08_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56444	X				X			X		X	

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

Project Name: BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
10	TP09_0-0.1	Mar 29, 2021		Soil	S21-Ma56445	X					X		X			
11	TP10_0-0.1	Mar 29, 2021		Soil	S21-Ma56446	X				X			X		X	
12	TP11_0-0.1	Mar 29, 2021		Soil	S21-Ma56447	X		X	X	X			X	X	X	
13	TP12_0-0.1	Mar 29, 2021		Soil	S21-Ma56448	X					X		X			
14	TP13_0-0.1	Mar 29, 2021		Soil	S21-Ma56449	X				X			X		X	
15	TP14_0-0.1	Mar 29, 2021		Soil	S21-Ma56450	X					X		X			
16	TP15_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56451	X				X			X		X	
17	TP16_0-0.1	Mar 29, 2021		Soil	S21-Ma56452	X					X		X			
18	TP17_0-0.1	Mar 29, 2021		Soil	S21-Ma56453	X					X		X			
19	TS	Mar 29, 2021		Water	S21-Ma56454											X
20	TB	Mar 29, 2021		Water	S21-Ma56455							X				

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Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
21	TP18_0.5-0.6	Mar 29, 2021		Soil	S21-Ma56456	X				X			X		X	
22	TP01_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56457		X									
23	TP01_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56458		X									
24	TP01_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56459		X									
25	QC01	Mar 29, 2021		Soil	S21-Ma56460		X									
26	TP02_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56461		X									
27	TP02_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56462		X									
28	TP03_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56463		X									
29	TP03_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56464		X									
30	TP03_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56465		X									
31	TP03_1.4-1.5	Mar 29, 2021		Soil	S21-Ma56466		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
32	TP04_0-0.1	Mar 29, 2021		Soil	S21-Ma56467		X									
33	TP04_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56468		X									
34	TP05_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56469		X									
35	TP05_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56470		X									
36	QC02	Mar 29, 2021		Soil	S21-Ma56471		X									
37	TP06_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56472		X									
38	TP06_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56473		X									
39	TP07_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56474		X									
40	TP07_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56475		X									
41	TP08_0-0.1	Mar 29, 2021		Soil	S21-Ma56476		X									
42	TP08_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56477		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
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External Laboratory																
43	TP08_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56478		X									
44	TP09_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56479		X									
45	QC03	Mar 29, 2021		Soil	S21-Ma56480		X									
46	TP10_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56481		X									
47	TP11_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56482		X									
48	TP12_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56483		X									
49	TP12_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56484		X									
50	TP13_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56485		X									
51	TP13_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56486		X									
52	TP14_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56487		X									
53	TP14_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56488		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
54	TP15_0-0.1	Mar 29, 2021		Soil	S21-Ma56489		X									
55	TP15_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56490		X									
56	TP15_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56491		X									
57	TP16_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56492		X									
58	TP16_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56493		X									
59	TP16_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56494		X									
60	TP16_1.1-1.2	Mar 29, 2021		Soil	S21-Ma56495		X									
61	TP16_1.5-1.6	Mar 29, 2021		Soil	S21-Ma56496		X									
62	TP17_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56497		X									
63	TP17_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56498		X									
64	TP18_0.-0.1	Mar 29, 2021		Soil	S21-Ma56499		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
65	TP18_0.3-0.4	Mar 29, 2021		Soil	S21-Ma56500		X									
Test Counts						19	44	2	2	11	7	1	18	2	11	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	89			70-130	Pass	
TRH C10-C14	%	77			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	94			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
o-Xylene	%	96			70-130	Pass	
Xylenes - Total*	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	108			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	77			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	99			70-130	Pass	
Benz(a)anthracene	%	102			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	%	105			70-130	Pass	
Benzo(g.h.i)perylene	%	114			70-130	Pass	
Benzo(k)fluoranthene	%	105			70-130	Pass	
Chrysene	%	101			70-130	Pass	
Dibenz(a.h)anthracene	%	115			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	116			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	97			70-130	Pass	
Pyrene	%	100			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4.4'-DDD	%	88			70-130	Pass	
4.4'-DDE	%	89			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-BHC	%	83			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-BHC	%	82			70-130	Pass	
d-BHC	%	83			70-130	Pass	
Dieldrin	%	85			70-130	Pass	
Endosulfan I	%	85			70-130	Pass	
Endosulfan II	%	85			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	92			70-130	Pass	
Endrin aldehyde	%	78			70-130	Pass	
Endrin ketone	%	81			70-130	Pass	
g-BHC (Lindane)	%	89			70-130	Pass	
Heptachlor	%	80			70-130	Pass	
Heptachlor epoxide	%	84			70-130	Pass	
Hexachlorobenzene	%	87			70-130	Pass	
Methoxychlor	%	84			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Chromium	%	97			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	94			80-120	Pass	
Mercury	%	93			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	99			80-120	Pass	
LCS - % Recovery							
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	82			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S21-Ma58594	NCP	%	79			70-130	Pass	
TRH C10-C14	S21-Ma58572	NCP	%	72			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Ma58594	NCP	%	87			70-130	Pass	
Toluene	S21-Ma58594	NCP	%	86			70-130	Pass	
Ethylbenzene	S21-Ma58594	NCP	%	90			70-130	Pass	
m&p-Xylenes	S21-Ma58594	NCP	%	91			70-130	Pass	
o-Xylene	S21-Ma58594	NCP	%	92			70-130	Pass	
Xylenes - Total*	S21-Ma58594	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S21-Ma58594	NCP	%	105			70-130	Pass	
TRH C6-C10	S21-Ma58594	NCP	%	81			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C10-C16	S21-Ma49449	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	N21-Ma54060	NCP	%	73			70-130	Pass	
Acenaphthylene	N21-Ma54060	NCP	%	74			70-130	Pass	
Anthracene	N21-Ma54060	NCP	%	71			70-130	Pass	
Benz(a)anthracene	N21-Ma54060	NCP	%	74			70-130	Pass	
Benzo(a)pyrene	N21-Ma54060	NCP	%	74			70-130	Pass	
Benzo(b&j)fluoranthene	N21-Ma54060	NCP	%	76			70-130	Pass	
Benzo(g.h.i)perylene	N21-Ma54060	NCP	%	107			70-130	Pass	
Benzo(k)fluoranthene	N21-Ma54060	NCP	%	72			70-130	Pass	
Chrysene	N21-Ma54060	NCP	%	72			70-130	Pass	
Dibenz(a.h)anthracene	N21-Ma54060	NCP	%	112			70-130	Pass	
Fluoranthene	S21-Ma57695	NCP	%	85			70-130	Pass	
Fluorene	N21-Ma54060	NCP	%	74			70-130	Pass	
Indeno(1.2.3-cd)pyrene	N21-Ma54060	NCP	%	110			70-130	Pass	
Naphthalene	N21-Ma54060	NCP	%	73			70-130	Pass	
Phenanthrene	N21-Ma54060	NCP	%	70			70-130	Pass	
Pyrene	N21-Ma54060	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	N21-Ma54060	NCP	%	87			70-130	Pass	
4.4'-DDD	N21-Ma54060	NCP	%	94			70-130	Pass	
4.4'-DDE	N21-Ma54060	NCP	%	92			70-130	Pass	
4.4'-DDT	N21-Ma54060	NCP	%	92			70-130	Pass	
a-BHC	N21-Ma54060	NCP	%	84			70-130	Pass	
Aldrin	N21-Ma54060	NCP	%	87			70-130	Pass	
b-BHC	N21-Ma54060	NCP	%	84			70-130	Pass	
d-BHC	N21-Ma54060	NCP	%	87			70-130	Pass	
Dieldrin	N21-Ma54060	NCP	%	86			70-130	Pass	
Endosulfan I	N21-Ma54060	NCP	%	86			70-130	Pass	
Endosulfan II	N21-Ma54060	NCP	%	84			70-130	Pass	
Endosulfan sulphate	N21-Ma54060	NCP	%	84			70-130	Pass	
Endrin	N21-Ma54060	NCP	%	96			70-130	Pass	
Endrin aldehyde	N21-Ma54060	NCP	%	78			70-130	Pass	
Endrin ketone	N21-Ma54060	NCP	%	82			70-130	Pass	
g-BHC (Lindane)	N21-Ma54060	NCP	%	91			70-130	Pass	
Heptachlor	N21-Ma54060	NCP	%	82			70-130	Pass	
Heptachlor epoxide	N21-Ma54060	NCP	%	88			70-130	Pass	
Hexachlorobenzene	N21-Ma54060	NCP	%	88			70-130	Pass	
Methoxychlor	N21-Ma54060	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Zinc	S21-Ap00858	NCP	%	107			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ma56444	CP	%	87			75-125	Pass	
Cadmium	S21-Ma56444	CP	%	92			75-125	Pass	
Chromium	S21-Ma56444	CP	%	94			75-125	Pass	
Copper	S21-Ma56444	CP	%	84			75-125	Pass	
Lead	S21-Ma56444	CP	%	75			75-125	Pass	
Mercury	S21-Ma56444	CP	%	90			75-125	Pass	
Nickel	S21-Ma56444	CP	%	86			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Ma56114	NCP	%	20	19	4.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S21-Ma56439	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Ma56439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Ma56439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Ma56439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Ma56439	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Ma56439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Ma56439	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S21-Ma56439	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Ma56439	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	N21-Ma54026	NCP	uS/cm	80	94	16	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	N21-Ma54026	NCP	pH Units	5.5	5.4	Pass	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma56443	CP	mg/kg	12	11	3.0	30%	Pass	
Cadmium	S21-Ma56443	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma56443	CP	mg/kg	21	21	2.0	30%	Pass	
Copper	S21-Ma56443	CP	mg/kg	20	20	3.0	30%	Pass	
Lead	S21-Ma56443	CP	mg/kg	22	21	5.0	30%	Pass	
Mercury	S21-Ma56443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma56443	CP	mg/kg	12	11	3.0	30%	Pass	
Zinc	S21-Ma56443	CP	mg/kg	50	48	3.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S21-Ma56447	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S21-Ma56447	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Ma56447	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Ma56447	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Ma56447	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Ma56447	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Ma56447	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Ma56447	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Ma56447	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Ma56447	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Ma56447	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S21-Ma56447	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Ma56447	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Ma56447	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Ma56447	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-Ma56447	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-Ma56447	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-Ma56447	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma56453	CP	mg/kg	26	21	22	30%	Pass	
Cadmium	S21-Ma56453	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma56453	CP	mg/kg	30	28	7.0	30%	Pass	
Copper	S21-Ma56453	CP	mg/kg	26	24	9.0	30%	Pass	
Lead	S21-Ma56453	CP	mg/kg	68	48	35	30%	Fail	Q15
Mercury	S21-Ma56453	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma56453	CP	mg/kg	8.2	9.7	17	30%	Pass	
Zinc	S21-Ma56453	CP	mg/kg	50	55	9.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
John Nguyen	Senior Analyst-Metal (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Katie Linz**

