

Mirvac Office and Industrial c/o: Pells Sullivan Meynink Preliminary Site Investigation

Mamre Road, Kemps Creek, NSW

30 January 2019 55607/119599 (Rev B) JBS&G Australia Pty Ltd

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# Abbreviations

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



## **Executive Summary**

JBS&G Australia Pty Ltd (JBS&G) was engaged by Pells Sullivan Meynink (PSM, the client) on behalf of Mirvac Office and Industrial (Mirvac) ,to conduct a Preliminary Site Investigation (PSI) for Lots 54 to 58 in Deposited Plan (DP) 259135, Mamre Road, Kemps Creek, NSW (the site). The site comprises approximately 56 hectares (ha) of rural residential land, utilised for a range of purposes including market gardening and poultry farming. The site location and layout are shown on **Figures 1** and **2**, respectively.

It is understood the client is proposing acquisition and redevelopment of the site for land use consistent with commercial and industrial use pursuant to the *National Environmental Protection Measure* (NEPM) (NEPC 2013<sup>1</sup>). The site, once redeveloped, will provide innovative commercial land uses within the Western Sydney Priority Growth Area (Western Sydney Employment Lands) to help deliver new industries and employment opportunities in support of the government's economic development goals for Western Sydney.

To facilitate the rezoning and subsequent redevelopment of the site, the client requires sufficiently detailed studies to identify and assess potential for contamination. As such, a PSI is required to support rezoning decisions consistent with Section 4.1 of the DUAP/EPA (1998) Managing Land Contamination Planning Guidelines SEPP 55 – Remediation of Land (the SEPP 55 Planning Guidelines)

A review of the site history indicated that the site appeared to be utilised for light agricultural purposes (i.e. grazing, historical dairy farming, poultry farming and horticulture). Based on the findings of the desktop study and as confirmed by detailed site inspections by JBS&G on 30 November 2018 and 16 January 2019, potential sources of onsite contamination, both historical and current, are likely to be from surficial sources associated with:

- Pesticides / herbicides used in former and current market gardens;
- Potential biological impacts from livestock / poultry farming;
- Potential use of hazardous building materials (asbestos, lead based paints, PCBs) in historic and current site structures resulting in localised impacts to soils in proximity to the location of site structures;
- Potential hydrocarbon and pesticide contamination from the storage of materials and consumables at various locations across the site area (former and current sheds).
- Fill materials of unknown origin; and
- Potential asbestos containing materials (ACM) in irrigation lines (conduits).

As part of the investigation, JBS&G collected soil samples from 38 locations from across the site – 29 boreholes, two testpits and seven stockpile samples. Fill materials containing anthropogenic materials were identified within four boreholes, comprising both imported gravels and soils associated with structural base coarse and/or road base. Fill materials containing anthropogenic inclusions of unknown origin were observed in several stockpiles and at four locations within Lot 57, associated with the uncontrolled import and spreading of materials. Historical site structures were noted to contain small volumes of fibre sheet board which may be ACM. Stained and odorous soils were observed at two locations associated with petroleum drums and electrical transformers.

<sup>&</sup>lt;sup>1</sup> National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013). National Environment Protection Council (NEPC 2013)



The soil analytical results indicated that concentrations of polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs) were all reported below the adopted land use criteria for commercial/industrial land use.

Elevated concentrations of Total Recoverable Hydrocarbon (TRH) were reported in sample BH15 0-0.1m, exceeding the ecological and management limit criteria adopted in the investigation. These soils were noted to be stained and were underlying a fuel drum. This impact is considered to be highly localised. No TRH or BTEX exceeded adopted health-based criteria. Concentrations of zinc and copper were reported above the adopted ecological criteria at several locations at the site.

The laboratory analysis results reported the absence of detectable asbestos fibres in soil at the LOR in all samples analysed with the exception of sample HA13 0-0.1, which detected the presence of chrysotile asbestos as fibrous asbestos (FA) with a total estimated asbestos concentration of 0.00032%w/w., below the laboratory LOR and adopted site criteria (**Figure 4**).

Based on the scope of work and subject to the limitations in **Section 11**, JBS&G notes the following conclusions:

- The site is proposed to be rezoned to allow for the development of the Western Sydney Employment Lands (commercial land use);
- A majority of the site area comprises land which has historically been utilised for agricultural purposes including dairy/poultry farming, grazing and market gardens;
- Due to access restrictions during the investigation, the contamination status of the chicken farm area located in Lot 54 is considered a data gap that will require future assessment prior to redevelopment;
- Trace level friable asbestos was identified at one location (HA13) adjacent to historic structures which were observed to contain possible ACM sheet board. As such, there is the potential for ACM to be present within site structures and in soil in the vicinity;
- Elevated TRH concentrations were identified in stained soils at one location and will require further investigation and management. This impact is highly limited in lateral extent and does not appear to migrate vertically.
- A small number of heavy metal impacts to surface soils were also identified but do not pose unacceptable ecological health risks under the proposed land use if not utilised as growing media.
- Anthropogenic materials at some locations were present in quantities that may pose an aesthetic concern for sensitive land uses. However, noting the proposed land use (commercial/industrial), these materials may be retained beneath hardstand without any further management. The impacts identified were typical of the low-risk historical land uses that occurred at the site
- Whilst the investigation identified localised surficial soil impacts to be present at the site, the
  investigation did not identify the potential for widespread contamination which may
  preclude rezoning or future redevelopment of the site. Identified potential soil impacts are
  considered representative of common contaminants and potentially contaminating land use
  activities which can be readily dealt with during the DA stage for redevelopment and
  assessment for site suitability; and
- Following from the above, the requirements of the DUAP (1998) SEPP 55 Planning Guidelines for generalised rezonings are considered to have been satisfied, namely that the rezoning can proceed and the site can be made suitable "provided that measures are in place to the ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made".



It is recommended that Hazardous Building Material Surveys (HBMS) be undertaken prior to any demolition of existing site structures.

JBS&G recommended that upon submission of development application(s) within the site, a detailed site investigation be undertaken consistent with SEPP 55 requirements and EPA made or endorsed guidelines.



## 1. Introduction

## 1.1 Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Pells Sullivan Meynink (PSM, the client) on behalf of Mirvac Office and Industrial (Mirvac), to conduct a Phase 1 Preliminary Site Investigation (PSI) for Lots 54 to 58 in Deposited Plan (DP) 259135, Mamre Road, Kemps Creek, NSW (the site). The site comprises approximately 56 hectares (ha) of rural residential land, utilised for a range of purposes including market gardening and poultry farming. The site location and layout are shown on **Figures 1** and **2**, respectively.

It is understood the client is proposing acquisition and redevelopment of the site for land use consistent with commercial and industrial use, pursuant to the *National Environmental Protection Measure* (NEPM) (NEPC 2013<sup>2</sup>). The proposed redevelopment will include the grading of site levels and construction of multiple warehouse office buildings and associated infrastructure (roadways and on grade car parks). The site, once redeveloped, will provide innovative commercial land uses within the Western Sydney Priority Growth Area (Western Sydney Employment Lands) to help deliver new industries and employment opportunities in support of the government's economic development goals for Western Sydney.

To facilitate rezoning, a PSI is required to support decisions consistent with Section 4.1 of the DUAP/EPA (1998) Managing Land Contamination Planning Guidelines SEPP 55 – Remediation of Land (the SEPP 55 Planning Guidelines).

The investigation scope was developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) including the *National Environment Protection (Assessment of Site Contamination) Measure* 2013 (ASC NEPM 2013), as well as SEPP 55 Planning Guidelines, and other relevant guidelines and standards.

#### 1.2 Objectives

The objective of the investigation is to assess potential contamination from historical activities across the site and a preliminary assessment of contamination, to facilitate rezoning of the site.

The investigation will assess whether there are any potential contamination constraints to rezoning and what further contamination investigation and management actions may be required to resolve potential issues prior to or subsequent to rezoning.

#### 1.3 Scope of Works

The site history and environmental site setting was reviewed for the purposes of identifying potential sources of environmental contamination. The desktop study has focused on key areas of the site, in particular those where there is considered to be a greater potential contamination risk associated with historical activities such as filling areas, agricultural activities, demolition of site structures, waste storage activities, and proximity to potentially contaminating activities.

Following this, a detailed site inspection of accessible areas within the site was undertaken. Further, targeted soil sampling was undertaken across the site. In summary, the following scope of works was undertaken:

• Procurement and review of Section 10.7 (2&5) (s.10.7) planning certificates for the four lots comprising the site from Penrith City Council;

<sup>&</sup>lt;sup>2</sup> National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013). National Environment Protection Council (NEPC 2013)



- Procurement and review of records of stored dangerous goods held by SafeWork NSW obtained for one representative lot within the site;
- Procurement and review of current and historical land title records for the four lots comprising the site;
- Procurement and review of historical aerial photographs;
- Review of publicly available heritage records held by the Office of Environment & Heritage for all lots within the site;
- Review of online records from OEH/EPA regarding notifications/records of contaminated land, and environmental incidents or former environmental licences;
- Review licensed groundwater bores within and near to the site;
- Review of the environmental setting including topography, geology and hydrogeology of the site and surrounding areas;
- Completion of a detailed inspection of accessible lots within the site boundary to assist in the development of the conceptual site model (CSM);
- Advancement of 29 boreholes, two testpits and seven stockpile samples within the site and subsequent collection of soil samples to provide a targeted assessment of the environmental condition of the site;
- Assessment of the potential for contamination based on current and historical site activities to draw preliminary conclusions regarding the potential contamination status of the site; and
- Preparation of this PSI report in general accordance with relevant EPA made and endorsed guidelines and SEPP 55 Planning Guidelines.



## 2. Site Condition and Surrounding Environment

### 2.1 Assessment Area Identification

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

Lot/DP	Lot 54 to 58, DP 259135			
Address	806-882 Mamre Road, Kemps Creek, NSW, 2178			
Local Government Authority	Penrith City Council			
Approximate Assessment Area Co-ordinates (MGA 56)	As shown on <b>Figure 2</b>			
Approximate Area size	56 ha			
Current Zoning	RU2 Rural Landscape (Penrith Local Environmental Plan (LEP) 2010)			
Current Land Use	Rural Residential / Agricultural			
Previous Land Use	Rural Residential / Agricultural			
Proposed Land Use	Commercial (Proposed Western Sydney Employment Lands)			

Table 2.1: Summary Assessment Area Details

#### 2.2 Site Description

A detailed inspection of the site was conducted on 30 November 2018 and 16 January 2019 by JBS&G's trained and experienced qualified environmental scientists. The general site was bound by Mamre Road to the west and agricultural/pastoral properties to the north, south and east. A summary of the key observations within the site is provided in the following sections. A graphical representation depicting the location of key observations is provided in **Figure 3**, and a photographic log is provided in **Appendix A**.

### 2.2.1 Lot 54 DP 269135 (864-882 Mamre Rd)

The western portion of the Lot was notably elevated, sloping upward from Mamre Road to a high point within the vicinity of a single story red brick residential building. The residential building was accessed via a gravelled driveway which ran from Mamre Road along the southern boundary of the Lot. A single septic tank was observed to the south west of the residence. An electrical transformer was observed to the north (**Figure 2**). Some minor staining and odours (hydrocarbon/chemical) were noted in adjacent topsoils. An open plan sheet metal warehouse was observed to the north east of the residential structure and appeared to contain general farming equipment, minor chemical and petroleum storage. A second smaller red brick residential dwelling was located toward the southern boundary, adjacent to the gravelled access road. JBS&G note access restrictions during the investigation precluded a detailed inspection of the residential structure and the immediate surroundings.

The central portion of the site appeared to be raised and levelled with a landform extending from the central western residential building, to the east and north and was elevated to a maximum height of approximately 5 m above the natural grade in the north eastern corner. Exposed soils within the embankment appeared to comprise natural and organic materials. Four warehouse structures of corrugated iron, sheet metal and sheet board (potential ACM) construction were observed in the central portion of the Lot (chicken coups associated with current poultry farming). JBS&G note access restrictions precluded a detailed inspection of the chicken coups and surrounding area during the investigation. Based on observations and communications with the client and landowner, it was understood that a single above ground storage tank (AST) containing liquid petroleum gas (LPG) was situated within the chicken coup area. Water and feed silos were observed at the eastern margin of each warehouse and it is understood minor underground infrastructure provided each warehouse with water and LPG to run heaters within each coup. A refrigerated container was observed to the west of the coups, based on communications with the client it is



understood to house deceased poultry awaiting offsite disposal. In addition, several large water tanks were observed to the north of the coups.

The eastern portion of the site comprised open pastoral/agricultural land with a gravelled roadway along the southern Lot boundary providing access to a single large dam. The dam embankments were observed to comprise natural reworked soils. Two small timber and corrugated metal sheds were noted at the north western and north eastern corners of the dam and contained water pumps and irrigation infrastructure. A single petroleum drum was noted in the north eastern shed. No staining or evidence of spills or leaks was observed adjacent to, or within the vicinity of the drum. Based on communications with the landowner, it is understood the eastern portion of the site was historically utilised for horticultural purposes and contained market gardens.

## 2.2.2 Lot 55 DP 269135 (844-862 Mamre Rd)

Three properties containing free-standing residential dwellings, associated garage/shed structures and landscaped garden beds were located in the western portion of the Lot, with access to each via gravelled driveways from Mamre Road. The southernmost property appeared to be recently constructed, with two corrugated sheet metal garages to the rear (east), one of which appeared to be utilised as a secondary dwelling. The central residential building was of red brick construction and appeared to have a newly constructed addition to the rear (eastern) portion. Further east a secondary red brick residential structure contained two vehicles and appeared to be used as a garage workshop. A sheet metal storage shed lay just beyond the workshop building. Stockpiled building materials (bricks, metal sheeting), stockpiled soils, demolition waste (scrap metal, timber), PVC piping, BBQ's, a lawnmower, discarded tyres, car parts, bicycles, exercise equipment and paint tins were observed within the vicinity of the workshop/garage. Two septic tank pits were noted in the central west, presumably associated with sewerage infrastructure servicing the three properties.

The northernmost property was of red brick construction, a large sheet metal garage/shed was observed at the rear (east). The shed was noted to contain building materials, stored household goods, paint tins and general agricultural/farming equipment. The northern section of the shed housed stored packaging (cardboard/polystyrene boxes), washing basins, an external kitchen and a large walk in refrigerator associated with horticultural activities at the Lot. A small retention pond was noted to the east of the wash area. Discarded farming machinery, tractor engines, tyres and some minor building and demolition waste was observed immediately south of the shed. Building materials and demolition waste were also observed within an ovate section of land to the south of the sheds bound by a gravelled drive. Materials within this area comprised stockpiled tiles, timber, bricks metal sheeting and discarded waste (furniture, wooden pallets and stockpiled soil).

The central west and eastern portion of the Lot contained a series of tilled market gardens which were accessed via a grid network of dirt and gravelled drives. Plastic irrigation pipes (including fragmented discarded pipes) were observed within ditches running along each roadway and running lengthways within each garden bed. Surface soils within the garden beds were observed to contain minor plastic fragments (PVC and small fragments of black plastic sheeting). A small shed adjacent to the central roadway was observed to contain drums of herbicides and bags of fertilisers. Discarded drums of herbicides were observed across the central and eastern portion of the Lot.

The central portion of the site contained evidence of historic market gardens and contained two dams. The dam embankments were raised approximately 3 m above natural grade and were observed to comprise reworked natural soils. Stockpiled building and demolition waste (metal sheeting, household rubbish, water tanks, tiles, bricks and a dilapidated trailer were observed adjacent to the southern margin of the main roadway, and within the central south of the Lot (as shown on **Figure 3**). Two stockpiles, one comprising organic matter with small rounded gravel inclusions, the other containing organic mulch were noted in the eastern portion of the site.



### 2.2.3 Lot 56 DP 269135 (826-842 Mamre Rd)

Two identical two storey red brick residential dwellings were located in the south west of the Lot, accessed via a gravelled drive from Mamre Road. The eaves of both building were noted to contain fibre sheet board (potential ACM). Two septic tanks were noted within the vicinity of the dwelling, one adjacent to the north eastern corner, the other further east. In general, the western portion of the site comprised pastoral agricultural land with three large market gardens located in the north west. Livestock (cattle, horses, goats) were noted within the central portion of the Lot. A single open plan timber frame/corrugated iron barn was located in the central south of the Lot and contained building materials, stored farming equipment, discarded fridges, batteries, a single petroleum drum (no indicators of leaks or spills) and general waste. Suspected ACM sheeting was noted along the northern and southern walls of the shed. Several fragments of potential sheet board were observed in surface soils adjacent to the structure. Metal irrigation pipes and several empty petroleum drums were located to the immediate east of the shed. A single shipping container to the west of the shed was empty at the time of inspection. Small, run-down timber fences were observed to the north of shed (old horse/cattle pens) containing a single abandoned vehicle.

A large dam was observed in the central portion of the Lot, with the northern embankment raised approximately 3 m above natural grade. Stockpiles of building materials (brick/concrete pavers), irrigation pipes, old water tanks, firewood and a dilapidated timber boat were noted within the area north of the dam. A small run-down timber shed located atop the embankment was observed to contain irrigation infrastructure (old pump and metal and PVC conduits) and a few small sheets of fibre board (potentially ACM).

JBS&G note that ACM conduit was identified in-ground by Mirvac. The conduit is suspected to extend for a length of approximately 400m in ground. The location of the ACM conduit is shown in **Figure 4**.

A single petroleum drum and staining indicative of hydrocarbon impacted surface soils (approximately 1 m<sup>2</sup>) was observed at the north eastern margin of the embankment. The eastern portion of the site comprised open pastoral paddocks with no evidence of ground disturbance or historic site structures.

## 2.2.4 Lot 57 DP 269135 (806-824 Mamre Rd)

The south western portion of the site contained a residential dwelling, sheds, garages and minor landscaped garden beds with access via a gravelled driveway fronting Mamre Road. Stockpiled and discarded farming equipment, building materials and demolition waste were observed within the south west of the Lot, east of a sheet metal garage where several stored cars were noted. Soils to the immediate north of the residential dwelling were observed to contain building and demolition materials (large bricks and concrete rubble), adjacent to which was a series of small market gardens. A large free standing warehouse was located in the north western portion of the site, bound by a barbed wire fence line. The area surrounding the shed contained one large stockpile of igneous road base gravel, palates of stored masonry materials (brick, stone, pavers), two petroleum drums (no leaking or staining observed) and a single dump truck parked at the rear.

Two stockpiles of brown soils with inclusions of crushed brick, concrete, igneous gravel and bitumen were observed within this area. Several stockpiles of similar composition were observed within the vicinity of the northern shed structure, and in the eastern portion of the site as shown on **Figure 2**. Exposed surface soils within the western portion of the site and within an area to the east of the site appeared to comprise similar fill material. Based on communications with the land owner, it is understood this material had been imported to the site and spread across the Lot surfaces via the use of a bobcat. The majority of the material appeared to be free from any overt indicators of contamination with the exception of two small suspected asbestos containing materials (ACM)



fragments, observed in close proximity two one another within fill materials in the central west of the Lot.

A large dam was situated in the central portion of the Lot, one stockpile of anthropogenic building waste (metal roofing, timber, bricks) and one stockpile of sandstone boulders was observed in vicinity to the western embankment. The eastern portion of the site housed two free-standing rundown sheet metal/timber storage sheds. The sheds and surface soils surrounding them contained building materials (window frames, timber, metal, fibre sheet board (potential ACM)) demolition waste (bricks/concrete), an abandoned car and general agricultural/household waste (empty petroleum drums/bathtubs (no observed staining) etc.). The easternmost portion of the site contained several mature trees of which approximately half were noted to be dead or dying.

## 2.2.5 Lot 58 DP 259135 (788-804 Mamre Rd)

A large dam was observed in the central southern portion of the Lot, with the western embankment raised approximately 3 m above natural grade. Four water pumps, fuel containers and two 44-gallon drums (empty) were located on the north western portion of the embankment. No obvious leaking of chemicals or fuel were observed.

The eastern portion of the site comprised open pastoral paddocks with no evidence of ground disturbance or historic site structures.

One semi derelict shed was the only standing structure on the Lot, located in the north west portion of site, some 60 m east of Mamre Road. The shed was of corrugated iron and timber construction, with various piles of rubbish and redundant piping, steel and timber from onsite market gardens surrounding it. There were some fuel containers in the shed (no indications of leaks or spills of fuel inside). A stockpile of organic mulch was located to the north west of the shed. One large concrete water tank was dug into the ground at the south side of the shed with the top 400 mm protruding from the ground. Several stockpiles of rock (boulders, cobbles and fines) were located scattered throughout the eastern portion of site. In general, the western portion of the Lot comprised of long grass with some mature trees and run-down fences. A dry watercourse from the east dam ran through the middle of the Lot towards Mamre Road in the west.

The central portion of the site contained several patches of market gardens with irrigation and laneways along the northern boundary and north south to the market garden on the southern boundary.

## 2.3 Surrounding Land Use

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

- North –rural residential properties;
- East –rural residential properties;
- South –rural residential properties including adjacent market gardens; and
- West Mamre Road, across which are rural residential properties.

## 2.4 Topography

A review of the regional topography (LPMA<sup>3</sup>) identified that there was a gentle gradient southwest towards Kemps Creek. The assessment area has an elevation of between approximately 40 to 50 m Australian Height Datum (AHD). The site exists within a generally flat alluvial plain with localised undulating rises / falls, generally sloping toward Kemps Creek to the west.

<sup>&</sup>lt;sup>3</sup> Land and Property Information, Spatial Information Exchange website, <u>http://maps.six.nsw.gov.au/</u> accessed 26 November 2018



#### 2.5 Geology and Soils

Reference to the 1:100,000 Penrith geological map (Clarke N.R. and Jones D.C. 1991<sup>4</sup>), indicates that the study area is predominantly underlain by Bringelly Shale which forms the upper formation of the Wianamatta Group. The Bringelly Shale is characterised by the presence of shales, carbonaceous clays, laminite and coal. Other units which may be encountered across the study area include Quaternary fluvial sand, silt and clay (around existing and old creeks and waterways), surficial topsoil and residual clays (derived from weathering of shale bedrock).

Reference to the eSPADE NSW Soil and Land Information database (OEH 2018<sup>5</sup>) indicates that most of the study area is underlain by two soil landscapes: Blacktown and Luddenham. Details of the soil landscapes are summarised in **Table 2.2.** 

 <sup>&</sup>lt;sup>4</sup> Clark N.R. and Jones D.C., 1991, Penrith 1:100 000 Geological Sheet 9030, 1st edition. Geological Survey of New South Wales, Sydney
 <sup>5</sup> 'eSPADE NSW Soil and Land Information', NSW Office of Environment and Heritage, Accessed 28 August 2018,

http://www.environment.nsw.gov.au/eSpade2Webapp



Soil Landscape	Geology	Landscape Type	Position	Vegetation	Soil Material	Limitations
Blacktown (bt)	Wianamatta Group shales	Residual	Gently undulating rises and slopes	Cleared Eucalypt woodland, tall open-forest (dry schlerophyll)	Red and brown podzols on crests, yellow pozdols on lower slopes and drainage lines	Moderately reactive highly plastic subsoil, localised seasonal waterlogging and water erosion hazard, localised surface movement potential
Luddenham (lu)	Wianamatta Group Ashfield Shale and Bringelly Shale.	Erosional	Undulating to rolling hills	Cleared Eucalypt woodland, tall open-forest (dry schlerophyll)	Shallow dark podzolic soils on crests, moderately deep red podzolic soils on upper slopes, yellow podzolic and prairie soils on lower slopes and drainage lines	Water erosion hazard, localised steep slopes, localised mass movement hazard, localised surface movement potential, moderately reactive, localised impermeable highly plastic subsoil.

Table 2.2 – Soil Landsc	pes within the	Investigation	Area
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### 2.6 Hydrology

LPMA indicated that the closest surface water body is Kemps Creek, located approximately 0.6 km south-west of the site. Kemps Creek traverses north-west conferencing with South Creek approximately 0.9 km west of the site before discharging into the Hawksbury River located approximately 26 km to the north of the site.

The site is predominately surfaced with grass cover, whereby it is anticipated surface water generated during periods of rainfall is likely to result in infiltration into the ground surface at a rate reflective of the silty clay topsoil permeability. In periods of heavy or prolonged rainfall, excess water is likely to result in overland flow and traverse south-west towards Kemps Creek, following the topographic gradient.

During the site inspection, several dams were also identified across the site and were predominately utilised for stock watering and irrigation.

#### 2.7 Hydrogeology

Registered bore information obtained from the NSW Office of Water (NOW<sub>5</sub>) is included as **Appendix B**. The search identified that there were no groundwater bores located within a 1.5 km radius of the site.

Based on the reported geology, topography and site observations of the assessment area, groundwater is expected to be encountered at shallow depth in swampy low lying areas within the assessment area and near the Georges immediately to the west of the assessment area. Groundwater is expected to flow west and south west towards Georges River. Based on the information summarised in **Table 2.2**, a deeper sandy water bearing zone may occur beneath the clay.

#### 2.8 Acid Sulfate Soils (ASS)

Acid sulfate soils (ASS) are generally associated with low-lying coastal areas, including estuarine flood plains, rivers and creeks. The location and elevation of the site (> 40 m AHD) are such that the likelihood of ASS within the study area is low.



### 2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Badgerys Creek AWS<sup>6</sup>) indicates the Site is located within the following meteorological setting:

- Average maximum temperatures range from 17.5°C in July to 30.1°C in January;
- Average minimum temperatures range from 4.1°C in July to 17.1°C in January;
- The average annual rainfall is approximately 681 mm with rainfall greater than 1mm occurring on an average of 67 days per year; and
- Monthly rainfall varies form 22.6 mm in July to 98.5 mm in February with the wettest periods occurring on average between the months of January to March.

<sup>&</sup>lt;sup>6</sup> http://www.bom.gov.au/climate/averages/tables/cw\_067108.shtml, Commonwealth of Australia, 2018 Bureau of Meteorology, Product IDCJCM0028 prepared on 22 Nov 2018 and accessed by JBS&G on 26 Nov 2018.

<sup>&</sup>lt;sup>6</sup> Australian Soil Resource Information System http://maps.six.nsw.gov.au/ accessed 26 Nov 2018.



## 3. Site History

#### 3.1 Aerial Photographs

Historical aerial photographs were obtained from NSW Land Property Information (LPI) and Six Maps imagery as shown in **Appendix C**. A summary of aerial photographs relevant to the broader site and the assessment area is included below:

• **1955**: The site appeared to comprise part of a larger land parcel used as agricultural land (grazing paddocks with scattered woodlands). The site itself appeared to be pastoral grazing land, generally devoid of trees. Two dams were noted in the central and northern portion of the site, linked by a drainage channel.

The surrounding area comprised predominantly undeveloped rural land including open paddocks similar to the subject site with some scattered woodlands. The current day Mamre Road was observed to be unsealed and present along the site's western boundary.

- **1965**: The site remained relatively unchanged from the previous 1955 aerial photograph. The two dams identified in the previous photograph have been expanded with a significant drainage channel dissecting the site and linking the two dams to the neighboring properties. A third dam is noted in the central western portion of the site, adjacent Mamre Road.
- **1975**: Several individual paddocks were evident in the northern portion of the site. Vegetation had been further cleared and a number of earthen access tracks dissected the site.

Land to the west of the site appeared more developed with an increase in cultivated plots (market gardens) and structures apparent. A large homestead had been constructed to the north of the site as well as the development of several dams to the north and south.

• **1986**: Further clearing had occurred with grazing lands having been replaced with market gardens in the central and southern portion of the site. A number of residential dwellings had been constructed in the northwest, west, central and southern areas. Two large long sheds had been constructed in the southern Lot (associated with poultry farming, where the two northern most current sheds exist). A third dam had been developed in the south eastern corner of the site, adjacent a number of offsite dams.

Land surrounding the site appeared more developed with an increase in residential dwellings and cultivated plots.

• **1991**: Further development had occurred in the southern portion of the site, with an additional two sheds constructed within the current chicken farming area. Market gardens were scattered across the remaining site area.

Land surrounding the site had been further cleared and was dominated by market gardens.

- **2002**: Further agricultural work had occurred across the site and several horticultural greenhouses had been constructed in the northern portion of the site, adjacent to a small residential dwelling. Further residential buildings had been constructed across the western border of the site, fronting Mamre road. Market gardens had also been extended through the central portion of the site.
- **2018**: The greenhouses identified in the previous 2002 photograph had been removed with the land comprising open pastoral fields. Further construction of residential buildings across the western boundary of the site was apparent. An increase in vegetation was noted in the vicinity of the chicken farming area and residential buildings in the southern portion of the site. Market gardens now extend across the majority of the central portion of the site.



In summary, the overall site originally comprised scattered woodlands/pastoral land and is understood it was used for agricultural grazing and dairy farming (based on communications with landowners). Since 1986, land use has varied from agricultural practices including grazing, market gardening, chicken farming and rural residential land uses.

### 3.2 Historical Land Title Records

The results of the historical land title search for the four Lots encompassing the site are summarised in **Table 3.1**. Historical land titles are provided in **Appendix C**.

Date of Acquisition and Term Held	Registered Proprietor Likely Use					
Lot 54 DP 259135						
25.01.1968 (1968 to 1980)	Number One Fleurs Pty Limited	Pastoral/agricultural				
14.02.1980 (1980 to 1985)	Myner Pty Limited	Agricultural/rural residential				
17.06.1985 (1985 to date)	# Michael Vincent Borg # Mary Victoria Borg	Agricultural/rural residential				
Lot 55 DP 259135						
25.01.1968 (1968 to 1980)	Number One Fleurs Pty Limited	Pastoral/agricultural				
21.02.1980 (1980 to date)	# Pasquale Maltese (Farmer) # Concetta Maltese (Married Woman)	Horticulture/agriculture/rural residential				
Lot 56 DP 259135						
25.01.1968 (1968 to 1980)	Number One Fleurs Pty Limited	Pastoral/agricultural				
13.02.1980 (1980 to date)	# Angelo Perri (Hairdresser) #Antonio Perri (Student) # Emilia Ierufi (Widow)	Agricultural/rural residential				
Lot 57 DP 259135						
25.01.1968 (1968 to 1980)	Number One Fleurs Pty Limited	Pastoral/agricultural				
28.07.1980 (1980 to 1984)	Exotic Livestock Aust Pty Limited	Agricultural/rural residential				
13.04.1984 (1984 to date)	# Benito Vitalone # Francesca Vitalone	Agricultural/rural residential				
Lot 58 DP 259135						
25.01.1968 (1968 to 1980)	Number One Fleurs Pty Limited	Pastoral/agricultural				
28.07.1980 (1980 to 1982)	Exotic Livestock Aust Pty Limited	Pastoral/agricultural				
22.10.1982 (1982 to 1997)	Giuseppe Demasi Alfonza Demasi	Pastoral/agricultural				
18.11.1997 (1997 to date)	# Diab Finianos # Sayde Finianos	Pastoral/agricultural				

Table 3.1 – Summary of historical land titles and associated use of the site.

The historical land title records suggest the majority of the site has been utilised for a combination of pastoral, agricultural and rural residential land uses since the late 1960s to date.

## 3.3 EPA Records

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

• No prevention, clean-up or prohibition notices; and



• No transfer, variation, suspension, surrender or revocation of an environmental protection licence.

A search was also conducted through the EPA's public contaminated land register (**Appendix E**). The search did not identify any current or previous records of notices by the EPA, or notification to the EPA under Section 60 of the Contaminated Land Management Act 1997 (CLM Act), in relation to the site or immediately surrounding land.

### 3.4 EPA Per- and Poly- Fluoroalkyl Substances (PFAS) Register

A search of the EPA's PFAS register (**Appendix E**) indicated that there were no records of impacts pertaining to the site or areas immediately surrounding the site. The nearest property included on the EPA PFAS investigation program is the Kemps Creek NSW Rural Fire Service depot on Liverpool City Council land at 245 Devonshire Road, approximately 7.5 km south of the site. Investigations reportedly detected PFAS on and beyond the RFS site, in some surface water, soil, sediment and produce samples, and it is understood further investigations are occurring. No details were available regarding sampling locations/results, however it is possible surface water samples were collected from Kemps Creek or waterways in connection with Kemps Creek, close to the RFS site. Kemps Creek flows north-northwest toward a small lake approximately 500 m downgradient of the site's western boundary. Given the sites position hydraulically up gradient, the onsite migration of PFAS to the site from the Kemps Creek Rural Fire Service Depot is considered unlikely.

#### 3.5 Australian and NSW Heritage Register

A search of the Australian and NSW Heritage database and the NSW Heritage database was undertaken and records are included in **Appendix F**. The searches identified no items of Australian or NSW historical significance at the site, sharing boundaries with or immediately surrounding the site.

The NSW Heritage search found the following with regard to surrounding properties:

- Bayley Park House, located approximately 500 m south west of the site, registered as an item of historical significance under the Penrith LGA; and
- The Fleurs Radio Telescope Array, located 1.35 km south west of the site, listed as an item of historical significance under the Penrith LEP 2010.

#### 3.6 Planning Certificates

Copies of the Planning Certificates for the four lots (54 to 58 DP 259135) forming the assessment area are included in **Appendix G**. Relevant information for the site is summarised below:

- The assessment area is zoned RU2 Rural Landscape under the Penrith Local Environmental Plan (LEP 2010);
- The assessment area is not considered to be bush fire prone land;
- The assessment area is not considered to have a high risk of ASS occurrence (LEP 2010);
- The council has not been notified by the department of public works that the assessment area is affected by the operations of section 38 or 39 of the *Coastal Protection Act 1979*;
- The assessment area is not situated within a heritage conservation area;
- Items of environmental heritage are not situated on the land;
- The assessment area is not part of biodiversity certified land;
- The land is not within a proclaimed Mine Subsidence District under *the Mine Subsidence Compensation Act 1961;*



- The land is not affected by any road widening or road alignment under either Division 2 of Part 3 of the *Roads Act 1993*, the environmental planning instrument, or council resolutions;
- The land and development on the land is subject to flood related development controls;
- The land is not affected Division 1A of part 8 of the Home Building Act 1989, relating to loose fill asbestos fibres; and
- The land is not subject to a management order, a voluntary management proposal, or a site audit statement and is not considered to be significantly contaminated to warrant regulation under the *CLM Act 1997*.

#### 3.7 Dangerous Goods Search

A hazardous goods search was not procured from SafeWork NSW as part of this assessment due to the time sensitive nature of the investigation. Subsequent searches (if procured) will be provided in (Appendix H).

The inspection across the site noted a LPG above ground storage tank in Lot 54. Storage drums, both depleted and still in use, were identified across all lots within the subject site.

#### 3.8 Integrity Assessment

The information obtained from the historical sources reviewed has been found to be in general agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.



## 4. Potential Areas of Environmental Concern

Based on the site history review and observations of site conditions during the detailed site inspection, areas of environmental concern and potential contaminants of concern of the been identified for the assessment and are presented in **Table 4.1**.

#### Table 4.1: Areas of Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern (AEC) / Media	Contaminant of Potential Concern (COPC)
Historical and existing site structures	Heavy metals, and asbestos
Storage and maintenance of equipment and consumables including fuel, oil and chemicals including above ground storage tanks (Lot 55 DP 259135)	Heavy metals, polycyclic aromatic hydrocarbons (PAHs), total recoverable hydrocarbons (TRH) benzene, toluene, ethylbenzene, xylene (BTEX) and volatile organic compounds (VOCs)
Fill materials	Heavy metals, PAH, TRH/ BTEX, organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs) and asbestos
Livestock barns and potential burial pits associated poultry /cattle and /or equine farming practices and underground septic tanks	Biological hazards (E. coli, faecal coliforms, esoteric viruses), heavy metals
Historical and current agricultural practices / features including market gardens, dams and fill materials used to create dam embankments.	Heavy metals, PAHs, TRH/BTEX, OCPs, organophosphorous pesticides (OPPs), PCBs and asbestos.
Historical irrigation lines/culverts	Asbestos
Aesthetic impacts	Stockpiled rubbish, building and demolition / fly tipped wastes and odours



## 5. Sampling and Analysis Plan

### 5.1 Data Quality Objective

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

### 5.1.1 State the Problem

The PSI is required to assess potential contamination risks to inform the rezoning of the site.

### 5.1.2 Identify the Decision

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

- Are there any historical and/or current potentially contaminating activities that would prohibit the rezoning of the site?
- Is a detailed site investigation (DSI) required to further assess the potential for contamination to assist in the development stage?
- Can identified potential contamination issues be managed and/or remediated such that the site can be made suitable for development after rezoning?

### 5.1.3 Identify Inputs to the Decision

Inputs to the decision are:

- Historical and environmental information regarding the site area as described in Section 2 and Section 3;
- Observations made during the completion of a site wide inspection;
- Targeted environmental data collected by JBS&G including the sampling and analysis of soil samples;
- Assessment criteria to be applied to the collected data based on the proposed intended land use and project objectives, as defined by assessment criteria nominated in **Section 6**; and
- 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 5.1.6**.

#### 5.1.4 Define the Study Boundaries

The study boundaries are limited to the site boundary, legally identified as Lots 54 to 58 in DP 269135, as defined in **Figure 2**.

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

#### 5.1.5 Develop a Decision Rule

Laboratory analytical data will be assessed against EPA endorsed criteria as identified in Section 6.

The decision rules adopted to answer the decisions identified in **Section 5.1.2** are summarised in **Table 5.1**.



_	/	
De	cision Required to be made	Decision Rule
1.	Are there any historical and/or current potentially contaminating activities that would preclude the rezoning of the site?	Based on the findings of the PSI, the site inspection and the limited soil sampling program, were there any areas of risk where the potential for gross contamination is such that would prevent rezoning of the land at this time? If the answer is no, then recommendations for further investigation are not required prior to the rezoning of the land. If the answer is yes, then further investigation may be required prior to rezoning.
2.	Is a detailed site investigation (DSI) required to further assess the potential for contamination to assist in the redevelopment of Stage 1, or any remaining stages of the site?	Based on the findings of the PSI, were there any potential AECs identified that require further investigation to assist in the redevelopment of the site? If the answer is no, then recommendations for further detailed investigation are not required to facilitate the redevelopment of the site. If the answer is yes, then further detailed investigation may be required prior to development.
3.	Can identified potential contamination issues be managed and/or remediated such that the site can be made suitable for development after rezoning?	Based on the findings of the PSI, are identified contamination issues able to be remediated and/or managed such that site can be made suitable for development after rezoning? If the answer is no, then further investigation and recommendations may be required to facilitate rezoning. If the answer is yes, then contamination issues can be managed and/or remediated such that the site can be made suitable for development after rezoning.

#### Table 5.1 Summary of Decision Rules

#### 5.1.6 Specify the 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 NSW EPA, NEPC 2013, appropriate indicators of data quality (DQIs) established for the project as discussed below in relation to precision, accuracy, representativeness, comparability and completeness (PARCCS parameters). The acceptable limit on decision error is 95% compliance with DQIs.

The DQIs and data assessment criteria are summarised in Table 5.2.

- **Precision** measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- Accuracy measure 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 collected 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 field and laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Data Quality Objectives	Frequency	Data Quality Indicator
Precision		
Blind duplicates (intra laboratory) <sup>4</sup>	1 / 20 samples	<50% RPD <sup>2</sup> , asbestos in agreement
Blind duplicates (inter laboratory) <sup>4</sup>	1 / 20 samples	<50% RPD <sup>2</sup> , asbestos in agreement
Laboratory duplicates <sup>1,4</sup>	1 / 20 samples	<50% RPD <sup>2</sup> , asbestos in agreement
Accuracy		
Surrogate spikes <sup>1</sup>	All organic samples	70-130%
Laboratory control samples <sup>1</sup>	1 per lab batch	70-130%
Matrix spikes <sup>1</sup>	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and		_3
Samples extracted and analysed		Soil: organics (14 days) inorganics (6
within holding times.		months)
Trip spike <sup>1</sup>	1 per sampling event	70-130% recovery
Storage blank <sup>1</sup>	1 per sampling event	<lor< td=""></lor<>
Rinsate blank <sup>1</sup>	1 per sampling data where reusable	<lor< td=""></lor<>
	equipment is used	
Laboratory blanks <sup>1</sup>		
	1 per lab batch	<lor< td=""></lor<>
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All samples <sup>3</sup>
Standard analytical methods used for all analyses	All Samples	All samples <sup>3</sup>
Consistent field conditions, sampling	All Samples	All samples <sup>3</sup>
staff and laboratory analysis		
Limits of reporting appropriate and	All Samples	All samples <sup>3</sup>
Limits of reporting appropriate and consistent	All Samples	All samples <sup>3</sup>
Limits of reporting appropriate and consistent Completeness	All Samples	All samples <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs	All Samples All Samples	All samples <sup>3</sup> All samples <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate	All Samples All Samples	All samples <sup>3</sup> All samples <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate Appropriate documentation	All Samples All Samples All Samples	All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate Appropriate documentation Satisfactory frequency and result for	All Samples All Samples All Samples All QA/QC samples	All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup> - <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate Appropriate documentation Satisfactory frequency and result for QC samples	All Samples All Samples All Samples All QA/QC samples	All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup> - <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate Appropriate documentation Satisfactory frequency and result for QC samples Data from critical samples is	All Samples All Samples All Samples All QA/QC samples -	All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup> - <sup>3</sup> Critical samples valid <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate Appropriate documentation Satisfactory frequency and result for QC samples Data from critical samples is considered valid	All Samples All Samples All Samples All QA/QC samples -	All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup> - <sup>3</sup> Critical samples valid <sup>3</sup>
Limits of reporting appropriate and consistent Completeness Sample description and COCs completed and appropriate Appropriate documentation Satisfactory frequency and result for QC samples Data from critical samples is considered valid Sensitivity	All Samples All Samples All Samples All QA/QC samples -	All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup> All samples <sup>3</sup> Critical samples valid <sup>3</sup>

Table 5.2: Summary	of Data Quality	/ Indicators

<sup>1</sup> For soil samples only

<sup>2</sup> If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.

<sup>3</sup> A qualitative assessment of compliance with standard procedures and appropriate sample collection methods will be completed during the DQI compliance assessment.



If any of the DQIs were not met, further assessment was necessary to determine whether the nonconformance significantly affected the usefulness of the data. Corrective actions might have included requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of the data.

## 5.1.7 Optimise the Design for Obtaining Data

Sampling conducted as part of the PSI is targeted in nature and followed a typically judgemental approach to obtain a preliminary indication of potential contamination at the site. The soil sampling locations were selected to target areas of potential environmental concern based on historical/current land use and field observations across site areas. Sample locations are shown in **Figure 3**.

## 5.2 Soil Sampling Methodology

During the completion of the detailed site inspections as described herein, JBS&G collected soil samples from 38 locations from across the site – 29 boreholes, two testpits and seven stockpile samples. Sampling locations are shown in **Figure 3**. Boreholes were manually advanced via the use of a hand tools and samples were collected at regular intervals from the surface soils (<0.1 m) to a maximum depth of 0.3 m below ground surface (bgs). Two test pits were advanced utilising an excavator and soil samples were collected directly from the bucket of the excavator at regular intervals from the surface soils (<0.1 m), 0.3 m, 0.5 m then at every meter interval to maximum depth of 3.1 m bgs. Seven samples were collected from stockpiled material observed during the investigation and were obtained from approximately 0.2 m into the stockpile surface.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination, if present, were noted.

Collected samples were immediately transferred to laboratory supplied sample jars and 500 mL ziplock bags. The sample jars 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. Preservation of the primary soil and QA/QC samples obtained during this investigation was completed in accordance with the protocols outlined in NEPC 2013.

Soil samples were analysed in accordance with the laboratory schedule (Table 5.3).

## 5.2.1 Field Screening

Soil samples were screened on site during works using a photo-ionisation detector (PID) to assess the potential presence of VOCs including petroleum hydrocarbons. Samples obtained for PID screening were placed in a sealed plastic bag for a period of approximately 2 minutes to equilibrate, prior to a PID being attached to the bag. Readings were then monitored for a period of approximately 1 minute or until values stabilised and the stabilised/highest reading was recorded. The PID was calibrated prior to the commencement of field works and then check readings were completed on a daily basis during the field program using a suitable calibration gas (isobutylene – 100ppm). Field calibration forms are provided in **Appendix I**. PID screening results were recorded on the bore logs included as **Appendix J**.

## 5.2.2 Duplicate and Triplicate Sample Preparation

Field soil duplicate, and triplicate samples were obtained during sampling using the above sampling methods. The collected samples were then divided laterally into three samples within minimal disturbance to reduce the potential for loss of volatiles and placed in three glass jars or sample bags as appropriate. Each sample was then labelled with a primary, duplicate or triplicate sample identification before being placed in the same chilled esky for laboratory transport.



### 5.2.3 Decontamination

Prior to the commencement of sampling activities, non-disposable sampling equipment, including shovel/hand auger and excavator bucket were cleaned with a water/detergent spray, rinsed with water and then air dried. The equipment was then 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. Decontamination and calibration certificates for field works are provided in **Appendix I**.

New nitrile gloves were utilised for the collection of each soil sample to avoid cross contamination between samples and locations.

#### 5.2.4 Laboratory Analysis

JBS&G contracted Eurofins | MGT (Eurofins) as the primary laboratory all analyses. The secondary laboratory for the investigation was Envirolab Services Pty Ltd (Envirolab). Both laboratories are National Association of Testing Authority (NATA) accredited for all analytes. In addition, the laboratories were required to meet JBS&G's internal QA/QC requirements. Laboratory analysis of samples was conducted as summarised in **Table 5.3**. Copies of the laboratories Certificates of Analysis are provided in **Appendix J**.

#### **Table 5.3 Sampling and Analytical Program**

Sample Type	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil	31 insitu soil sampling locations	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 30 samples
	7 stockpile soil sampling locations	PAHs – 30 samples
		TRH/BTEX – 22 samples
		OCPs – 22 samples
		OPPs – 5 samples
		PCBs – 1 sample
		Asbestos NEPM (500g) – 19 samples
		Asbestos (presence/absence) – 2 samples of building materials
		Ecological parameters;
		(pH, Cation Exchange Capacity (CEC), % clay) – 3 samples
		TCLP- 1 sample

In addition to the above analyses, for QA/QC purposes field duplicates and triplicates were analysed at a rate of 1/15 primary samples. Rinsate samples were obtained from all reusable sampling equipment per day of sampling, and trip spike and trip blank samples accompanied the soil samples for each batch of samples submitted to the laboratory.



## 6. Assessment Criteria

### 6.1 Regulatory Guidelines

The assessment of contaminant data for this preliminary investigation was undertaken with consideration to aspects of the following guidelines, as relevant:

- National Environment Protection (Assessment of Site Contamination) Measure 2013 (as amended 2013), National Environment Protection Council (NEPC 2013);
- Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, NSW EPA, 2011 (OEH 2011);
- Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme, 3rd Edition, NSW EPA, 2017 (NSW EPA 2017); and
- NSW EPA Sampling Design Guidelines, September 1995 (NSW EPA 1995).

### 6.2 Soil Criteria

Given the site is proposed to be developed as part of the Western Sydney Priority Growth Area, consistent with a commercial/industrial land use scenario, soil data has been compared against published guidelines made or endorsed by the NSW EPA, as outlined below and shown in **Table A**:

- NEPC (2013) Health Investigation Levels (HILs)/Health Screening Levels (HSLs): Commercial/Industrial Land Uses (HIL- D); and
- Ecological Investigation Levels (EILs), and Ecological Screening Levels (ESLs) including generic and site-specific EILs where applicable, consistent with NEPC (2013);
- HSLs for petroleum hydrocarbons considering potential for vapour intrusion, fine grained as provided in NEPC (2013);
- Direct contact HSLs provided in CRCCARE (2011<sup>7</sup>); and
- Management limits provided in NEPC (2013).

Where there are no NSW EPA endorsed thresholds for individual COPC the laboratory limit of reporting (LOR) was adopted as an initial screening value for the purpose of this assessment.

## 6.3 Derivation of Site Specific Ecological Investigation Levels

Site specific EILs were derived in accordance with the methodology outlined within NEPC (2013). Added Contaminant Limits (ACLs) were obtained from NEPC (2013) for zinc, copper, chromium, nickel and lead.

Three representative soil samples (TP01 0.5-0.6, TP01 3-3.1 and TP02 1-1.1) were submitted for laboratory analysis to determine physical parameters including CEC, pH and % Clay. Detailed laboratory reports and chain of custody documentation is provided in **Appendix K**.

Values for Average Background Concentrations (ABCs) were obtained from Trace Element Concentrations in Soils from Rural and Urban Areas of Australia (Henry Olzworthy *Et Al.* 1995).

**Table 6.1** details ABCs, Added Contaminant Limits and derived EILs. All values are in mg/kg unless otherwise specified.

<sup>&</sup>lt;sup>7</sup> Technical Report No.10 Health screening levels for petroleum hydrocarbons in soil and groundwater Part 2: Application. Australia Guidance, September 2011, CRC for Contamination Assessment and Remediation of the Environment (CRCCARE 2011)



#### Table 6.1 Derivation of EILs

Physical Parameters					
Sample	CEC (meq/100g)	pH (pH units)	% Clay		
TP01 0.5-0.6	17	5.1	33		
TP01 3-3.1	4.5	4.6	23		
TP02 1-1.1	13	5.3	24		
Average	11.5	5	26.7		
Investigation Levels					
Contominant	ABC	ACL	EIL		
Containinairt		Commercial / Industrial	Commercial / Industrial		
		commercial / muustrial	commercial / maustrial		
Arsenic <sup>3</sup>	Not Applicable	160	160		
Arsenic <sup>3</sup> Chromium (III)	Not Applicable 11	160 310	160 321		
Arsenic <sup>3</sup> Chromium (III) Copper	Not Applicable 11 23	160 310 85 <sup>1</sup>	160 321 108		
Arsenic <sup>3</sup> Chromium (III) Copper DDT <sup>3</sup>	Not Applicable 11 23 Not Applicable	160 310 85 <sup>1</sup> 180	160 321 108 180		
Arsenic <sup>3</sup> Chromium (III) Copper DDT <sup>3</sup> Lead	Not Applicable 11 23 Not Applicable 161	160 310 85 <sup>1</sup> 180 1800	160 321 108 180 1961		
Arsenic <sup>3</sup> Chromium (III) Copper DDT <sup>3</sup> Lead Naphthalene <sup>3</sup>	Not Applicable 11 23 Not Applicable 161 Not Applicable	160 310 85 <sup>1</sup> 180 1800 170	160 321 108 180 1961 170		
Arsenic <sup>3</sup> Chromium (III) Copper DDT <sup>3</sup> Lead Naphthalene <sup>3</sup> Nickel	Not Applicable 11 23 Not Applicable 161 Not Applicable 5	160           310           85 <sup>1</sup> 180           170           55	160 321 108 180 1961 170 60		

<sup>1</sup> Selected utilising the CEC value to determine the most conservative ACL.

<sup>2</sup> Selected based on value for pH and CEC resulting in the most conservative ACL.

<sup>3</sup> Generic EIL



## 7. Quality Assurance/Quality Control

An assessment of QA/QC was undertaken by calculation of DQIs for the data generated as part of the assessment activities as outlined in **Section 5.1.6**.

The assessment of site suitability has been assessed against the PARCCS parameters of Precision, Accuracy, Representativeness, Completeness, Comparability and Sensitivity as presented in **Appendix L**.

The field sampling, inspection and handling procedures produced QA/QC results which indicated that the data set is of an acceptable quality and suitable for use in site characterisation.

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

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



## 8. Discussion of Results

### 8.1 Targeted Soil Investigation Results

#### 8.1.1 Soil Observations

The following section refers only to soil observations made during the targeted intrusive investigation undertaken.

Sample locations are shown on **Figure 3.** A summary of soil analytical data with comparison to the adopted site criteria is presented in **Table A**. Laboratory documentation is provided in **Appendix K**. Borehole logs are provided in **Appendix J**.

Fill materials were observed at eight locations to a program depth of 0.3 m bgs and comprised the following:

- Dry heterogeneous red-brown clays with inclusions crushed concrete, brick, terracotta, minor timber and bitumen fragments resultant from importation, stockpiling and spreading activities in Lot 57 (HA19, HA20, HA21 and HA22); and
- Loose gravelly red brown clays with inclusions of lithic angular igneous gravels, minor concrete and terracotta/brick associated with base coarse and/or gravelled driveways (HA02, HA07, HA10 and HA18).

Reworked natural materials were observed within dam embankments and within the exposed soils of the raised landform (Lot 54), and were identified as red – brown mottled natural clays with inclusions of organic material (grass, wood, roots) and/or shale rock fragments (HA04, HA05 and HA11). Reworked natural materials forming embankments and landforms were observed to be raised to a maximum of approximately 5 m above the natural grade. In addition, reworked natural materials (tilled soils) associated with existing and historic market gardens were identified to between 0.3 m bgs and 0.5 m bgs (HA09, HA12, HA16, HA17 and TP02) and consisted of red-brown clays with inclusions of organic material (wood, roots, vegetal matter) and very minor fragments of black plastic sheeting/white PVC pipe (<2 %). It is noted adjacent drainage ditches in Lot 55 (as discussed in **Section 2.**2) contained a significantly higher proportion of surficial plastic waste.

Due to the targeted nature and shallow depth of the intrusive investigation, natural soils were observed underlying fill and reworked natural materials at 13 locations (HA01, HA08, HA13, HA14, TP01, TP02, and BH01 to BH07). Natural soils were identified as damp red – brown and grey mottled clays with inclusions of minor roots/rootlets grading to weathered shale at depth. It is anticipated that natural soils would be generally encountered from the ground surface across a majority of the site, with the exception of raised landforms, tilled market gardens (historic and current) and within the vicinity of gravelled roadways.

Two fragments of suspected ACM were identified in close proximity to one another on the ground surface at one location (HA20), within fill materials comprising red – brown clays with anthropogenic inclusions observed to be present across a large portion of Lot 57 (**Figure 3**). The presence of fragments of ACM at the ground surface represents an aesthetic issue and potentially unacceptable human health risk.

Odorous and stained soils were observed at two locations in the vicinity of a leaking petroleum drum (HA15) and an electrical transformer (HA01).

JBS&G note that an ACM conduit of approximately 400m in length was identified in Lot 56 by the client. The location and known extent of the conduit is shown in **Figure 4**.



### 8.1.2 Soil Analytical Results

Soil sampling locations are shown on **Figure 3**. Detailed laboratory reports and chain of custody documentation are provided in **Appendix J**. Summarised soil laboratory results are presented in **Table A** and discussed in the following sections.

### 8.1.2.1 Heavy metals

Concentrations of heavy metals were reported either below the LOR or below the adopted site criteria for all samples submitted for analysis, except for the following:

- Concentrations of zinc in HA01 0-0.1 (500 mg/kg), HA06 0-0.1 (340 mg/kg), QA01 (parent sample HA08 0-0.1 (260 mg/kg)), HA13 0-0.1 (320 mg/kg) and HA18 0-0.1 (250 mg/kg); exceeded the site specific EIL of 215 mg/kg; and
- Concentration of copper in HA01 0-0.1 (900 mg/kg) exceeded the site specific EIL of 108 mg/kg.

The reported elevated concentration of zinc and copper were generally clustered in proximity to site structures or stored anthropogenic materials. As such, the reported concentrations may be attributed to metal building materials and waste. Noting the age and condition of building and waste materials (including potentially galvanised [zinc] steel drums/tins, and wiring [copper] associated with the electrical transformer), it is likely that zinc and copper oxide (rust) may have cross-contaminated underlying soils. Vegetation in proximity to the sample locations did not appear stressed.

### 8.1.2.2 TRH

Concentrations of TRH were reported below the LOR or below the adopted site criteria for all samples, except for the following;

- Concentrations of TRH C<sub>10</sub>-C<sub>16</sub> (19 000 mg/kg) and C<sub>16</sub>-C<sub>34</sub> (48 000 mg/kg) in HA15 0-0.1 exceeded the NEPM Management Limits (1 000 mg/kg and 5 000 mg/kg respectively); and
- Concentrations of C<sub>10</sub>-C<sub>16</sub> less Naphthalene (19 000 mg/kg) and C<sub>16</sub>-C<sub>34</sub> (48 000 mg/kg) in HA15 0-0.1 exceeded the adopted ESLs (170 mg/kg and 2500 mg/kg respectively).

The reported TRH concentrations relate to surface soils adjacent to a leaking petroleum drum (HA15). At the time of sampling surface soils were notably stained, odourous and contained tacky hydrocarbon residue. This staining was restricted to an area of approximately  $1m^2$ .

It is noted that the LOR for  $C_{34}$ - $C_{40}$  in HA15 0-0.1 was raised by the primary laboratory (<10 000 mg/kg) due to high concentrations of one or more contaminants. Based on the total concentrations of other reported TRH fractions it is considered unlikely the concentration for this fraction would exceed the adopted EIL.

In addition, the LOR was raised by the primary laboratory for samples HA03 0-0.1 and HA08 0-0.1 (<500 mg/kg) to account for elevated TRH in soil samples. As such, JBS&G is unable to determine the specific levels of TRH within these samples. The LORs were below adopted criteria except for the  $C_{10}$ - $C_{16}$  less Naphthalene ESL of 170 mg/kg. However, we note that the elevated concentrations of these compounds in soil may constitute a potential ecological risk.

## 8.1.2.3 BTEX

Concentrations of individual BTEX compounds were reported below the LOR or below the adopted site criteria for all samples submitted for analysis.

## 8.1.2.4 PAHs

Concentrations of PAHs were reported below the LOR or below the adopted site criteria for all analysed samples.



### 8.1.2.5 OCPs and OPPs

Concentrations of OCPs and OPPs were reported below the LOR and below the adopted site criteria for all analysed samples.

### 8.1.2.6 PCBs

Concentrations of PCBs were reported below the LOR and below the adopted site criteria for the soil sample collected from HA01 adjacent the small substation.

### 8.1.2.7 Asbestos

Representative soil samples were submitted for asbestos analysis from selected locations. No asbestos was reported above the LOR or to exceed the adopted site criteria.

Chrysotile asbestos was identified at sample location HA13 0-0.1 with an approximate raw weight of asbestos fines (AF) of 0.0016g and an estimated asbestos content in AF of 0.0015g. The total asbestos concentration in AF was reported as 0.00032%w/w, considered trace levels below the LOR and adopted HSL.

Two representative fragments of fibre sheet board were collected from site structures and submitted for asbestos presence/absence analysis. Both fragments reported no detectable asbestos.

Notwithstanding, HA13 0-0.1 was collected within the vicinity of fibre sheet board observed in the walls of an adjacent site structure. AF in soils may be attributed to the liberation of fibres from a bonded matrix (sheet board) as a result of weathering/physical degradation. It is noted the sheet board in close proximity to HA13 was observed to be fragmented and in poor condition.



## 9. Conceptual Site Model

### 9.1 Potentially Contaminated Media

Given activities in remaining areas of the site area appear to have been both historically and currently utilised predominantly for agricultural/horticultural (market gardens) and grazing (livestock/dairy farming) purposes, JBS&G consider that potential contamination at the site will be associated with soils that have been locally impacted by surface sources (e.g. pesticides, herbicides, storage of materials, drums, vehicle storage, fly-tipped waste, structures/buildings, stored/damaged hazardous building materials), or are associated with localised filling activities, and/or onsite migration from adjacent properties (market gardens).

Based on observations made during the preliminary targeted intrusive investigation at the site, the majority of existing site structures were unlikely to contain potentially hazardous building materials. Small amounts of fibre sheet board were observed within or stored adjacent to historic site sheds, within the eaves of two residential buildings (Lot 56) and observed within the walls of the chicken farm warehouses, as outlined in **Section 2.2**. Based on visual inspection within accessible areas (excluding the chicken farm) and preliminary analytical data as discussed in **Section 8.1.2.7**, the majority of this material is unlikely to be ACM. However, with consideration to the age of these structures and reported trace level friable asbestos (HA13) in the vicinity of observed fibre sheet boards, the potential remains for ACM to be present within site structures and potentially impacted surface soils in the immediate surroundings.

Fill materials of unknown origin (and containing anthropogenic waste) were observed stockpiled and spread across the surface of Lot 57 (as shown on **Figure 2**). This material was noted to be of similar composition and contained similar anthropogenic inclusions (brick, concrete, gravel). JBS&G note two suspected fragments of ACM were observed in one location associated with this fill material. Whilst a detailed inspection of surface soils did not identify any further ACM fragments, JBS&G consider there may be the potential for additional deleterious inclusions to be present within these fill materials. Fill material containing anthropogenic inclusions was also noted in gravelled roadways and in soils adjacent to warehouse structures in Lot 54 and 55.

Scattered/stockpiled anthropogenic materials were observed across site surfaces, including building and agricultural materials, demolition and household waste. Noting the distribution of anthropogenic waste materials, it is considered there may be the potential for additional hazardous building materials or deleterious inclusions to be present. Several underground septic tanks (**Figure 2**) and a single above ground LPG storage tank were identified. Barn/warehouse structures noted to be utilised for cattle farming within Lot 56 were observed to contain potential sources of biological hazards including soils impacted with manure/faecal matter (HA13).

A single large ACM conduit was noted at the site surface, adjacent to an exposed culvert in the north west of the site (Lot 57). The majority of conduits observed across the site were metal, PVC or concrete (that did not contain ACM). JBS&G consider there is the potential that additional ACM pipes not identified in the current investigation may be present at the site (potentially within subsurface irrigation lines).

Extensive fertiliser and herbicide use was apparent at the site, particularly within Lot 55 and other market garden areas. As such, tilled surface soils are considered potentially contaminated by pesticides and heavy metals. Analysis of targeted soil samples from areas of current/former market gardens however did not detect elevated pesticides or typically related metals. Additionally, JBS&G note algae growth (indicating elevated nutrient levels) was observed within onsite dams (Lot 54).

JBS&G note surface water, groundwater and ground gasses were not sampled as part of this investigation.



### 9.2 Potential for Migration, Exposure Pathways and Receptors

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

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

The potential contaminants identified as part of the site history review are generally in either a solid form (e.g. heavy metals, asbestos, etc) or liquid form (e.g. fuel, pesticides, etc).

A large proportion of the site's surface is comprised of vegetated surfaces i.e. grasses and vegetation. As such, dependent upon the nature and distribution of potential contamination at the site (i.e. surficial impacts), JBS&G does not consider there to be significant potential for the migration of contaminants via aeolian transport given these surface coverings act as natural windbreaks. The risk of migration of contaminants in dust is higher in some areas where minimal or no vegetation existed.

The potential for contamination migration via infiltration of water and subsequent migration through the soil profile is possible given a significant portion of the site area is unsealed and/or contains vegetated surfaces. The use of potentially soluble/liquid contaminants identified at the site (herbicides/fertilisers) and subsequent migration of these contaminants through the soil profile is considered possible, given the identified use of these materials associated with historic/current horticultural activities. However, targeted soil sampling did not detect elevated pesticide concentrations.

JBS&G note there is the potential for offsite sources of contamination to migrate to the site, and subsequent potential for offsite migration of contamination from the site due to the presence of a drainage channel and series of water bodies (dams) bisecting the site. The hydraulic downgradient flow of discharging surface waters is considered a vector for contamination migration. JBS&G note there is the potential for migration of contaminated groundwater to, and from the site, although soil data from this investigation suggests on-site impacts to groundwater are unlikely, however further investigation is required to assess the potential for groundwater/surface water impacts within the site.

JBS&G note that historical and current activities specifically relating to poultry/bovine farming and the presence of underground septic tanks may result in biological hazards being present in or on soils. There is the potential for localised contamination of surface water bodies to exist given the nature of the impacts.

#### 9.3 Potential Exposure Pathways

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

- Dermal;
- Ingestion; and
- Inhalation.

Due to the potential presence of impacted reworked soil/fill on ground surfaces in areas of the site that may be accessed by current and/or future users of the site, dermal exposure must be


considered a potential exposure pathway. In the event that dust is generated, ingestion and inhalation are also considered to be potential exposure pathways.

As groundwater is not anticipated to be extracted under the proposed land use, dermal contact and ingestion of groundwater is considered to be unlikely. However, dependent on the depth to groundwater and the potential nature and extent of contamination in near surface soils/fill, there is a potential for exposure to groundwater during construction excavation activities.

#### 9.3.1 Potential Receptors

Potential receptors of potential contamination present within the site area include:

- Future users, and excavation/construction/maintenance workers conducting activities at the site, who may potentially be exposed to COPCs through direct contact with impacted soils present within excavations and/or inhalation of dusts/fibres associated with impacted soils, both on and off the site; and
- Downgradient ecological receptors of the Kemps Creek Catchment exposed to liquid or soluble COPCs via migration and direct contact/ingestion, both on and off the site.

#### 9.4 Preferential Pathways

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

Given the area surrounding the site area is a flood plain and bisected by a surface water drainage channel, JBS&G consider drainage lines to represent a possible preferential pathway for potential surface contamination across the area.

Fill materials/reworked natural materials are anticipated to have a higher permeability than the underlying natural soil and/or bedrock. Man-made preferential pathways (irrigation pipelines/trenches and sewerage infrastructure) are limited, but present throughout the site.



### **10.** Conclusions and Recommendations

### 10.1 Conclusions

Based on the scope of work and subject to the limitations in **Section 11**, JBS&G notes the following conclusions:

- The site is proposed to be rezoned to allow for the development of the Western Sydney Employment Lands (commercial land use);
- A majority of the site area comprises land which has historically been undeveloped and/or utilised for agricultural purposes including dairy/poultry farming, grazing and market gardens;
- Due to access restrictions during the investigation, the contamination status of the chicken farm area located in Lot 54 is considered a data gap that may require future assessment;
- Trace level friable asbestos was identified at one location (HA13) adjacent to historic structures which were observed to contain possible ACM sheet board. As such, there is the potential for ACM to be present within site structures and soils in vicinity of structures;
- Elevated TRH concentrations were identified at one location where very localised surface staining was visible around a drum and will require further assessment and/or management. The impact is considered to be highly localised;
- A small number of heavy metals were identified in concentrations that may pose an unacceptable risk to ecological receptors at the site. However, these impacts are not considered to pose unacceptable human health risks.
- Anthropogenic materials at some locations were present in quantities that may pose an aesthetic concern for sensitive land uses. However, noting the proposed land use (commercial/industrial), these materials may be retained beneath hardstand without any further management. The impacts identified were typical of the low-risk historical land uses that occurred at the site
- Whilst the investigation identified the potential for soil impacts to be present at the site, the investigation did not identify the potential for wide spread contamination which may preclude rezoning or future redevelopment of the site. The confirmed and potential areas of environmental concern are considered representative of common contaminants and potentially contaminating land use activities which can be readily dealt with during the DA stage for redevelopment and assessment for site suitability; and
- Following from the above, the requirements of the DUAP (1998) SEPP 55 Planning Guidelines for generalised rezonings are considered to have been satisfied, namely that the rezoning can proceed and the site can be made suitable "provided that measures are in place to the ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made".

#### 10.2 Recommendations

It is recommended that detailed site investigation (DSI) be undertaken to support the development application/s (DA) for future redevelopment of individual stages/areas within the site in order to assess the suitability of the land for the intended land uses.

It is recommended that Hazardous Building Material Surveys (HBMS) be undertaken prior to any demolition of existing site structures.