Report **784145-W**
Project name BONNYRIGG STAGES 8-11
Project ID 60493
Received Date Mar 30, 2021

Client Sample ID			**TS**	**TB**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**S21-Ma56454**	**S21-Ma56455**
Date Sampled			**Mar 29, 2021**	**Mar 29, 2021**
Test/Reference	LOR	Unit		
BTEX				
Benzene	1	%	95	-
Ethylbenzene	1	%	81	-
m&p-Xylenes	1	%	90	-
o-Xylene	1	%	75	-
Toluene	1	%	86	-
Xylenes - Total	1	%	80	-
4-Bromofluorobenzene (surr.)	1	%	113	-
BTEX				
Benzene	0.001	mg/L	-	< 0.001
Toluene	0.001	mg/L	-	< 0.001
Ethylbenzene	0.001	mg/L	-	< 0.001
m&p-Xylenes	0.002	mg/L	-	< 0.002
o-Xylene	0.001	mg/L	-	< 0.001
Xylenes - Total*	0.003	mg/L	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	-	112

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
BTEX	Sydney	Mar 31, 2021	14 Days

- Method: LTM-ORG-2010 TRH C6-C40

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Project Name: BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP01_0-0.1	Mar 29, 2021		Soil	S21-Ma56436	X				X			X		X	
2	TP02_0-0.1	Mar 29, 2021		Soil	S21-Ma56437	X				X			X		X	
3	TP02_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56438	X										
4	TP03_0-0.1	Mar 29, 2021		Soil	S21-Ma56439	X				X			X		X	
5	TP04_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56440	X		X	X	X			X	X	X	
6	TP05_0-0.1	Mar 29, 2021		Soil	S21-Ma56441	X					X		X			
7	TP06_0-0.1	Mar 29, 2021		Soil	S21-Ma56442	X					X		X			
8	TP07_0-0.1	Mar 29, 2021		Soil	S21-Ma56443	X				X			X		X	
9	TP08_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56444	X				X			X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
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Mayfield Laboratory																
External Laboratory																
10	TP09_0-0.1	Mar 29, 2021		Soil	S21-Ma56445	X					X		X			
11	TP10_0-0.1	Mar 29, 2021		Soil	S21-Ma56446	X				X			X		X	
12	TP11_0-0.1	Mar 29, 2021		Soil	S21-Ma56447	X		X	X	X			X	X	X	
13	TP12_0-0.1	Mar 29, 2021		Soil	S21-Ma56448	X					X		X			
14	TP13_0-0.1	Mar 29, 2021		Soil	S21-Ma56449	X				X			X		X	
15	TP14_0-0.1	Mar 29, 2021		Soil	S21-Ma56450	X					X		X			
16	TP15_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56451	X				X			X		X	
17	TP16_0-0.1	Mar 29, 2021		Soil	S21-Ma56452	X					X		X			
18	TP17_0-0.1	Mar 29, 2021		Soil	S21-Ma56453	X					X		X			
19	TS	Mar 29, 2021		Water	S21-Ma56454											X
20	TB	Mar 29, 2021		Water	S21-Ma56455							X				

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
21	TP18_0.5-0.6	Mar 29, 2021		Soil	S21-Ma56456	X				X			X		X	
22	TP01_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56457		X									
23	TP01_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56458		X									
24	TP01_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56459		X									
25	QC01	Mar 29, 2021		Soil	S21-Ma56460		X									
26	TP02_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56461		X									
27	TP02_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56462		X									
28	TP03_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56463		X									
29	TP03_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56464		X									
30	TP03_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56465		X									
31	TP03_1.4-1.5	Mar 29, 2021		Soil	S21-Ma56466		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
32	TP04_0-0.1	Mar 29, 2021		Soil	S21-Ma56467		X									
33	TP04_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56468		X									
34	TP05_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56469		X									
35	TP05_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56470		X									
36	QC02	Mar 29, 2021		Soil	S21-Ma56471		X									
37	TP06_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56472		X									
38	TP06_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56473		X									
39	TP07_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56474		X									
40	TP07_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56475		X									
41	TP08_0-0.1	Mar 29, 2021		Soil	S21-Ma56476		X									
42	TP08_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56477		X									

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Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
43	TP08_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56478		X									
44	TP09_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56479		X									
45	QC03	Mar 29, 2021		Soil	S21-Ma56480		X									
46	TP10_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56481		X									
47	TP11_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56482		X									
48	TP12_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56483		X									
49	TP12_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56484		X									
50	TP13_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56485		X									
51	TP13_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56486		X									
52	TP14_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56487		X									
53	TP14_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56488		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
54	TP15_0-0.1	Mar 29, 2021		Soil	S21-Ma56489		X									
55	TP15_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56490		X									
56	TP15_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56491		X									
57	TP16_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56492		X									
58	TP16_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56493		X									
59	TP16_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56494		X									
60	TP16_1.1-1.2	Mar 29, 2021		Soil	S21-Ma56495		X									
61	TP16_1.5-1.6	Mar 29, 2021		Soil	S21-Ma56496		X									
62	TP17_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56497		X									
63	TP17_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56498		X									
64	TP18_0.-0.1	Mar 29, 2021		Soil	S21-Ma56499		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
65	TP18_0.3-0.4	Mar 29, 2021		Soil	S21-Ma56500		X									
Test Counts						19	44	2	2	11	7	1	18	2	11	1

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	95			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	92			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
o-Xylene	%	92			70-130	Pass	
Xylenes - Total*	%	94			70-130	Pass	

Comments

Sample Integrity

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

Authorised by:

Ursula Long — Analytical Services Manager

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

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

Attention:	Katie Linz
Report	784145-AID
Project Name	BONNYRIGG STAGES 8-11
Project ID	60493
Received Date	Mar 30, 2021
Date Reported	Apr 13, 2021

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

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

Project Name BONNYRIGG STAGES 8-11
Project ID 60493
Date Sampled Mar 29, 2021
Report 784145-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01_0-0.1	21-Ma56436	Mar 29, 2021	Approximate Sample 618g Sample consisted of: Brown fine-grained clayey soil, fragments of cement material	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP02_0-0.1	21-Ma56437	Mar 29, 2021	Approximate Sample 567g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP02_0.2-0.3	21-Ma56438	Mar 29, 2021	Approximate Sample 597g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP03_0-0.1	21-Ma56439	Mar 29, 2021	Approximate Sample 547g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP04_0.2-0.3	21-Ma56440	Mar 29, 2021	Approximate Sample 657g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP05_0-0.1	21-Ma56441	Mar 29, 2021	Approximate Sample 558g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP06_0-0.1	21-Ma56442	Mar 29, 2021	Approximate Sample 593g Sample consisted of: Brown fine-grained clayey soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP07_0-0.1	21-Ma56443	Mar 29, 2021	Approximate Sample 585g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

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Accreditation Number 1261
Site Number 18217