### 11. Limitations

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

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

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

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

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

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

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



Figures



File Name: N:\Projects\Mirvac\55607 Mamre Rd, Kemps Creek\GIS\Maps\R01 Rev A\55607\_01\_SiteLoc.mxd Reference: © OpenStreetMap (and) contributors, CC-BY-SA



File Name: N:\Projects\Mirvac\55607 Mamre Rd, Kemps Creek\GIS\Maps\R01 Rev A\55607\_02\_SiteLay.mxd Reference: Nearmap - nearmap.com.au - Imagery 29-12-2018





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## Table A – Soil Analytical Results

						Metals 8	k Metallo	ids				IP	HS (NEPC	1999)				IKH	s (NEPC 20	13)						BIEXN												Por	ycyclic
() IB	IS&G		Arsenic (Total)	Cadmium	Chromium (Total)	Copper	read	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acen apht hylene	Anthracene	Benz(a) anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo (b,j) fluoran then e	Benzo (g, h, i) perylene
			mg/kg	g mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	50	100	100	50	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.5	0.1
NEPC 2013 EIL, EILs Aged Sec	diment		160			108	1961		60	215		İ						1		1	İ					İ			170										
NEPM 2013 ESL Commercial	l and Industrial, Fine Soil								1								2500	6600		170		215	95	185	135			95						1.4					
NEPM 2013 HSL Asbestos in	Soil - Bonded ACM - Commercia	I/Industrial - HSL D																																					
NEPM 2013 HSL Asbestos in	Soil - FA & AF - HSL								1			1						1		İ	1					1													
NEPM 2013 Mgnt Limits - Co	ommercial and Industrial, Fine															1000	5000	10000			800																		
NEPM 2013 Soil HIL D			3000	900	3600	240000	1500	730	6000	400000																									40	40	40		
NEPM 2013 Soil HSL D for Va	apour Intrusion - Clay 0 to <1m																			NL		310	4	NL	NL			NL	NL										
Field_ID	Sampled_Date-Time	Lab_Report_Number																																					
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FRAG-01	30-Nov-18	631102		•	-		-		-	-	•	-	-		-						•	-	-		-	•	-			•	•	-	-	-		· · ·	- 1	-	
FRAG-03	30-Nov-18	631102	•	-	-	-	-	-	-	-	•		-		-	-		-	-	-	-	-	-		-	•	-	-		•		-	-	-		· · ·	- 1	-	
HA01 0-0.1	30-Nov-18	631102	<2	1.1	36	900	270	<0.1	6.3	500	<20	22	75	78	175	<50	130	<100	130	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<5	<5	<5	<5	<5	<0.5	6.1	12	<5	<5
HA02 0-0.1	30-Nov-18	631102	7.3	1.5	30	54	52	<0.1	15	120	<20	<20	130	95	225	<50	190	<100	190	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA03 0-0.1	30-Nov-18	631102	3.7	<0.4	30	70	12	<0.1	44	150	<20	<200	1100	1800	2900	<500	2400	<1000	2400	<500	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<5	<5	<5	<5	<5	<0.5	6.1	12	<5	<5
HA04 0.2-0.3	30-Nov-18	631102		•	-		-		-		•	-			-				•	-		•			-		-			•	•	-	-	-	•	I		-	-
HA04 0-0.1	30-Nov-18	631102	8.3	<0.4	19	30	21	<0.1	9.7	85	<20	40	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA05 0-0.1	30-Nov-18	631102	•	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	•		-	-	-		· · ·	- 1	-	
HA06 0-0.1	30-Nov-18	631102	8.4	<0.4	19	47	34	<0.1	20	340	•	-	-		-				•	-		•			-		-			•	•	-	-	-	•	I		-	-
HA07 0-0.1	30-Nov-18	631102	4	<0.4	18	34	10	<0.1	11	94	•	-	-		-				•	-		•			-		-		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA08 0-0.1	30-Nov-18	631102	8.2	<0.4	18	73	55	<0.1	15	150	<20	<200	<500	<500	<500	<500	<1000	<1000	<100	<500	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<5	<5	<5	<5	<5	<0.5	6.1	12	<5	<5
QA01	30-Nov-18	631102	14	<0.4	29	51	34	<0.1	23	260	<20	<20	65	51	116	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
QC01	30-Nov-18	207152	10	<0.4	18	45	33	<0.1	13	150	<25	<50	<100	300		<50	320	310	630	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	<0.5	-	0.1
HA09 0-0.1	30-Nov-18	631102	11	<0.4	21	27	23	<0.1	10	59	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA10 0-0.1	30-Nov-18	631102		•	-		-		-		<20	23	59	64	146	<50	110	<100	110	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA11 0-0.1	30-Nov-18	631102	9.6	<0.4	17	22	21	<0.1	8.9	35	•	-	-		-				•			•			-		-		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA12 0-0.1	30-Nov-18	631102	12	< 0.4	20	27	30	< 0.1	10	45	•	-			-						•	•	-		-	•	•		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA13 0-0.1	30-Nov-18	631102	13	<0.4	24	38	30	<0.1	14	320	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA14 0-0.1	30-Nov-18	631102	5.5	<0.4	16	16	15	<0.1	7.1	16		-	-	-		-			-	-		•			-		-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA15 0-0.1	30-Nov-18	631102	11	<0.4	32	17	36	<0.1	10	140	<200	8700	53,000	7000	68,700	19,000	48,000	<10,000	67,000	19,000	<200	<200	<0.5	<0.5	<0.5	<0.5	<1	<1.5	1.4 - 37	2	<0.5	10	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA16 0-0.1	30-Nov-18	631102	11	<0.4	27	16	29	<0.1	8.2	37	<20	28	65	69	162	<50	120	<100	120	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA17 0-0.1	30-Nov-18	631102	9.5	<0.4	26	28	32	<0.1	13	66		-	-	-		-			-	-					-		-	-				-	-	-	-			-	-
HA18 0-0.1	30-Nov-18	631102	6.6	<0.4	14	28	22	<0.1	17	250	<20	<20	59	57	116	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA19 0-0.1	30-Nov-18	631102	10	<0.4	16	30	22	<0.1	19	67	•	-	-		-			-	-		-	•	-		-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
HA20 0-0.1	30-Nov-18	631102	13	<0.4	16	21	36	<0.1	10	63	<20	20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
QA02	30-Nov-18	631102	11	<0.4	14	21	32	<0.1	9.6	63	<20	<20	55	73	128	<50	100	<100	100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
QC02	30-Nov-18	207152	8	<0.4	11	16	24	<0.1	7	44	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.1
HA21 0-0.1	30-Nov-18	631102	11	<0.4	18	34	23	<0.1	12	62	<20	21	270	450	741	<50	580	440	1020	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-		-	-	-	-	· · ·	-		-
HA22 0-0.1	30-Nov-18	631102	8	<0.4	23	28	38	<0.1	13	51	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
SP01	30-Nov-18	631102	7.3	<0.4	19	110	33	<0.1	29	200	<20	25	50	<50	75	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
SP03	30-Nov-18	631102	8.4	<0.4	22	23	26	0.1	15	96	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
TP01 0.5-0.6	03-Dec-18	631102		-		-	-	-	-				-	-	-	-	-		-		-		-	1.1	-	-	-	-		-		-	-	-	-	I	-	-	-
TP01 0-0.1	03-Dec-18	631102		-	-	-	-	-	-	-		-	-	-	-	-			-	-	-	-	-		-	-	-	-		•	-	-	-	-	-	· · ·	-	-	-
TP01 3-3.1	03-Dec-18	631102		-		-	-	-	-				-	-	-	-	-		-		-		-	1.1	-	-	-	-		-		-	-	-	-	I	-	-	-
TP02 0-0.1	03-Dec-18	631102		-		-	-	-	-				-	-	-	-	-		-		-	•	-	1.1	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
TP02 1-1.1	03-Dec-18	631102		-	-	-	-	-	-	-		-	-	-	-	-			-	-	-	-	-		-	-	-	-		•	-	-	-	-	-	· · ·	-	-	-
BH02	16/01/2019	636089	9.6	<0.4	24	25	20	<0.1	12	35			-	-	-	-	-		-		-	•	-	1.1	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
BH04	16/01/2019	636089	6	<0.4	20	23	15	<0.1	11	34	•	-	-		-		-	-	-	-	-	-	-		-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
BH06	16/01/2019	636089	8.6	<0.4	25	14	25	<0.1	8.6	27	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
BH07	16/01/2019	636089	8	<0.4	26	16	16	<0.1	8.4	23	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
STOCKPILE	16/01/2019	636089	<2	<0.4	<5	62	<5	<0.1	7.2	520	<40	<20	240	160	400	<50	330	<100	330	<50	<40	<40	<0.2	<0.2	<0.2	<0.2	<0.4	<0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
Statistical Summary																																							

Number of Results	31	31	31	31	31	31	31	31	24	24	24	24	22	24	24	24	24	24	24	24	24	24	24	24	24	24	32	30	30	30	30	30	30	30	30	28	30
Number of Detects	29	2	30	31	30	1	31	31	0	8	12	12	12	1	10	2	10	1	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	28	28	0	1
Minimum Concentration	<2	< 0.4	<5	14	<5	<0.1	6.3	16	<20	<20	<50	<50	<50	<50	<100	<100	<50	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	<0.5	<0.1
Minimum Detect	3.7	1.1	11	14	10	0.1	6.3	16	ND	20	50	51	75	19000	100	310	100	19000	ND	ND	ND	ND	ND	ND	ND	ND	1.4	2	ND	10	ND	0.1	ND	0.6	1.2	ND	0.1
Maximum Concentration	14	1.5	36	900	270	0.1	44	520	<200	8700	53000	7000	68700	19000	48000	<10000	67000	19000	<200	<200	<0.5	<1	<0.5	<1	<2	<1.5	37	<5	<5	10	<5	<5	<0.5	6.1	12	<5	<5
Maximum Detect	14	1.5	36	900	270	0.1	44	520	ND	8700	53000	7000	68700	19000	48000	440	67000	19000	ND	ND	ND	ND	ND	ND	ND	ND	37	2	ND	10	ND	0.1	ND	6.1	12	ND	0.1
Average Concentration	8.5	0.27	21	63	35	0.052	13	132	14	385	2323	448	3380	834	2226	321	3029	834	14	14	0.065	0.098	0.077	0.098	0.2	0.21	0.83	0.52	0.46	0.79	0.46	0.46	0.25	1.1	2.2	0.49	0.46
Median Concentration	8.4	0.2	20	28	26	0.05	11	67	10	15	52.5	54	116	25	50	50	50	25	10	10	0.05	0.05	0.05	0.05	0.1	0.15	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25
Standard Deviation	3.2	0.28	6.8	157	45	0.009	7.6	133	18	1771	10797	1442	14602	3870	9762	1008	13635	3870	18	18	0.043	0.13	0.068	0.13	0.26	0.15	3.4	0.75	0.69	1.9	0.69	0.69	0	1.7	3.3	0.71	0.69
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		0.1	< 0.1	0.167	0.1	< 0.1	0.1	< 0.1	-	0.2	0.74
1	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
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-											
J	< 0.5	<0.5	<0.5	<1.21	<0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	-
1	<0.5	< 0.5	<0.5	<1.21	<0.5	< 0.5	<0.5	<0.5	<0.5	< 0.5	
۲	<0 F	<0 F	<0 F	<1.21	<0 F	<0 F	<0 F	<0 F	<0 F	<0 F	
4	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<u> </u>
	<0.5	<0.5	<0.5	<1.21	<0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	
1	-	<0.1	<0.1	<0.172	<0.1	< 0.1	<0.1	<0.1	-	< 0.1	< 0.05
۲											
4						-					
J	<0.5	<0.5	<0.5	<1.21	<0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	-
1	<0.5	< 0.5	< 0.5	<1.21	0.5	< 0.5	<0.5	<0.5	1	0.5	
۲	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
-	-0.0	-0.0	-3.5	*****	-0.5	-0.0	-3.5	-3.5	-3.3	-3.5	· ·
	-	-	-		-	-	-	-	-	-	-
1	-	-	-		-	-	-	-	-	-	
٦					-						
-	-0.5	-0.5	-0.5	11.21	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	<u> </u>
	<0.5	<0.5	<0.5	<1.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	· ·
ļ	- 1		- 1		· · ]	· · ]	· · [		- 1		· · ·
٦	<0.5	<0.5	<0.5	<1.21 #4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
-	-0.5	-0.5	-0.5	<1.21	-0.5			-0.5	-0.5		<u> </u>
	<0.5	<0.5	<0.5	<1.21""	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
1	<0.5	<0.5	<0.5	<1.21#4	<0.5	< 0.5	< 0.5	<0.5	<0.5	<0.5	•
٦	<0.5	<0.5	<0.5	<1 21 #4	<0.5	<0.5	< 0.5	<0.5	<0.5	<0.5	
-	-0.5	.0.5	-0.5	~1.21	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
	<0.5	<0.5	<0.5	<1.21""	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	•
1	28	30	30	30	30	30	30	30	28	30	2
۲	0	1	0	1	2	1	1	2	4	5	1
4	0	1	J	1		1	1	4	-+		
	<0.5	<0.1	<0.1	0.167	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.05
1	ND	0.1	ND	0.167	0.1	1.4	0.1	10	0.7	0.2	0.74
۲	<b>~</b> 5	<5	<5	<12.1	-5	-5	-5	12	29	26	0.74
4	<b>^</b> 3	< <u>5</u>	~ 3	×12.1				12	30	20	0.74
	ND	0.1	ND	0.167	2.2	1.4	0.1	12	38	26	0.74
1	0.49	0.46	0.46	1.1	0.54	0.5	0.46	1.1	2.8	1.3	
۲	0.25	0.25	0.25	0.605	0.25	0.25	0.25	0.25	0.25	0.25	0.2825
4	0.25	0.25	0.25	0.005	0.25	0.25	0.25	0.25	0.25	0.25	0.3825
	0.71	0.69	0.69	1.7	0.76	0.71	0.69	2.8	8.8	4.7	
1	0	0	0	0	0	0	0	0	0	0	0
-				<u> </u>	<u> </u>	-	- C		-	- C	<u> </u>
	U	U	U	U	0	U	U	U	U	U	U

			PAHs in S	oil								Or	ganochlorine P	esticides										Polych	lorinated	d Biphen	yls		Chlorinated Benzenes				Asbe	estos				lon	ic Balance		Other	EP/	A VIC - IWF	RG621
() JB	S&G		mg/kg	44-DDE mg/k	uitippy g mg/kg	ald rin + Dieldrin (Sum of Total)	u 8x/8m	ន័ង) ន័ង/ យ	Wa BHC beta-BHC Chloridane		a mg/kg	beldrin wg/ga DDT+DDE+DDD (Sum of Total)	m gy/gg getta-BHC	<sup>33</sup> // <sup>5</sup> <sup>33</sup> / <sup>5</sup> Endosulfan beta	End os ulfan sulphate	way/gm Pendrin Adehvide	BX/Bamma-Chlordane	Endrin ketone Mag/kg	Bay/80	Bay/Bu Bay/Elindane	8aX/8au 8	mg/kg m	ay/ <sup>36</sup> Aroclor 1016 Mucdor 1221	8 mg/kg	Bay/Bu - 242	Bay/Ba	Ma/kg Aroclor 1254	1 Aroclor 1260 1 전 PCBs (Total)	sk/3m 3s	a Approx. Sample Mass	<ul> <li>K) %%</li> <li>Asbestos from ACM in Soil</li> <li>Masbestos from FA &amp; AF in Soil</li> </ul>	o Mass ACM	on Mass Asbestos in ACM	a Mass FA	co Mass Asbestos in FA co Mass AF	∞ Mass Asbestos in AF	∞ Mass Asbestos in FA & AF	Cation Exchange Capacity	ux)57 EC 1:5 soil:water	bh Units	% % Clay % % Moisture 103oC	Moisture	Organochlorine Pesticides ErAVIL	이 Other Organochlorine Pesticides EPAVic
EQL				0.05	0.05	0.05	0.05	C	0.05 0.	1 0.05	0.05	0.05 0.05	0.05 0	.05 0.05	0.05	0.05 0.0	5	0.05	0.05	0.05 0.05	0.1	1	0.5 0.1	0.5	0.5	0.5	0.5 0	0.5 0.5	0.05									0.05	5	0.1	1 1	0	1.1	0.1
NEPC 2013 EIL, EILs Aged Sedin	ment			_						_	180						_															_										_		
NEPM 2013 ESL Commercial a	ind Industrial, Fine Soil	Industrial HELD						_			-			_			_								_	_		_		-	0.05	_								_				
NEPM 2013 HSL Asbestos in Se	pil - FA & AF - HSI	rindustrial - HSE D												_			_				++			+ +			_	_			0.03	1												
NEPM 2013 Mgnt Limits - Con	nmercial and Industrial, Fine																																											
NEPM 2013 Soil HIL D						45			53	10		3600				100			50		2500	160						7	80															
NEPM 2013 Soil HSL D for Vap	our Intrusion - Clay 0 to <1m																																											
Field ID	Sampled_Date-Time	Lab_Report Number																																										
FRAG-01	30-Nov-18	631102	· ·		· · ·	-	•	•		-	-	• •	-		· ·		-	-	-		<u> </u>			-	-	-	-			85	0 0	0	0	0	0 0	0	0	-	-	-		•	-	-
FRAG-03	30-Nov-18	631102	-			-	-	-		-								•	•			-		-	•	•	-			115	0 0	0	0	0	0 0	0	0	-	-				-	•
HA01 0-0.1	30-Nov-18	631102		-		-	-	-		-	-		-		-		-	-	-		-	-	<5 <5	<5	<5	<5	<5 ·	<5 <5	-	-		-	-	-		· ·	•		•	•	- 38	•	-	-
HA02 0-0.1	30-Nov-18	631102		<0.0	> <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	s <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.		<0.05	0.05	<0.05 <0.05	<0.2	<1			•	•	-		<0.05	530	0 0	0	0	0	0 0	0	0	-	•	-	- 15	- <	<u>,1</u>	<0.1
HA04 0.2-0.3	30-Nov-18	631102		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1					-		<0.05	-		-	-	-			-			-	- 15	- <(	0.1	<0.1
HA04 0-0.1	30-Nov-18	631102	-	· ·	-	-	-	-		-	-				· ·			-	•			-		-	•	•	-							-		· ·	•		•		- 19	•	-	
HA05 0-0.1	30-Nov-18	631102	-	<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	i <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	-	-	-		<0.05			-		-			•		-		- 16	- <(	).1	<0.1
HA06 0-0.1	30-Nov-18	631102		· ·		-	-			-					· ·			•	·		· ·	-		-	•	•			· ·	-		-	-	-		· ·	•	•	•	•	- 28	•	·	· ·
HA07 0-0.1	30-Nov-18 30-Nov-18	631102			<0.5	- <0.05	-	•		1 <0.5	<0.5		-		- <0.5		5 .					-								571	0 0	0	0	0	0 0	0	0		•		- 35	•	01	-
QA01	30-Nov-18	631102		<0.5	<0.5	<0.05	<0.5	- <	<0.5 <	1 <0.5	<0.5	<0.5 <0.05	i <0.5 <	0.5 <0.5	<0.5	<0.5 <0	5 -	<0.5	<0.5	<0.5 <0.5	<2	<10		+ ·	-	-			<0.5	608	0 0	0	0	0	0 0	0	0				- 18	· <	0.1	<0.1
QC01	30-Nov-18	207152	<0.2	<0.1	<0.1	<0.2#9	<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	•			-	-					-	•		6		-
HA09 0-0.1	30-Nov-18	631102	-	< 0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	< 0.05	<0.05 <0.05	5 <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	-	-	-		<0.05	-		-	-	-		•		-	-	-	- 23	- <(	).1	<0.1
HA10 0-0.1	30-Nov-18	631102	-	<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	- 05	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	•	•	-		<0.05	626	0 0	0	0	0	0 0	0	0	-	-	•	- 16	- <(	).1	<0.1
HA11 0-0.1	30-Nov-18	631102			-	-	-	-					-				-	-	-			-		· ·	•	•	-		-	533	0 0	0	0	0	0 0	0	0	-	-	·	- 14	•		-
HA12 0-0.1	30-Nov-18	631102		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	1 <0.05	<0.05	<0.05 <0.05		1.05 <0.05	<0.05	<0.05 <0.0	15 -	<0.05	0.05	<0.05 <0.05	<0.2	<1			-	-			<0.05	478	0 0.000	3 0	-	-	0 0.001	0.0015	- 0.0015		-		- 22	· <	01	<0.1
HA14 0-0.1	30-Nov-18	631102		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		· ·					<0.05			-	-	-			-		-		- 17	- <(	0.1	<0.1
HA15 0-0.1	30-Nov-18	631102	-		· ·	-	-	-							· ·		-		-		· ·	-		-	-	-	-			-		-	-	-		· ·	•	-	-		- 9.7	-	-	-
HA16 0-0.1	30-Nov-18	631102	-	< 0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	i <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	-	-	-		<0.05	-		-	-	-					-		- 22	- <(	).1	<0.1
HA17 0-0.1	30-Nov-18	631102	-	<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	•	•	-		<0.05	364	0 0	0	0	0	0 0	0	0	-	•		- 30	- <(	J.1	<0.1
HA18 0-0.1	30-Nov-18	631102					-			1 <0.05			-				-		-			-			•	•	-		- <0.05	577	0 0	0	0	0	0 0	0	0	-	•	-	- 1/	· /		
HA20 0-0.1	30-Nov-18	631102																-	-			-					-			649	0 0	0	0	0	0 0	0	0			-	- 16	- ~	-	
QA02	30-Nov-18	631102	-	<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	•	•	-		<0.05	583	0 0	0	0	0	0 0	0	0		•		- 17	- <(	J.1	<0.1
QC02	30-Nov-18	207152	<0.2	<0.1	<0.1	<0.2#9	<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			-		-		•	•		-			13	-	•
HA21 0-0.1	30-Nov-18	631102		-		-	-	-		-	-		-		-		-	-	-		-	•		· ·	•	•	-		-	597	0 0	0	0	0	0 0	0	0	-	-	·	- 22	•		-
SP01	30-Nov-18	631102		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	1 <0.05	<0.05	<0.05 <0.05		1.05 <0.05	<0.05	<0.05 <0.0	15 -	<0.05	0.05	<0.05 <0.05	<0.2	<1			-	-			<0.05	378	0 0	0	0	0	0 0	0	0		-		- 21	· <	01	<0.1
SP03	30-Nov-18	631102		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.	05 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-					<0.05	586	0 0	0	0	0	0 0	0	0		-		- 16	- <(	0.1	<0.1
TP01 0.5-0.6	03-Dec-18	631102				-	-	-		-	-		-		-			-			-	-		-			-					-		-		•	•	17	190	5.1	33 18	•	-	-
TP01 0-0.1	03-Dec-18	631102	-	<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.2	<1		-	•	•	-		<0.05	-		-		-		· ·	•		-		- 13	- <(	J.1	<0.1
TP01 3-3.1 TP02 0-0 1	03-Dec-18	631102					-			1 <0.05			-				-		-			-			•	•	-		- <0.05					•		<u> </u>	•	7.5	620	4.6	23 11	· /		
TP02 0-0.1	03-Dec-18	631102																-	-			-					-											13	180	5.3	24 16	- ~	-	
BH02	16/01/2019	636089	-	<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	i <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.05	<1		-	-	-	-			-		-	-	-		· ·	•	-				13 <0	J.1	<0.1
BH04	16/01/2019	636089		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	i <0.05 <0	.05 <0.05	<0.05	<0.05 <0.	)5 -	<0.05	0.05	<0.05 <0.05	<0.05	<1		-		•				478	0 0	0	0	0	0 0	0	0			•		14 <0	).1	<0.1
BH06	16/01/2019	636089		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	.1 <0.05	<0.05	<0.05 <0.05	5 <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.0	05 -	<0.05	0.05	<0.05 <0.05	<0.05	<1		· ·	•	•	-			-		-	-	-			-			·		15 <0	J.1	<0.1
STOCKPILE	16/01/2019	636089		<0.0	5 <0.05	<0.05	<0.05	- <	0.05 <0	1 <0.05	<0.05	<0.05 <0.05		1.05 <0.05	<0.05	<0.05 <0.0	15 -	<0.05	0.05	<0.05 <0.05	<0.05	<1				-				97	0 0	0	0	0	0 0	0	0				-+-+	18 <0	0.1	<0.1
Statistical Summary	10/01/2015			10.0.		10.05	10.05		0.03 1 10	1 10.05	10.05	10.05		10.05	10.05	10.05 1 10.		1 10.03	0.03		1 10.05									51	<u> </u>				0 0									10.1
Number of Results			2	26	26	26	26	2	26 24	4 26	26	26 26	26	26 26	26	26 20	2	24	26	26 26	26	24	1 1	1	1	1	1	1 1	21	22	22 22	22	22	22	22 22	22	22	3	3	3	3 32	7 2	4	24
Number of Detects			0	0	0	0	0	0	0 0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0 0	0	0	0 0	0	0	0	0	0 0	0	22	22 22	22	22	22	22 22	22	22	3	3	3	3 32	7	<u>ه</u>	0
Minimum Concentration			<0.2	<0.05	5 <0.05	<0.05	<0.05	<0.1 <	0.05 <0	1 <0.05	<0.05	<0.05 <0.05	i <0.05 <0	0.05 <0.05	<0.05	<0.05 <0.0	05 <0.1	<0.05	0.05	<0.05 <0.05	<0.05	<1 ND	<5 <5	<5	<5	<5	<5	<5 <5	<0.05	85	0 0	0	0	0	0 0	0	0	7.5	180	4.6	23 9.7	6 <	1.1	<0.1
Maximum Concentration			<0.2	<0.5	<0.5	<0,2	<0.5	<0.1 <	<0.5 <	1 <0.5	<0.5	<0.5 <0.1	<0.5 <	0.5 <0.5	<0.5	<0.5 <0	5 <0.1	<0.5	<0.5	<0.5 <0.5	<2	<10	<5 <5	<5	<5	<5	<5	<5 <5	<0.5	736	0.000	3 0	0	0	0 0.001	0.0015	0.0015	1.5	620	4.0	33 38	68 <1	0.1	<0.1
Maximum Detect			ND	ND	ND	ND	ND	ND	ND N	D ND	ND	ND ND	ND	ND ND	ND	ND N	D ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND I	ND ND	ND	736	ND 0.000	3 ND	ND	ND	ND 0.001	5 0.0015	0.0015	17	620	5.3	33 38	68 N	JD	ND
Average Concentration				0.04	4 0.044	0.031	0.044	0	.044 0.0	88 0.045	0.045	0.044 0.027	0.044 0.	044 0.044	0.044	0.044 0.0	14	0.044	.044	0.044 0.044	0.15	0.88							0.049	505	0 1.4E-	05 0	0	0	0 7.3E-0	5 6.8E-05	6.8E-05	13	330	5	27 19	21 0.	.05	0.05
Median Concentration			0.1	0.02	5 0.025	0.025	0.025	0.05 0	.025 0.0	0.025	0.025	0.025 0.025	0.025 0.	025 0.025	0.025	0.025 0.0	25 0.05	0.025	.025	0.025 0.025	0.1	0.5	2.5 2.5	2.5	2.5	2.5	2.5 2	2.5 2.5	0.025	574	0 0	0	0	0	0 0	0	0	13	190	5.1	24 17	14 0.	.05	0.05
Standard Deviation	2005			0.06	1 0.061	0.02	0.061	0	.061 0.1	13 0.061	0.061	0.061 0.006	8 0.061 0.	0.061 0.061	0.061	0.061 0.0	51	0.064	0.061	0.061 0.061	0.25	1.3	0 0		0	0		0 0	0.067	187	0 6.4E-	0	0	0	0 0.0003	4 0.00032	0.00032	4.8	251	0.36	5.5 6.4	21	<u>-</u>	0
Number of Guideline Exceeda	nces(Detects Only)		0	0	0	0	0	0	0 0	0	20	0 0	0	0 0	0	0 0	0		0	0 0	0	0	0 0	0	0	0	0	0 0	0	0	0 0	0	0	0	0 0	0	0	0	0	0	0 0	0	<u></u>	-
Let al an an an a street and a street and						-	-	2			1										1 * 1				-	-												-		-	1 1 2			<u> </u>



### **Table B – Soil Leachate Results**

### Table B: Soil Leachate Project Number: 55607

Project Name: Mamre Road Kemps Creek

			N	letals & P	Metalloid	s			BTEXN							Polycycl	lic Aromati	c Hydrocar	rbons							le	onic Balanc	ce
<b>JBS&amp;G</b>	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a) anthracene	Benzo(a)pyrene	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)an thracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	PAHs (Total)	Pyrene	pH (TCLP - HCl addition)	pH (TCLP - initial)	pH (TCLP - off)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ph Units	ph Units	ph Units
EQL	0.01	0.005	0.05	0.05	0.01	0.001	0.05	0.05	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.1	0.1	0.1
Field_ID         LocCode         Sample_Depth_Range         Sampled_Date-Time         Matrix_Description           HA15 0-0.1         HA15         0-0.1         30-Nov-18         30-Nov-18	<0.01	<0.005	<0.05	<0.05	<0.01	<0.001	<0.05	0.69	0.057	0.013	0.001	<0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.006	<0.001	0.018	0.097	<0.002	1.8	6	5.3
Statistical Summary																												
Number of Results	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Number of Detects	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	1
Minimum Concentration	<0.01	<0.005	<0.05	<0.05	<0.01	<0.001	<0.05	0.69	0.057	0.013	0.001	<0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.006	<0.001	0.018	0.097	<0.002	1.8	6	5.3
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	0.69	0.057	0.013	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.006	ND	0.018	0.097	ND	1.8	6	5.3
Maximum Concentration	<0.01	<0.005	<0.05	<0.05	<0.01	<0.001	<0.05	0.69	0.057	0.013	0.001	<0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.006	<0.001	0.018	0.097	<0.002	1.8	6	5.3
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	0.69	0.057	0.013	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.006	ND	0.018	0.097	ND	1.8	6	5.3
Average Concentration																												
Median Concentration	0.005	0.0025	0.025	0.025	0.005	0.0005	0.025	0.69	0.057	0.013	0.001	0.0075	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.006	0.0005	0.018	0.097	0.001	1.8	6	5.3
Standard Deviation																												
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



## Table C – Dam Water Screening Sample

				Metals &	Metalloids					TPHs	(NEPC 1	999)				TRHs	(NEPC	2013)						BTEXN			
(JBS&G	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	read	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	-C10-C16 Fraction	-C16-C34 Fraction	-C34-C40 Fraction	>C10-C40 Fraction (T otal)	>C10-C1 6 less Naphthalene (F2)	C6-C10 Fraction	C6-CL0 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Kylene (o)	Kylene (m & p)	Kylene (Total)	Naphthalene
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.0002	0.001	0.001	0.001	0.0001	0.001	0.005	0.02	0.05	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.05	0.02	0.02	0.001	0.001	0.001	0.001	0.002	0.003	0.01
ANZG (2018) Freshwater 95% toxicant DGVs		0.0002*1		0.0014*1	0.0034 #2	0.0006*2	0.011**	0.008#4													0.95"2			0.35*1			0.016 <sup>#1</sup>
Field_ID Sampled_Date-Time Lab_Report_Number																											

Env Stds Comments #1:Very high reliability #2:Moderate reliability #3:Low reliability #4:High reliability







# Appendix A Photographic Log















# Appendix B Registered Groundwater Bores



# Appendix C Aerial Photographs







File Name: N\Projects\RMS\52043 - Wamberal Remediation and Validation\GIS\Maps\Aerial\55607\_1975.mxd Reference: Spatial Services, NSW











# Appendix D Historic Land Title Records



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and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps InfoTrac








					FIRST SCHEDULE (continued)				V. L. N. U.	IGHT. GOVERNMENT PRINTER
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for lot	s in yeposy	129410	18120101	as tonows	2 - <b>29</b> .					
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_	- <u>11</u>	REGI	STRAR GENERAL	Cast		2	1.1.1.1.1.1.1.1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-
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	-	3. V.	×*				1.			- <u>15 - 0</u>
				-	SECOND SCHEDULE (continued)				10	Tooler
NATURE	NUMBER	DATE		PART	ïculars	ENTERED	Signature of Registrar-General		CANCELLATION	
dage	K743630	25-1-1168	To J. H. Bourn	Pt: Sin to	1	1.10.1018	history	1.	Labour	la
and gage	1571588	12.7. 1969	To Autralia	and Mes	and Bark 1. Fil	211.0 00	Jandateon	anlaged	Q624196	1 6
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	FIRST SCHEDULE (continued)				
	REGISTERED PROPRIETOR	INST NATURE	RUMENT	REGISTERED	Signature of Registrar General
ł	Tarko Matanovic of St. Manys, Butcher and Milky Matanovic his wife				
4	rs joint tahouts	Transfer	R 994528	21-8-1980	Same and
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	SECOND SCHEDULE (continued)	-			
	INSTRUMENT PARTICULARS NATURE NUMBER	REGISTERED	Signature of Registrar General	CANCE	LLATION
	The interest of the Council of the City of Pensith in the addition to				
	existing road shown on D.P. 606341	22-11-1975	kanna	-	
3	422463 Mortgage to Commonwealth Savings Bank of Australia. Registered 28-4-1981.	·	Alineis		
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SEARCH DATE 26/11/2018 11:17AM

FOLIO: 52/259135

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Firs Prio	t Title(s): r Title(s):	SEE PRIOR TITLE(S) VOL 13940 FOL 182	
Recorded  5/6/1987	Number	Type of Instrument  TITLE AUTOMATION PROJECT	C.T. Issue LOT RECORDED FOLIO NOT CREATED
28/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
<mark>29/6/1988</mark>	X651228	DISCHARGE OF MORTGAGE	EDITION 1
18/11/1993		AMENDMENT: LOCAL GOVT AREA	
23/6/1994	U378379	CHANGE OF NAME	EDITION 2
16/3/2004	AA498129	TRANSFER	EDITION 3
11/3/2013	AH601743	DEPARTMENTAL DEALING	

\*\*\* END OF SEARCH \*\*\*

kemps

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.

Req:R719687 /Doc:DL AA498129 /Rev:17-Mar-2004 /Sts:NO.OK /Pgs:ALL /Prt:12-Dec-2018 14:28 /Seq:1 of 1 Ref:kemps /Src:M

	Form: 01T Release: 2 www.lpi.nsw.gov	v.au TRANSFER New South Wales Real Property Act 1900
		PRIVACY NOTE: this information is legally required and will ( AA4981291
	STAMP DUTY	Office of State Revenue use only NEW SOUTH WALES DUTY 07-03-2004 0001869750-001 TRANSFER- TRANSFER DUTIABLE AMOUNT \$ **********44,000.00 DUTY \$ ************************************
A)	TORRENS TITLE	Folio Identifier 52/259135
B)	LODGED BY	Delivery BoxName, Address or DX and TelephoneCODES1029SAstley Thompson Cox DX 8046 PenrithT TW
-		Reference: HP: sb: 20026766 (Sheriff)
C)	TRANSFEROR	MARKO MATANOVIC & MILKA MATANOVIC
D)	CONSIDERATION	The transferor acknowledges receipt of the consideration of \$ 1.00 and as regards
E)	ESTATE	the land specified above transfers to the transferee an estate in fee simple
F) 3)	SHARE TRANSFERRED	Encumbrances (if applicable):
HI)	TRANSFEREE	MARKO MATANOVIC & MILKA MATANOVIC as joint tenants as to 96/100 share and IVAN MATANOVIC as to 4/100 share as tenants in common
0		TENANCY:
D)	DATE	8th Marcy 2004
	I certify that the p I am personally ac otherwise satisfied	content of the signing opposite, with whom contained or as to whose identity I am d, signed this instrument in my presence. Certified correct for the purposes of the Real Property Act 1900 by the transferor.
	Signature of witne	Signature of transferor. Marko O Macarte
	Name of witness: Address of witnes	51-79 HENRY STREET PENRITH SOLICITOR hillsa chotociouro
	I certify that the particular the particular for a set of the particular termine satisfies otherwise satisfies and the particular termine satisfies and the particular termine set of the particular termines and the particular termines and the particular termines and the particular termines and the particular termines and termines	erson(s) signing opposite, with whom equainted or as to whose identity I am I, signed this instrument in my presence. Certified correct for the purposes of the Real Property Act 1900 by the transferee.
	Signature of witne	Signature of transferee:
	Name of witness: Address of witnes	"36 Woodsilf 31, PENRITH
	52	Page 1 of
	All handwriting m	ust be in block capitals. pages sequentially Land and Property Information NSW.

51





FOLIO: 52/259135

LAND

SERVICES

SEARCH DATE	ΤÍΜΕ	EDITION NO	DATE
12/12/2018	2:29 PM	3	16/3/2004

## LAND

LOT 52 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

## FIRST SCHEDULE

MARKO MATANOVIC MILKA MATANOVIC AS JOINT TENANTS IN 96/100 SHARE IVAN MATANOVIC IN 4/100 SHARE AS TENANTS IN COMMON

(T AA498129)

SECOND SCHEDULE (3 NOTIFICATIONS)

RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) 1

2 DP259135 RESTRICTION(S) ON THE USE OF LAND

\* 3 THE INTEREST(S) OF THE COUNCIL OF THE CITY OF PENRITH IN ADDITION TO EXISTING ROAD SHOWN ON DP606341

## NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

kemps creek

#### PRINTED ON 12/12/2018

\* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Tide. 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.



	-	FIRST SCHEDULE (continued)				
		REGISTERED PROPRIETOR	INS NATURE	RUMENT	REGISTERITD	Signature of Resistrat Canaral
Percival Bar	tolo of Austr	al, Market Gardener and Mary Bartolo his wife, as joint tenants	Transfer	5935505	17-10-1980	k
					11-20-1900	
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		SECOND SCHEDULE (anti-				
INSTR	MENT	PARTICIPARE		Simolyan at		
NATORE	NUMBER	FAKILULAKS	REGISTERED	Registrar General	CANCEL	LATION
	-	The interest of the council of the cary of Pennith in the addition to				
		existing road shown on D.P. 606341	22.11.1979	kannen		
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				26 <sup>10</sup> 1	ere Terretta	<u>()-</u>







SEARCH DATE ------26/11/2018 11:17AM

FOLIO: 53/259135

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First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 13940 FOL 183

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/9 <b>/</b> 1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
18/11/1993		AMENDMENT: LOCAL GOVT AREA	
13/11/2007	AD560942	CAVEAT	
14/2/2012	AG810891	WITHDRAWAL OF CAVEAT	
11/3/2013	AH601743	DEPARTMENTAL DEALING	

\*\*\* END OF SEARCH \*\*\*

kemps

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FOLIO: 53/259135

LAND

SERVICES

SEARCH DATE	TIME	EDITION NO	DATE
12/12/2018	2:29 PM	<del></del>	-

VOL 13940 FOL 183 IS THE CURRENT CERTIFICATE OF TITLE

#### LAND

-----LOT 53 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

FIRST SCHEDULE 

PERCIVAL BARTOLO MARY BARTOLO AS JOINT TENANTS

(T S935505)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) 2 DP259135 RESTRICTION(S) ON THE USE OF LAND \* 3 THE INTEREST(S) OF THE COUNCIL OF THE CITY OF PENRITH IN ADDITION TO EXISTING ROAD SHOWN ON DP606341

NOTATIONS \_\_\_\_\_

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

#### kemps creek

#### PRINTED ON 12/12/2018

\* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Tide. 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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	053	REGISTERED PROPRIETOR	NATURE	TRUMENT	REGISTERED	Signature of
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chael Vincen	Borg and Ma	ry Victoria Borg as joint tenants by Transfer V738605. Registered 17-6-1985.	TIGHSLEL	10,0402 15	16-2-1980	
			_			
			_			
		SECOND SCHEDULE (continued)				
INSTRU	ENT NUMBER	PARTICULARS	Dearen	-Simmer al-		·
Montonoo	DESPA62	to Paul of New Or Control In	REGISTERED	Registrar General	CANCE	LLATION
HOL DEALC	1 1030403	to tent of New Sourcesteles	14-2-1980	Summer 1	Discharged	₹436061
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SEARCH DATE ------26/11/2018 11:17AM

FOLIO: 54/259135

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First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 13940 FOL 184

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
10/11/1989	Y693340	MORTGAGE	EDITION 1
18/11/1993		AMENDMENT: LOCAL GOVT AREA	
30/3/2001	7511149	DISCHARGE OF MORTGAGE	EDITION 2
13/11/2007	AD560941	CAVEAT	
14/2/2012	AG810786	WITHDRAWAL OF CAVEAT	
26/9/2018	AN737523	CAVEAT	

\*\*\* END OF SEARCH \*\*\*

kemps

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FOLIO: 54/259135 -----

LAND

SERVICES

SEARCH DATE	TIME	EDITION NO	DATE
12/12/2018	2:29 PM	2	30/3/2001

## LAND

-----

LOT 54 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

#### FIRST SCHEDULE

-----

-----MICHAEL VINCENT BORG MARY VICTORIA BORG AS JOINT TENANTS

(T V738605)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- \* 2 AN737523 CAVEAT BY CONTACT ASSET MANAGEMENT PTY LIMITED

#### NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

kemps creek

#### PRINTED ON 12/12/2018

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REGISTERED PROPRIETOR	INSTRU	MENT	RECISTERED	Signature of Registrar General
	NATURE	NUMBER	REGISTERED	Registra General
squale Maltese of West Hoxton, Farmer and Concetta Maltese his wife as joint tenants	THANSFER	R638459	21-2-1980	the man
		1		
2				
		1		

NATURE NUMBER		PARTICULARS	REGISTERED Signature of Registrar General		CANCELLATION	
lortgage	S55132	to Australia and New Zealand Banking Group Limited	22-9-1980	b		
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	dependence of the second					

8-Feb-2011 /Sts:OK.SC /Pgs:ALL /Prt:12-Dec-2018 14:14







SEARCH DATE ------26/11/2018 11:17AM

FOLIO: 55/259135

First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 13940 FOL 185

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
18/11/1993		AMENDMENT: LOCAL GOVT AREA	
13/11/2007	AD560847	CAVEAT	
14/2/2012	AG810684	WITHDRAWAL OF CAVEAT	
1/9/2018	AN678863	DEPARTMENTAL DEALING	EDITION 1 CORD ISSUED
11/9/2018	AN698501	CAVEAT	

\*\*\* END OF SEARCH \*\*\*

kemps

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FOLIO: 55/259135 

LAND

SERVICES

SEARCH DATE	TIME	EDITION NO	DATE
12/12/2018	2:29 PM	1	1/9/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO. CONTROL OF THE RIGHT TO DEAL IS HELD BY AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED.

#### LAND -----

LOT 55 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

FIRST SCHEDULE 

-----

PASQUALE MALTESE CONCETTA MALTESE AS JOINT TENANTS

(T R638459)

SECOND SCHEDULE (4 NOTIFICATIONS)

RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) 1

- 2 DP259135 RESTRICTION(S) ON THE USE OF LAND
- 3 S55132 MORTGAGE TO AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED
- \* 4 AN698501 CAVEAT BY CONTACT ASSET MANAGEMENT PTY LIMITED

NOTATIONS -----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

kemps creek

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FIRST SU	TEROTE (CONTINCO)					- 04t
REGISTERED PROPRIETOR		NATURE	NUMBER	REGISTERED	Signature of Registrar General	
ngelo Perri, Hairdresser in 🗄 share, Antonio Perri, Student in 🗄 share and	d Emilia Ierufi, Widow in		_			V41680
share, all of Cabramatta, tenancy in common	•	Transfer	R649040	13-2-1980	kinin	W/52/8
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na an an an an an an an an an an an an a		· · · · · · · · · · · · · · · · · · ·				-
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						1
SECOND SC	CHEDULE (continued)					1
INSTRUMENT PARTICULARS		REGISTERED	Signature of Registrar General	CANCE	LLATION	1
The interest of the Council of the cit	ty of Penrith in					1
addition to existing road shown a	D. P. 606341	22.11.1979	kennen			]
16804 Hortgage to Commonwealth Same Sayings Bank of Australia. Registe	red 7-11-1984		king	Discharged	W52483	
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SEARCH DATE 26/11/2018 11:17AM

FOLIO: 56/259135

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13940 FOL 186

Recorded	Number	Type of Instrument	C.T. Issue
			LOT RECORDED
5/6/1987		TITLE AUTOMATION PROJECT	FOLIO NOT CREATED
28/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

18/11/1993 AMENDMENT: LOCAL	GOVT	AREA
-----------------------------	------	------

11/2/1999 5589110 DEPARTMENTAL DEALING

11/3/2013 AH601743 DEPARTMENTAL DEALING

\*\*\* END OF SEARCH \*\*\*

kemps

#### PRINTED ON 26/11/2018

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FOLIO: 56/259135

LAND

SERVICES

SEARCH DATE	TIME	EDITION NO	DATE
12/12/2018	2:29 PM	1 <del></del>	-

## VOL 13940 FOL 186 IS THE CURRENT CERTIFICATE OF TITLE

#### LAND \_\_\_\_

LOT 56 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

#### FIRST SCHEDULE

\_\_\_\_\_

ANGELO PERRI IN 1/3 SHARE ANTONIO PERRI IN 1/3 SHARE EMILIA IERUFI IN 1/3 SHARE AS TENANTS IN COMMON

(T R649040)

SECOND SCHEDULE (3 NOTIFICATIONS)

- RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) 1
- 2 DP259135 RESTRICTION(S) ON THE USE OF LAND
- THE INTEREST(S) OF THE COUNCIL OF THE CITY OF PENRITH IN ADDITION \* 3 TO EXISTING ROAD SHOWN ON DP606341

#### NOTATIONS

-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

kemps creek

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			FIRST SCHEDULE (continued)				
			REGISTERED PROPRIETOR	NATURE	IRUMENT NUMBER	REGISTERED	Signature of Registrar General
	Exotic Lines	bek Aust	- the Sime tet	Tomair	Reamer	-28-9-190	- k
ŧ	Benito Vitalon	e and France	sca Vitalone as joint tenants by Transfer V65431. Registered 13-4-1984	/			1
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	INCILIA	EVIT	SECOND SCHEDULE (continued)				
	NATURE	NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCE	LLATION
!			The interest of the Council of the City of Aparith in addition	0			
			to existing road shown on D.P. 606341.	12 0 1000	10 million to		
1				ZT.11.(212			
1	V65431 Coven	nt. Regist	ered 13-4-1984	24-11-19	An		
	V65431 Coven W328078 Mortga	nt. Regist ge to Natio	al Australia Bank Limited. Registered 16-5-1986.	<u>Z</u> A-11-1919			
	V65431 Coven W328078 Mortga	nt. Regist ge to Natio	ered 13-4-1984 mal Australia Bank Limited. Registered 16-5-1986.	24.0.0919			
	V65431 Coven W328078 Mortga	nt. Regist ge to Natio	ered 13-4-1984 nal Australia Bank Limited. Registered 16-5-1986.	ZA-W-(919			
	V65431 Coven <u>W328078 Mortg</u>	nt. Regist ge to Natio	ered 13-4-1984 hal Australia Bank Limited. Registered 16-5-1986.	ZA-W-1919			
	V65431 Coven W328078 Mortg	nt. Regist ge to Natio	ered 13-4-1984 hal Australia Bank Limited. Registered 16-5-1986.	ZA-W-(414			
	V65431 Coven W328078 Mortga	nt. Regist ge to Natio	ered 13-4-1984 hal Australia Bank Limited. Registered 16-5-1986.	ZA-W-1919			
	V65431 Coven W328078 Mortg	nt. Regist ge to Natio	ered 13-4-1984 nal Australia Bank Limited. Registered 16-5-1986.				
	V65431 Coven W328078 Mortga	nt. Regist ge to Natio	ered 13-4-1984 hal Australia Bank Limited. Registered 16-5-1986.				
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/  _ /// // // // // // // // // // // // /	V65431 Coven W328078 Mortga	nt. Regist ge to Natio	ered 13-4-1984 hal Australia Bank Limited. Registered 16-5-1986.				
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	V65431 Coven W328078 Mortga	nt. Regist	ered 13-4-1984				
	V65431 Coven W328078 Mortga	nt. Regist	ered 13-4-1984				
Vinger + Cr. + Luger	V65431 Coven W328078 Mortgi	nt. Regist ge to Natio	ered 13-4-1984				







SEARCH DATE ------26/11/2018 11:17AM

FOLIO: 57/259135

------

First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 13940 FOL 187

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
18/11/1993		AMENDMENT: LOCAL GOVT AREA	
9/6/1999 9/6/1999	5891296 5891297	DISCHARGE OF MORTGAGE MORTGAGE	EDITION 1
15/10/1999	6270933	DISCHARGE OF MORTGAGE	EDITION 2
30/6/2000	6913246	MORTGAGE	EDITION 3
18/1/2001	7354862	DISCHARGE OF MORTGAGE	EDITION 4
17/11/2006	AC643679	MORTGAGE	EDITION 5
13/11/2007	AD560781	CAVEAT	
14/2/2012	AG810670	WITHDRAWAL OF CAVEAT	
31/5/2012	AH21187	DISCHARGE OF MORTGAGE	EDITION 6
11/3/2013	AH601743	DEPARTMENTAL DEALING	
9/1/2017	AM41552	DEPARTMENTAL DEALING	
27/2/2017	AM47376	CAVEAT	
9/8/2017	AM627859	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 7
26/9/2018	AN737522	CAVEAT	

\*\*\* END OF SEARCH \*\*\*

PRINTED ON 26/11/2018





FOLIO: 57/259135

LAND

SERVICES

SEARCH DATE	TIME	EDITION NO	DATE
12/12/2018	2:29 PM	7	9/8/2017

#### LAND 10000

LOT 57 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

FIRST SCHEDULE 

BENITO VITALONE FRANCESCA VITALONE AS JOINT TENANTS

(T V65431)

SECOND SCHEDULE (6 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

DP259135 RESTRICTION(S) ON THE USE OF LAND 2

THE INTEREST(S) OF THE COUNCIL OF THE CITY OF PENRITH IN ADDITION 3 TO EXISTING ROAD SHOWN ON DP606341

4 V65431 COVENANT AM627859 THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY 5 ACT, 1900

\* 6 AN737522 CAVEAT BY CONTACT ASSET MANAGEMENT PTY LIMITED

#### NOTATIONS

\_\_\_\_\_

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

#### kemps creek

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	14		REGISTERED PROPRIETOR	INS	TRUMENT	DECISTENED	Signature of	100
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Gi	useppe Demas	i and Alfon:	za Demasi as joint tenants by Transfer T280709, Registered 22-10-1982	-	_			
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_	Normal St.	Fair	SECOND SCHEDULE (continued)			8		1
4	NATURE	NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCEI	LATION	
			The interest of the Council of the City of Penrith in addition					
			to satisfy read shown on D. P 606341	22-11-1119	den			
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SEARCH DATE -----26/11/2018 11:17AM

FOLIO: 58/259135

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First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 13940 FOL 188

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/9/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
25/8/1993	<b>I59</b> 0218	LEASE	EDITION 1
18/11/1993		AMENDMENT: LOCAL GOVT AREA	
18/11/1997	3588164	TRANSFER	
18/11/1997	3588165	MORTGAGE	EDITION 2
24/7/2000	6966618	DISCHARGE OF MORTGAGE	EDITION 3
29/1/2003	9328976	MORTGAGE	EDITION 4
13/11/2007	AD560882	CAVEAT	
14/12/2011	AG686707	DISCHARGE OF MORTGAGE	EDITION 5
14/2/2012	AG810585	WITHDRAWAL OF CAVEAT	
23/4/2012	AG941653	MORTGAGE	EDITION 6
6/8/2012	AH155855	DISCHARGE OF MORTGAGE	EDITION 7
11/3/2013	AH601743	DEPARTMENTAL DEALING	
18/9/2013	AI30384	MORTGAGE	EDITION 8
15/3/2017	AM233564	DISCHARGE OF MORTGAGE	EDITION 9
11/9/2018	AN698500	CAVEAT	
20/11/2018	AN868908	WITHDRAWAL OF CAVEAT	

\*\*\* END OF SEARCH \*\*\*

kemps

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FOLIO: 58/259135

LAND

SERVICES

SEARCH DATE	TIME	EDITION NO	DATE
12/12/2018	2:29 PM	9	15/3/2017

#### LAND

LOT 58 IN DEPOSITED PLAN 259135 AT SOUTH ST.MARYS LOCAL GOVERNMENT AREA PENRITH PARISH OF MELVILLE COUNTY OF CUMBERLAND TITLE DIAGRAM DP259135

FIRST SCHEDULE 

\_\_\_\_\_

DTAB FINTANOS SAYDE FINIANOS AS JOINT TENANTS

(T 3588164)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT (S)

2 DP259135 RESTRICTION(S) ON THE USE OF LAND

THE INTEREST(S) OF THE COUNCIL OF THE CITY OF PENRITH IN ADDITION 3 TO EXISTING ROAD SHOWN ON DP606341

NOTATIONS

------

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

kemps creek

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# Appendix E NSW EPA Records

Home Contaminated land Record of notices

## Search results

Your search for:Suburb: KEMPS CREEK

#### did not find any records in our database.

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

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

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under <u>section 149 of the Environmental Planning and Assessment Act</u>.

See <u>What's in the record and What's not in the record</u>.

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

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

and industry **^** 

For business

26 November 2018

For local government ^

## Contact us

Find us on

- **L** 131 555 (tel:131555)
- 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)

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

Search Again Refine Search

.. more search tips

<u>Home</u> <u>Environment protection licences</u> <u>POEO Public Register</u> <u>Search</u> <u>for licences, applications and notices</u>

# Search results

Your search for: General Search with the following criteria

Suburb - Kemps Creek

returned 137 results

Export to exc	<u>el</u>	3 of 7 Pages			Search Again	
Number	Name	Location	Туре	Status	<b>Issued date</b>	
<u>1069425</u>	KARI & GHOSSAYN PTY LTD (C/- STEVEN NICOLS - LIOUIDATOR)	CLIFTON AVE, SKEMPS CREEK, NSW 2171	s.79 Suspension of a Licence	Issued	15 Feb 2007	
<u>1089317</u>	KARI & GHOSSAYN PTY LTD (C/- STEVEN NICOLS - LIQUIDATOR)	CLIFTON AVE, SKEMPS CREEK, NSW 2171	s.79 Revocation of a Licence	Issued f	10 Jul 2008	
<u>1509139</u>	Kemps Creek Investments Pty Ltd	113 Western Rd, KEMPS CREEK, NSW 2171	s.91 Clean Up Notice	pIssued	12 Nov 2012	
<u>1511151</u>	Kemps Creek Investments Pty Ltd	113 Western Rd, KEMPS CREEK, NSW 2171	s.91 Clean Up Notice	pIssued	08 Jan 2013	
<u>1511634</u>	Kemps Creek Investments Pty Ltd	113 Western Rd, KEMPS CREEK, NSW 2171	s.91 Clean Up Notice	pIssued	14 May 2013	
<u>1516213</u>	Kemps Creek Investments Pty Ltd	113 Western Rd, KEMPS CREEK, NSW 2171	s.91 Clean Up Notice	pIssued	19 Sep 2013	
<u>1523933</u>	LIVERPOOL CITY COUNCIL	245 Devonshire Road, KEMPS CREEK, NSW 2178	s.91 Clean Up Notice	pIssued	15 Sep 2014	
<u>3085776091</u>	LIVERPOOL CITY COUNCIL	245 Devonshire Road, KEMPS CREEK, NSW 2178	Penalty Notice	Issued	17 Mar 2015	
<u>1539676</u>	Mahmoud Tellaoui	1055 Fifteenth Avenue , KEMPS CREEK, NSW 2178	s.91 Clean U Notice	pIssued	09 Apr 2016	
<u>3085781106</u>	Mahmoud Tellaoui	1055 Fifteenth Avenue , KEMPS CREEK, NSW 2178	Penalty Notice	Issued	23 Dec 2016	For business
<u>1549534</u>	Mahmoud Tellaoui	1055 Fifteenth Avenue , KEMPS CREEK, NSW 2178	s.91 Clean U Notice	pIssued	21 Mar 2018	and industry ^
<u>1562364</u>	Mahmoud Tellaoui	1055 Fifteenth Avenue , KEMPS CREEK, NSW 2178	s.110 Revocation of Clean Up Notice	Issued f	21 Mar 2018	For local government ^
<u>7219</u>	NOVARTIS ANIMAL HEALTH AUSTRALASIA PTY. LIMITED	245 WESTERN ROAD, KEMPS CREEK, NSW 2171	POEO licence	No longer in force	26 Jun 2000	Contactus
<u>1048306</u>	NOVARTIS ANIMAL HEALTH AUSTRALASIA PTY. LIMITED	245 WÉSTERN ROAD, KEMPS CREEK, NSW 2171	s.58 Licence Variation	Issued	30 May 2005	Contact us
<u>1530101</u>	OLATHREE PTY LTD	901 - 915 Mamre Road, KEMPS CREEK, NSW 2178	s.91 Clean Up Notice	pIssued	24 Jul 2015	
<u>3085777815</u>	OLATHREE PTY LTD	901 - 915 Mamre Road, KEMPS CREEK, NSW 2178	Penalty Notice	Issued	15 Oct 2015	
<u>3085780464</u>	OLATHREE PTY LTD	901 - 915 Mamre Road, KEMPS CREEK, NSW 2178	Penalty Notice	Issued	07 Oct 2016	
3173524137	Pacific Environmental	16-23 Clifton Avenue, KEMPS CREEK, NSW 2178	Penalty Notice	Court Elected		
<u>3173525796</u>	SUEZ RECYCLING & RECOVERY PTY LTD	1725 Elizabeth Drive, KEMPS CREEK, NSW 2178	Penalty Notice	Withdraw	n	
<u>4068</u>	SUEZ RECYCLING & RECOVERY PTY LTD	1725 ÉLIZABETH DRIVE, KEMPS CREEK, NSW 2178	POEO licence	Issued	13 Sep 2001	
		,			1234567	

26 November 2018



# Kemps Creek RFS training site

A Detailed Site Investigation (DSI) for per- and poly-fluoroalkyl substances (PFAS) and a human health risk assessment was completed in April 2018 at the Kemps Creek Rural Fire Service (RFS) training site located within Liverpool City Council's Western Depot. The DSI followed preliminary investigations which confirmed the presence of PFAS at and around the facility. The detailed testing was undertaken to verify earlier findings, to help determine the extent of PFAS migration, and inform management actions for the site.

The DSI included sampling soil, groundwater, sediment and surface water from various locations on and off-site, as well as produce grown on nearby properties.

The EPA requested the NSW PFAS Taskforce undertake a review and assessment of the investigation report. The NSW PFAS Taskforce comprises representatives from EPA, NSW Office of Environment and Heritage, NSW Department of Primary Industries Biosecurity and Food Safety, NSW Food Authority, NSW Department of Premier and Cabinet, NSW Health, NSW Department of Industry Lands and Water, and NSW Chief Scientist and Engineer.

While there is no consistent evidence of any human health effects related to PFAS exposure, the NSW PFAS Taskforce is taking a precautionary approach to protecting human health.

As a precaution, the EPA and NSW PFAS Taskforce has recommended that specific residents near the depot, not use surface water for drinking, cooking or watering produce (fruit, vegetables, herbs and poultry). The affected residents have been notified by the EPA.

Residents near the Kemps Creek site are connected to the town water supply, which is safe to use.

The EPA is committed to working closely with RFS, Council and residents to help reduce exposure to PFAS. The primary PFAS exposure pathways are through drinking water containing PFAS, or eating produce that was grown using water containing PFAS.

The EPA is working collaboratively with stakeholders and government agencies to ensure an appropriate, scientific and risk-based approach is adopted throughout the investigation, and that the community receives timely information.

For more information see:

NSW EPA media release: PFAS investigation underway at Kemps Creek (/news/media-releases/2017/epamedia170405012)

NSW EPA factsheet: Kemps Creek PFAS investigations - information for local residents (/-/media/epa/corporate-site/resources/community/18p0838-kemps-creek-pfas-investigation.pdf)

Liverpool City Council media release: Soil and water testing for PFAS continues at Kemps Creek (http://www.liverpool.nsw.gov.au/council/media/media-releases/2017/april-2017/soil-and-water-testing-for-pfas-continues-atkemps-creek)

Tags: PFAS (/Search?q=PFAS)

Page last updated 18 July 2018

## For business and industry

## For local government

## Contact us

## **L** 131 555 (tel:131555)

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

♠ EPA Office Locations (/about-us/contact-us/locations)

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 $\sim$
Suburb	Site Name	Address	Contamination Activity Type	Management Class	Latitude	Longitude
КАТООМВА	Former Katoomba/Leura Gasworks	Megalong STREET	Gasworks	Contamination currently regulated under CLM Act	-33.71318559	150.3187284
KELLYVILLE	Caltex Service Station	3-5 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71436125	150.9602175
KELLYVILLE	BP Service Station Kellyville	19-23 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71280997	150.9590756
KELSO	Caltex Service Station Kelso	19 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41904247	149.6023985
KELSO	BP Service Station (Reliance Petroleum)	63 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41925328	149.6076677
KEMBLA GRANGE	ShawCor Australia	66 West Dapto ROAD	Other Petroleum	Regulation under CLM Act not required	-34.46875328	150.8106326
KEMBLAWARRA	Griffins Bay, Lake Illawarra	Shellharbour ROAD	Landfill	Regulation under CLM Act not required	-34.49653984	150.8943776
KEMPS CREEK	Caltex-branded Service Station	1163 Mamre ROAD	Service Station	Regulation under CLM Act not required	-33.86972102	150.7966074
KEMPSEY	Kempsey Showground	19 Sea STREET	Unclassified	Contamination being managed via the planning process (EP&A Act)	-31.07334836	152.8308795
KEMPSEY	Former Shell Depot	43-51 Gladstone STREET	Other Petroleum	Regulation under CLM Act not required	-31.07500944	152.8346699
KEMPSEY	Former Mobil depot	14 Hopetoun STREET	Other Petroleum	Regulation under CLM Act not required	-31.07603107	152.8350132
KEMPSEY	Shell Coles Express Service Station Kempsey	165 Smith STREET	Service Station	Regulation under CLM Act not required	-31.07036743	152.8461571
KEMPSEY	Mobil Depot	154 Belgrave STREET	Service Station	Regulation under CLM Act not required	-31.07965043	152.8326303
KEMPSEY	Liberty (Former Mobil) Service Station	108-112 Smith STREET	Service Station	Regulation under CLM Act not required	-31.07492508	152.8431945
KENSINGTON	7-Eleven Kensington	135 Anzac PARADE	Service Station	Regulation under CLM Act not	-33.91035885	151.2228537
KENSINGTON	Former Ampol Service Station	76-82 Anzac PARADE	Service Station	Regulation under CLM Act not	-33.9059246	151.2242891
KENSINGTON	Footpath adjacent to 10-20 Anzac Parade	10-20 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9032124	151.2237836
KENSINGTON	Caltex Service Station	211-213 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.91460752	151.2251266
KENTHURST	Vacant Land	259 McCylmonts ROAD	Unclassified	Regulation under CLM Act not required	-33.61283529	150.9425303
KHANCOBAN	Khancoban Tip	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21994191	148.1542718
KIAMA	Former Gasworks	105 to 109 and 113 Shoalhaven	Gasworks	Regulation under CLM Act not	-34.67416881	150.8504143
KIAMA HEIGHTS	Former Mobil Service Station Kiama	7-9 South Kiama DRIVE	Service Station	Regulation under CLM Act not	-34.69553931	150.8437977
KILLARA	7-Eleven Service Station (Former Mobil)	496 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.77146554	151.1606903
KILLARA	Former Caltex Service Station	692B-694 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.76306802	151.1550109
KILLARA	Killara Garage	544 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76974164	151.1599696



# Appendix F State and National Heritage Records

# **Search Results**

#### No results found.

 $Enter \ at \ least \ one \ search \ criterion.$ 

### Search Hints

	Search Reset form
Place name	
Street name	
mamre road	
Town or suburb State	
Kemps Creek New	South Wales <ul> <li>Image: The second seco</li></ul>
Country	
Australia	
Advanced search options	
List	
All Lists <b>v</b>	
Different lists will provide different status and class options	
Local Government Area Pla	ice ID number
Legal status Cla	
All •	AII <b>V</b>
Keyword Search	
<ul><li>Description</li><li>Statement of Significance</li><li>Place his</li></ul>	tory
Latitude/Longitude	
Ν	
Latitude 1	
Longitude 1 S Longitude 2	
W E Latitude 2 E E	
S S	
<ul> <li>Wholly within region</li> <li>Wholly or partially within region</li> </ul>	
Longitude coordinates should be entered as ddd.mm.ss Latitude coordinates should be entered as dd.mm.ss	
Map Ref No	
1:100,000 eg 2357 1:250,000 eg SF-50-01	

#### Search Hints

• Not all fields need to be filled in. The fewer you fill in the more results you will get.

#### 26/11/2018

#### Australian Heritage Database

- If you cannot find a place, check spelling and try alternative names. Reduce the number of words that you include and use fewer fields.
- The Local Government field used on its own will provide a comprehensive list of places in an area.

Report Produced: Mon Nov 26 11:32:16 2018

Accessibility | Disclaimer | Privacy | @ Commonwealth of Australia

Home > Topics > Heritage places and items > Search for heritage

# **Bayley Park - House**

## **Item details**

Name of item:	Bayley Park - House
Type of item:	Built
Group/Collection:	Residential buildings (private)
Category:	Homestead building
Primary address:	919-929 Mamre Road, Kemps Creek, NSW 2171
County:	Cumberland
Local govt. area:	Penrith

#### All addresses

Street Address	Suburb/town	LGA	Parish	County	Туре
919-929 Mamre Road	Kemps Creek	Penrith		Cumberland	Primary Address

# Statement of significance:

Under construction from the 1810s for Nicholas Bayley, the property is unique in the southeastern section of Penrith LGA for its historic associations with a settler family and colonial era rural enterprise. While the importance of the house requires investigation, the treed creekside setting with foreground of pastureland provides a historic item and demonstrates nineteenth century pastoral and agricultural estate planning.

#### Date significance updated: 06 Mar 05

*Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the OEH copyright and disclaimer.* 

# **Description**

Physical description:	The house and its immediate garden setting have not been inspected, but the broader setting includes remnants of an early landscaping scheme.			
	Date condition updated:20 Dec 91			
Modifications and dates:	It was altered extensively by subsequent owners, and in recent years, the single storey sandstone house has been renovated with new roof and rendered external walls. Large			

#### Bayley Park - House | NSW Environment & Heritage

additions have been built at the rear of the house. (Fox \* Associates 1987: KC-3).

Farmhouse Current use: History **Historical notes:** During the 1810s Bayley spent most of his time with activities associated with his estate at Kemps Creek. By 1814 a house described 'as a noble mansion with gardens and cultivated grounds' had been erected. Shortly before his death in 1823 Bayley engaged government road gangs to clear his estate, and received a number of assigned convict mechanics (stonemasons, carpenters and the like). The muster of 1822 noted Bayley had 2,630 acres, only 40 of which had been cleared for growing wheat, and there were 34 cattle and eight sheep. Bayley's brother, Henry, had received two grants in the 1810s in the area with a total area of 500 acres, which in the 1822 stock muster had not been cleared; the estate being used to run 21 cattle. Bayley died at Bayley Park in 1823 and the estate was put up for sale in that year when it was advertised as possessing 2,500 acres and a 'brick built house'. The estate was eventually bought in 1826 by Richard Jones for £3,400. Jones (1786-1852) was a free settler who had arrived in 1809. Jones entered into partnerships with the Riley brothers (Alexander in 1815 and Edward in 1817), the only merchant house in Sydney at the time. In the early 1820s Jones returned to England, but on his return in 1825 entered into partnership with William Walker. Jones is best known for his pioneering efforts to develop a wool industry in Australia importing pure-bred Saxon sheep, which were kept at Fleurs. Like the Cox brothers in the Mulgoa Valley however, Jones' pastoral empire was centred on estates beyond the Great Dividing Range, in this instance the Hunter Valley. Jones' son, Nicholas Paget, established the noted Havilah pastoral station at Mudgee. Jones sold Fleurs in the 1840s due to the collapse in wool prices and credit squeeze. In later years the estate was associated with Robert Cork (1860), while by 1872 Fleurs was associated with Elizabeth Rettalick and an estate named Bayley Park had been re-established and was occupied by Joseph Weston. In 1883, the 2000 acres of the Fleurs Estate was purchased, after subdivision, by the Penrith auctioneer T.R Smith, and on-sold to land speculators in 1887. In 1888 the farm was re-subdivided into rural allotments of 20 acres. The land was described as being rich alluvial soil that had been cleared and stumped and was 'ready for the plough'. These sales would seem to have faired poorly for as late as 1930, Fleurs with an area of 2311 acres was again on the market.