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP08_0.4-0.5	21-Ma56444	Mar 29, 2021	Approximate Sample 597g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP09_0-0.1	21-Ma56445	Mar 29, 2021	Approximate Sample 638g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10_0-0.1	21-Ma56446	Mar 29, 2021	Approximate Sample 535g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP11_0-0.1	21-Ma56447	Mar 29, 2021	Approximate Sample 767g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP12_0-0.1	21-Ma56448	Mar 29, 2021	Approximate Sample 679g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13_0-0.1	21-Ma56449	Mar 29, 2021	Approximate Sample 665g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP14_0-0.1	21-Ma56450	Mar 29, 2021	Approximate Sample 643g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP15_0.4-0.5	21-Ma56451	Mar 29, 2021	Approximate Sample 780g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP16_0-0.1	21-Ma56452	Mar 29, 2021	Approximate Sample 470g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17_0-0.1	21-Ma56453	Mar 29, 2021	Approximate Sample 594g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP18_0.5-0.6	21-Ma56456	Mar 29, 2021	Approximate Sample 754g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Mar 31, 2021	Indefinite

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Address: Level 1, 50 Margaret St
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NSW 2000

Project Name: BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP01_0-0.1	Mar 29, 2021		Soil	S21-Ma56436	X				X			X		X	
2	TP02_0-0.1	Mar 29, 2021		Soil	S21-Ma56437	X				X			X		X	
3	TP02_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56438	X										
4	TP03_0-0.1	Mar 29, 2021		Soil	S21-Ma56439	X				X			X		X	
5	TP04_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56440	X		X	X	X			X	X	X	
6	TP05_0-0.1	Mar 29, 2021		Soil	S21-Ma56441	X					X		X			
7	TP06_0-0.1	Mar 29, 2021		Soil	S21-Ma56442	X					X		X			
8	TP07_0-0.1	Mar 29, 2021		Soil	S21-Ma56443	X				X			X		X	
9	TP08_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56444	X				X			X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
10	TP09_0-0.1	Mar 29, 2021		Soil	S21-Ma56445	X					X		X			
11	TP10_0-0.1	Mar 29, 2021		Soil	S21-Ma56446	X				X			X		X	
12	TP11_0-0.1	Mar 29, 2021		Soil	S21-Ma56447	X		X	X	X			X	X	X	
13	TP12_0-0.1	Mar 29, 2021		Soil	S21-Ma56448	X					X		X			
14	TP13_0-0.1	Mar 29, 2021		Soil	S21-Ma56449	X				X			X		X	
15	TP14_0-0.1	Mar 29, 2021		Soil	S21-Ma56450	X					X		X			
16	TP15_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56451	X				X			X		X	
17	TP16_0-0.1	Mar 29, 2021		Soil	S21-Ma56452	X					X		X			
18	TP17_0-0.1	Mar 29, 2021		Soil	S21-Ma56453	X					X		X			
19	TS	Mar 29, 2021		Water	S21-Ma56454											X
20	TB	Mar 29, 2021		Water	S21-Ma56455							X				

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
21	TP18_0.5-0.6	Mar 29, 2021		Soil	S21-Ma56456	X				X			X		X	
22	TP01_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56457		X									
23	TP01_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56458		X									
24	TP01_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56459		X									
25	QC01	Mar 29, 2021		Soil	S21-Ma56460		X									
26	TP02_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56461		X									
27	TP02_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56462		X									
28	TP03_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56463		X									
29	TP03_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56464		X									
30	TP03_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56465		X									
31	TP03_1.4-1.5	Mar 29, 2021		Soil	S21-Ma56466		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
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External Laboratory																
32	TP04_0-0.1	Mar 29, 2021		Soil	S21-Ma56467		X									
33	TP04_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56468		X									
34	TP05_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56469		X									
35	TP05_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56470		X									
36	QC02	Mar 29, 2021		Soil	S21-Ma56471		X									
37	TP06_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56472		X									
38	TP06_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56473		X									
39	TP07_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56474		X									
40	TP07_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56475		X									
41	TP08_0-0.1	Mar 29, 2021		Soil	S21-Ma56476		X									
42	TP08_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56477		X									

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Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
43	TP08_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56478		X									
44	TP09_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56479		X									
45	QC03	Mar 29, 2021		Soil	S21-Ma56480		X									
46	TP10_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56481		X									
47	TP11_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56482		X									
48	TP12_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56483		X									
49	TP12_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56484		X									
50	TP13_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56485		X									
51	TP13_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56486		X									
52	TP14_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56487		X									
53	TP14_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56488		X									

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

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Site # 1254 & 14271

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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Phone : +61 2 4968 8448

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

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

Project Name: BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
54	TP15_0-0.1	Mar 29, 2021		Soil	S21-Ma56489		X									
55	TP15_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56490		X									
56	TP15_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56491		X									
57	TP16_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56492		X									
58	TP16_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56493		X									
59	TP16_0.9-1.0	Mar 29, 2021		Soil	S21-Ma56494		X									
60	TP16_1.1-1.2	Mar 29, 2021		Soil	S21-Ma56495		X									
61	TP16_1.5-1.6	Mar 29, 2021		Soil	S21-Ma56496		X									
62	TP17_0.2-0.3	Mar 29, 2021		Soil	S21-Ma56497		X									
63	TP17_0.4-0.5	Mar 29, 2021		Soil	S21-Ma56498		X									
64	TP18_0.-0.1	Mar 29, 2021		Soil	S21-Ma56499		X									

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

Project Name: BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 784145
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 12:12 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271									X					X		
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
65	TP18_0.3-0.4	Mar 29, 2021		Soil	S21-Ma56500		X									
Test Counts						19	44	2	2	11	7	1	18	2	11	1

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Chain of Custody

JBS&G

PROJECT NO.: 60493
PROJECT NAME: Bonnyrigg Stages 8-11
DATE NEEDED BY: STAT
LABORATORY BATCH NO.:
SAMPLERS: AS
QC LEVEL: NEPM (2013)
PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) ....klin3.....@jbsg.com.au; (3) ...alisonsmith...@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos*	H. Metals	CCPs	TRH/BTEX	PAHs	CEC	VEC	PH	FOC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP01_0-0.1	SOIL	29.3.21		Bag+Jar +Ice		X	X	X	X	X							* SOCMC
0.2-0.3																	NEPC.
0.4-0.5																	
0.9-1.0																	
QC01						X	X	X	X	X							
TP02_0-0.1						X											
0.2-0.3																	
0.4-0.5																	
0.9-1.0																	
TP03_0-0.1																	
0.2-0.3						X	X	X	X	X							
0.4-0.5																	
0.9-1.0																	
1.4-1.5																	
TP04_0-0.1																	
0.2-0.3						X	X	X	X	X	X	X	X	X			
0.4-0.5																	
TP05_0-0.1						X	X										
0.2-0.3																	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: DATE: ASmith 29.3.21 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: VC DATE: 29/3 12:12PM OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

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

16.5°C 784145

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Chain of Custody

JBS&G

PROJECT NO.: 60493	LABORATORY BATCH NO.:
PROJECT NAME: Bonnyrigg Stages 8-11	SAMPLERS: AS
DATE NEEDED BY: STAT	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) .....Klintz.....@jbsg.com.au; (3) .....Alsoservices.....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	HM	OCPs	TRH/BTEX	PAHs	CEC	VOC	PCB	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP05 - 0.4 - 0.5	Soil	29.3		Jar + Bag + Ice												
QC02	↓	↓		↓												
TP06 - 0 - 0.1						X	X									
↓ 0.2 - 0.3																
↓ 0.4 - 0.5																
TP07 - 0 - 0.1						X	X	X	X	X						
↓ 0.2 - 0.3																
↓ 0.4 - 0.5																
TP08 - 0 - 0.1																
↓ 0.2 - 0.3																
↓ 0.4 - 0.5						X	X	X	X	X						
↓ 0.9 - 1.0																
TP09 - 0 - 0.1						X	X									
↓ 0.2 - 0.3																
QC03																
TP10 - 0 - 0.1						X	X	X	X	X						
↓ 0.2 - 0.3																
TP11 - 0 - 0.1						X	X	X	X	X	X	X	X			
↓ 0.2 - 0.3	↓	↓		↓												

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: A. Smith DATE: 29.3.21	CONSIGNMENT NOTE NO.	NAME: NC DATE: 30/3 12:12PM	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

16.5°C 784145

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Chain of Custody

JBS&G

PROJECT NO.: 60493	LABORATORY BATCH NO.:
PROJECT NAME: Bonnyrigg Stages 8-11	SAMPLERS: AS
DATE NEEDED BY: STAT	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) .....@jbsg.com.au; (3) ASmith.....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	H, Metals	OCPs	TRH/BTEX	PAHs	CEC	EC	PH	PC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP12-0-0.1	SOIL	29.3		Bag + Jar + Ice		X	X										
0.2-0.3	↓	↓		↓													
0.4-0.5																	
TP13 0-0.1						X	X	X	X	X							
0.2-0.3																	
0.4-0.5																	
TP14-0-0.1						X	X										
0.3-0.4																	
0.4-0.5																	
TP15-0-0.1																	
0.2-0.3																	
0.4-0.5						X	X	X	X	X							
0.9-1.0																	
TP16-0-0.1						X	X										
0.2-0.3																	
0.4-0.5																	
0.9-1.0																	
1.1-1.2																	
1.5-1.6	↓	↓		↓													