### **Historic themes**

Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy- Developing local, regional and national economies	Agriculture-Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Country estates-
3. Economy- Developing local, regional and national economies	Pastoralism-Activities associated with the breeding, raising, processing and distribution of livestock for human use	Rural settlem ent-
4.	Accommodation-Activities associated with the provision of accommodation, and	

#### 26/11/2018

#### Bayley Park - House | NSW Environment & Heritage

Settlement-Building settlements, towns and cities	particular types of accommodation – does not include architectural styles – use the theme of Creative Endeavour for such activities.	Rural settlem ent-
8. Culture-Developing cultural institutions and ways of life	Creative endeavour-Activities associated with the production and performance of literary, artistic, architectural and other imaginative, interpretive or inventive works; and/or associated with the production and expression of cultural phenomena; and/or environments that have inspired such creative activities.	Country estates-
9. Phases of Life- Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Country estate-

# Assessment of significance

SHR Criteria a) [Historical significance]	The property demonstrates a phase in the development of the region with the establishment of large pastoral and agricultural estates.
SHR Criteria b) [Associative significance]	The property is associated with the Bayley and Jones families.
SHR Criteria c) [Aesthetic significance]	The siting and broader landscaping scheme are excellent examples of a substantial country residences of the nineteenth century with plantings of landmark status.
SHR Criteria f) [Rarity]	The property is rare in the State for its historic associations with a settler family of note and colonial era rural estate.
Integrity/Intactn ess:	Requires assessment
Assessment criteria:	Items are assessed against the <b>State Heritage Register (SHR) Criteria</b> to determine the level of significance. Refer to the Listings below for the level of statutory protection.

# Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Bayley Park	KC-3	20 Dec 91	180	
Local Environmental Plan	Penrith LEP 2010	104	22 Sep 10		
Heritage study	Bayley Park	KC-3	01 Apr 87		
Heritage study		2260104	01 Nov 07		

# Study details

#### 26/11/2018

#### Bayley Park - House | NSW Environment & Heritage

Title	Year	Number	Author	Inspected by	Guidelines used
Penrith Heritage Study Review	2005	KC3	Paul Davies Pty. Ltd.		Y e s
Heritage Study City of Penrith	1987	KC-3	Fox & Associates		N o

# **References, internet links & images**

Туре	Author	Year	Title	Internet Links
Written	Stickley, C.		The Old Charm of Penrith	

Note: internet links may be to web pages, documents or images.





#### (Click on thumbnail for full size image and image details)

## **Data source**

The information for this entry comes from the following source:

Name: Local Government

2260104 Database number:

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# **Gateposts to Colesbrook**

## **Item details**

Name of item:	Gateposts to Colesbrook
Type of item:	Built
Group/Collection:	Farming and Grazing
Category:	Gate
Primary address:	269-285 Mamre Road, Kemps Creek, NSW 2171
County:	Cumberland
Local govt. area:	Penrith

#### All addresses

Street Address	Suburb/town	LGA	Parish	County	Туре
269-285 Mamre Road	Kemps Creek	Penrith		Cumberland	Primary Address
Mamre Road	Kemps Creek	Penrith			Alternate Address

# Statement of significance:

Significant as evidence of the prosperity of the larger rural properties in the late 19th and early 20th Century, and the subsequent decline leading to the present day subdivision of the area into 10ha allotments. (Fox \* Associates 1987:KC-4)

Date significance updated: 14 Jan 00

*Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the OEH copyright and disclaimer.* 

# **Description**

Physical description:

Only one of these large, square sandstone gateposts is still standing. It appears to be Victorian in design and is inscribed with the name Colesbrook. It is likely that the gateposts were erected at the entry to the large Federation farmhouse to the east of this site. (Fox \* Associates 1987:KC-4)

Date condition updated:20 Dec 91

# Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Gateposts to Colesbrook	KC-4	20 Dec 91	180	
Local Environmental Plan	Penrith LEP 2010	105	22 Sep 10		
Heritage study		KC-4	01 Apr 87		
Heritage study		2260105	01 Nov 07		

# Study details

Title	Year	Number	Author	Inspected by	Guidelines used
	0	KC-4			No

# **References, internet links & images**

Туре	Author	Year	Title	Internet Links
Writt en		1991	Penrith Local Environmental Plan 1991 (Environmental Heritage Conservation).	

Note: internet links may be to web pages, documents or images.



#### (Click on thumbnail for full size image and image details)

# Data source

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# 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 the Heritage Division.
- Section 2 contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- Section 3 contains items listed by local councils on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 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 NSW Heritage Act.

Your search did not return any matching results.

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

Your search returned 3 records.

Item name	Address	Suburb	LGA	Information source
<u>Bayley Park - House</u>	919-929 Mamre Road	Kemps Creek	Penrith	LGOV
Gateposts to Colesbrook	269-285 Mamre Road	Kemps Creek	Penrith	LGOV
The Fleurs Radio Telescope Site	885(a) Mamre Road	Kemps Creek	Penrith	LGOV

There was a total of 3 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 the Heritage Division 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.



Home > Topics > Heritage places and items > Search for heritage

# The Fleurs Radio Telescope Site

## **Item details**

Name of item:	The Fleurs Radio Telescope Site
Other name/s:	Fleurs Farm
Primary address:	885(a) Mamre Road, Kemps Creek, NSW 2178
Local govt. area:	Penrith

#### All addresses

Street Address	Suburb/town	LGA	Parish	County	Туре
885(a) Mamre Road	Kemps Creek	Penrith			Primary Address

# Statement of significance:

Used from 1954 until 1988 for astronomical research, the Fleurs Telescope site was in the 1950s considered to be one of the world's leading radio astronomy field stations. At its peak it included telescopes developed by with a number of important astronomers including Bernie Mills, creator of the Mills Cross, Alex Shain, creator of the Shain Cross and Dr W. N. Christiansen, creator of the Chris Cross and a Professor at the University of Sydney. The series of telescopes constructed on the site in a short period were of great importance to the advance of radio astronomy. Much of the equipment was considered important enough to be relocated elsewhere for future research.

While most of the equipment has been removed from the Fleurs Telescope site, there is sufficient remaining equipment, including structure for the Mills and Shain telescopes, bases of the Chris Cross telescopes and two dishes of the Fleurs Synthesis telescope, to allow for further investigation and interpretation.

Fleurs Telescope Site is a rare if not unique example of a site used for astronomical research in the Penrith Local Government Area.

#### Date significance updated: 15 Sep 08

*Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the OEH copyright and disclaimer.* 

### **Description**

**Construction** 1954-1964

#### 26/11/2018

years:

cars.

Physical description:

The Fleurs Telescope site is located between South Creek and Kemps Creek. A scattering of evidence of the series of telescopes that once operated on the site remains.

The first of the telescopes was the Mills Cross, built in 1954. It had north-south and eastwest arrays of dipoles in a cross formation with wire mesh reflector. Some of the metal frames and wire mesh of the eastern arm of this array survives.

The second telescope was the 1956 Shain Cross formed by dipoles slung between timber posts (similar to telegraph posts). Many of the posts on the north-south alignment of the Shain Cross survive.

The third major telescope on the site was the 1957 Chris Cross, an array of 32 5.8 metre diameter parabolic dishes. None of these dishes survive, although some concrete footings are visible in the grass.

After the 1950s telescopes on the site had fallen into disuse, research on the site was revived by the erection of six 13.7 metre Synthesis telescopes at the ends of the earlier arrays. Two of these survive, one at the north end of the Shain Cross and one beyond the west end of the Chris Cross.

Near the junction of the two arms of the Mills Cross is a single storey gabled building clad with compressed fibrous cement sheeting with a roof of corrugated steel with roll top ridge capping. It has paired double hung windows, shaded by bracketed awnings on the north side.

Near the junction of the two arms of the Chris Cross is a single storey building with a multiple gabled roof. It is clad with compressed fibrous cement sheeting and has a roof of corrugated steel with roll top ridge capping. Windows are paired double hung sashes. To its east is a gabled weatherboard building with a corrugated steel roof and double hung windows.

Between the eastern arms of the Mills Cross and the Chris Cross are two single storey buildings clad with compressed fibrous cement sheeting and with roofs of corrugated steel with roll top ridge capping. The windows are casement sashes.

 Physical
 While the condition of the remaining equipment on the site is poor, there is potential to

 condition and/or
 record and interpret the surviving elements.

 Archaeological
 potential:

#### Date condition updated:15 Sep 08

Modifications and dates:	1954 Mills Cross
	1956 Shain Cross
	1957 Chris Cross
	1964? Fleurs Synthesis Telescopes

Unused

Current use:

### **History**

Historical notes:

Fleurs Radio Telescope station was established in 1954 to erect an innovative type of telescope known as the Mills Cross. The Mills Cross telescope was used by Bernie Mills, Eric Hill and Bruce Slee between 1954 and 1957 to carry out a detailed survey of radio emissions in the sky. The site for the telescope was near a disused WWII airstrip.

It was again used between 1961 and 1963 by Bruce Slee and visiting Cambridge radio astronomer, Peter Sheuer to carry out an interferometric sky survey of the MSH sources.

A second telescope on the site, the Shain Cross was completed in 1956. It was used by its creator Alex Shain to carry out a survey of the galactic plane and monitor decametric burst emission from Jupiter.

The third telescope at Fleurs was the Chris Cross, an array of 32 parabolic dishes designed by Dr W N Christiansen and completed in 1957. An 18m prefabricated American parabola was added to the eastern end of the Chris Cross in 1959. It was relocated to Parkes in 1963.

With the removal of the 18m parabola, the CSIRO no longer used the Fleurs site and it was transferred to the University of Sydney. Dr W. N. Christiansen was at that time a Professor at the University and further developed his telescope. Under the School of Engineering, the station continued to contribute to radio astronomy.

After 1988, the site was leased to the Engineering Faculty at the University of Western Sydney. Problems of interference from two way radios and mobile telephone made use of the equipment difficult and use of the telescopes effectively ceased in 1991. During this period the condition of all the telescopes deteriorated. All that remained in 2002 were the twelve centrally-located Chris Cross aerials, the Mills Cross equipment having been relocated to Bungendore. The site was cleared of any remaining equipment in 2005-6 including telescopes that were donated to the CSIRO to be re-erected at their Epping site. The site is currently agisted for cattle grazing.

During the period of use by the CSIRO, the Fleurs Radio Telescope Station was considered to be "one of the world's leading radio astronomy field stations, and it played an important role in furthering solar and non-solar radio astronomy". (Orchison and Slee)

## **Historic themes**

Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy-Developing local, regional and national economies	Science-Activities associated with systematic observations, experiments and processes for the explanation of observable phenomena	(none)-

## Assessment of significance

#### 26/11/2018

### The Fleurs Radio Telescope Site | NSW Environment & Heritage

SHR Criteria a) [Historical significance]	Used from 1954 until 1988 for astronomical research, the Fleurs Telescope site was in the 1950s considered to be one of the world's leading radio astronomy field stations. Its series of telescopes constructed in a short period were of great importance to the advance of radio astronomy. Much of the equipment was considered important enough to be relocated elsewhere for future research.
SHR Criteria b) [Associative significance]	The Fleurs Telescope site is associated with a number of important astronomers including Bernie Mills, creator of the Mills Cross, Alex Shain, creator of the Shain Cross and Dr W. N. Christiansen, creator of the Chris Cross and a Professor at the University of Sydney.
SHR Criteria e) [Research potential]	While most of the equipment has been removed from the Fleurs Telescope site, there is sufficient remaining equipment, including structure for the Mills and Shain telescopes, bases of the Chris Cross telescopes and two dishes of the Fleurs Synthesis telescope, to allow for further investigation and interpretation.
SHR Criteria f) [Rarity]	Fleurs is a rare if not unique example of a site used for astronomical research in the Penrith Local Government Area. The use of the site and the sequence of equipment erected there is probably rare in New South Wales.
Integrity/Intactn ess:	Most of the equipment has been dismantled and relocated. Surviving structures would allow for some interpretation.
Assessment criteria:	Items are assessed against the 🔂 <b>State Heritage Register (SHR) Criteria</b> to determine the level of significance. Refer to the Listings below for the level of statutory protection.

# Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Penrith LEP 2010	832	22 Sep 10		
Heritage study		2260832	01 Nov 07		

# Study details

Title	Year	Number	Author	Inspected by	Guidelines used
Penrith Heritage Study Supplementary Items	2008	KC-06	Hubert Architects Pty Ltd	Pamela Hubert	Y e s

# References, internet links & images

Туре	Author	Year	Title	Internet Links
Written			Mills Cross Telescope	
Oral History	David Bennett, Porfolio Property Manager, University of Sydney	2008	Telephone interview with Pamela Hubert 16.8.08	

#### The Fleurs Radio Telescope Site | NSW Environment & Heritage

Note: internet links may be to web pages, documents or images.







(Click on thumbnail for full size image and image details)

## **Data source**

The information for this entry comes from the following source:

Name: Local Government

Database 2260832 number:

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# Appendix G Council s.10.7 Planning Certificates

Telephone: 02 4732 7777 Facsimile: 02 4732 7958

Email: pencit@penrithcity.nsw.gov.au

# **PLANNING CERTIFICATE UNDER SECTION 10.7**

Environmental Planning and Assessment Act, 1979

Property No: 403361 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06152

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:904-928 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 52 DP 259135

# - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

# 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

PENRITH

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State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

# 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.

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Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

# 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

# 2 ZONING AND LAND USE UNDER RELEVANT LEPs

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

# Zone RU2 Rural Landscape (Penrith Local Environmental Plan 2010)

# **1** Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

# 2 Permitted without consent

Extensive agriculture; Home occupations

# **3 Permitted with consent**

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

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Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

#### 4 **Prohibited**

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

# Zone SP2 Infrastructure - Classified Road (Penrith Local Environmental Plan 2010)

**Civic Centre** 

#### 1 **Objectives of zone**

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- **Permitted without consent** 
  - Nil

#### 3 Permitted with consent

The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose; Environmental protection works; Flood mitigation works; Roads

#### 4 **Prohibited**

2

Any development not specified in item 2 or 3

# **Flood planning**

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

# **Rural subdivision**

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

# Residential development and subdivision prohibited in certain rural, residential and environment protection zones

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

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# Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)

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# 2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

# 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

# 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

# 2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

# *3 COMPLYING DEVELOPMENT*

# HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development, attached development or detached development. Complying development **may** be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

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# RURAL HOUSING CODE

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Rural Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the relevant zones complying development under the General Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development or detached development. Complying development **may** be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

# LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development or detached development. Complying development **may** be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

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Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

# **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant ٠ zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code may not be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the • relevant zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development or detached development. Complying development may be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

# HOUSING ALTERATIONS CODE

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

# **GENERAL DEVELOPMENT CODE**

Complying development under the General Development 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.

# SUBDIVISIONS CODE

Complying development under the Subdivisions Code **may** be carried out on the land.



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# **DEMOLITION CODE**

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

# COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

# FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

# 4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

# 5 MINE SUBSIDENCE

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

# 6 ROAD WIDENING AND ROAD REALIGNMENT

The land is affected by road widening or road realignment under

- (a) Division 2 of Part 3 of the Roads Act 1993, or
- (b) an environmental planning instrument, or
- (c) a resolution of Council.

Note: Additional advice may be available in section 10.7(5) information.

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# 7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

# (a) Council Policies

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The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

# (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

# 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

# 8 LAND RESERVED FOR ACQUISITION

The land is affected by provisions under an environmental planning instrument, a deemed environmental planning instrument or a draft environmental planning instrument applying to the land that provides for acquisition by a public authority, as referred to in section 3.15 of the Act.

# 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas

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identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

# 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

# *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

# 11 BUSH FIRE PRONE LAND

All of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

# 12 **PROPERTY VEGETATION PLANS**

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

# 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

# 14 DIRECTIONS UNDER PART 3A

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

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# 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

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- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

# *16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE*

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

# 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

# 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

# *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

# 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) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

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(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

# 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

# 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

# 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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 sub-section (5). 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.

Note:

• Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <u>www.penrithcity.nsw.gov.au</u>. Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.

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- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

# \* Threatened Species Conservation Act 1995

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When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

# \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

# \* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

# \* Scenic and Landscape Values

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

\* Preservation of Trees and Vegetation

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

# \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

# \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

- Site Planning and Design Principles
- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain

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- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and

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• Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct
- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

Penrith Development Control Plan 2014 may be accessed at

https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

# \* Western Sydney Airport

The land the subject of this certificate is in the vicinity of the proposed Badgery's Creek airport site and is located within the Australian Noise Exposure Forecast (ANEF) shown on the map in Appendix U of the 1985 draft environmental impact statement for the second Sydney Airport.

The land is affected by the 20 - 25 ANEF and the 25 - 30 ANEF.

In regard to land affected by the ANEF Clause 7.9 of Penrith Local Environmental Plan No.2010 states:

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# **"7.9 Development of land in the flight paths of the site reserved for the proposed Second Sydney** Airport

- (1) The objective of this clause is to ensure that development in the vicinity of the proposed Badgery's Creek airport site:
  - (a) has regard to the use or potential future use of the site as an airport, and
  - (b) does not hinder or have any other adverse impact on the development or operation of an airport on that site.
- (2) This clause applies to development that:

# (a) is on land that:

- (i) is near the proposed Badgery's Creek airport site, and
- (ii) is in an ANEF contour of 20 or greater, and
- (b) the consent authority considers is likely to be adversely affected by aircraft noise.
- (3) Before determining a development application for development to which this clause applies, the consent authority:
  - (a) must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
  - (b) must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021-2000, and
  - (c) must be satisfied that the development will meet AS 2021-2000 with respect to interior noise levels for the purposes of:
    - (i) if the development will be in an ANEF contour or 20 or greater child care centres, educational establishments, entertainment facilities, hospitals, places of public worship, public administration buildings or residential accommodation, and
    - (ii) if the development will be in an ANEF contour of 25 or greater commercial premises, hostels or hotel or motel accommodation.
- (4) In this clause:

*ANEF contour* means a noise exposure contour shown as an ANEF contour on the map in Appendix U of the draft environmental impact statement for the Second Sydney Airport, copies of which are deposited in the Office of the Council and of the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government.

AS 2021-2000 means AS 2021-2000, Acoustics-Aircraft noise intrusion-Building siting and construction."

(Note: The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: <<u>http://westernsydneyairport.gov.au></u>))

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**Environmental Planning and Assessment Act, 1979** 

Warwick Winn General Manager

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## **Please note:**

Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.
# PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

Property No: 403370 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06153

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

#### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:884-902 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 53 DP 259135

## - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

## 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

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State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

# 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.

## PLANNING CERTIFICATE UNDER SECTION 10.7

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Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

# 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

#### 2 **ZONING AND LAND USE UNDER RELEVANT LEPs**

**Civic Centre** 

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

# **Zone RU2 Rural Landscape** (Penrith Local Environmental Plan 2010)

#### 1 **Objectives of zone**

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture. .
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

#### 2 Permitted without consent

Extensive agriculture; Home occupations

#### 3 Permitted with consent

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

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Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

#### 4 **Prohibited**

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

# Zone SP2 Infrastructure - Classified Road (Penrith Local Environmental Plan 2010)

**Civic Centre** 

#### 1 **Objectives of zone**

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- **Permitted without consent** 
  - Nil

#### 3 Permitted with consent

The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose; Environmental protection works; Flood mitigation works; Roads

#### 4 **Prohibited**

2

Any development not specified in item 2 or 3

## **Flood planning**

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

## **Rural subdivision**

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

# Residential development and subdivision prohibited in certain rural, residential and environment protection zones

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

# **PLANNING CERTIFICATE UNDER SECTION 10.7**

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# Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)

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# 2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

# 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

# 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

# 2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

# *3 COMPLYING DEVELOPMENT*

# HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development, attached development or detached development. Complying development **may** be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

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# RURAL HOUSING CODE

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Rural Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the relevant zones complying development under the General Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development or detached development. Complying development **may** be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

# LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development or detached development. Complying development **may** be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

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Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

# **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

- The land is affected by a reservation for a public purpose. If the land is within the relevant ٠ zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code may not be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.
- The land is affected by a 25 ANEF contour or a higher ANEF contour. If the land is within the • relevant zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code **may not** be carried out on any part of the land that is in the 25 ANEF contour or a higher ANEF contour, unless the development is only for the erection of ancillary development, attached development or detached development or the alteration of or an addition to ancillary development, attached development or detached development. Complying development may be carried out on any part of the land that is not in the 25 ANEF contour or a higher ANEF contour. Contact Council for the location of the 25 ANEF contour or higher ANEF contour.

# HOUSING ALTERATIONS CODE

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

# **GENERAL DEVELOPMENT CODE**

Complying development under the General Development 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.

## SUBDIVISIONS CODE

Complying development under the Subdivisions Code **may** be carried out on the land.



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# **DEMOLITION CODE**

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

## COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

The land is affected by a reservation for a public purpose. If the land is within the relevant • zones complying development under the Commercial and Industrial (New Buildings and Additions) Code may not be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development may be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

# FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

#### 4 **COASTAL PROTECTION**

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

#### 5 MINE SUBSIDENCE

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

#### 6 ROAD WIDENING AND ROAD REALIGNMENT

The land is affected by road widening or road realignment under

- (a) Division 2 of Part 3 of the Roads Act 1993, or
- (b) an environmental planning instrument, or
- (c) a resolution of Council.

Note: Additional advice may be available in section 10.7(5) information.

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# 7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

# (a) Council Policies

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The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

# (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

# 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

# 8 LAND RESERVED FOR ACQUISITION

The land is affected by provisions under an environmental planning instrument, a deemed environmental planning instrument or a draft environmental planning instrument applying to the land that provides for acquisition by a public authority, as referred to in section 3.15 of the Act.

# 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas

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identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

# 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

# *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

# 11 BUSH FIRE PRONE LAND

All of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

# 12 **PROPERTY VEGETATION PLANS**

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

## 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

# 14 DIRECTIONS UNDER PART 3A

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

**Civic Centre** 

- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

# *16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE*

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

# 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

# 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

# *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

# 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) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

#### **PLANNING CERTIFICATE UNDER SECTION 10.7**

**Environmental Planning and Assessment Act, 1979** 

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

# 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

# 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

# 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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 sub-section (5). 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.

Note:

• Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <u>www.penrithcity.nsw.gov.au</u>. Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.

# **PLANNING CERTIFICATE UNDER SECTION 10.7**

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- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

## \* Threatened Species Conservation Act 1995

PENRITH

CITY COUNCIL

When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

# \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

## \* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

## \* Scenic and Landscape Values

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

\* Preservation of Trees and Vegetation

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

## \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

## \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

- Site Planning and Design Principles
- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain

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PLANNING CERTIFICATE UNDER SECTION 10.7

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- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and

**Civic Centre** 

601 High Street, Penrith

• Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct
- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

Penrith Development Control Plan 2014 may be accessed at

https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

# \* Western Sydney Airport

The land the subject of this certificate is in the vicinity of the proposed Badgery's Creek airport site and is located within the Australian Noise Exposure Forecast (ANEF) shown on the map in Appendix U of the 1985 draft environmental impact statement for the second Sydney Airport.

The land is affected by the 20 - 25 ANEF and the 25 - 30 ANEF.

In regard to land affected by the ANEF Clause 7.9 of Penrith Local Environmental Plan No.2010 states:

PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# **"7.9 Development of land in the flight paths of the site reserved for the proposed Second Sydney** Airport

- (1) The objective of this clause is to ensure that development in the vicinity of the proposed Badgery's Creek airport site:
  - (a) has regard to the use or potential future use of the site as an airport, and
  - (b) does not hinder or have any other adverse impact on the development or operation of an airport on that site.
- (2) This clause applies to development that:

# (a) is on land that:

- (i) is near the proposed Badgery's Creek airport site, and
- (ii) is in an ANEF contour of 20 or greater, and
- (b) the consent authority considers is likely to be adversely affected by aircraft noise.
- (3) Before determining a development application for development to which this clause applies, the consent authority:
  - (a) must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
  - (b) must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021-2000, and
  - (c) must be satisfied that the development will meet AS 2021-2000 with respect to interior noise levels for the purposes of:
    - (i) if the development will be in an ANEF contour or 20 or greater child care centres, educational establishments, entertainment facilities, hospitals, places of public worship, public administration buildings or residential accommodation, and
    - (ii) if the development will be in an ANEF contour of 25 or greater commercial premises, hostels or hotel or motel accommodation.
- (4) In this clause:

*ANEF contour* means a noise exposure contour shown as an ANEF contour on the map in Appendix U of the draft environmental impact statement for the Second Sydney Airport, copies of which are deposited in the Office of the Council and of the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government.

AS 2021-2000 means AS 2021-2000, Acoustics-Aircraft noise intrusion-Building siting and construction."

(Note: The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: <<u>http://westernsydneyairport.gov.au></u>))

Telephone: 02 4732 7777 Facsimile: 02 4732 7958

Email: pencit@penrithcity.nsw.gov.au

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Warwick Winn General Manager

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#### **Please note:**

Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.

# PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

Property No: 403389 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06154

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

#### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:864-882 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 54 DP 259135

## - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

## 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

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# PLANNING CERTIFICATE UNDER SECTION 10.7

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State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

# 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.

PLANNING CERTIFICATE UNDER SECTION 10.7

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Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

# 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

# 2 ZONING AND LAND USE UNDER RELEVANT LEPs

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

# Zone RU2 Rural Landscape (Penrith Local Environmental Plan 2010)

# **1** Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

# 2 Permitted without consent

Extensive agriculture; Home occupations

# **3 Permitted with consent**

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

# 4 Prohibited

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

# Flood planning

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

# Rural subdivision

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

# <u>Residential development and subdivision prohibited in certain rural, residential and</u> <u>environment protection zones</u>

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

## Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**PLANNING CERTIFICATE UNDER SECTION 10.7** 

**Environmental Planning and Assessment Act, 1979** 

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)

# 2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

# 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

# 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

## PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# 2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

# 3 COMPLYING DEVELOPMENT

# HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

## **RURAL HOUSING CODE**

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Rural Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

## LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Low Rise Medium Density Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

# **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

# PLANNING CERTIFICATE UNDER SECTION 10.7

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Complying development under the Greenfield Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.

# HOUSING ALTERATIONS CODE

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

# GENERAL DEVELOPMENT CODE

Complying development under the General Development 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.

# SUBDIVISIONS CODE

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

# **DEMOLITION CODE**

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

## COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Commercial and Industrial (New Buildings and Alterations) Code **may** be carried out on the land if the land is within one of the abovementioned zones.

# FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

# 4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

# PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

# 5 MINE SUBSIDENCE

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

# 6 ROAD WIDENING AND ROAD REALIGNMENT

The land is not affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the Roads Act 1993, or

(b) an environmental planning instrument, or

(c) a resolution of council.

# 7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

# (a) Council Policies

The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

#### (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

# 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

# 8 LAND RESERVED FOR ACQUISITION

No 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.

# 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

# 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

# *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

# 11 BUSH FIRE PRONE LAND

All of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

# 12 PROPERTY VEGETATION PLANS

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

# *14 DIRECTIONS UNDER PART 3A*

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

# 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

# 16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

# 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

# 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

## *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

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# **PLANNING CERTIFICATE UNDER SECTION 10.7**

Environmental Planning and Assessment Act, 1979

# 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) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

# 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

# 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

# **PLANNING CERTIFICATE UNDER SECTION 10.7**

**Environmental Planning and Assessment Act, 1979** 

# 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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 sub-section (5). 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.

Note:

- Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <a href="http://www.penrithcity.nsw.gov.au">www.penrithcity.nsw.gov.au</a> . Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

## \* Threatened Species Conservation Act 1995

When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

#### \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

#### \* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

#### \* Scenic and Landscape Values

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

\* <u>Preservation of Trees and Vegetation</u>

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

# PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

# \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

# \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

- Site Planning and Design Principles
- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain
- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and
- Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct



PLANNING CERTIFICATE UNDER SECTION 10.7 Environmental Planning and Assessment Act, 1979

- Riverlink Precinct
- St Clair,

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- St Marys / St Marys North, and
- Sydney Science Park.

Penrith Development Control Plan 2014 may be accessed at

**Civic Centre** 

601 High Street, Penrith

https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

# \* Western Sydney Airport

The land the subject of this certificate is in the vicinity of the proposed Badgery's Creek airport site and is located within the Australian Noise Exposure Forecast (ANEF) shown on the map in Appendix U of the 1985 draft environmental impact statement for the second Sydney Airport.

The land is affected by the 20 - 25 ANEF.

In regard to land affected by the ANEF Clause 7.9 of Penrith Local Environmental Plan No.2010 states:

# **"7.9 Development of land in the flight paths of the site reserved for the proposed Second Sydney** Airport

(1) The objective of this clause is to ensure that development in the vicinity of the proposed Badgery's Creek airport site:

- (a) has regard to the use or potential future use of the site as an airport, and
- (b) does not hinder or have any other adverse impact on the development or operation of an airport on that site.
- (2) This clause applies to development that:
  - (a) is on land that:
    - (i) is near the proposed Badgery's Creek airport site, and
    - (ii) is in an ANEF contour of 20 or greater, and
  - (b) the consent authority considers is likely to be adversely affected by aircraft noise.
- (3) Before determining a development application for development to which this clause applies, the consent authority:
  - (a) must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
  - (b) must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021-2000, and
  - (c) must be satisfied that the development will meet AS 2021-2000 with respect to interior noise levels for the purposes of:
    - (i) if the development will be in an ANEF contour or 20 or greater child care centres, educational establishments, entertainment facilities, hospitals, places of public worship, public administration buildings or residential accommodation, and
    - (ii) if the development will be in an ANEF contour of 25 or greater commercial premises, hostels or hotel or motel accommodation.
- (4) In this clause:

*ANEF contour* means a noise exposure contour shown as an ANEF contour on the map in Appendix U of the draft environmental impact statement for the Second Sydney Airport, copies of which are deposited in the Office of the Council and of the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government.

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# AS 2021-2000 means AS 2021-2000, Acoustics-Aircraft noise intrusion-Building siting and construction."

(Note: The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: <<u>http://westernsydneyairport.gov.au></u>)).

Warwick Winn General Manager

PER

Faker

#### **Please note:**

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Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.

# PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

Property No: 403398 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06155

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

#### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:844-862 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 55 DP 259135

## - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

## 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

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# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

# 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.
#### PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

## 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

#### 2 **ZONING AND LAND USE UNDER RELEVANT LEPs**

**Civic Centre** 

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

# **Zone RU2 Rural Landscape** (Penrith Local Environmental Plan 2010)

#### 1 **Objectives of zone**

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture. .
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

#### 2 Permitted without consent

Extensive agriculture; Home occupations

#### 3 Permitted with consent

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

#### PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

#### 4 Prohibited

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

## Flood planning

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

## Rural subdivision

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

# <u>Residential development and subdivision prohibited in certain rural, residential and</u> <u>environment protection zones</u>

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

#### Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**PLANNING CERTIFICATE UNDER SECTION 10.7** 

**Environmental Planning and Assessment Act, 1979** 

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)

# 2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

# 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

# 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

#### PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# 2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

## *3 COMPLYING DEVELOPMENT*

## HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

#### **RURAL HOUSING CODE**

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Rural Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

#### LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Low Rise Medium Density Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

# **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

#### **PLANNING CERTIFICATE UNDER SECTION 10.7**

**Environmental Planning and Assessment Act, 1979** 

Complying development under the Greenfield Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.

# HOUSING ALTERATIONS CODE

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

# GENERAL DEVELOPMENT CODE

Complying development under the General Development 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.

## SUBDIVISIONS CODE

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

## **DEMOLITION CODE**

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

#### COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Commercial and Industrial (New Buildings and Alterations) Code **may** be carried out on the land if the land is within one of the abovementioned zones.

# FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

# 4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

## PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

## 5 MINE SUBSIDENCE

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

## 6 ROAD WIDENING AND ROAD REALIGNMENT

The land is not affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the Roads Act 1993, or

(b) an environmental planning instrument, or

(c) a resolution of council.

## 7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

#### (a) Council Policies

The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

#### (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

#### 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

# 8 LAND RESERVED FOR ACQUISITION

No 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.

# 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

# 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

# *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

# 11 BUSH FIRE PRONE LAND

All of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

# 12 **PROPERTY VEGETATION PLANS**

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

#### PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

# 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

# *14 DIRECTIONS UNDER PART 3A*

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

# 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

#### 16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

# 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

# 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

#### *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

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# PLANNING CERTIFICATE UNDER SECTION 10.7

Environmental Planning and Assessment Act, 1979

# 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) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

# 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

# 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

## **PLANNING CERTIFICATE UNDER SECTION 10.7**

**Environmental Planning and Assessment Act, 1979** 

# 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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 sub-section (5). 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.

Note:

- Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <a href="http://www.penrithcity.nsw.gov.au">www.penrithcity.nsw.gov.au</a> . Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

#### \* Threatened Species Conservation Act 1995

When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

#### \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

#### \* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

#### \* Scenic and Landscape Values

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

#### \* <u>Preservation of Trees and Vegetation</u>

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

# PENRITH CITY COUNCIL

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

# \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

- Site Planning and Design Principles
- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain
- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and
- Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct

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Environmental Planning and Assessment Act, 1979

- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

Penrith Development Control Plan 2014 may be accessed at

**Civic Centre** 

601 High Street, Penrith

https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

## \* Western Sydney Airport

The land the subject of this certificate is in the vicinity of the proposed Badgery's Creek airport site and is located within the Australian Noise Exposure Forecast (ANEF) shown on the map in Appendix U of the 1985 draft environmental impact statement for the second Sydney Airport.

The land is partially affected by the 20 - 25 ANEF.

In regard to land affected by the ANEF Clause 7.9 of Penrith Local Environmental Plan No.2010 states:

# **"7.9 Development of land in the flight paths of the site reserved for the proposed Second Sydney** Airport

(1) The objective of this clause is to ensure that development in the vicinity of the proposed Badgery's Creek airport site:

- (a) has regard to the use or potential future use of the site as an airport, and
- (b) does not hinder or have any other adverse impact on the development or operation of an airport on that site.
- (2) This clause applies to development that:
  - (a) is on land that:
    - (i) is near the proposed Badgery's Creek airport site, and
    - (ii) is in an ANEF contour of 20 or greater, and
  - (b) the consent authority considers is likely to be adversely affected by aircraft noise.
- (3) Before determining a development application for development to which this clause applies, the consent authority:
  - (a) must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
  - (b) must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021-2000, and
  - (c) must be satisfied that the development will meet AS 2021-2000 with respect to interior noise levels for the purposes of:
    - (i) if the development will be in an ANEF contour or 20 or greater child care centres, educational establishments, entertainment facilities, hospitals, places of public worship, public administration buildings or residential accommodation, and
    - (ii) if the development will be in an ANEF contour of 25 or greater commercial premises, hostels or hotel or motel accommodation.
- (4) In this clause:

*ANEF contour* means a noise exposure contour shown as an ANEF contour on the map in Appendix U of the draft environmental impact statement for the Second Sydney Airport, copies of which are deposited in the Office of the Council and of the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government.