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: A Smith DATE: 29.3.21	CONSIGNMENT NOTE NO.	NAME: JC	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	DATE: 30/3 12:12PM	
NAME: DATE:	CONSIGNMENT NOTE NO.	OF:	COOLER TEMP ..... deg C
OF:	TRANSPORT CO	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
		OF:	COOLER TEMP ..... deg C

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

165°C 784148

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Chain of Custody

JBS&G

PROJECT NO.: 60493	LABORATORY BATCH NO.:
PROJECT NAME: Bonnyrigg Stages 8-11	SAMPLERS: AS
DATE NEEDED BY: STAT.	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) K.Linz@jbsg.com.au; (3) also: a.smith@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	H.Metals	CCPs	TRH/BTEX	PAHs	OCEC	OCEC	PH	PCC	BTEX	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP17_0-0.1	SOIL	29.3		Jar + Bag + Ice		X	X											
0.2-0.3	↓	↓		↓														
0.4-0.5																		
TS				vial on ice											X			
TB				↓											X			
TP18-0-0.1				soil jar + bag														
0.3-0.4				once		X	X	X	X	X								
0.5-0.6	↓	↓		↓														

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: A.Smith DATE: 29.3.21	CONSIGNMENT NOTE NO.	NAME: NC DATE: 30/3 12:12PM	COOLER SEAL – Yes..... No ..... Intact ..... Broken.....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

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Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	JBS & G Australia (NSW) P/L
Contact name:	Katie Linz
Project name:	BONNYRIGG STAGES 8-11
Project ID:	6093
Turnaround time:	5 Day
Date/Time received	Mar 30, 2021 12:12 PM
Eurofins reference	784145

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 16.5 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

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

Results will be delivered electronically via email to Katie Linz - klinz@jbsg.com.au.

Global Leader - Results you can trust

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Katie Linz**

Report **784428-S**
Project name BONNYRIGG STAGES 6-11
Project ID 60493
Received Date Mar 30, 2021

Client Sample ID			**TP20_0-0.1**	**TP21_0-0.1**	**QC04**	**TP25_0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Ma58483**	**S21-Ma58484**	**S21-Ma58485**	**S21-Ma58489**
Date Sampled			**Mar 30, 2021**	**Mar 30, 2021**	**Mar 30, 2021**	**Mar 30, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	INT	125	112	82
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP20_0-0.1	TP21_0-0.1	QC04	TP25_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma58483	S21-Ma58484	S21-Ma58485	S21-Ma58489
Date Sampled			Mar 30, 2021	Mar 30, 2021	Mar 30, 2021	Mar 30, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	95	107	111	115
p-Terphenyl-d14 (surr.)	1	%	97	107	114	118
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	0.21	< 0.05	0.22	< 0.05
4.4'-DDT	0.05	mg/kg	0.50	< 0.05	1.9	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.71	< 0.05	2.12	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.71	< 0.2	2.12	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	97	112	137	126
Tetrachloro-m-xylene (surr.)	1	%	108	117	127	125
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	21	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	6.7	-	-	-
Total Organic Carbon	0.1	%	1.7	-	-	-
% Moisture	1	%	18	19	19	15
Heavy Metals						
Arsenic	2	mg/kg	26	3.4	21	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	25	17	29	16
Copper	5	mg/kg	32	21	30	18
Lead	5	mg/kg	60	57	49	23

Client Sample ID			TP20_0-0.1	TP21_0-0.1	QC04	TP25_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma58483	S21-Ma58484	S21-Ma58485	S21-Ma58489
Date Sampled			Mar 30, 2021	Mar 30, 2021	Mar 30, 2021	Mar 30, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.8	9.3	12	7.4
Zinc	5	mg/kg	370	110	360	32
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	18	-	-	-

Client Sample ID			TP27_0-0.1	HA02_0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S21-Ma58491	S21-Ma58494
Date Sampled			Mar 30, 2021	Mar 30, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	75
TRH C10-C36 (Total)	50	mg/kg	< 50	75
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	63	INT
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			TP27_0-0.1	HA02_0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S21-Ma58491	S21-Ma58494
Date Sampled			Mar 30, 2021	Mar 30, 2021
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	111	99
p-Terphenyl-d14 (surr.)	1	%	113	100
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	119	111
Tetrachloro-m-xylene (surr.)	1	%	120	111
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	34
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	6.6
Total Organic Carbon	0.1	%	-	1.0
% Moisture	1	%	19	19
Heavy Metals				
Arsenic	2	mg/kg	18	9.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	29	21
Copper	5	mg/kg	20	28
Lead	5	mg/kg	28	20
Mercury	0.1	mg/kg	< 0.1	< 0.1

Client Sample ID			TP27_0-0.1	HA02_0.2-0.3
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S21-Ma58491**	**S21-Ma58494**
Date Sampled			**Mar 30, 2021**	**Mar 30, 2021**
Test/Reference	LOR	Unit		
Heavy Metals				
Nickel	5	mg/kg	9.7	9.3
Zinc	5	mg/kg	56	48
Cation Exchange Capacity				
Cation Exchange Capacity	0.05	meq/100g	-	17

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 06, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Apr 06, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 06, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 06, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Apr 06, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Apr 06, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Apr 06, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Apr 06, 2021	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 07, 2021	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Sydney	Apr 06, 2021	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Apr 07, 2021	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Sydney	Mar 31, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			

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Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
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Project Name: BONNYRIGG STAGES 6-11
Project ID: 60493

Order No.:
Report #: 784428
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 4:50 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	TP19_0-0.1	Mar 30, 2021		Soil	S21-Ma58482	X								
2	TP20_0-0.1	Mar 30, 2021		Soil	S21-Ma58483	X			X	X	X	X	X	X
3	TP21_0-0.1	Mar 30, 2021		Soil	S21-Ma58484	X					X	X		X
4	QC04	Mar 30, 2021		Soil	S21-Ma58485	X					X	X		X
5	TP22_0-0.1	Mar 30, 2021		Soil	S21-Ma58486	X								
6	TP23_0-0.1	Mar 30, 2021		Soil	S21-Ma58487	X								
7	TP24_0-0.1	Mar 30, 2021		Soil	S21-Ma58488	X								
8	TP25_0-0.1	Mar 30, 2021		Soil	S21-Ma58489	X					X	X		X
9	TP26_0-0.1	Mar 30, 2021		Soil	S21-Ma58490	X								

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Company Name: JBS & G Australia (NSW) P/L
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Project Name: BONNYRIGG STAGES 6-11
Project ID: 60493

Order No.:
Report #: 784428
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 4:50 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
10	TP27_0-0.1	Mar 30, 2021		Soil	S21-Ma58491	X					X	X		X
11	TP28_0-0.1	Mar 30, 2021		Soil	S21-Ma58492	X								
12	HA01_0-0.1	Mar 30, 2021		Soil	S21-Ma58493	X								
13	HA02_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58494	X			X	X	X	X	X	X
14	TP28-F1	Mar 30, 2021		Building Materials	S21-Ma58495		X							
15	TP19_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58496			X						
16	TP20_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58497			X						
17	TP20_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58498			X						
18	TP21_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58499			X						
19	QC05	Mar 30, 2021		Soil	S21-Ma58500			X						

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IANZ # 1290

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
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Project Name: BONNYRIGG STAGES 6-11
Project ID: 60493

Order No.:
Report #: 784428
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 4:50 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
20	TP22_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58501			X						
21	TP23_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58502			X						
22	TP24_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58503			X						
23	TP24_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58504			X						
24	TP25_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58505			X						
25	TP26_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58506			X						
26	TP27_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58507			X						
27	TP28_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58508			X						
28	TP28_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58509			X						
29	HA01_0.3-0.4	Mar 30, 2021		Soil	S21-Ma58510			X						
30	HA02_0-0.1	Mar 30, 2021		Soil	S21-Ma58511			X						

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Project Name: BONNYRIGG STAGES 6-11
Project ID: 60493

Order No.:
Report #: 784428
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 4:50 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
31	HA02_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58512			X						
32	TP28-F2	Mar 30, 2021		Building Materials	S21-Ma58513			X						
33	TP28-F3	Mar 30, 2021		Building Materials	S21-Ma58514			X						
Test Counts						13	1	19	2	2	6	6	2	6

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	87			70-130	Pass	
TRH C10-C14	%	81			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	93			70-130	Pass	
Toluene	%	88			70-130	Pass	
Ethylbenzene	%	92			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
o-Xylene	%	95			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	94			70-130	Pass	
TRH C6-C10	%	88			70-130	Pass	
TRH >C10-C16	%	82			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	108			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	106			70-130	Pass	
Benzo(a)pyrene	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	%	120			70-130	Pass	
Benzo(g.h.i)perylene	%	71			70-130	Pass	
Benzo(k)fluoranthene	%	112			70-130	Pass	
Chrysene	%	104			70-130	Pass	
Dibenz(a.h)anthracene	%	71			70-130	Pass	
Fluoranthene	%	99			70-130	Pass	
Fluorene	%	108			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	73			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	104			70-130	Pass	
Phenanthrene	%	103			70-130	Pass	
Pyrene	%	105			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	117			70-130	Pass	
4.4'-DDD	%	124			70-130	Pass	
4.4'-DDE	%	119			70-130	Pass	
4.4'-DDT	%	124			70-130	Pass	
a-BHC	%	117			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-BHC	%	114			70-130	Pass	
d-BHC	%	115			70-130	Pass	
Dieldrin	%	114			70-130	Pass	
Endosulfan I	%	115			70-130	Pass	
Endosulfan II	%	117			70-130	Pass	
Endosulfan sulphate	%	115			70-130	Pass	
Endrin	%	127			70-130	Pass	
Endrin aldehyde	%	108			70-130	Pass	
Endrin ketone	%	115			70-130	Pass	
g-BHC (Lindane)	%	123			70-130	Pass	
Heptachlor	%	112			70-130	Pass	
Heptachlor epoxide	%	118			70-130	Pass	
Hexachlorobenzene	%	121			70-130	Pass	
Methoxychlor	%	117			70-130	Pass	
LCS - % Recovery							
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	83			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	100			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	101			80-120	Pass	
Zinc	%	105			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S21-Ma58585	NCP	%	128			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S21-Ma58585	NCP	%	128			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	N21-Ma54060	NCP	%	73			70-130	Pass	
Acenaphthylene	N21-Ma54060	NCP	%	74			70-130	Pass	
Anthracene	N21-Ma54060	NCP	%	71			70-130	Pass	
Benz(a)anthracene	N21-Ma54060	NCP	%	74			70-130	Pass	
Benzo(a)pyrene	N21-Ma54060	NCP	%	74			70-130	Pass	
Benzo(b&j)fluoranthene	N21-Ma54060	NCP	%	76			70-130	Pass	
Benzo(g.h.i)perylene	N21-Ma54060	NCP	%	107			70-130	Pass	
Benzo(k)fluoranthene	N21-Ma54060	NCP	%	72			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chrysene	N21-Ma54060	NCP	%	72			70-130	Pass	
Dibenz(a.h)anthracene	N21-Ma54060	NCP	%	112			70-130	Pass	
Fluoranthene	S21-Ma57695	NCP	%	85			70-130	Pass	
Fluorene	N21-Ma54060	NCP	%	74			70-130	Pass	
Indeno(1.2.3-cd)pyrene	N21-Ma54060	NCP	%	110			70-130	Pass	
Naphthalene	N21-Ma54060	NCP	%	73			70-130	Pass	
Phenanthrene	N21-Ma54060	NCP	%	70			70-130	Pass	
Pyrene	N21-Ma54060	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	N21-Ma54060	NCP	%	87			70-130	Pass	
4.4'-DDD	N21-Ma54060	NCP	%	94			70-130	Pass	
4.4'-DDE	N21-Ma54060	NCP	%	92			70-130	Pass	
4.4'-DDT	N21-Ma54060	NCP	%	92			70-130	Pass	
a-BHC	N21-Ma54060	NCP	%	84			70-130	Pass	
Aldrin	N21-Ma54060	NCP	%	87			70-130	Pass	
b-BHC	N21-Ma54060	NCP	%	84			70-130	Pass	
d-BHC	N21-Ma54060	NCP	%	87			70-130	Pass	
Dieldrin	N21-Ma54060	NCP	%	86			70-130	Pass	
Endosulfan I	N21-Ma54060	NCP	%	86			70-130	Pass	
Endosulfan II	N21-Ma54060	NCP	%	84			70-130	Pass	
Endosulfan sulphate	N21-Ma54060	NCP	%	84			70-130	Pass	
Endrin	N21-Ma54060	NCP	%	96			70-130	Pass	
Endrin aldehyde	N21-Ma54060	NCP	%	78			70-130	Pass	
Endrin ketone	N21-Ma54060	NCP	%	82			70-130	Pass	
g-BHC (Lindane)	N21-Ma54060	NCP	%	91			70-130	Pass	
Heptachlor	N21-Ma54060	NCP	%	82			70-130	Pass	
Heptachlor epoxide	N21-Ma54060	NCP	%	88			70-130	Pass	
Hexachlorobenzene	N21-Ma54060	NCP	%	88			70-130	Pass	
Methoxychlor	N21-Ma54060	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ma58485	CP	%	89			75-125	Pass	
Cadmium	S21-Ma58485	CP	%	100			75-125	Pass	
Chromium	S21-Ma58485	CP	%	81			75-125	Pass	
Copper	S21-Ma58485	CP	%	95			75-125	Pass	
Lead	S21-Ma58485	CP	%	97			75-125	Pass	
Mercury	S21-Ma58485	CP	%	102			75-125	Pass	
Nickel	S21-Ma58485	CP	%	92			75-125	Pass	
Zinc	S21-Ma58485	CP	%	104			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S21-Ma58489	CP	%	77			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Ma58489	CP	%	74			70-130	Pass	
Toluene	S21-Ma58489	CP	%	84			70-130	Pass	
Ethylbenzene	S21-Ma58489	CP	%	83			70-130	Pass	
m&p-Xylenes	S21-Ma58489	CP	%	83			70-130	Pass	
o-Xylene	S21-Ma58489	CP	%	84			70-130	Pass	
Xylenes - Total*	S21-Ma58489	CP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S21-Ma58489	CP	%	91			70-130	Pass	
TRH C6-C10	S21-Ma58489	CP	%	77			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	N21-Ma54069	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N21-Ma54069	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N21-Ma54069	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N21-Ma54069	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N21-Ma54069	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N21-Ma54069	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Anthracene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N21-Ma54057	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
4.4'-DDE	N21-Ma54057	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	S21-Ma58515	NCP	uS/cm	42	32	27	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	S21-Ma58515	NCP	pH Units	6.1	6.0	Pass	30%	Pass	
% Moisture	S21-Ma58466	NCP	%	19	19	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma58484	CP	mg/kg	3.4	7.6	77	30%	Fail	Q15
Cadmium	S21-Ma58484	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma58484	CP	mg/kg	17	22	26	30%	Pass	
Copper	S21-Ma58484	CP	mg/kg	21	21	3.0	30%	Pass	
Lead	S21-Ma58484	CP	mg/kg	57	62	8.0	30%	Pass	
Mercury	S21-Ma58484	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma58484	CP	mg/kg	9.3	11	13	30%	Pass	
Zinc	S21-Ma58484	CP	mg/kg	110	140	21	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S21-Ma58485	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Ma58485	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Ma58485	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Ma58485	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Ma58485	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Ma58485	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Ma58485	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Ma58485	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Ma58485	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-Ma58485	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-Ma58485	CP	mg/kg	1.9	1.0	63	30%	Fail	Q15
a-BHC	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-Ma58485	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-Ma58485	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
John Nguyen	Senior Analyst-Metal (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

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

Attention:	Katie Linz
Report	784428-AID
Project Name	BONNYRIGG STAGES 6-11
Project ID	60493
Received Date	Mar 30, 2021
Date Reported	Apr 12, 2021

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
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Project Name BONNYRIGG STAGES 6-11
Project ID 60493
Date Sampled Mar 30, 2021
Report 784428-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP19_0-0.1	21-Ma58482	Mar 30, 2021	Approximate Sample 584g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP20_0-0.1	21-Ma58483	Mar 30, 2021	Approximate Sample 622g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP21_0-0.1	21-Ma58484	Mar 30, 2021	Approximate Sample 574g Sample consisted of: Brown fine-grained clayey soil, glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC04	21-Ma58485	Mar 30, 2021	Approximate Sample 556g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP22_0-0.1	21-Ma58486	Mar 30, 2021	Approximate Sample 634g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP23_0-0.1	21-Ma58487	Mar 30, 2021	Approximate Sample 643g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP24_0-0.1	21-Ma58488	Mar 30, 2021	Approximate Sample 642g Sample consisted of: Brown fine-grained clayey soil, rocks and debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP25_0-0.1	21-Ma58489	Mar 30, 2021	Approximate Sample 654g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP26_0-0.1	21-Ma58490	Mar 30, 2021	Approximate Sample 678g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP27_0-0.1	21-Ma58491	Mar 30, 2021	Approximate Sample 613g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP28_0-0.1	21-Ma58492	Mar 30, 2021	Approximate Sample 703g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
HA01_0-0.1	21-Ma58493	Mar 30, 2021	Approximate Sample 646g Sample consisted of: Brown fine-grained clayey soil, glass, fragments of plastic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
HA02_0.2-0.3	21-Ma58494	Mar 30, 2021	Approximate Sample 583g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP28-F1	21-Ma58495	Mar 30, 2021	Approximate Sample 26g / 85x40x5mm Sample consisted of: Grey fibre cement material	Chrysotile, amosite and crocidolite asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Mar 31, 2021	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Mar 31, 2021	Indefinite

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Project Name: BONNYRIGG STAGES 6-11
Project ID: 60493