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#### **PLANNING CERTIFICATE UNDER SECTION 10.7**

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AS 2021-2000 means AS 2021-2000, Acoustics-Aircraft noise intrusion-Building siting and construction."

(Note: The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: <<u>http://westernsydneyairport.gov.au></u>)).

Warwick Winn General Manager

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#### **Please note:**

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Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.

# **PLANNING CERTIFICATE UNDER SECTION 10.7**

Environmental Planning and Assessment Act, 1979

Property No: 403405 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06156

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

#### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:826-842 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 56 DP 259135

#### - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

#### 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

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## PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

# 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.

PLANNING CERTIFICATE UNDER SECTION 10.7

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Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

# 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

# 2 ZONING AND LAND USE UNDER RELEVANT LEPs

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

# Zone RU2 Rural Landscape (Penrith Local Environmental Plan 2010)

# **1** Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

# 2 Permitted without consent

Extensive agriculture; Home occupations

# **3 Permitted with consent**

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

#### 4 **Prohibited**

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

# Zone SP2 Infrastructure - Classified Road (Penrith Local Environmental Plan 2010)

**Civic Centre** 

#### 1 **Objectives of zone**

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- **Permitted without consent** 
  - Nil

#### 3 Permitted with consent

The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose; Environmental protection works; Flood mitigation works; Roads

#### 4 **Prohibited**

2

Any development not specified in item 2 or 3

# **Flood planning**

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

# **Rural subdivision**

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

# Residential development and subdivision prohibited in certain rural, residential and environment protection zones

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

## **PLANNING CERTIFICATE UNDER SECTION 10.7**

Environmental Planning and Assessment Act, 1979

#### Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)

# PENRITH CITY COUNCIL

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

# 2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

# 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

# 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

# 2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

# 3 COMPLYING DEVELOPMENT

# HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

# RURAL HOUSING CODE

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Rural Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith

#### **PLANNING CERTIFICATE UNDER SECTION 10.7**

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Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

## LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

#### **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

# HOUSING ALTERATIONS CODE

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

#### GENERAL DEVELOPMENT CODE

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

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# COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

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

#### SUBDIVISIONS CODE

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

#### **DEMOLITION CODE**

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

## COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

# FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

#### 4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

## 5 MINE SUBSIDENCE

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

601 High Street, Penrith Face Street, Penrith Email: pencit@penrithcity.nsw.gov.au

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# 6 ROAD WIDENING AND ROAD REALIGNMENT

**Civic Centre** 

The land is affected by road widening or road realignment under(a) Division 2 of Part 3 of the Roads Act 1993, or(b) an environmental planning instrument, or(c) a resolution of Council.Note: Additional advice may be available in section 10.7(5) information.

# 7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

## (a) Council Policies

The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

## (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

# 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

# 8 LAND RESERVED FOR ACQUISITION

The land is affected by provisions under an environmental planning instrument, a deemed environmental planning instrument or a draft environmental planning instrument applying to the land that provides for acquisition by a public authority, as referred to in section 3.15 of the Act.

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# 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

# 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

# *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

# 11 BUSH FIRE PRONE LAND

All of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

# 12 **PROPERTY VEGETATION PLANS**

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

# 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

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# *14 DIRECTIONS UNDER PART 3A*

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

# 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

# *16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE*

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

# 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

#### 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

# *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

# 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

#### **PLANNING CERTIFICATE UNDER SECTION 10.7**

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(a) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

## 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

# 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

# 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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

#### PLANNING CERTIFICATE UNDER SECTION 10.7

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faith pursuant to sub-section (5). 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.

Note:

- Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <a href="https://www.penrithcity.nsw.gov.au">www.penrithcity.nsw.gov.au</a> . Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

#### \* Threatened Species Conservation Act 1995

When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

#### \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

\* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

#### \* <u>Scenic and Landscape Values</u>

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

\* Preservation of Trees and Vegetation

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

#### \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

#### \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

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# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

• Site Planning and Design Principles

**Civic Centre** 

- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain
- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and
- Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct
- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

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Penrith Development Control Plan 2014 may be accessed at

https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

#### \* <u>Western Sydney Airport</u>

The land the subject of this certificate is in the vicinity of the proposed Badgery's Creek airport site and is located within the Australian Noise Exposure Forecast (ANEF) shown on the map in Appendix U of the 1985 draft environmental impact statement for the second Sydney Airport.

The land is partially affected by the 20 - 25 ANEF.

In regard to land affected by the ANEF Clause 7.9 of Penrith Local Environmental Plan No.2010 states:

#### **"7.9 Development of land in the flight paths of the site reserved for the proposed Second Sydney** Airport

- (1) The objective of this clause is to ensure that development in the vicinity of the proposed Badgery's Creek airport site:
  - (a) has regard to the use or potential future use of the site as an airport, and
  - (b) does not hinder or have any other adverse impact on the development or operation of an airport on that site.
- (2) This clause applies to development that:
  - (a) is on land that:
    - (i) is near the proposed Badgery's Creek airport site, and
    - (ii) is in an ANEF contour of 20 or greater, and
  - (b) the consent authority considers is likely to be adversely affected by aircraft noise.
- (3) Before determining a development application for development to which this clause applies, the consent authority:
  - (a) must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
  - (b) must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021-2000, and
  - (c) must be satisfied that the development will meet AS 2021-2000 with respect to interior noise levels for the purposes of:
    - (i) if the development will be in an ANEF contour or 20 or greater child care centres, educational establishments, entertainment facilities, hospitals, places of public worship, public administration buildings or residential accommodation, and
    - (ii) if the development will be in an ANEF contour of 25 or greater commercial premises, hostels or hotel or motel accommodation.
- (4) In this clause:

*ANEF contour* means a noise exposure contour shown as an ANEF contour on the map in Appendix U of the draft environmental impact statement for the Second Sydney Airport, copies of which are deposited in the Office of the Council and of the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government.

AS 2021-2000 means AS 2021-2000, Acoustics-Aircraft noise intrusion-Building siting and construction."

(Note: The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to

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cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: <<u>http://westernsydneyairport.gov.au></u>)).

Warwick Winn General Manager

PER

Faker

#### **Please note:**

Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.

# PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Property No: 403414 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06157

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

#### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:806-824 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 57 DP 259135

#### - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

#### 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

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State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

# 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.

#### PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

## 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

#### 2 **ZONING AND LAND USE UNDER RELEVANT LEPs**

**Civic Centre** 

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

# **Zone RU2 Rural Landscape** (Penrith Local Environmental Plan 2010)

#### 1 **Objectives of zone**

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture. .
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

#### 2 Permitted without consent

Extensive agriculture; Home occupations

#### 3 Permitted with consent

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

#### 4 **Prohibited**

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

# Zone SP2 Infrastructure - Classified Road (Penrith Local Environmental Plan 2010)

**Civic Centre** 

#### 1 **Objectives of zone**

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- **Permitted without consent** 
  - Nil

#### 3 Permitted with consent

The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose; Environmental protection works; Flood mitigation works; Roads

#### 4 **Prohibited**

2

Any development not specified in item 2 or 3

#### **Flood planning**

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

#### **Rural subdivision**

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

# Residential development and subdivision prohibited in certain rural, residential and environment protection zones

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

## **PLANNING CERTIFICATE UNDER SECTION 10.7**

Environmental Planning and Assessment Act, 1979

#### Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)


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### 2(f) whether the land includes or comprises critical habitat:

**Civic Centre** 

(Information is provided in this section only if the land includes or comprises critical habitat.)

### 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

### 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

### 2AZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

### 3 **COMPLYING DEVELOPMENT**

### **HOUSING CODE**

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Housing Code may not be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development may be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### **RURAL HOUSING CODE**

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Rural Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development may be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.



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### LOW RISE MEDIUM DENSITY HOUSING CODE

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**Civic Centre** 

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code may not be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development may be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

### **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

The land is affected by a reservation for a public purpose. If the land is within the relevant ٠ zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code may not be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development may be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### HOUSING ALTERATIONS CODE

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

### GENERAL DEVELOPMENT CODE

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

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### COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

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

### SUBDIVISIONS CODE

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

### **DEMOLITION CODE**

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

### COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

### 4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

### 5 MINE SUBSIDENCE

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

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### 6 ROAD WIDENING AND ROAD REALIGNMENT

**Civic Centre** 

601 High Street, Penrith

The land is affected by road widening or road realignment under(a) Division 2 of Part 3 of the Roads Act 1993, or(b) an environmental planning instrument, or(c) a resolution of Council.Note: Additional advice may be available in section 10.7(5) information.

### 7 COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

### (a) Council Policies

The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

### (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

### 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

### 8 LAND RESERVED FOR ACQUISITION

The land is affected by provisions under an environmental planning instrument, a deemed environmental planning instrument or a draft environmental planning instrument applying to the land that provides for acquisition by a public authority, as referred to in section 3.15 of the Act.

# PENRITH CITY COUNCIL

### **PLANNING CERTIFICATE UNDER SECTION 10.7**

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### 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

### 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

### *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

### 11 BUSH FIRE PRONE LAND

Some of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

### 12 **PROPERTY VEGETATION PLANS**

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

### 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

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### *14 DIRECTIONS UNDER PART 3A*

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

### 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

### 16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

### 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

### 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

### *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

# 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

### **PLANNING CERTIFICATE UNDER SECTION 10.7**

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(a) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

### 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

### 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

### 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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

### PLANNING CERTIFICATE UNDER SECTION 10.7

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faith pursuant to sub-section (5). 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.

Note:

- Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <a href="https://www.penrithcity.nsw.gov.au">www.penrithcity.nsw.gov.au</a> . Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

### \* Threatened Species Conservation Act 1995

When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

### \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

\* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

### \* Scenic and Landscape Values

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

\* Preservation of Trees and Vegetation

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

### \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

### \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

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## PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

• Site Planning and Design Principles

**Civic Centre** 

- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain
- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and
- Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct
- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

 Telephone:
 02 4732 7777

 Facsimile:
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Penrith Development Control Plan 2014 may be accessed at https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

### \* Western Sydney Airport

The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: http://westernsydneyairport.gov.au).

### Warwick Winn General Manager

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### **Please note:**

Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.

### PLANNING CERTIFICATE UNDER SECTION 10.7

**Environmental Planning and Assessment Act, 1979** 

Property No: 403423 Your Reference: 55607 Contact No:

Issue Date:27 November 2018Certificate No:18/06158

Issued to: Jbs&G Level 1 / 50 Margaret Street SYDNEY NSW 2000

PRECINCT 2010

### **DESCRIPTION OF LAND**

County: CUMBERLAND Parish: MELVILLE

Location:788-804 Mamre Road KEMPS CREEK NSW 2178Land Description:Lot 58 DP 259135

### - PART 1 PRESCRIBED MATTERS -

In accordance with the provisions of Section 10.7(2) of the Act the following information is furnished in respect of the abovementioned land:

### 1 NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

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

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.) State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.) State Environmental Planning Policy No.21 - Caravan Parks. State Environmental Planning Policy No.30 - Intensive Agriculture. State Environmental Planning Policy No.33 - Hazardous and Offensive Development. **Civic Centre** 

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### PLANNING CERTIFICATE UNDER SECTION 10.7

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State Environmental Planning Policy No.50 - Canal Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies. State Environmental Planning Policy No.55 - Remediation of Land. State Environmental Planning Policy No.62 - Sustainable Aquaculture. State Environmental Planning Policy No.64 - Advertising and Signage. State Environmental Planning Policy No.65 - Design Quality of Residential Apartment Development. State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes). State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. State Environmental Planning Policy (State Significant Precincts) 2005. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2013. State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007. State Environmental Planning Policy (Infrastructure) 2007. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. State Environmental Planning Policy (Affordable Rental Housing) 2009. State Environmental Planning Policy (State and Regional Development) 2011. State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. State Environmental Planning Policy (Education Establishments and Child Care Centre Facilities) 2017.

State Environmental Planning Policy (Western Sydney Employment Area) 2009 applies to the land.

### 1(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:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft amendments to Penrith Development Control Plan 2014 for Multi-Dwelling Housing and Boarding Houses applies to the land. (See www.penrithcity.nsw.gov.au for details).

Draft State Environmental Planning Policy (Western Sydney Corridors) may apply to the land. Further information is available here: https://www.transport.nsw.gov.au/corridors.

On 22 June 2018, the NSW Government announced changes to the recommended alignments for the Western Sydney corridors, including continuing with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection.

Draft State Environmental Planning Policy (Primary Production & Rural Development) applies to the land.

Draft State Environmental Planning Policy (Environment) applies to the land.

Draft State Environmental Planning Policy (Remediation of Land) applies to the land.

Draft Standard Instrument (Local Environmental Plans) Order 2006 applies to the land.

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Draft State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 applies to the land.

# 1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

### 2 ZONING AND LAND USE UNDER RELEVANT LEPs

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):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

## Zone RU2 Rural Landscape (Penrith Local Environmental Plan 2010)

### **1** Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

### 2 Permitted without consent

Extensive agriculture; Home occupations

### **3 Permitted with consent**

Agricultural produce industries; Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (outdoor);

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Roads; Roadside stalls; Rural supplies; Schools; Secondary dwellings; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals

### 4 **Prohibited**

Hotel or motel accommodation; Serviced apartments; Any other development not specified in item 2 or 3

## Zone SP2 Infrastructure - Classified Road (Penrith Local Environmental Plan 2010)

**Civic Centre** 

#### 1 **Objectives of zone**

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- **Permitted without consent** 
  - Nil

### 3 Permitted with consent

The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose; Environmental protection works; Flood mitigation works; Roads

#### 4 **Prohibited**

2

Any development not specified in item 2 or 3

### **Flood planning**

All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

### **Rural subdivision**

Under the terms of Clause 4.2 of Penrith Local Environmental Plan 2010 land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots or Zone RU6 Transition may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Penrith Local Environmental Plan 2010 Lot Size Map in relation to that land. Such a lot cannot be created if an existing dwelling would, as a result of the subdivision, be situated on the lot; and a dwelling cannot be erected on such a lot.

### Residential development and subdivision prohibited in certain rural, residential and environment protection zones

Under the terms of Clause 4.2A of Penrith Local Environmental Plan 2010 (PLEP 2010) on land within Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU4 Primary Production Small Lots, Zone RU5 Village, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living development consent must not be granted for the erection of a dwelling house on a lot resulting from the closure of part or all of a road, whether before or after the commencement of this Plan. This requirement does not apply to a lot created by the consolidation of a lot resulting from a road closure with an adjoining lot that did not result from a road closure.

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### Additional information relating to Penrith Local Environmental Plan 2010

**Note 1**: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

**Note 2**: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

**Note 3**: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

**Note 4**: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

**Note 5**: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

**Note 6**: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

**Note 7**: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

**Note 8**: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

**Note 9:** Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

**Note 10**: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

**Note 11**: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

# 2(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:

(Information is provided in this section only if 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.)

# PENRITH CITY COUNCIL

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### 2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

### 2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

### 2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

### 2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

### 3 COMPLYING DEVELOPMENT

### HOUSING CODE

(The Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### RURAL HOUSING CODE

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Rural Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith

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Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### LOW RISE MEDIUM DENSITY HOUSING CODE

(The Low Rise Medium Density Housing Code only applies if the land is within Zones R1, R2, R3 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Low Rise Medium Density Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

Please note that Council has been deferred from the application of Part 3B of the Low Rise Medium Density Housing Code until 1 July 2019. That Part will not apply to Penrith Local Government Area during this time.

### **GREENFIELD HOUSING CODE**

(The Greenfield Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones, and if the land is identified as a Greenfield Housing Code Area by the Greenfield Housing Code Area Map complying development under the Greenfield Housing Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### HOUSING ALTERATIONS CODE

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

### GENERAL DEVELOPMENT CODE

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

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### COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

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

### SUBDIVISIONS CODE

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

### **DEMOLITION CODE**

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

### COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

• The land is affected by a reservation for a public purpose. If the land is within the relevant zones complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on any part of the land that is reserved for a public purpose by an environmental planning instrument. Complying development **may** be carried out on any part of the land that is not reserved for a public purpose by an environmental planning instrument. For the purposes of this section "public purpose" means any land that is zoned either Zone E1, RE1, SP1 or SP2 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument, or land that is subject to acquisition.

### FIRE SAFETY CODE

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

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

### 4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

### 5 MINE SUBSIDENCE

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

**Civic Centre** 601 High Street, Penrith

Email: pencit@penrithcity.nsw.gov.au

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### 6 ROAD WIDENING AND ROAD REALIGNMENT

The land is affected by road widening or road realignment under (a) Division 2 of Part 3 of the Roads Act 1993, or (b) an environmental planning instrument, or (c) a resolution of Council. Note: Additional advice may be available in section 10.7(5) information.

### COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK 7 RESTRICTIONS

### (a) Council Policies

PENRITH

CITY COUNCIL

The land is affected by the Asbestos Policy adopted by Council.

The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

### (b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy 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, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

### 7A FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Development on the 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) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.

Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

### 8 LAND RESERVED FOR ACQUISITION

The land is affected by provisions under an environmental planning instrument, a deemed environmental planning instrument or a draft environmental planning instrument applying to the land that provides for acquisition by a public authority, as referred to in section 3.15 of the Act.

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## 9 CONTRIBUTIONS PLANS

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park).

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

### 9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*. (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*.))

### *10 BIODIVERSITY STEWARDSHIP SITES*

(Information is provided in this section only if Council has been notified by the Chief Executive of the Office of Environment and Heritage that the land is land to which a biobanking stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relates. Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardships agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

### 11 BUSH FIRE PRONE LAND

Some of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

### *12 PROPERTY VEGETATION PLANS*

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan approved under the *Native Vegetation Act 2003* applies and continues in force.)

### 13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that 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.)

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### *14 DIRECTIONS UNDER PART 3A*

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act (repealed on 1st October 2011) 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.)

### 15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

- (a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or
- (b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

### *16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE*

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

### 17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

- (a) 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/or
- (b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

### 18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

### *19 SITE VERIFICATION CERTIFICATES*

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

# 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

### **PLANNING CERTIFICATE UNDER SECTION 10.7**

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(a) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 - a copy of which has been provided to Council.)

Note: Section 10.7(5) information for this property may contain additional information regarding contamination issues.

### 20 LOOSE FILL ASBESTOS INSULATION

(Information is provided in this section only if there is a residential premises listed on the register of residential premises that contain or have contained loose-fill asbestos insulation (as required by Division 1A of Part 8 of the Home Building Act 1989))

### 21 AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(Information is provided in this section only if Council is aware of any "affected building notice" and/or a "building product rectification order" in force for the land).

Note: The Environmental Planning and Assessment Amendment Act 2017 commenced operation on the 1 March 2018. 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 (Savings, Transitional and Other Provisions) Regulation 2017, and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by relevant government departments.

### 10.7(5) Certificate This Certificate is directed to the following relevant matters affecting the land

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. 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

### PLANNING CERTIFICATE UNDER SECTION 10.7

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faith pursuant to sub-section (5). 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.

Note:

- Council's 10.7(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at <u>www.penrithcity.nsw.gov.au</u>. Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

### \* Threatened Species Conservation Act 1995

When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

### \* Agricultural Activities Within Rural Areas

This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.

If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

\* Broader Western Sydney Employment Area (WSEA) Draft Structure Plan

The land is affected by the Broader Western Sydney Employment Area (WSEA) draft Structure Plan. The draft Structure Plan outlines a broad framework for the area including the location of future employment land and centres, a road network, potential freight and transport corridors and staging scenarios. Contact the Department of Planning and Environment for details.

### \* Scenic and Landscape Values

The land is identified as "Land with Scenic and Landscape Values" on the Penrith Local Environmental Plan 2010 Scenic and Landscape Values Map. See Clause 7.5 of Penrith Local Environmental Plan 2010 and Chapter C1 Site Planning and Design of Penrith Development Control Plan 2014.

\* Preservation of Trees and Vegetation

See Chapter C2 of Penrith Development Control Plan 2014 for specific controls relating to the preservation of trees and vegetation.

### \* Dual Occupancy and Secondary Dwellings Controls

See Clause 7.10 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

### \* Development Control Plan General Information

Penrith Development Control Plan 2014 which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

601 High Street, Penrith Fa Email: pencit@penrithcity.nsw.gov.au

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• Site Planning and Design Principles

**Civic Centre** 

- Vegetation Management
- Water Management
- Land Management
- Waste Management
- Landscape Design
- Culture and Heritage
- Public Domain
- Advertising and Signage
- Transport, Access and Parking
- Subdivision
- Noise and Vibration, and
- Infrastructure and Services.

The Development Control Plan also specifies requirements relating to various types of land uses including:

- Rural Land Uses
- Residential Development
- Commercial and Retail Development, and
- Industrial Development

as well as for a number of specific activities, including child care centres; health consulting rooms; educational establishments; parent friendly amenities; places of public worship; vehicle repair stations; cemeteries, crematoria and funeral homes; extractive industries; and telecommunication facilities.

The Development Control Plan also details requirements relating to key precincts within the Penrith Local Government Area, including:

- Caddens
- Claremont Meadows Stage 2
- Cranebrook
- Emu Heights
- Emu Plains
- Erskine Business Park
- Glenmore Park
- Kingswood
- Mulgoa Valley
- Orchard Hills
- Penrith
- Penrith Health and Education Precinct
- Riverlink Precinct
- St Clair,
- St Marys / St Marys North, and
- Sydney Science Park.

 Telephone:
 02 4732 7777

 Facsimile:
 02 4732 7958

Email: pencit@penrithcity.nsw.gov.au

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Penrith Development Control Plan 2014 may be accessed at https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/

### \* Western Sydney Airport

The Australian Government announced on 15 April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney. On 12 December 2016, the Government announced the approval of the Airport Plan, authorising Stage 1 of the Western Sydney Airport. Stage 1 comprises a single runway and facilities to cater for up to 10 million passengers a year. This approval follows an assessment of the Airport Plan and its Environmental Impact Statement by the Environment Minister. Enquiries regarding the Western Sydney Airport should be made with the Department of Infrastructure and Regional Development. (Website: http://westernsydneyairport.gov.au).

### Warwick Winn General Manager

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### **Please note:**

Certain amendments to the Environmental Planning and Assessment Act 1979 No 203 (Act) commenced on 1 March 2018.

The Environmental Planning and Assessment (Amendment) Act 2017 No 60 makes structural changes to the Act and, as a consequence, the Act has been renumbered in a decimal format. For example, Section 149 Planning Certificates have become Section 10.7 Certificates. Some of the information in this certificate may refer to the previous version of the Act.

Council is committed to updating all relevant documents in a timely manner. This will include planning instruments, applications, approvals, orders, certificates, forms and other associated documents in both printed and electronic versions. Council is required to implement these changes and regrets any inconvenience caused to the local business, industry and the community.



# Appendix H SafeWork NSW Dangerous Goods Search



## Appendix I Calibration and Decontamination Documentation



PROJECT NAME: Kemps Creek.	PROJECT NO: 55607
FIELD DATES: 30/11/18	FIELD STAFF: CB/CK.

CALIBRATION SUMMARY						
EQUIPMENT: PIO	9					
CALIBRATION STANDARD:	100	150	ppm	•		

DATE	τιμε	READING (ppm <sub>v</sub> )	COMMENTS
30/11/1.	8 8:04	0	Ambient Air
, ,			100 iso butane.
	8:07	100.1	Bump test.
			,

DECONTAMINATION SUMMARY			
EQUIPMENT:			
Shovel, Hand age/			
1. Was the equipment decontaminated appropriately prior to sampling at each location?	P	N	NA
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	Y	N	NA
3. Was the equipment contaminated with grease, tar or similar material? If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y Y		NA
4. Was phosphate-free detergent used to wash the equipment?	Ø	N	NA
5. Was the equipment rinsed with clean water?	Ŷ	Ν	NA
6. Was the equipment then rinsed with deionised water?	Y	Ν	NA
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection? - lab Supplied.	Y	Ν	NA
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.			
Fresh nitrile gloves used per sample.			

# Field Equipment Calibration and Decontamination



PROJECT NAME: Kemps (reele.	PROJECT NO: 55607
FIELD DATES: 3 / 12 / 18	FIELD STAFF: CK.

CALIBRATION SUMMARY							
EQUIPMENT: DID							
CALIBRATION STANDARD:	100 iso ppm.						

DATE	TIME	READING (ppm <sub>v</sub> )	COMMENTS
3/12/18	8:00	0	Ambient a.Y
11	8:02	100 .1	Bump test (150 butane)
			, (

DECONTAMINATION SUMMARY									
EQUIPMENT:									
		÷							
1. Was the equipment decontaminated appropriately prior to sampling at each location?	Y	Ν	NA						
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	Y	N	NA						
3. Was the equipment contaminated with grease, tar or similar material? If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y Y	N N	NA						
4. Was phosphate-free detergent used to wash the equipment?	Y	N	NA						
5. Was the equipment rinsed with clean water?	Y	Ν	NA						
6. Was the equipment then rinsed with deionised water?	Y	Ν	NA						
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	NA						
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.									
Fiesh nitrile gloves									



Appendix J Borehole Logs



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger	_			Fill	Silty CLAY; dark brown, heterogeneous, damp, soft, medium plasticity. Inclusions of organic matter, rootlets.	HA01 0.0-0.1 PID = 21 ppm	Slight hydrocarbon / chemical odour, black grey staining, no ACM
		0.15		Fill	Silty CLAY: dark black, inclusions of organics, probable, wood		
	_	0.13		-			
	_	0.20		CL	CLAY; red brown, heterogeneous, damp, soft, medium to high plasticity	HA01 0.2-0.3 PID = 3 ppm	No odours, staining or ACM
		0.35			Borehole HA01 terminated at 0.35m		
	_						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 12/12/18



Project Number: 55607 Client: T açæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 12/12/18

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

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger	_			Fill	Silty CLAY; brown, heterogeneous, moist, medium plasticity, soft. Inclusions of road base gravels, glass (minor), mulch and wood.	HA02 0.0-0.1 PID = 1 ppm	No odours, staining or ACM
		0.12		Fill	Gravelly CLAYL; brown, heterogeneous with inclusions of road base gravels, and black gravel with metallic luster.		
	_	0.15		CL	CLAY; orange/brown, heterogeneous, damp, medium plastic, soft - firm. Inclusions of gravels, lithic gravels, wood (decaying).	HA02 0.2-0.3 PID = 0.2 ppm	No odours, staining or ACM
		0.35			Borehole HA02 terminated at 0.35m		



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.2 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				Fill	Silty CLAY; dark brown, heterogeneous, damp, soft, medium plasticity. Inclusions of road base gravels.	HA03 0.0-0.1 PID = 8.3 ppm	No odours, staining or ACM
-			0.20			Borehole HA03 terminated at 0.2m		
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 12/12/18								



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Silty CLAY; brown, heterogeneous, moist, non plastic, soft. Inclusions of organic matter.	HA04 0.0-0.1 PID = 0.2 ppm	No odours, staining or ACM
						HA04 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
		0.30			Borehole HA04 terminated at 0.3m		

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 12/12/18


Project Number: 55607 Client: T ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				CL	CLAY; red mottled grey, heterogeneous, damp, medium plasticity, firm. Inclusions of lithic gravels, rootlets.	HA05 0.0-0.1 PID = 0.1 ppm	No odours, staining or ACM
		0.30			Borehole HA05 terminated at 0.3m	HA05 0.2-0.3 PID = 0.4 ppm	No odours, staining or ACM



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.2 Bore Diameter (mm): 150

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 12/12/18

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				CL-ML	Silty CLAY; brown, heterogeneous, dry, low plasticity, soft. Inclusions of organic matter (grass).	HA06 0.0-0.1 PID = 0.1 ppm	No odours, staining or ACM
	-	0.10			Borehole HA06 terminated at 0.1m		
	_					HA06 0.2-0.3 PID = 0 ppm	No odours, staining or ACM



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				Fill	Silty CLAY; brown, heterogeneous, dry - damp, medium plasticity, soft. Inclusions of road base gravels, concrete, tiles, terracotta.	HA07 0.0-0.1 PID = 0.4 ppm	No odours, staining or ACM
		_	0.20			Borehole HA07 terminated at 0.2m		
CPJ GINT STD AUSTRALIA.GDT 12/12/18		_						
BOREHOLE JBSG BOREHOLE - 2017								



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Airrer				Fill	Silty CLAY; brown, heterogeneous, moist. Inclusions of roadbase gravels, and bitumen gravels.	HA08 0.0-0.1 PID = 4.5 ppm	No odours, staining or ACM
STD AUSTRALIA.GDT 12/12/18		0.10		CL-ML	Silty CLAY; mottled brown orange, heterogeneous, moist, medium plasticity. Inclusions of roadbase gravels.	HA08 0.2-0.3 PID = 1.2 ppm	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT (		0.30					



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CK Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Reworked Natural CLAY; brown, heterogeneous, wet, soft. Inclusions of roots, rootlets, minor plastic sheeting (black) and fragments of white PVC.	HA09 0.0-0.1 PID = 0.1 ppm	No odours, staining or ACM
	_	0.25		Fill	Reworked Natural CLAY; brown, heterogeneous, moist, firm - stiff. Inclusions of roots, rootlets, minor plastic sheeting (black) and fragments of white PVC.	HA09 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
		0.30			Borehole HA09 terminated at 0.3m		



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

	Memod Danth (mhris)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	nang Auger			Fill	Silty CLAY; brown, heterogeneous, dry, low plasticity, soft. Inclusions of ceramic tile and igneous gravels.	HA10 0.0-0.1	
		0.05		CL-ML	Silty CLAY; brown, heterogeneous, dry, low plasticity, soft.	PID = 1.2 ppm	No odours, staining or ACM
		_					
DT 12/12/18						HA10 0.2-0.3 PID = 0.4 ppm	No odours, staining or ACM
IT STD AUSTRALIA.GI		0.30			Borehole HA10 terminated at 0.3m		
REHOLE - 2017.GPJ GIN							
BOREHOLE JBSG BOF							



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				Fill	Reworked Natural Silty CLAY; dark brown, heterogeneous, wet, low plasticity, soft. Inclusions of minor plastic sheeting and small lithic gravels.	HA12 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
ISG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 12/12/18			0.10		CL-ML	Silty CLAY; dark brown, heterogeneous, wet, low plasticity, soft.	HA12 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
BOREHOLE .								



Project Number: 55607 Client: A]fj UWWE DGA Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				CL-ML	Silty CLAY; dark brown, heterogeneous, damp, low - medium plasticity, soft.	HA13 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
	_	0.10		CL	CLAY; red/brown/orange, homogeneous, damp, medium - high plasticity, soft.	HA13 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
		0.30			Borehole HA13 terminated at 0.3m		



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				CL-ML	Silty CLAY; brown, heterogeneous, damp, low - medium plasticity, soft. Inclusions of minor clasts of charcoal / burnt wood.	HA14 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
			0.00					
TD AUSTRALIA.GDT 12/12/18			0.20		UL	CLAY; red/orange/grey, nomogeneous, damp, medium - nign plasticity, sort.	HA14 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT S			0.30			Borehole HA14 terminated at 0.3m		



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				CL-ML	Silty CLAY; brown, heterogeneous, damp, low - medium plasticity, firm and tacky	HA15 0.0-0.1 PID = 345 ppm	Strong hydrocarbon odour, black tacky staining, no ACM
			0.20		C	CLAY: red/orange/grey, homogeneous, damp, medium - high plasticity, firm		
TD AUSTRALIA.GDT 12/12/18			0.20				HA15 0.2-0.3 PID = 260 ppm	Strong hydrocarbon odour, grey tacky staining, no ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT S			0.30			Borenole HA15 terminated at 0.3m		



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				Fill	Reworked Natural Silty CLAY; brown, heterogeneous, damp, low plasticity, soft. Inclusions of organic matter, leaf, rootlets.	HA16 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
TD AUSTRALIA.GDT 12/12/18							HA16 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT ST			0.30			Borehole HA16 terminated at 0.3m		



Project Number: 55607 Client: A]fj UWWE DGA Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Reworked Natural Silty CLAY; brown, heterogeneous, dry - damp, low - medium plasticity, soft. Inclusions of roots.	HA17 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
		0.00				HA17 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
		0.30			Borenole HA1/ terminated at 0.3m		



Project Number: 55607 Client:ẤT ảçæ& AĐ ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill		HA18 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
		0.20				HA18 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
		0.30					



Project Number: 55607 Client:ÁT ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

r Method	Depth (mbgs)	Contact (mbgs)	X X Graphic Log	⊟ Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auge	_				Inclusions of sandstone, brick, concrete and roadbase gravels.	HA19 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
	_					HA19 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
					Borehole HA19 terminated at 0.3m		



Project Number: 55607 Client: T ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger	_			Fill	Silty CLAY; brown. Inclusions of shale, small igenous gravels, plastic, brick, concrete and suspected ACM.	HA20 0.0-0.1 PID = 0 ppm	No odours or staining, suspected ACM in adjacent surface soils
		0.20		Fill	CLAY: as above, grades to very firm clay with less no intrusions (reworked natural)		
		0.20				HA20 0.2-0.3 PID = 0 ppm	No odours, staining or ACM
		0.30			Borehole HA20 terminated at 0.3m		



Project Number: 55607 Client:ẤT ảçæ& AĐ ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.15 Bore Diameter (mm): 150 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Ground Surface Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger				Fill	Silty CLAY; red brown, heterogeneous, moist to wet. Inclusions of igneous gravel and minor brick fragments.	HA21 0.0-0.1 PID = 0.2 ppm	No odours, staining or ACM
		0.15			Borehole HA21 terminated at 0.15m		
	_						



Project Number: 55607 Client: T ãçæ& AD ÁÚÙT Project Name: Mamre Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 30/11/2018 Logged By: CB Contractor: Total Hole Depth (mbgs): 0.15 Bore Diameter (mm): 150

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				Fill	Silty CLAY; heterogeneous, loose, dry with inclusions of large bricks, concrete, shale and asphalt.	HA22 0.0-0.1 PID = 0 ppm	No odours, staining or ACM
			0.15			Borehole HA22 terminated at 0.15m		
STD AUSTRALIA.GDT 12/12/18								
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT								



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100 Eastings (GDA 94): Northings (GDA 94): Zone/Area/Permit#: Reference Level: Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Hand Auger	_	0.10		Fill	Sandy CLAY; grey, hetergeneous, dry, firm, low plasticity.		
	_						No odours, staining or ACM
						BH01 0.2-0.3	
		0.30			Borehole BH01 terminated at 0.3m		EOH. Program depth.