Order No.:
Report #: 784428
Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 4:50 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	TP19_0-0.1	Mar 30, 2021		Soil	S21-Ma58482	X								
2	TP20_0-0.1	Mar 30, 2021		Soil	S21-Ma58483	X			X	X	X	X	X	X
3	TP21_0-0.1	Mar 30, 2021		Soil	S21-Ma58484	X					X	X		X
4	QC04	Mar 30, 2021		Soil	S21-Ma58485	X					X	X		X
5	TP22_0-0.1	Mar 30, 2021		Soil	S21-Ma58486	X								
6	TP23_0-0.1	Mar 30, 2021		Soil	S21-Ma58487	X								
7	TP24_0-0.1	Mar 30, 2021		Soil	S21-Ma58488	X								
8	TP25_0-0.1	Mar 30, 2021		Soil	S21-Ma58489	X					X	X		X
9	TP26_0-0.1	Mar 30, 2021		Soil	S21-Ma58490	X								

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Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
10	TP27_0-0.1	Mar 30, 2021		Soil	S21-Ma58491	X					X	X		X
11	TP28_0-0.1	Mar 30, 2021		Soil	S21-Ma58492	X								
12	HA01_0-0.1	Mar 30, 2021		Soil	S21-Ma58493	X								
13	HA02_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58494	X			X	X	X	X	X	X
14	TP28-F1	Mar 30, 2021		Building Materials	S21-Ma58495		X							
15	TP19_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58496			X						
16	TP20_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58497			X						
17	TP20_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58498			X						
18	TP21_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58499			X						
19	QC05	Mar 30, 2021		Soil	S21-Ma58500			X						

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Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
20	TP22_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58501			X						
21	TP23_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58502			X						
22	TP24_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58503			X						
23	TP24_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58504			X						
24	TP25_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58505			X						
25	TP26_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58506			X						
26	TP27_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58507			X						
27	TP28_0.2-0.3	Mar 30, 2021		Soil	S21-Ma58508			X						
28	TP28_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58509			X						
29	HA01_0.3-0.4	Mar 30, 2021		Soil	S21-Ma58510			X						
30	HA02_0-0.1	Mar 30, 2021		Soil	S21-Ma58511			X						

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Phone: 02 8245 0300
Fax:

Received: Mar 30, 2021 4:50 PM
Due: Apr 8, 2021
Priority: 5 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Total Organic Carbon	Organochlorine Pesticides	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										X			X	
Sydney Laboratory - NATA Site # 18217						X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory														
External Laboratory														
31	HA02_0.4-0.5	Mar 30, 2021		Soil	S21-Ma58512			X						
32	TP28-F2	Mar 30, 2021		Building Materials	S21-Ma58513			X						
33	TP28-F3	Mar 30, 2021		Building Materials	S21-Ma58514			X						
Test Counts						13	1	19	2	2	6	6	2	6

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Chain of Custody pg 1 of 2.

JBS&G

PROJECT NO.: 60493	LABORATORY BATCH NO.: 154428
PROJECT NAME: Bonnyrigg Stages 8-11	SAMPLERS: AS
DATE NEEDED BY: STAT	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) .....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	H. Metals	OCPs	TRH/BTEX	PAHs	CEC	EC	PH	POC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP19_0-0.1	SOIL	30.3		Bag + Jar + Ice		X											
↓ 0.2-0.3	↓	↓		↓													
TP20_0-0.1						X	X	X	X	X	X	X	X	X			
↓ 0.2-0.3																	
↓ 0.4-0.5																	
TP21_0-0.1						X	X	X	X	X							
↓ 0.2-0.3																	
QC04						X	X	X	X	X							
QC05																	
TP22_0-0.1						X											
↓ 0.2-0.3																	
TP23_0-0.1						X											
↓ 0.2-0.3																	
TP24_0-0.1						X											
↓ 0.2-0.3																	
↓ 0.4-0.5																	
TP25_0-0.1						X	X	X	X	X							
↓ 0.2-0.3																	
TP26_0-0.1	↓	↓		↓		X											

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: A Smith DATE: 30.3.21	CONSIGNMENT NOTE NO.	NAME: DATE: 30/3	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF:	COOLER TEMP 12.93 ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

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Chain of Custody

pg 2 of 2

JBS&G

PROJECT NO.: 60493
PROJECT NAME: Bonnyrigg Stages 8-11
DATE NEEDED BY: STAT
LABORATORY BATCH NO.: 784428
SAMPLERS: AS.
QC LEVEL: NEPM (2013)
PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) .....@jbsg.com.au; (3) alisonsmith.....@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	H. Metals	OCPs	TRH/BTEX	PAHs	CEC	EC	PH	EC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
TP26_0.2-0.3	SOIL	30.3.21		JAR + BAG + ICE													
TP27_0-0.1						X	X	X	X	X							
↓ 0.2-0.3																	
TP28_0-0.1						X											
↓ 0.2-0.3																	
↓ 0.4-0.5																	
HA01_0-0.1						X											
↓ 0.3-0.4																	
HA02_0-0.1																	
↓ 0.2-0.3						X	X	X	X	X	X	X	X	X			
↓ 0.4-0.5																	
TP28-F1	Material			bag		X											
F2																	
F3																	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: ASmith DATE: 30.3.21 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: Grace Emms DATE: 30/3 OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP 12.9 deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

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

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Rolleston, Christchurch 7675
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IANZ # 1290

Sample Receipt Advice

Company name:	JBS & G Australia (NSW) P/L
Contact name:	Katie Linz
Project name:	BONNYRIGG STAGES 6-11
Project ID:	60493
Turnaround time:	5 Day
Date/Time received	Mar 30, 2021 4:50 PM
Eurofins reference	784428

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 12.9 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

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

Results will be delivered electronically via email to Katie Linz - klinz@jbsg.com.au.

Global Leader - Results you can trust

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

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Katie Linz**

Report **788112-S**
Project name ADDITIONAL - BONNYRIGG STAGES 8-11
Project ID 60493
Received Date Apr 19, 2021

Client Sample ID			**QC01**
Sample Matrix			**Soil**
Eurofins Sample No.			**S21-Ap28083**
Date Sampled			**Mar 29, 2021**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	53
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5

Client Sample ID			QC01
Sample Matrix			Soil
Eurofins Sample No.			S21-Ap28083
Date Sampled			Mar 29, 2021
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	104
p-Terphenyl-d14 (surr.)	1	%	94
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2
Toxaphene	0.1	mg/kg	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2
Dibutylchlorendate (surr.)	1	%	126
Tetrachloro-m-xylene (surr.)	1	%	97
Heavy Metals			
Arsenic	2	mg/kg	13
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	19
Copper	5	mg/kg	20
Lead	5	mg/kg	29
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	12
Zinc	5	mg/kg	190
% Moisture	1	%	17

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 19, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Apr 19, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 19, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 19, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Apr 19, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Apr 19, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Apr 19, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Apr 19, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			

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

Project Name: ADDITIONAL - BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 788112
Phone: 02 8245 0300
Fax:

Received: Apr 19, 2021 11:44 AM
Due: Apr 20, 2021
Priority: Overnight
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Organochlorine Pesticides	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	QC01	Mar 29, 2021		Soil	S21-Ap28083	X	X	X	X
Test Counts						1	1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	87			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	98			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	106			70-130	Pass	
Xylenes - Total*	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	96			70-130	Pass	
TRH C6-C10	%	84			70-130	Pass	
TRH >C10-C16	%	71			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	76			70-130	Pass	
Acenaphthylene	%	89			70-130	Pass	
Anthracene	%	82			70-130	Pass	
Benz(a)anthracene	%	99			70-130	Pass	
Benzo(a)pyrene	%	80			70-130	Pass	
Benzo(b&j)fluoranthene	%	87			70-130	Pass	
Benzo(g.h.i)perylene	%	95			70-130	Pass	
Benzo(k)fluoranthene	%	89			70-130	Pass	
Chrysene	%	95			70-130	Pass	
Dibenz(a.h)anthracene	%	98			70-130	Pass	
Fluoranthene	%	81			70-130	Pass	
Fluorene	%	81			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	94			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	94			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	%	82			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	79			70-130	Pass	
4.4'-DDD	%	86			70-130	Pass	
4.4'-DDE	%	78			70-130	Pass	
4.4'-DDT	%	93			70-130	Pass	
a-BHC	%	105			70-130	Pass	
Aldrin	%	78			70-130	Pass	
b-BHC	%	91			70-130	Pass	
d-BHC	%	76			70-130	Pass	
Dieldrin	%	77			70-130	Pass	
Endosulfan I	%	127			70-130	Pass	
Endosulfan II	%	72			70-130	Pass	
Endosulfan sulphate	%	85			70-130	Pass	
Endrin	%	111			70-130	Pass	
Endrin aldehyde	%	85			70-130	Pass	
Endrin ketone	%	89			70-130	Pass	
g-BHC (Lindane)	%	78			70-130	Pass	
Heptachlor	%	89			70-130	Pass	
Heptachlor epoxide	%	79			70-130	Pass	
Hexachlorobenzene	%	97			70-130	Pass	
Methoxychlor	%	82			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	91			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	102			80-120	Pass	
Copper	%	103			80-120	Pass	
Lead	%	110			80-120	Pass	
Mercury	%	112			80-120	Pass	
Nickel	%	105			80-120	Pass	
Zinc	%	100			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S21-Ap19014	NCP	%	77			70-130	Pass	
TRH C10-C14	S21-Ap29834	NCP	%	75			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Ap19014	NCP	%	77			70-130	Pass	
Toluene	S21-Ap19014	NCP	%	80			70-130	Pass	
Ethylbenzene	S21-Ap19014	NCP	%	86			70-130	Pass	
m&p-Xylenes	S21-Ap19014	NCP	%	93			70-130	Pass	
o-Xylene	S21-Ap19014	NCP	%	92			70-130	Pass	
Xylenes - Total*	S21-Ap19014	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S21-Ap19014	NCP	%	102			70-130	Pass	
TRH C6-C10	S21-Ap19014	NCP	%	76			70-130	Pass	
TRH >C10-C16	S21-Ap29834	NCP	%	72			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-Ap18723	NCP	%	95			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthylene	S21-Ap18723	NCP	%	104			70-130	Pass	
Anthracene	S21-Ap18723	NCP	%	92			70-130	Pass	
Benz(a)anthracene	S21-Ap18723	NCP	%	116			70-130	Pass	
Benzo(a)pyrene	S21-Ap18723	NCP	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	S21-Ap18723	NCP	%	119			70-130	Pass	
Benzo(g.h.i)perylene	S21-Ap18723	NCP	%	113			70-130	Pass	
Benzo(k)fluoranthene	S21-Ap18723	NCP	%	108			70-130	Pass	
Chrysene	S21-Ap18723	NCP	%	113			70-130	Pass	
Dibenz(a.h)anthracene	S21-Ap18723	NCP	%	116			70-130	Pass	
Fluoranthene	S21-Ap18723	NCP	%	91			70-130	Pass	
Fluorene	S21-Ap18723	NCP	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ap18723	NCP	%	115			70-130	Pass	
Naphthalene	S21-Ap18723	NCP	%	113			70-130	Pass	
Phenanthrene	S21-Ap18723	NCP	%	104			70-130	Pass	
Pyrene	S21-Ap18723	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S21-Ap13861	NCP	%	117			70-130	Pass	
4.4'-DDD	S21-Ap24939	NCP	%	94			70-130	Pass	
4.4'-DDE	S21-Ap24939	NCP	%	129			70-130	Pass	
4.4'-DDT	S21-Ap24939	NCP	%	86			70-130	Pass	
a-BHC	S21-Ap24939	NCP	%	111			70-130	Pass	
Aldrin	S21-Ap24939	NCP	%	90			70-130	Pass	
b-BHC	S21-Ap24939	NCP	%	105			70-130	Pass	
d-BHC	S21-Ap24939	NCP	%	83			70-130	Pass	
Dieldrin	S21-Ap24939	NCP	%	128			70-130	Pass	
Endosulfan I	S21-Ap24939	NCP	%	107			70-130	Pass	
Endosulfan II	S21-Ap24939	NCP	%	110			70-130	Pass	
Endosulfan sulphate	S21-Ap24939	NCP	%	102			70-130	Pass	
Endrin	S21-Ap24939	NCP	%	120			70-130	Pass	
Endrin aldehyde	S21-Ap24939	NCP	%	94			70-130	Pass	
g-BHC (Lindane)	S21-Ap24939	NCP	%	112			70-130	Pass	
Heptachlor	S21-Ap24939	NCP	%	87			70-130	Pass	
Hexachlorobenzene	S21-Ap13861	NCP	%	94			70-130	Pass	
Methoxychlor	S21-Ap13861	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ap29904	NCP	%	101			75-125	Pass	
Cadmium	S21-Ap29904	NCP	%	97			75-125	Pass	
Chromium	S21-Ap29904	NCP	%	116			75-125	Pass	
Copper	S21-Ap29904	NCP	%	97			75-125	Pass	
Lead	S21-Ap28511	NCP	%	105			75-125	Pass	
Mercury	S21-Ap29904	NCP	%	109			75-125	Pass	
Nickel	S21-Ap29904	NCP	%	97			75-125	Pass	
Zinc	S21-Ap29904	NCP	%	124			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S21-Ap28249	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S21-Ap29850	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Ap29850	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Ap29850	NCP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Ap28249	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Ap28249	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Ap28249	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Ap28249	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Ap28249	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Ap28249	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S21-Ap28249	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Ap28249	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S21-Ap29850	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Ap29850	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Ap29850	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Ap28241	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-Ap28241	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-Ap28241	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-Ap28241	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ap18186	NCP	mg/kg	3.8	3.7	5.0	30%	Pass	
Cadmium	S21-Ap18186	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ap18186	NCP	mg/kg	5.3	9.8	60	30%	Fail	Q15
Copper	S21-Ap18186	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S21-Ap18186	NCP	mg/kg	18	15	17	30%	Pass	
Mercury	S21-Ap18186	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ap18186	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S21-Ap18186	NCP	mg/kg	< 5	10	150	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Ap27616	NCP	%	5.5	5.9	8.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

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Attention:	Katie Linz
Report	788112-AID
Project Name	ADDITIONAL - BONNYRIGG STAGES 8-11
Project ID	60493
Received Date	Apr 19, 2021
Date Reported	Apr 20, 2021

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

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

Project Name ADDITIONAL - BONNYRIGG STAGES 8-11
Project ID 60493
Date Sampled Mar 29, 2021
Report 788112-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
QC01	21-Ap28083	Mar 29, 2021	Approximate Sample 59g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 19, 2021	Indefinite

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Australia

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NATA # 1261
Site # 1254 & 14271

Sydney
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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
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NATA # 1261 Site # 20794

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Site # 23736

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IANZ # 1327

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

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

Project Name: ADDITIONAL - BONNYRIGG STAGES 8-11
Project ID: 60493

Order No.:
Report #: 788112
Phone: 02 8245 0300
Fax:

Received: Apr 19, 2021 11:44 AM
Due: Apr 20, 2021
Priority: Overnight
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Organochlorine Pesticides	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	QC01	Mar 29, 2021		Soil	S21-Ap28083	X	X	X	X
Test Counts						1	1	1	1

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

The sample received was not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-sample to be analysed accurately represented the sample received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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From: Katie Linz <KLinz@jbsg.com.au>
Sent: Monday, 19 April 2021 11:44 AM
To: Ursula Long <UrsulaLong@eurofins.com>
Subject: FW: Eurofins Test Results - Report 784145 : Site BONNYRIGG STAGES 8-11 (60493)

EXTERNAL EMAIL*

Hi Ursula,

Im not sure why but my QC sample appears to have been put on hold despite the COC requesting it be analysed? Was there a problem with the sample? I need the result if possible ASAP.

Thanks,

Katie

Please note I am available in the office Monday to Wednesday and Friday

Katie Linz | Senior Associate| JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Darwin | Wollongong | Bunbury
Level 1, 50 Margaret Street Sydney NSW 2000
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Contaminated Land | Groundwater Remediation | Approvals and Assessments | Auditing and Compliance | Hygiene and Hazardous Materials | Due Diligence and Liability | Fire Management Planning | Stakeholder and Risk Management

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

Sample Receipt Advice

Company name:	JBS & G Australia (NSW) P/L
Contact name:	Katie Linz
Project name:	ADDITIONAL - BONNYRIGG STAGES 8-11
Project ID:	60493
Turnaround time:	Overnight
Date/Time received	Apr 19, 2021 11:44 AM
Eurofins reference	788112

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 16.5 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

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

Results will be delivered electronically via email to Katie Linz - klinz@jbsg.com.au.

Global Leader - Results you can trust

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	Katie Linz
Report	788140-AID
Project Name	ADDITIONAL - BONNYRIGG STAGES 6-11
Project ID	60493
Received Date	Apr 19, 2021
Date Reported	Apr 20, 2021

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

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

Project Name ADDITIONAL - BONNYRIGG STAGES 6-11
Project ID 60493
Date Sampled Mar 29, 2021
Report 788140-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP28_0.2-0.3	21-Ap28201	Mar 29, 2021	Approximate Sample 567g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 19, 2021	Indefinite

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

Company Name:	JBS & G Australia (NSW) P/L	**Order No.:**	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	788140
		Phone:	02 8245 0300
		Fax:	
Project Name:	ADDITIONAL - BONNYRIGG STAGES 6-11		
Project ID:	60493		

Received:	Apr 19, 2021 1:21 PM		
Due:	Apr 20, 2021		
Priority:	1 Day		
Contact Name:	Katie Linz		

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines
Melbourne Laboratory - NATA Site # 1254 & 14271						
Sydney Laboratory - NATA Site # 18217						X
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Mayfield Laboratory						
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	TP28_0.2-0.3	Mar 29, 2021		Soil	S21-Ap28201	X
Test Counts						1

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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From: Katie Linz <KLinz@jbsg.com.au>
Sent: Monday, 19 April 2021 1:21 PM
To: Ursula Long <UrsulaLong@eurofins.com>
Cc: Alison Smith <alisonsmith@jbsg.com.au>
Subject: RE: Eurofins Final Test Results - Report 784428 : Site BONNYRIGG STAGES 6-11 (60493)

EXTERNAL EMAIL*

Hi Ursula,

Can I please also request additional analysis of sample TP28-0.2-0.3 for asbestos NEPC 2013 on 24 hr tat.