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 16/1/19 Hand Auger		0.30		Fill	SILT; grey, heterogeneous, dry, soft, non plastic.	BH02 0.2-0.3	Slight organic smell, no staining or ACM



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
-	Hand Auger		0.10		Fill MI CL	SILT; grey, heterogeneous, dry, soft, non plastic.		
D AUSTRALIA.GDT 16/1/19		_					BH03 0.2-0.3	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT ST			0.30			Borehole BH03 terminated at 0.3m		EOH. Program depth.



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
	Hand Auger				Fill	SILT; grey, heterogeneous, dry, soft, non plastic.		
STD AUSTRALIA.GDT 16/1/19			0.10		FI	SiL 1; grey, neterogeneous, damp, sort, non plastic.	BH04 0.2-0.3	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT								



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
STD AUSTRALIA GDT 16/1/19	Hand Auge		0.30			SIL1; grey, nomogeneous, dry, sort, non plastic.	BH05 0.2-0.3	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT ST			0.30			Borehole BH05 terminated at 0.3m		EOH. Program depth.



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
SG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 16/1/19	Hand Auger		0.30		Fill	SILT; grey, heterogeneous, dry, soft to firm, non plastic.	BH06 0.2-0.3	No odours, staining or ACM
BOREHOLE JE								



Project Number: 55607 Client: Mirvac c/o PSM Project Name: Marme Road, Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 16/01/2019 Logged By: RL Contractor: Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 100

	Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
017.GPJ GINT STD AUSTRALIA GDT 16/1/19	Hand Auger		0.30		Fill	Clayey SILT: red, heterogeneous, damp to moist, firm, non plastic. Inclusions of some small angular gravels.	BH07 0.2-0.3	No odours, staining or ACM
BOREHOLE JBSG BOREHOLE - 20								



#### **TP01**

Project Number: 55607 Client: PSM Project Name: Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 3/12/2018 Logged By: CK Contractor: PSM Total Hole Depth (mbgs): 3.1 Pit Dimension (m3): 450

fethod	)epth (mbgs)	contact (mbgs)	sraphic Log	ithological Jass	Lithological Description	Samples Tests Remarks	Additional Observations
est Pit N		0	9	CL-ML	Silty CLAY (Topsoil); brown, heterogeneous, damp, low plastic, very soft.	TP01 0.0-0.1	No Odour, Staining or ACM Observed.
	_					TP01 0.2-0.3	No Odour, Staining or ACM Observed.
	_	0.30		CL	CLAY; mottled red, homogeneous, damp, medium plasticity, stiff. With some roots and rootlets.		
	0.5					TP01 0.5-0.6	No Odour, Staining or ACM Observed.
	-						
	-						
	1 <u>.0</u>					TP01 1.0-1.1	No Odour, Staining or ACM Observed.
	_						
	-						
	1.5						
	_						
	-	1.80		CL	CLAY; mottled grey, homogeneous, damp, medium plasticity, firm.		
	2.0					TP01 2.0-2.1	No Odour, Staining or ACM Observed.
/18	_						
GDT 6/12	-						
STRALIA.	2.5						
T STD AU	_						
.GPJ GIN							
ыт - 2017	3 <u>.0</u>					TP01 3.0-3.1	No Odour, Staining or ACM Observed.
SG TEST		3.10			Test Pit TP01 terminated at 3.1m		End of Hole at 3.1 m at Program Depth.
T PIT JB;	-						
Ë	3.5						



## **TP02**

Project Number: 55607 Client: PSM Project Name: Kemps Creek Site Address: Marme Road, Kemps Creek

Date: 3/12/2018 Logged By: CK Contractor: PSM Total Hole Depth (mbgs): 3.1 Pit Dimension (m3): 450

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Test Pit	-	_		CL-ML	Silty CLAY (Topsoil); brown, heterogeneous, damp, low plastic, very soft. Minor inclusions of roots, black plastic sheeting.	TP02 0.0-0.1	No Odour, Staining or ACM Observed.
ľ	-					TP02 0.2-0.3	No Odour, Staining or ACM Observed.
	0.5						
	-	0.50		CL	CLAY; red mottled grey, heterogeneous, damp, medium plasticity, soft to firm.	TP02 0.5-0.6	No Odour, Staining or ACM Observed.
	-	-					
	-	-					
	1 <u>.0</u>						
	-						
	-	-					
	1 <u>.5</u>	1.40		CL	CLAY; grey, heterogeneous, damp, medium plasticity, stiff. Weathered red shle fragments from 3.0 m.		
	-	-					
	-						
	-						
	2.0						
	-						
IT 6/12/1	-						
RALIA.GD	2.5						
D AUSTF	-						
SINT ST	-						
17.GPJ 0	-	-					
PIT - 201	3 <u>.0</u>						
G TEST	-	3.10			Test Pit TP02 terminated at 3.1m		End of Hole at 3.1 m at Program Depth.
PIT JBS	-						
TEST	3.5	]					



## Appendix K Detailed Laboratory Documentation



#### **CERTIFICATE OF ANALYSIS 207152**

Client Details	
Client	JBS & G (NSW & WA) Pty Ltd
Attention	Daniel Denaro, C Kauffman
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details	
Your Reference	55607, Mamre Road
Number of Samples	2 Soil
Date samples received	03/12/2018
Date completed instructions received	03/12/2018

#### **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
 10/12/2018

 Date of Issue
 10/12/2018

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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: Lucy Zhu Authorised by Asbestos Approved Signatory: Lucy Zhu **Results Approved By** Jaimie Loa-Kum-Cheung, Senior Chemist Jeremy Faircloth, Organics Supervisor Long Pham, Team Leader, Metals Lucy Zhu, Asbestos Analyst Steven Luong, Senior Chemist Authorised By

Jacinta Hurst, Laboratory Manager



#### Client Reference: 55607, Mamre Road

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date extracted	-	04/12/2018	04/12/2018
Date analysed	-	05/12/2018	05/12/2018
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	106

svTRH (C10-C40) in Soil			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date extracted	-	04/12/2018	04/12/2018
Date analysed	-	06/12/2018	06/12/2018
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	300	<100
TRH >C10 -C16	mg/kg	<50	<50
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	<50	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	320	<100
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	310	<100
Total +ve TRH (>C10-C40)	mg/kg	630	<50
Surrogate o-Terphenyl	%	92	77

PAHs in Soil			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date extracted	-	04/12/2018	04/12/2018
Date analysed	-	05/12/2018	05/12/2018
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1
Total +ve PAH's	mg/kg	0.74	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	98	101

Organochlorine Pesticides in soil			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date extracted	-	04/12/2018	04/12/2018
Date analysed	-	04/12/2018	04/12/2018
НСВ	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	100	92

Acid Extractable metals in soil			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date prepared	-	04/12/2018	04/12/2018
Date analysed	-	04/12/2018	04/12/2018
Arsenic	mg/kg	10	8
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	18	11
Copper	mg/kg	45	16
Lead	mg/kg	33	24
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	13	7
Zinc	mg/kg	150	44

Moisture			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date prepared	-	04/12/2018	04/12/2018
Date analysed	-	05/12/2018	05/12/2018
Moisture	%	6.0	13

Asbestos ID - soils NEPM - ASB-001			
Our Reference		207152-1	207152-2
Your Reference	UNITS	QC01	QC02
Date Sampled		30/11/2018	30/11/2018
Type of sample		Soil	Soil
Date analysed	-	05/12/2018	05/12/2018
Sample mass tested	g	634.17	534.1
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected
Total Asbestos <sup>#1</sup>	g/kg	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	_	-
FA and AF Estimation*	g	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<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.		
	<b>NOTE</b> <sup>#1</sup> Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF)		
	<b>NOTE</b> <sup>#2</sup> 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-003	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-003	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-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.		

Method ID	Methodology Summary
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. 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-012	<ul> <li>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.</li> <li>Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</li> <li>For soil results:- <ol> <li>'EQ PQL'values are assuming all contributing PAHs reported as <pql actually="" and="" approach="" are="" at="" be="" calculation="" can="" conservative="" contribute="" false="" give="" given="" is="" li="" may="" most="" not="" pahs="" positive="" pql.="" present.<="" teq="" teqs="" that="" the="" this="" to=""> <li>'EQ zero'values are assuming all contributing PAHs reported as <pql and="" approach="" are="" below="" but="" calculation="" conservative="" contribute="" false="" is="" least="" li="" more="" negative="" pahs="" pql.<="" present="" susceptible="" teq="" teqs="" that="" the="" this="" to="" when="" zero.=""> <li>'EQ half PQL'values are assuming all contributing PAHs reported as <pql a="" above.<="" and="" approaches="" are="" between="" conservative="" half="" hence="" least="" li="" mid-point="" most="" pql.="" stipulated="" the=""> </pql></li></pql></li></pql></li></ol> </li> <li>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.</li> </ul>
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	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-016	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 CONT	ROL: vTRH	(C6-C10)		Du	Spike Re	Spike Recovery %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			04/12/2018	[NT]		[NT]	[NT]	04/12/2018	
Date analysed	-			05/12/2018	[NT]		[NT]	[NT]	05/12/2018	
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-016	<25	[NT]		[NT]	[NT]	105	
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-016	<25	[NT]		[NT]	[NT]	105	
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]		[NT]	[NT]	106	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]		[NT]	[NT]	102	
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]		[NT]	[NT]	106	
m+p-xylene	mg/kg	2	Org-016	<2	[NT]		[NT]	[NT]	105	
o-Xylene	mg/kg	1	Org-016	<1	[NT]		[NT]	[NT]	109	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]		[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	106	[NT]		[NT]	[NT]	118	

QUALITY CO	NTROL: svT	RH (C10		Du	plicate		Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			07/12/2018	[NT]			[NT]	07/12/2018	
Date analysed	-			07/12/2018	[NT]			[NT]	07/12/2018	
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-003	<50	[NT]			[NT]	125	
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-003	<100	[NT]			[NT]	117	
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-003	<100	[NT]			[NT]	130	
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-003	<50	[NT]			[NT]	125	
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-003	<100	[NT]			[NT]	117	
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-003	<100	[NT]			[NT]	130	
Surrogate o-Terphenyl	%		Org-003	95	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALIT	Y CONTRO	L: PAHs	in Soil			Du	plicate		Spike Recovery %					
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]				
Date extracted	-			04/12/2018	[NT]		[NT]	[NT]	04/12/2018					
Date analysed	-			05/12/2018	[NT]		[NT]	[NT]	05/12/2018					
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	117					
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	127					
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	129					
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	125					
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	115					
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	116					
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]		[NT]	[NT]	[NT]					
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]		[NT]	[NT]	108					
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]		[NT]	[NT]	[NT]					
Surrogate p-Terphenyl-d14	%		Org-012	99	[NT]	[NT]	[NT]	[NT]	97	[NT]				

QUALITY CONTR	OL: Organo	chlorine I	Pesticides in soil			Du	plicate	Spike Re	covery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			04/12/2018	[NT]		[NT]	[NT]	04/12/2018	
Date analysed	-			04/12/2018	[NT]		[NT]	[NT]	04/12/2018	
НСВ	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	99	
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	80	
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	82	
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	73	
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	76	
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	80	
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	86	
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	77	
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	86	
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	74	
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]		[NT]	[NT]	[NT]	
Surrogate TCMX	%		Org-005	102	[NT]		[NT]	[NT]	108	

QUALITY CONT	ROL: Acid E	xtractable		Du	Spike Re	Recovery %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			04/12/2018	[NT]		[NT]	[NT]	04/12/2018	
Date analysed	-			04/12/2018	[NT]		[NT]	[NT]	04/12/2018	
Arsenic	mg/kg	4	Metals-020	<4	[NT]		[NT]	[NT]	107	
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]		[NT]	[NT]	103	
Chromium	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	103	
Copper	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	105	
Lead	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	103	
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]		[NT]	[NT]	101	
Nickel	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	98	
Zinc	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	102	

Result Definiti	ons
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

<b>Quality Control</b>	ol 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	Nator Quidelines recommend that Thermotolerant Caliform, Eccard Entergancei, & E. Cali layola are less than

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.

## 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; 60-140% for organics (+/-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.

# **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.

# CHAIN OF CUSTODY



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PROJECT NO .: 5560	<u>,  7</u>					LA	BOR	ATC	DRY	BATC	H NO.:															
PROJECT NAME: Man	nre K	oan				SA	MPL	ERS	> C	n				-					_							_
DATE NEEDED BY: Sto	•					Q	C LEN	/EL:	NEP	°M (2	013)					_		_								
PHONE: Sydney: 02 8245 030	10   Perth: (	08 9488 01	00   <u>B</u> rist	pane: 07 3112 2688		_		1			20														-	_
SEND REPORT & INVOICE TO:	: (1) adm <u>in</u> r	nsw@jbsg.e	com.au; (	2)@jbs	sg.com.a	au; (	(3)	<u>ر ک</u>	<u>na</u>	ايد		<u>() @</u>	jbsg	.con	n.au											_
COMMENTS / SPECIAL HANDLING / STOR	AGE OR DISPOS	AL:						0									-			1	YPE OF	<u>.</u>				
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NAME: DATE:			IGNMENT N	IOTE NO.			AME: F:				DAT	E:			DLER	SEAL	- Yes		No		Intact	t	Broken			
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Container & Preservative Codes: P = Pla	ntainer & 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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IMSO FormsO13 - Chain of Custody - Generic

# **CHAIN OF CUSTODY**

BS&G



IMSO FormsO13 - Chain of Custody - Generic

# **CHAIN OF CUSTODY**



ROJECT NO .: 55667		LABORATORY BATCH NO.:											
ROJECT NAME: Mamile Roch		SAMPLERS: ChrcB											
ATE NEEDED BY: Sto		QC LEVEL: NEPM (2013)											
HONE: Sydney: 02 8245 0300   Perth: 08 9488	0100   Brisbane: 07 3112 2688	<i>a</i>											
END REPORT & INVOICE TO: (1) adminnsw@jb	osg.com.au; (2) dence @jbsg.com.au	u; (3) Chan Chan @jbsg.com.au											
)MMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:		Ly TYPE OF											
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SAMPLE ID MATRIX DATE	E TIME TYPE & PRESERVATIVE pH												
HA 12 0-0.1 Soil 30.11	18 J+B	X 😤 X X 🖉											
02071													
HA130-01													
0.2-0.3													
17A14 0-6-1	J+B	XXX											
J D.2-0.7	J+B												
HA16 0-0.1	J+B												
0.2-0.7	1+0												
HA17 0-01	J+B .												
6.2-0.7	J+0												
HA18 0-0.1	5+3												
0.2-0.2	J+B												
HA19 0-01	Tth												
0.2.67	1+8												
HAZO 0-0.1	3+6 >>	XXXX											
1 0.2-0.8	THB												
HAZI 0-01	-5+B	X X X X X											
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HA22 0-0.1 4 4	5+3												
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VAME: ( 1 DATE: 8.12.1.48 CC	ONSIGNMENT NOTE NO.	NAME: MONG COOLER SEAL - Yes No Intact Broken											
DF: JBS&G TR	RANSPORT CO.												
NAME: DATE: CC	ONSIGNMENT NOTE NO.	NAME: DATE: COOLER SEAL – Yes No Intact Broken											
DF:		OF:											
Container & Preservative Codes: P = Plastic: J = Soil Jar: B = Glass B	Rottle: N = Nitric Acid Posyd : C = Sodium Hydrovide Posyd: VC = Hydrochlorid	COOLER TEMP deg C											

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SO FormsO13 - Chain of Custody - Generic

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# CHAIN OF CUSTODY



JECT NO .: 04 55	NO.: DA SS607 LABORATORY BATCH NO :														
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						esto,	÷	POLE	٤	Ecclar			ASBI	ESTOS LYSIS	631107-
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	nH	F	E	힌 순	1	=			BITTE	MM	
PO1 0-0-1	Soil	8.12.18		1-1	Port.	4	-		-	9			ē	Ľ	NOTES:
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6.5-0.4						+		+	-						
1-1-1						$\vdash$				X					
0.71	+				-	$\vdash$		-							
1 7.71		+					_								
-207	+ + -			V						X					
1 0-0.1		+ +		7+3			X	X							
0.2-0.5				5+B								+++	+		
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JBS&G Ch		TRAN	SPORT CO		DATE: COOLER SEAL - Yes No Intact Broken							Broken			
ME: DATE:		CONS	IGNMENT NO	DTE NO.		OF:			ي	112	COOLER TENAN				
5						NAI	ME:			DATE:	COOLER SEAL - Ye	aeg C	Inte		
intainer & Preservative Codes: P = P	astic; J = Soil Jar;	B = Glass Bottle	SPORT CO	d Depud - C - C - L	_								inta	α	Broken
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		.•	<b>`</b>							ere stuly d	- Junitic Acid Prsvd; Z = Zin	c Prsvd; E = EDT/	A Prsvd	; ST =	Sterile Bottle; O = Other
			in the second	S-4-											

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DIECT NO: 3560	7					LA	BO	RAT	ORY	r BA	TCH	NO.										
OJECT NAME: Man	re la	c.)				SA	MF	LER	<b>S:</b> ()	C	n	. +1	CB									
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ONE: Sydney: 02 8245 030	0   Perth:	08 9488 01	00   Brisba	ne: 07 3112 2688						a	7_											
ND REPORT & INVOICE TO	: (1) admir	nsw@jbsg.	com.au; (2	adenara @	jbsg.com	.au; (	(3)<	h	en.	16	~		@	jbsg.	com	.au					-	
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SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	ρH	R	C	2	õ	I	12	B								IDEN	NEP	NOTES:
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O FormsO13 - Chain of Custody - Generic

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# CHAIN OF CUSTODY



019100				CHAIN	OF C	USTC	DY									_
PROJECT NO.: 556	67					LABOR	ATOR	BATC	H NO.:							
PROJECT NAME:	mere R	and				SAMPI	ERS:	CF	+ CI	3						
DATE NEEDED BY:	GUIDAD	D				QC LEV	/EL: NE	EPM (20	)13)							
PHONE: Sydney: 02 8245	0300   Perth: 0	8 9488 0	100   Brist	oane: 07 3112 2688				n	7							
SEND REPORT & INVOICE	TO: (1) adminn	sw@ibsg	.com.au: (	2)	osg.com.a	au: (3) .	cha	ev (f	no	@jb	sg.com.a	au				
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NAME: DATE	7.12.19	CON	SIGNMENT	NOTE NO.		NAME: DATE:					COOL	ER SEAL	Yes N	o li	ntact	Broken
OF: JBS&G	<u></u>	TRA	NSPORT CO.			OF:					COOL	ER TEMP	deg C			Dealers
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OF.		TRA	NSPORT CO			Or.					COOL	ER TEMP	deg C			
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MSO FormsO13 - Chain of Custody - Generic

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Co Ad Pro	mpany Name: dress: bject Name:	JBS & G Au Level 1, 50 N Sydney NSW 2000 MAMRE RO	stralia (NSW) Margaret St AD	P/L			Or Re Pr Fa	rder N eport none: ix:	lo.: #:	6 0	631102 02 824	<u>2</u> 5 030	0					R D P C	Receiv Due: Priorit Contac	ved: y: ct Nar	me:	Dec 3, Dec 10 5 Day Daniel	2018 6:3 ), 2018 Denaro	8 PM	
	bject ID:	55607															Eur	ofins	mgt	Analy	ytical Ser	vices N	Manager	: Nibha V	aidya
		Sa	mple Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Melk	ourne Laborato	ory - NATA Site	# 1254 & 142	271														х			_				
Sydi	ney Laboratory	- NATA Site # 1	8217				X	X	Х	X	X	Х	X	Х	X	X	Х	X	X	Х	4				
Bris	bane Laborator	y - NATA Site #	20794			X		<u> </u>					<u> </u>			<u> </u>					4				
Pert	h Laboratory - N	ATA Site # 237	736																		4				
Exte No	rnal Laboratory Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																1				
1	HA01 0-0.1	Nov 30, 2018		Soil	S18-De03141						X		Х		X	X	Х		X		]				
2	HA02 0-0.1	Nov 30, 2018		Soil	S18-De03142		Х				Х	х			Х	X	Х		X						
3	HA03 0-0.1	Nov 30, 2018		Soil	S18-De03143		х				х				Х	х	Х		Х						
4	HA04 0-0.1	Nov 30, 2018		Soil	S18-De03144						х				х	X	Х		X						
5	HA04 0.2-0.3	Nov 30, 2018		Soil	S18-De03145							х					Х				1				
6	HA05 0-0.1	Nov 30, 2018		Soil	S18-De03146							х				x	Х		X		1				
7	HA06 0-0.1	Nov 30, 2018		Soil	S18-De03147										Х		Х				1				
8	HA07 0-0.1	Nov 30, 2018		Soil	S18-De03148		X				X				Х		Х				1				
9	HA08 0-0.1	Nov 30, 2018		Soil	S18-De03149		X				X	Х			Х	X	Х		X						

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Pro Pro	ject Name: ject ID:	MAMRE RO/ 55607	AD														Eur	ofins	mgt	Analy	ytical S	ervices	s Manag	∍r : Nibha ∖	/aidya	
		Sa	mple Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH						
Melbo	ourne Laborato	ory - NATA Site	# 1254 & 142	71														х								
Sydn	ey Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	1					
Brisb	ane Laboratory	y - NATA Site #	20794			Х							<u> </u>								-					
Perth	Laboratory - N	ATA Site # 237	736									<u> </u>	<u> </u>		<u> </u>						4					
10	HA09 0-0.1	Nov 30, 2018		Soil	S18-De03150						X	X			X	X	Х		X		-					
11	HA10 0-0.1	Nov 30, 2018		Soil	S18-De03151		X				X	X				X	Х		X		-					
12	HA11 0-0.1	Nov 30, 2018		Soil	S18-De03152		X				X				X		X				-					
13	HA12 0-0.1	Nov 30, 2018		Soil	S18-De03153	<b> </b>					X	X			X		X				-					
14	HA13 0-0.1	Nov 30, 2018		Soil	S18-De03154		X				X	X			X	X	X		X		-					
15	HA14 0-0.1	Nov 30, 2018		Soil	S18-De03155						X	X			X		X				-					
16	HA16 0-0.1	Nov 30, 2018		Soil	S18-De03156	<b> </b>					X	X			X	X	X		X		-					
17	HA17 0-0.1	Nov 30, 2018		Soil	S18-De03157	<b> </b>	X					X			X		X				-					
18	HA18 0-0.1	Nov 30, 2018		Soil	S18-De03158	<u> </u>	Х				X		<u> </u>		X	X	Х		X		4					
19	HA19 0-0.1	Nov 30, 2018		Soil	S18-De03159	<u> </u>	Х				X	X	<u> </u>		X		Х				4					
20	HA20 0-0.1	Nov 30, 2018		Soil	S18-De03160		X				X	<u> </u>	-		Х	X	Х		Х		-					
21	HA21 0-0.1	Nov 30, 2018		Soil	S18-De03161		Х								Х	X	Х		Х							

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		Sa	Imple Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH						-
Mel	bourne Laborate	ory - NATA Site	# 1254 & 142	271														Х								
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х						
Bris	sbane Laborator	y - NATA Site #	20794			Х															1					
Pert	th Laboratory - N	NATA Site # 237	736	1	1																1					
22	HA22 0-0.1	Nov 30, 2018		Soil	S18-De03162		X				Х	Х			Х	X	Х		Х		4					
23	TP01 0-0.1	Dec 03, 2018		Soil	S18-De03163							Х					Х				4					
24	TP01 0.5-0.6	Dec 03, 2018		Soil	S18-De03164	Х				X							Х	Х			4					
25	TP01 3-3.1	Dec 03, 2018		Soil	S18-De03165	X				X							X	X			4					
26	TP02 0-0.1	Dec 03, 2018		Soil	S18-De03166						Х	Х					Х				-					
27	TP02 1-1.1	Dec 03, 2018		Soil	S18-De03167	Х				X							Х	Х			4					
28	QA01	Nov 30, 2018		Soil	S18-De03168		Х				Х	Х			Х	X	Х		Х		4					
29	QA02	Nov 30, 2018		Soil	S18-De03169		Х				Х	Х			Х	X	Х		Х		1					
30	RIN01	Dec 03, 2018		Water	S18-De03170						Х	Х			Х	X			Х		1					
31	TS	Nov 30, 2018		Water	S18-De03171															Х	1					
32	ТВ	Nov 30, 2018		Water	S18-De03172															Х	1					
33	SP01	Nov 30, 2018		Soil	S18-De03173		X				Х	Х			Х	X	Х		Х		1					

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Pr Pr	oject Name: oject ID:	MAMRE RO 55607	AD													Eur	ofins	mgt	Analy	ytical Se	rvices	Managei	: Nibha V	aidya
		Sa	Imple Detail		% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Melk	oourne Laborato	ory - NATA Site	# 1254 & 14271														Х	ļ		-				
Syd	ney Laboratory	- NATA Site # 1	8217			Х	Х	Х	Х	X	Х	X	Х	Х	X	Х	Х	X	Х	-				
Bris	bane Laboratory	y - NATA Site #	20794		X															-				
Pert	h Laboratory - N	ATA Site # 237	736	1																-				
34	SP03	Nov 30, 2018	Soil	S18-De03174		X				Х	Х			Х	X	Х		X		-				
35	FRAG-01	Nov 30, 2018	Building	S18-De03175			x																	
36	HA15 0-0.1	Nov 30. 2018	Soil	S18-De03176						x				x	x	x		x		1				
37	FRAG-03	Nov 30, 2018	Building Materials	S18-De03177			x													]				
38	HA15 0-0.1	Nov 30, 2018	US Leachate	S18-De03310						X			х	Х										
39	HA01 0.2-0.3	Nov 30, 2018	Soil	S18-De03326				х																
40	HA02 0.2-0.3	Nov 30, 2018	Soil	S18-De03327				х																
41	HA05 0.2-0.3	Nov 30, 2018	Soil	S18-De03328				Х																
42	HA08 0.2-0.3	Nov 30, 2018	Soil	S18-De03329				Х																
43	HA09 0.2-0.3	Nov 30, 2018	Soil	S18-De03330				х												]				
44	HA10 0.2-0.3	Nov 30, 2018	Soil	S18-De03331				Х																

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Pr Pr	roject Name: roject ID:	MAMRE RO 55607	AD														Euro	ofins	mgt	Analy	ytical Se	rvices	Manager	: Nibha V	aidya	
		Sa	Imple Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH						
Mel	bourne Laborato	ory - NATA Site	# 1254 & 142	71														Х								
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	X	Х						
Bris	bane Laborator	y - NATA Site #	20794			Х															1					
Per	th Laboratory - N	NATA Site # 237	736																		-					
45	HA11 0.2-0.3	Nov 30, 2018		Soil	S18-De03332				Х												-					
46	HA12 0.2-0.3	Nov 30, 2018		Soil	S18-De03333				X												-					
47	HA13 0.2-0.3	Nov 30, 2018		Soil	S18-De03334				Х												-					
48	HA14 0.2-0.3	Nov 30, 2018		Soil	S18-De03335				Х												-					
49	HA16 0.2-0.3	Nov 30, 2018		Soil	S18-De03336				Х												-					
50	HA17 0.2-0.3	Nov 30, 2018		Soil	S18-De03337				Х												-					
51	HA18 0.2-0.3	Nov 30, 2018		Soil	S18-De03338	-			Х							<u> </u>			<u> </u>		4					
52	HA19 0.2-0.3	Nov 30, 2018		Soil	S18-De03339				Х												-					
53	HA20 0.2-0.3	Nov 30, 2018		Soil	S18-De03340				Х												4					
54	TP01 0.2-0.3	Dec 03, 2018		Soil	S18-De03341				Х												4					
55	TP01 1-1.1	Dec 03, 2018		Soil	S18-De03342				Х												_					
56	TP01 2-2.1	Dec 03, 2018		Soil	S18-De03343				Х																	

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Co Ac Pr	ompany Name: Idress: oject Name:	JBS & G Au Level 1, 50 I Sydney NSW 2000 MAMRE RC	stralia (NSW) Margaret St 0AD	P/L			Or Re Ph Fa	rder N eport none: ix:	lo.: #:	6 0	31102 2 824	<u>2</u> 5 030	0					R D P C	eceiv ue: riority ontac	ed: /: :t Nan	ne:	Dec 3, Dec 10 5 Day Daniel	, 2018 6:3 0, 2018 I Denaro	8 PM	
Pr	oject ID:	55607															Euro	ofins	mgt	Analy	tical Ser/	vices I	Manager	: Nibha Va	aidya
	Project ID: 55607 Sample Detail					% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Mell	oourne Laborate	ory - NATA Site	e # 1254 & 142	:71														х							
Syd	ney Laboratory	- NATA Site # 1	18217				Х	X	Х	х	Х	Х	X	Х	Х	X	Х	Х	X	х	1				
Bris	bane Laborator	y - NATA Site #	‡ 20794			Х	<u> </u>														1				
Pert	h Laboratory - I	NATA Site # 23	736																		1				
57	TP02 0.2-0.3	Dec 03, 2018		Soil	S18-De03344				Х				<u> </u>			<u> </u>					ł				
58	TP02 0.5-0.6	Dec 03, 2018		Soil	S18-De03345				X												ł				
59	TP02 2-2.1	Dec 03, 2018		Soil	S18-De03346				X												1				
60 0.1	1P02 3-3.1	Dec 03, 2018		Soil	S18-De03347				X												1				
61	SP02	Nov 30, 2018		Sol	S18-De03348		-		X							-					1				
62	5204	Nov 30, 2018		501	S18-De03349				X												1				
63	5805	Nov 30, 2018		50II Soil	S18-De03350	-	+		×			<u> </u>									1				
65	FRAG02	Nov 30, 2018 Nov 30, 2018		Building Materials	S18-De03351 S18-De03352				x																
66	HA15 0.2-0.3	Nov 30, 2018		Soil	S18-De03353				Х												l				
Test	Counts					3	17	2	28	3	25	20	1	1	26	20	32	3	20	2	1				



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# Certificate of Analysis

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



NATA Accredited Accreditation Number 1261 Site Number 18217

Attention:	Daniel Denaro
Report	631102-AID
Project Name	MAMRE ROAD
Project ID	55607
Received Date	Dec 03, 2018
Date Reported	Dec 10, 2018
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	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.
Fibres	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	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.
Samples	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.



mgt



Project Name	MAMRE ROAD
Project ID	55607
Date Sampled	Nov 30, 2018
Report	631102-AID

Client Sample ID	Eurofins   mgt Sample No.	Date Sampled	Sample Description	Result
HA02 0-0.1	18-De03142	Nov 30, 2018	Approximate Sample 630g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA03 0-0.1	18-De03143	Nov 30, 2018	Approximate Sample 736g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA07 0-0.1	18-De03148	Nov 30, 2018	Approximate Sample 693g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA08 0-0.1	18-De03149	Nov 30, 2018	Approximate Sample 571g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA10 0-0.1	18-De03151	Nov 30, 2018	Approximate Sample 626g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA11 0-0.1	18-De03152	Nov 30, 2018	Approximate Sample 533g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.





NATA Accredited Accreditation Number 1261 Site Number 18217

Client Sample ID	Eurofins   mgt Sample No.	Date Sampled	Sample Description	Result
HA13 0-0.1	18-De03154	Nov 30, 2018	Approximate Sample 478g Sample consisted of: Brown fine-grained sandy soil and rocks	AF: Chrysotile asbestos detected in the form of loose fibre bundles. Approximate raw weight of AF = $0.0016g^*$ Estimated asbestos content in AF = $0.0015g^*$ Total estimated asbestos concentration in AF = $0.00032\%$ w/w <sup>*</sup> No asbestos detected at the reporting limit of $0.001\%$ w/w.*
				No respirable fibres detected.
HA17 0-0.1	18-De03157	Nov 30, 2018	Approximate Sample 364g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA18 0-0.1	18-De03158	Nov 30, 2018	Approximate Sample 577g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA19 0-0.1	18-De03159	Nov 30, 2018	Approximate Sample 552g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA20 0-0.1	18-De03160	Nov 30, 2018	Approximate Sample 649g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA21 0-0.1	18-De03161	Nov 30, 2018	Approximate Sample 597g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
HA22 0-0.1	18-De03162	Nov 30, 2018	Approximate Sample 643g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
QA01	18-De03168	Nov 30, 2018	Approximate Sample 608g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
QA02	18-De03169	Nov 30, 2018	Approximate Sample 583g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
SP01	18-De03173	Nov 30, 2018	Approximate Sample 378g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
SP03	18-De03174	Nov 30, 2018	Approximate Sample 586g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.





NATA Accredited Accreditation Number 1261 Site Number 18217

Client Sample ID	Eurofins   mgt Sample No.	Date Sampled	Sample Description	Result
FRAG-01	18-De03175	Nov 30, 2018	Approximate Sample 85g / 143x120x4mm Sample consisted of: Grey compressed fibre cement sheet	No asbestos detected. Organic fibre detected. No respirable fibres detected.
FRAG-03	18-De03177	Nov 30, 2018	Approximate Sample 115g / 103x85x4mm Sample consisted of: Grey compressed fibre cement sheet	No asbestos detected. Organic fibre detected. No respirable fibres detected.