Thanks,

Katie

Please note I am available in the office Monday to Wednesday and Friday

Katie Linz | Senior Associate| JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Darwin | Wollongong | Bunbury
Level 1, 50 Margaret Street Sydney NSW 2000
T: 02 8245 0300 | M: 0422 913 638 | E: klinz@jbsg.com.au |W: www.jbsg.com.au
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NATA # 1261 Site # 18217

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Phone : 0800 856 450
IANZ # 1290

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

Project Name: ADDITIONAL - BONNYRIGG STAGES 6-11
Project ID: 60493

Order No.:
Report #: 788140
Phone: 02 8245 0300
Fax:

Received: Apr 19, 2021 1:21 PM
Due: Apr 20, 2021
Priority: 1 Day
Contact Name: Katie Linz

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines
Melbourne Laboratory - NATA Site # 1254 & 14271						
Sydney Laboratory - NATA Site # 18217						X
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Mayfield Laboratory						
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	TP28_0.2-0.3	Mar 29, 2021		Soil	S21-Ap28201	X
Test Counts						1

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customerservice@envirolab.com.au
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CERTIFICATE OF ANALYSIS 265444

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	Katie Linz
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	**60493, Bonnyrigg Stages 8-11**
Number of Samples	3 soil
Date samples received	30/03/2021
Date completed instructions received	30/03/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	08/04/2021
Date of Issue	06/04/2021

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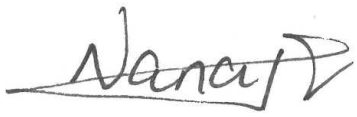

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date extracted	-	31/03/2021
Date analysed	-	06/04/2021
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	101

svTRH (C10-C40) in Soil		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date extracted	-	31/03/2021
Date analysed	-	02/04/2021
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	94

PAHs in Soil		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date extracted	-	31/03/2021
Date analysed	-	31/03/2021
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	101

Organochlorine Pesticides in soil		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date extracted	-	31/03/2021
Date analysed	-	31/03/2021
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	103

Acid Extractable metals in soil		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date prepared	-	31/03/2021
Date analysed	-	31/03/2021
Arsenic	mg/kg	10
Cadmium	mg/kg	<0.4
Chromium	mg/kg	13
Copper	mg/kg	14
Lead	mg/kg	20
Mercury	mg/kg	<0.1
Nickel	mg/kg	9
Zinc	mg/kg	200

Moisture		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date prepared	-	31/03/2021
Date analysed	-	01/04/2021
Moisture	%	12

Asbestos ID - soils NEPM - ASB-001		
Our Reference		265444-1
Your Reference	UNITS	QA01
Date Sampled		29/03/2021
Type of sample		soil
Date analysed	-	31/03/2021
Sample mass tested	g	568.23
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. **NOTE** #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) **NOTE** #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Date analysed	-			06/04/2021	[NT]	[NT]	[NT]	[NT]	06/04/2021	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	85	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	90	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	75	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	102	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Date analysed	-			02/04/2021	[NT]	[NT]	[NT]	[NT]	02/04/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	126	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	90	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	126	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	90	[NT]
Surrogate o-Terphenyl	%		Org-020	97	[NT]	[NT]	[NT]	[NT]	93	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Date analysed	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	122	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	129	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	107	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Date analysed	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	109	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	108	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Date analysed	-			31/03/2021	[NT]	[NT]	[NT]	[NT]	31/03/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	102	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	98	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

265444

Updated COC

Envirolab.

Chain of Custody

JBS&G

PROJECT NO.: 60493
PROJECT NAME: Bonnyrigg Stages 8-11
DATE NEEDED BY: / / STAT.
PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) ...K.Linz.....@jbsg.com.au; (3) ...ada.soosmith.....@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

LABORATORY BATCH NO.:
SAMPLERS: AS
QC LEVEL: NEPM (2013)

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	H.Metals	OCPs	TRH/BTEX	PAHs	CEC	EC	pH	OC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
1	QA01	SOIL	29.3.21		Bag + Jar + Ice		X	X	X	X	X							
2	QA02	↓	↓		↓													
3	QA03.	↓	↓		↓													

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: AS DATE: 29.3.21 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: Tanya Doherty DATE: 30/03/2021 OF: ELS	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

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

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265444

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	Katie Linz

Sample Login Details

Your reference	60493, Bonnyrigg Stages 8-11
Envirolab Reference	265444
Date Sample Received	30/03/2021
Date Instructions Received	30/03/2021
Date Results Expected to be Reported	08/04/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	3 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	21
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	On Hold
QA01	✓	✓	✓	✓	✓	✓	
QA02							✓
QA03							✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 265548

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	Katie Linz
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	**60493, Bonnyrigg Stages 8-11**
Number of Samples	2 soil
Date samples received	31/03/2021
Date completed instructions received	31/03/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	09/04/2021
Date of Issue	08/04/2021

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Ridwan Wijaya
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Lucy Zhu, Asbestos Supervisor
Manju Dewendrage, Chemist

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date extracted	-	01/04/2021
Date analysed	-	06/04/2021
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	95

svTRH (C10-C40) in Soil		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date extracted	-	01/04/2021
Date analysed	-	02/04/2021
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	99

PAHs in Soil		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date extracted	-	01/04/2021
Date analysed	-	01/04/2021
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	80

Organochlorine Pesticides in soil		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date extracted	-	01/04/2021
Date analysed	-	01/04/2021
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	0.1
Surrogate TCMX	%	90

Acid Extractable metals in soil		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date prepared	-	06/04/2021
Date analysed	-	06/04/2021
Arsenic	mg/kg	14
Cadmium	mg/kg	<0.4
Chromium	mg/kg	19
Copper	mg/kg	34
Lead	mg/kg	42
Mercury	mg/kg	0.1
Nickel	mg/kg	10
Zinc	mg/kg	200

Moisture		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date prepared	-	31/03/2021
Date analysed	-	01/04/2021
Moisture	%	13

Asbestos ID - soils NEPM - ASB-001		
Our Reference		265548-1
Your Reference	UNITS	QA04
Date Sampled		30/03/2021
Type of sample		soil
Date analysed	-	01/04/2021
Sample mass tested	g	585.36
Sample Description	-	Brown fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. **NOTE** #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) **NOTE** #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			01/04/2021	[NT]	[NT]	[NT]	[NT]	01/04/2021	[NT]
Date analysed	-			06/04/2021	[NT]	[NT]	[NT]	[NT]	06/04/2021	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	100	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	120	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	110	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	84	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	106	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			01/04/2021	[NT]	[NT]	[NT]	[NT]	01/04/2021	[NT]
Date analysed	-			02/04/2021	[NT]	[NT]	[NT]	[NT]	02/04/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	99	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	99	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate o-Terphenyl	%		Org-020	96	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			01/04/2021	[NT]	[NT]	[NT]	[NT]	01/04/2021	[NT]
Date analysed	-			01/04/2021	[NT]	[NT]	[NT]	[NT]	01/04/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	123	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	73	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	121	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	121	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	111	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	116	[NT]	[NT]	[NT]	[NT]	78	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			01/04/2021	[NT]	[NT]	[NT]	[NT]	01/04/2021	[NT]
Date analysed	-			01/04/2021	[NT]	[NT]	[NT]	[NT]	01/04/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	129	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	126	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	133	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	123	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	130	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	122	[NT]	[NT]	[NT]	[NT]	74	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			06/04/2021	[NT]	[NT]	[NT]	[NT]	06/04/2021	[NT]
Date analysed	-			06/04/2021	[NT]	[NT]	[NT]	[NT]	06/04/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	95	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	94	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Envirolab.

Chain of Custody

1 of 1

JBS&G

PROJECT NO.: 60493	LABORATORY BATCH NO.:
PROJECT NAME: Bonnyrigg Stages 8-11	SAMPLERS: AS
DATE NEEDED BY: STAT	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) ....K.Linz.....@jbsg.com.au; (3) alisonsmith@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Asbestos	H.Metals	OCP	TRH/BTEX	PAHs	CEC	EC	PH	LOC	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
QA04 (1)	SOIL	30.3.21		Bag+Jar+Ice		X	X	X	X	X							
QA05 (2)	↓	↓		↓													

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

UNIVERSAL

Job No: 265548

Date Received: 31/3/21

Time Received: 1240

Received By: AB

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: ASmith DATE: 30.3.21	CONSIGNMENT NOTE NO.	NAME: A-BV1	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	DATE: 31/3/21	COOLER TEMP 1.8 deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

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

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Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	Katie Linz

Sample Login Details

Your reference	60493, Bonnyrigg Stages 8-11
Envirolab Reference	265548
Date Sample Received	31/03/2021
Date Instructions Received	31/03/2021
Date Results Expected to be Reported	09/04/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	On Hold
QA04	✓	✓	✓	✓	✓	✓	
QA05							✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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Document Status

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		Name	Name	Signature	Date
A	Katie Linz	Matthew Bennett	M. Bennett	Draft for Client Review	26/04/2021
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