# mgt

### **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 (regarding both quality and NATA accreditation).

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	Dec 04, 2018	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Dec 04, 2018	Indefinite

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Melbourne
3-5 Kingston Town
Oakleigh VIC 3166

NATA # 1261 Site # 1254 & 14271

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

Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MAMPE ROAD							Order No.: Report #: Phone: Fax:			6; 0;	631102 02 8245 0300							R D P C	eceiv lue: riority contac	ved: y: ct Nan	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day <b>ne:</b> Daniel Denaro
Pro	oject Name: oject ID:	55607	AD														Euro	ofins	mgt	Analy	ytical Services Manager : Nibha Vaidya
		Sa	mple Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	
Melk	oourne Laborat	ory - NATA Site	# 1254 & 142	271														X			
Syd	here Laboratory	- NATA Site # 1	8217 20704			v	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Port	b l aboratory - l	y - NATA Sile #	20194			<u>^</u>															
Exte	ernal Laboratory	1	<u> </u>																		
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																
1	HA01 0-0.1	Nov 30, 2018		Soil	S18-De03141						Х		Х		Х	Х	Х		Х		
2	HA02 0-0.1	Nov 30, 2018		Soil	S18-De03142		х				х	Х			Х	Х	х		X		
3	HA03 0-0.1	Nov 30, 2018		Soil	S18-De03143		Х				х				Х	Х	х		X		
4	HA04 0-0.1	Nov 30, 2018		Soil	S18-De03144						Х				Х	Х	Х		X		4
5	HA04 0.2-0.3	Nov 30, 2018		Soil	S18-De03145							Х					Х				
6	HA05 0-0.1	Nov 30, 2018		Soil	S18-De03146							Х				Х	X		X		4
7	HA06 0-0.1	Nov 30, 2018		Soil	S18-De03147										X		X				
8	HA07 0-0.1	Nov 30, 2018		Sol	S18-De03148						X				X		X				
9	HA08 0-0.1	Nov 30, 2018		Sol	S18-De03149		X				Х	Х			Х	Х	Х		X		1

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Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Lane Cove West NSW 2066 Phone : +61 7 3902 4600 Phone : +61 2 9900 8400 NATA # 1261 Site # 20794 NATA # 1261 Site # 18217

Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000					Or Re Ph Fa	rder No.: eport #: hone: ax:			631102 02 8245 0300								eceiv ue: riority ontac	red: /: ct Nan	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day <b>ne:</b> Daniel Denaro	
Project Name: Project ID:	MAMRE ROAD 55607														Euro	ofins	mgt	Analy	rtical Services Manager : Nibha V	/aidya
	Sample Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Melbourne Laborato	ory - NATA Site # 1254 & 14	271														Х				
Sydney Laboratory	- NATA Site # 18217			V	X	X	Х	X	X	Х	Х	X	Х	X	Х	Х	Х	Х		
Brisbane Laboratory	y - NATA Site # 20794			~															l	
10 HA09 0-0.1	Nov 30, 2018	Soil	S18-De03150						x	х			x	x	х		х		l	
11 HA10 0-0.1	Nov 30, 2018	Soil	S18-De03151		х				х	х				x	х		х		l	
12 HA11 0-0.1	Nov 30, 2018	Soil	S18-De03152		Х				Х				Х		Х				l	
13 HA12 0-0.1	Nov 30, 2018	Soil	S18-De03153						Х	Х			Х		Х				l	
14 HA13 0-0.1	Nov 30, 2018	Soil	S18-De03154		х				х	х			Х	x	х		Х		ł	
15 HA14 0-0.1	Nov 30, 2018	Soil	S18-De03155						Х	Х			Х		Х				l	
16 HA16 0-0.1	Nov 30, 2018	Soil	S18-De03156						Х	Х			Х	X	Х		Х		l	
17 HA17 0-0.1	Nov 30, 2018	Soil	S18-De03157		X				<u> </u>	Х			Х		Х				I	
18 HA18 0-0.1	Nov 30, 2018	Soil	S18-De03158		X				X				Х	X	Х		Х		I	
19 HA19 0-0.1	Nov 30, 2018	Soil	S18-De03159		X				X	Х			X		Х				I	
20 HA20 0-0.1	Nov 30, 2018	Soil	S18-De03160	-	X				X				Х	X	Х		Х		l	
21 HA21 0-0.1	Nov 30, 2018	Soil	S18-De03161		Х								Х	Х	Х		Х			

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Co Ao Pr	Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MAMRE ROAD					Order No.: Report #: Phone: Fax:			6: 0:	631102 02 8245 0300							Received: Due: Priority: Contact Name:			Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day me: Daniel Denaro
Pr	oject ID:	55607														Euro	ofins	mgt	Analy	ytical Services Manager : Nibha Vaidya
		Sample Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	НОГД	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	
Mell	bourne Laborato	ry - NATA Site # 1254 & 142	271														X		~	-
Syd	ney Laboratory -	NATA Site # 1821/			Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Pert	balle Laboratory - N	ΔTΔ Site # 23736			~															
22	HA22 0-0.1	Nov 30, 2018	Soil	S18-De03162		x				х	х			х	x	х		x		
23	TP01 0-0.1	Dec 03, 2018	Soil	S18-De03163							х					Х				
24	TP01 0.5-0.6	Dec 03, 2018	Soil	S18-De03164	Х				Х							Х	Х			
25	TP01 3-3.1	Dec 03, 2018	Soil	S18-De03165	Х				Х							Х	Х			
26	TP02 0-0.1	Dec 03, 2018	Soil	S18-De03166						Х	Х					Х				
27	TP02 1-1.1	Dec 03, 2018	Soil	S18-De03167	Х				Х							Х	Х			
28	QA01	Nov 30, 2018	Soil	S18-De03168		х				х	Х			Х	х	х		Х		
29	QA02	Nov 30, 2018	Soil	S18-De03169		х				х	х			х	х	х		x		
30	RIN01	Dec 03, 2018	Water	S18-De03170						х	х			х	х			x		
31	TS	Nov 30, 2018	Water	S18-De03171															Х	
32	ТВ	Nov 30, 2018	Water	S18-De03172															Х	
33	SP01	Nov 30, 2018	Soil	S18-De03173		х				х	х			х	х	х		х		

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Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MAMRE ROAD         Project ID:       55607					Or Re Ph Fa	der N port a ione: ix:	lo.: #:	6 0	31102 2 824	2 5 030	0					R D P C	eceiv ue: riorit ontac	ved: y: ct Nan	ne:	Dec 3, 20 Dec 10, 2 5 Day Daniel De	18 6:38 P <b>I</b> 018 enaro	Л	
	-					-	-	-	-	-	_	-	-	-	-	Eur	ofins	mgt	Analy	tical Se	rvices Mar	nager : Nit	oha Vaidya
Sample Detail					% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH				
Mell	bourne Laborato	ry - NATA Site # 1254 &	14271														Х						
Syd	ney Laboratory -	NATA Site # 18217				Х	Х	Х	Х	Х	х	х	Х	Х	х	Х	Х	Х	Х				
Bris	bane Laboratory	- NATA Site # 20794			Х																		
Pert	h Laboratory - N	ATA Site # 23736		1																			
34	SP03	Nov 30, 2018	Soil	S18-De03174		Х				Х	Х			Х	Х	Х		Х					
35	FRAG-01	Nov 30, 2018	Building Materials	S18-De03175			x																
36	HA15 0-0.1	Nov 30, 2018	Soil	S18-De03176						Х				Х	Х	Х		Х					
37	FRAG-03	Nov 30, 2018	Building Materials	S18-De03177			x																
38	HA15 0-0.1	Nov 30, 2018	US Leachate	S18-De03310						х			Х	Х									
39	HA01 0.2-0.3	Nov 30, 2018	Soil	S18-De03326				Х															
40	HA02 0.2-0.3	Nov 30, 2018	Soil	S18-De03327				х															
41	HA05 0.2-0.3	Nov 30, 2018	Soil	S18-De03328				Х															
42	HA08 0.2-0.3	Nov 30, 2018	Soil	S18-De03329				Х															
43	HA09 0.2-0.3	Nov 30, 2018	Soil	S18-De03330				Х															
44	HA10 0.2-0.3	Nov 30, 2018	Soil	S18-De03331				х															

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Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000				Or Re Pr Fa	Order No.: Report #: Phone: Fax:		631102 02 8245 0300								Received: Due: Priority: Contact Name:				Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day Daniel Denaro						
Pi Pi	roject Name: roject ID:	MAMRE RO 55607	AD														Euro	ofins	mgt	Analy	ytical Se	rvices Ma	anager :	Nibha V	/aidya
	Sample Detail					% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH			-		-
Mel	bourne Laborato	ory - NATA Site	# 1254 & 1427	71														х			-				
Syd	ney Laboratory	- NATA Site # 1	8217				X	X	Х	X	X	Х	X	X	Х	X	Х	Х	X	Х	-				
Bris	sbane Laboratory	/ - NATA Site #	20794			X															-				
Per	th Laboratory - N	ATA Site # 237	736	0'l	010 D 00000				v												-				
45	HA11 0.2-0.3	Nov 30, 2018		Soll Soil	S18-De03332																				
40	HA13 0 2-0 3	Nov 30, 2018		Soil	S18-De03333		1		X		1			1											
48	HA14 0.2-0.3	Nov 30, 2018		Soil	S18-De03335	1	1		x		1			1							1				
49	HA16 0.2-0.3	Nov 30, 2018		Soil	S18-De03336				x												1				
50	HA17 0.2-0.3	Nov 30, 2018		Soil	S18-De03337	1	1		x		1			1							1				
51	HA18 0.2-0.3	Nov 30, 2018		Soil	S18-De03338				Х												1				
52	HA19 0.2-0.3	Nov 30, 2018		Soil	S18-De03339				Х												]				
53	HA20 0.2-0.3	Nov 30, 2018		Soil	S18-De03340				Х																
54	TP01 0.2-0.3	Dec 03, 2018		Soil	S18-De03341				Х																
55	TP01 1-1.1	Dec 03, 2018		Soil	S18-De03342				Х																
56	TP01 2-2.1	Dec 03, 2018		Soil	S18-De03343				Х																

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Co Ao	ompany Name: Idress:	JBS & G Au Level 1, 50 I Sydney NSW 2000	stralia (NSW) Margaret St	P/L			Or Re Ph Fa	der N port i ione: x:	o.: #:	6 0	31102 2 824	2 5 030	0					R D P C	eceiv Jue: Priority Contac	red: y: ct Nar	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day me: Daniel Denaro
Pr Pr	oject Name: oject ID:	MAMRE RO 55607	AD														Euro	ofins	mgt	Analy	ytical Services Manager : Nibha Vaidya
	Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	
Mell	oourne Laborato	ry - NATA Site	# 1254 & 142	271			×	V	V	×	V	V		V	v	v	V	X		×	-
Syd	hey Laboratory		8217 20704			×	×	×	×	×	~	×	<u> </u>	×	~	<u> </u>	×	~		~	-
Port	b Laboratory - N	ATA Site # 23	· <u>20734</u> 736			~															-
57	TP02 0.2-0.3	Dec 03, 2018		Soil	S18-De03344				х												-
58	TP02 0.5-0.6	Dec 03, 2018		Soil	S18-De03345				х												1
59	TP02 2-2.1	Dec 03, 2018		Soil	S18-De03346				Х												1
60	TP02 3-3.1	Dec 03, 2018		Soil	S18-De03347				х												]
61	SP02	Nov 30, 2018		Soil	S18-De03348				Х												
62	SP04	Nov 30, 2018		Soil	S18-De03349				х												
63	SP05	Nov 30, 2018		Soil	S18-De03350				х												
64	SP06	Nov 30, 2018		Soil	S18-De03351				х												
65	FRAG02	Nov 30, 2018		Building Materials	S18-De03352				х												
66	HA15 0.2-0.3	Nov 30, 2018		Soil	S18-De03353				х												
Test	t Counts					3	17	2	28	3	25	20	1	1	26	20	32	3	20	2	



### Internal Quality Control Review and Glossary General

### 1. QC data may be available on request.

- 2. All soil results are reported on a dry basis, unless otherwise stated.
- 3. Samples were analysed on an 'as received' basis.
- 4. 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.

mgt

### Units

% w/w: weight for weight b	pasis	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 Austr Sites in Western Australia (2009), including supporting document F	alia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination	on) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-a: NEPM, ACM is generally restricted to those materials that do not p	sbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the ass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, w equivalent to "non-bonded / friable".	eathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or materials that do not pass a 7mm x 7mm sieve.	severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those
Friable	Asbestos-containing materials of any size that may be broken or cr outside of the laboratory's remit to assess degree of friability.	umbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is
Trace Analysis	Analytical procedure used to detect the presence of respirable fibre	es in the matrix.



# mgt

### Comments

De03154, 57, 73: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Eurofins | mgt accreditation number 1261, corporate site 1254 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

### 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**

CodeDescriptionN/ANot 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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mgt

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 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention:

Daniel Denaro

Report	
Project name	
Project ID	
Received Date	

631102-L MAMRE ROAD 55607 Dec 03, 2018

Client Sample ID			HA15 0-0.1
Sample Matrix			US Leachate
Eurofins   mgt Sample No.			S18-De03310
Date Sampled			Nov 30, 2018
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	0.013
Acenaphthylene	0.001	mg/L	0.001
Anthracene	0.001	mg/L	< 0.015
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene <sup>N07</sup>	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	0.002
Fluorene	0.001	mg/L	0.006
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	0.057
Phenanthrene	0.001	mg/L	0.018
Pyrene	0.001	mg/L	< 0.002
Total PAH*	0.002	mg/L	0.097
2-Fluorobiphenyl (surr.)	1	%	72
p-Terphenyl-d14 (surr.)	1	%	81
Heavy Metals			
Arsenic	0.01	mg/L	< 0.01
Cadmium	0.005	mg/L	< 0.005
Chromium	0.05	mg/L	< 0.05
Copper	0.05	mg/L	< 0.05
Lead	0.01	mg/L	< 0.01
Mercury	0.001	mg/L	< 0.001
Nickel	0.05	mg/L	< 0.05
Zinc	0.05	mg/L	0.69
USA Leaching Procedure			
Leachate Fluid <sup>C01</sup>		comment	1.0
pH (initial)	0.1	pH Units	6.0
pH (off)	0.1	pH Units	5.3
pH (USA HCI addition)	0.1	pH Units	1.8


## 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 (regarding both quality and NATA accreditation).

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
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 06, 2018	7 Days
- Method:			
Metals M8	Sydney	Dec 09, 2018	28 Day
- Method:			
USA Leaching Procedure	Sydney	Dec 06, 2018	14 Day
- Method:			

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Co Ad Pro	mpany Name: dress: oject Name: oject ID:	JBS & G Aus Level 1, 50 M Sydney NSW 2000 MAMRE RO/ 55607	etralia (NSW) largaret St AD	P/L			Or Re Ph Fa	der N port <del>/</del> one: x:	o.: #:	63 02	31102 2 824	2 5 030	0				Fur	R D P C	eceiv ue: riorit; ontac	ved: y: ct Nar	me: [	Dec 3, 2 Dec 10, 5 Day Daniel D	018 6:38 2018 enaro	PM libba Vaid	łva
	Sample Detail Melbourne Laboratory - NATA Site # 1254 & 14271							Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	271														Х							
Sydi	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					
Bris	bane Laboratory	y - NATA Site #	20794			Х																			
Pert	h Laboratory - N	ATA Site # 237	36																						
Exte	rnal Laboratory			1	1																_				
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	HA01 0-0.1	Nov 30, 2018		Soil	S18-De03141						х		x		Х	х	Х		х		1				
2	HA02 0-0.1	Nov 30, 2018		Soil	S18-De03142		х				х	х			х	х	Х		Х		1				
3	HA03 0-0.1	Nov 30, 2018		Soil	S18-De03143		х				х				х	х	Х		х		1				
4	HA04 0-0.1	Nov 30, 2018		Soil	S18-De03144						х				х	х	Х		Х		1				
5	HA04 0.2-0.3	Nov 30, 2018		Soil	S18-De03145							х					Х				1				
6	HA05 0-0.1	Nov 30, 2018		Soil	S18-De03146							х				х	Х		Х		1				
7	HA06 0-0.1	Nov 30, 2018		Soil	S18-De03147										Х		Х				1				
8	HA07 0-0.1	Nov 30, 2018		Soil	S18-De03148		Х				Х				х		Х				1				
9	HA08 0-0.1	Nov 30, 2018		Soil	S18-De03149		Х				Х	Х			Х	Х	Х		Х		]				

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Company Name: Address: Project Name: Project ID:	JBS & G Australia (NSW) Level 1, 50 Margaret St Sydney NSW 2000 MAMRE ROAD 55607	P/L			Or Re Ph Fa	der N port <del>/</del> one: x:	o.: #:	6 0.	31102 2 824	<u>2</u> 5 030	0					R D P C	Receiv Due: Priorit <u>:</u> Contac	red: y: ct Nar	[ [ me: [	Dec 3, 20 Dec 10, 2 5 Day Daniel De	018 6:38 PN 2018 enaro	1
															Euro	ofins	mgt	Analy	ytical Serv	ices Ma	nager : Nib	ha Vaidya
	Sample Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH				
Melbourne Laborator	y - NATA Site # 1254 & 142	71														Х						
Sydney Laboratory -	NATA Site # 18217				Х	Х	Х	X	Х	Х	X	Х	Х	X	Х	Х	X	Х	4			
Brisbane Laboratory	- NATA Site # 20794			Х															4			
Perth Laboratory - N/	ATA Site # 23736																		4			
10 HA09 0-0.1	Nov 30, 2018	Sol	S18-De03150		v				X	X			X	X	X				-			
12 HA11 0 0 4	Nov 30, 2018	Soll	S18-De03151							X		-	v	<u> </u>					-			
13 HA12 0-0 1	Nov 30, 2018	Soil	S18-De03152		<u> </u>				×	x	-	-	×		×				1			
14 HA13 0-0 1	Nov 30, 2018	Soil	S18-De03153		x				x	x		<u> </u>	x	x	x		x		-			
15 HA14 0-0 1	Nov 30, 2018	Soil	S18-De03155						X	x			x		X				1			
16 HA16 0-0.1	Nov 30, 2018	Soil	S18-De03156						x	X			x	x	x		x		1			
17 HA17 0-0.1	Nov 30, 2018	Soil	S18-De03157		х				-	X			X		X				1			
18 HA18 0-0.1	Nov 30, 2018	Soil	S18-De03158		х				х				х	x	х		x		1			
19 HA19 0-0.1	Nov 30, 2018	Soil	S18-De03159		х				х	Х			х		х				1			
20 HA20 0-0.1	Nov 30, 2018	Soil	S18-De03160		х			l	х				х	X	х	l	X		1			
21 HA21 0-0.1	Nov 30, 2018	Soil	S18-De03161		Х								Х	Х	Х		X		]			

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Cc Ac Pr Pr	ompany Name: Idress: oject Name: oject ID:	JBS & G Aus Level 1, 50 M Sydney NSW 2000 MAMRE RO/ 55607	stralia (NSW) P/L Margaret St AD			Or Re Ph Fa	der N port # one: x:	o.: #:	6 0	31102 2 824	2 5 030	00				Eur	F C F C	Receiv Due: Priority Contac	ed: /: :t Nar Analy	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day me: Daniel Denaro
	Sample Detail lelbourne Laboratory - NATA Site # 1254 & 14271 vdney Laboratory - NATA Site # 18217					Asbestos - WA guidelines	Asbestos Absence /Presence	НОГД	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	
Melt	oourne Laborate	ory - NATA Site	# 1254 & 14271														Х			
Syd	ney Laboratory	- NATA Site # 1	8217			Х	Х	Х	Х	Х	Х	X	Х	Х	X	Х	Х	X	Х	_
Bris	bane Laborator	y - NATA Site #	20794		Х							<u> </u>			<u> </u>					_
Pert	h Laboratory - N	NATA Site # 237	36																	_
22	HA22 0-0.1	Nov 30, 2018	Soil	S18-De03162		X				X	X	<u> </u>		X	X	X		X		-
23	TP01 0-0.1	Dec 03, 2018	Soil	S18-De03163							X					X				-
24	TP01 0.5-0.6	Dec 03, 2018	Soil	S18-De03164	X				X			-				X	X			-
25	TP00 0.0.4	Dec 03, 2018	Soil	S18-De03165	X				X	v	v				-	X	X			-
26	TP02 0-0.1	Dec 03, 2018	Soil	S18-De03166	~					X	X					X	v			-
27	1122 1-1.1	Dec 03, 2018	Soil	518-De03167	X	~			X	~	v			~		X	X			-
28		Nov 30, 2018	Soil	518-De03168		X			<u> </u>	X	X			X		X	<u> </u>			-
29	QA02	NOV 30, 2018	Soll	S18-De03169		X					×	+				X				-
30		Dec 03, 2018	vvater	518-De03170						×	~	+		~					×	-
31		Nov 30, 2018	VVater	S18 Dc03171								+							×	-
22		Nov 30, 2018	vvater	S10-De03172		v				v	v			v	- v	v		-	^	-
১১	13201	1100 30, 2018	12011	1918-De031/3		Ň				X	Ň			X		Ň	1	X		

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Pr	oject ID:	55607															Euro	ofins	mgt	Analy	ytical Servic	ces Mar	nager : Nit	oha Vaidya	
	Sample Detail lelbourne Laboratory - NATA Site # 1254 & 14271 vdney Laboratory - NATA Site # 18217						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Mell	bourne Laborate	ory - NATA Site	# 1254 & 142	71														Х			4				
Syd	ney Laboratory	- NATA Site # 1	8217				X	X	X	X	Х	Х	X	X	Х	X	Х	X	X	Х	-				
Bris	bane Laborator	y - NATA Site #	20794			X															-				
Pert	h Laboratory - I	Nov 20, 2018	/36	Coil	C10 De02174		~				v	v			v	v	v				-				
34 35	FRAG-01	Nov 30, 2018		Building Materials	S18-De03174		^	x			^	^			^	^	^				-				
36	HA15 0-0.1	Nov 30, 2018		Soil	S18-De03176						х				х	х	х		X						
37	FRAG-03	Nov 30, 2018		Building Materials	S18-De03177			х																	
38	HA15 0-0.1	Nov 30, 2018		US Leachate	S18-De03310						Х			Х	Х						4				
39	HA01 0.2-0.3	Nov 30, 2018		Soil	S18-De03326				Х		<u> </u>										4				
40	HA02 0.2-0.3	Nov 30, 2018		Soil	S18-De03327				Х		<u> </u>										4				
41	HA05 0.2-0.3	Nov 30, 2018		Soil	S18-De03328				Х												4				
42	HA08 0.2-0.3	Nov 30, 2018		Soil	S18-De03329				X												-				
43	HA09 0.2-0.3	Nov 30, 2018		Soil	S18-De03330				X												-				
44	HA10 0.2-0.3	Nov 30, 2018		Soll	S18-De03331				Х																

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Company Name:JBS & G Australia (NSW) P/LAddress:Level 1, 50 Margaret StSydneySW 2000Project Name:MAMRE ROADProject ID:55607			Ore Re Ph Fa	der N port # one: x:	o.: #:	6 0	31102 2 824	2 5 030	0				Euro	R D P C	eceiv Jue: Priority Contac	ed: /: :t Nar Analy	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day Ime: Daniel Denaro Iytical Services Manager : Nibha Vaidy	ra
Sample Detail		% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	ногр	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Melbourne Laboratory - NATA Site # 1254 & 14271														х				
Sydney Laboratory - NATA Site # 18217			Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	X	Х	_	
Brisbane Laboratory - NATA Site # 20794		Х															4	
Perth Laboratory - NATA Site # 23736																	-	
45 HA11 0.2-0.3 Nov 30, 2018 Soil	S18-De03332				X												-	
46     HA12 U.2-U.3     Nov 30, 2018     Soil     518-De03333</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>-</td> <td></td>	518-De03333				X												-	
41     ITA 13 U.2-U.3     INUV 3U, 2U I8     SOII     S       48     HA14 0 2-0 3     Nov 30 2019     Soii     S	S18-De02225				×	-											-	
40 HA16 0 2-0 3 Nov 30 2018 Soil Soil	S18-De03335				X												-	
H0     H0	S18-De03330				X												-	
51 HA18 0 2-0 3 Nov 30 2018 Soil	S18-De03337				X												-	
52 HA19 0 2-0 3 Nov 30 2018 Soil	S18-De03330				x												4	
53 HA20 0.2-0.3 Nov 30, 2018 Soil	S18-De03340				X	<u> </u>											1	
54 TP01 0.2-0.3 Dec 03 2018 Soil	S18-De03341				X	<u> </u>											1	
55 TP01 1-1.1 Dec 03, 2018 Soil	S18-De03342				X												1	
56     TP01 2-2.1     Dec 03, 2018     Soil     S	S18-De03343				Х													

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Co Ao Pr	ompany Name: Idress: oject Name:	JBS & G Australia (NSW Level 1, 50 Margaret St Sydney NSW 2000 MAMRE ROAD	P/L			Or Re Ph Fa	der N port ; ione: x:	o.: #:	6 0.	31102 2 824	<u>2</u> 5 030	0					R D P C	eceiv Due: Priority Contac	ed: /: :t Nar	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day ame: Daniel Denaro	
	oject iD.	55607														Euro	ofins	mgt	Analy	lytical Services Manager : Nibha Vaidya	
	Sample Detail Melbourne Laboratory - NATA Site # 1254 & 14271 Sydney Laboratory - NATA Site # 18217						Asbestos Absence /Presence	НОГД	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Mell	bourne Laborato	ory - NATA Site # 1254 & 14	271														Х			_	
Syd	ney Laboratory	- NATA Site # 18217				X	X	Х	X	Х	Х	X	X	Х	X	Х	Х	X	Х	4	
Bris	bane Laborator	y - NATA Site # 20794			X															-	
Pert	TD02 0 2 0 2	NATA Site # 23/36	Coil	S18 De02244				v												-	
50	TP02 0.2-0.3	Dec 03, 2018	Soil	S18-De03344			-	×						-						-	
50	TP02 0.3-0.0	Dec 03, 2018	Soil	S18-De03345			-	x												-	
60	TP02.3-3.1	Dec 03 2018	Soil	S18-De03347				x												1	
61	SP02	Nov 30, 2018	Soil	S18-De03348				X												1	
62	SP04	Nov 30, 2018	Soil	S18-De03349				X												1	
63	SP05	Nov 30, 2018	Soil	S18-De03350				x					1	<u> </u>						1	
64	SP06	Nov 30, 2018	Soil	S18-De03351				X												1	
65	FRAG02	Nov 30, 2018	Building Materials	S18-De03352				x													
66	HA15 0.2-0.3	Nov 30, 2018	Soil	S18-De03353				х													
Tes	t Counts				3	17	2	28	3	25	20	1	1	26	20	32	3	20	2		



### Internal Quality Control Review and Glossary

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.

- 2. All soil 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. 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
сос	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
СР	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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 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									
Heavy Metals									
Arsenic			mg/L	< 0.01			0.01	Pass	
Cadmium			mg/L	< 0.005			0.005	Pass	
Chromium			mg/L	< 0.05			0.05	Pass	
Copper			mg/L	< 0.05			0.05	Pass	
Lead			mg/L	< 0.01			0.01	Pass	
Mercury			mg/L	< 0.001			0.001	Pass	
Nickel			mg/L	< 0.05			0.05	Pass	
Zinc			mg/L	< 0.05			0.05	Pass	
LCS - % Recovery							•		
Heavy Metals									
Arsenic			%	105			70-130	Pass	
Cadmium			%	101			70-130	Pass	
Chromium			%	101			70-130	Pass	
Copper			%	97			70-130	Pass	
Lead			%	99			70-130	Pass	
Mercury			%	105			70-130	Pass	
Nickel			%	98			70-130	Pass	
Zinc			%	95			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S18-De02812	NCP	%	106			70-130	Pass	
Cadmium	S18-De02812	NCP	%	102			70-130	Pass	
Chromium	S18-De02812	NCP	%	101			70-130	Pass	
Copper	S18-De02812	NCP	%	94			70-130	Pass	
Lead	S18-De02812	NCP	%	97			70-130	Pass	
Mercury	S18-De02812	NCP	%	96			70-130	Pass	
Nickel	S18-De02812	NCP	%	95			70-130	Pass	
Zinc	S18-De02812	NCP	%	94			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-De02796	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Cadmium	S18-De02796	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chromium	S18-De02796	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Copper	S18-De02796	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead	S18-De02796	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Mercury	S18-De02796	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Nickel	S18-De02796	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Zinc	S18-De02796	NCP	mg/L	0.21	0.19	8.0	30%	Pass	



## Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

## Authorised By

Nibha Vaidya Andrew Sullivan Gabriele Cordero Analytical Services Manager Senior Analyst-Organic (NSW) 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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NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention:

Daniel Denaro

Report	631102-S
Project name	MAMRE ROAD
Project ID	55607
Received Date	Dec 03, 2018

Client Sample ID			G01HA01 0-0.1	HA02 0-0 1	HA03 0-0 1	HA04 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins I mot Sample No			S18-De03141	S18-De03142	S18-De03143	S18-De03144
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Deference		Linit	100 30, 2010	100 30, 2010	100 30, 2010	100 30, 2010
Test Recoverable Hydrocarbons - 1999 NEPM Eract		Unit				
Commonto					D16	
	20	malka	< 20	< 20	K 10	< 20
TRH C10 C14	20	mg/kg	< 20	< 20	< 20	40
TPH C15 C29	50	mg/kg	75	120	< 200	40
	50	mg/kg	70	130	1900	< 50
TRH C29-C30	50	mg/kg	175	95	1800	< 50
	50	піу/ку	175	225	2900	< 50
Banzana	0.1	mallea	- 0.1	.01	. 0.1	:01
	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylhonzono	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vulence Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
A Promofluorobonzono (ourr.)	0.3	0/	< 0.3 51	< 0.3	< 0.3	< 0.3
Total Recoverable Hydrocarbons - 2013 NERM Fract	ione	70	51	109	07	75
Comments					R16	
Naphthalene <sup>N02</sup>	0.5	ma/ka	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	ma/ka	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	ma/ka	< 20	< 20	< 20	< 20
TRH >C10-C16	50	ma/ka	< 50	< 50	< 500	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	ma/ka	< 50	< 50	< 500	< 50
TRH >C16-C34	100	mg/kg	130	190	2400	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 1000	< 100
TRH >C10-C40 (total)*	100	mg/kg	130	190	2400	< 100
Polycyclic Aromatic Hydrocarbons	•					
Comments					G01	
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	6.1	0.6	6.1	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	12	1.2	12	1.2
Acenaphthene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Acenaphthylene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Anthracene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5



Client Sample ID			<sup>G01</sup> HA01 0-0.1	HA02 0-0.1	HA03 0-0.1	HA04 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03141	S18-De03142	S18-De03143	S18-De03144
Date Sampled			Nov 30. 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit		,	,	,
Polycyclic Aromatic Hydrocarbons	Lon	Offic				
Benzo(a, h, i)pervlene	0.5	ma/ka	< 5	< 0.5	< 5	< 0.5
Benzo(k)fluoranthene	0.5	ma/ka	< 5	< 0.5	< 5	< 0.5
Chrysene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Fluoranthene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Fluorene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Naphthalene	0.5	mg/kg	< 5	< 0.5	< 5	< 0.5
Phenanthrene	0.5	mg/kg	12	< 0.5	< 5	< 0.5
Pyrene	0.5	mg/kg	26	< 0.5	< 5	< 0.5
Total PAH*	0.5	mg/kg	38	< 0.5	< 5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	89	125	83	127
p-Terphenyl-d14 (surr.)	1	%	115	INT	91	INT
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	-	-
	1	mg/kg	-	< 1	-	-
Aldrin and Dieldrin (Total)^	0.05	mg/kg	-	< 0.05	-	-
	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Dibutulablarandata (aurr.)	1	0/ mg/kg	-	< 0.1	-	-
	1	70 0/	-	125	-	-
Polychlorinated Binhenvle	1	/0	-	107	-	-
Arcelor 1016	0.5	ma/ka	- 5			
Aroclor-1221	0.0	mg/kg	- 5	-	-	-
Aroclor-1232	0.1	mg/kg	< 5	-	-	-
Aroclor-1242	0.0	mg/kg	5	-	-	-
Aroclor-1248	0.5	ma/ka	- 5	-	-	
Aroclor-1254	0.5	ma/ka	5	-	-	
Aroclor-1260	0.5	ma/ka	< 5	-	-	_
	0.0			1	1	



Client Sample ID Sample Matrix			<sup>G01</sup> HA01 0-0.1	HA02 0-0.1	HA03 0-0.1	HA04 0-0.1
Sample Maurix			S011 S18-Do03141	SUI	S18-Do03143	S18-Do02144
Euronn's   mgr Sample No.			510-De05141	510-De05142	510-De05145	510-De05144
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Total PCB*	0.5	mg/kg	<5	-	-	-
Dibutylchlorendate (surr.)	1	%	INT	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	-	-	-
% Moisture	1	%	38	15	17	19
Heavy Metals						
Arsenic	2	mg/kg	< 2	7.3	3.7	8.3
Cadmium	0.4	mg/kg	1.1	1.5	< 0.4	< 0.4
Chromium	5	mg/kg	36	30	30	19
Copper	5	mg/kg	900	54	70	30
Lead	5	mg/kg	270	52	12	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.3	15	44	9.7
Zinc	5	mg/kg	500	120	150	85

Oliant Comple ID						
			HA04 0.2-0.3	HA05 0-0.1	HA06 0-0.1	HA07 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03145	S18-De03146	S18-De03147	S18-De03148
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions					
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 C10-36 (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	%	-	70	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions					
Naphthalene <sup>N02</sup>	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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	-	-



Client Sample ID			HA04 0.2-0.3	HA05 0-0.1	HA06 0-0.1	HA07 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03145	S18-De03146	S18-De03147	S18-De03148
Date Sampled			Nov 30. 2018	Nov 30. 2018	Nov 30. 2018	Nov 30. 2018
Test/Reference		Linit				
Polycyclic Aromatic Hydrocarbons	LOIN	Offic				
Bonzo(2)pyropa TEO (lower bound) *	0.5	ma/ka				< 0.5
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5 0.6
Benzo(a)pyrene TEQ (intediditi bound) *	0.5	mg/kg	-		-	1.2
Acenantithene	0.5	ma/ka		_	-	< 0.5
Acenaphthylene	0.5	mg/kg			-	< 0.5
Anthracene	0.5	ma/ka	_	_	_	< 0.5
Benz(a)anthracene	0.5	ma/ka	_	_	_	< 0.5
Benzo(a)pyrepe	0.5	ma/ka	_	_	_	< 0.5
Benzo(b&i)fluoranthene <sup>N07</sup>	0.5	ma/ka	_	_	_	< 0.5
Benzo(a h i)pervlene	0.5	ma/ka	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	ma/ka	-	-	-	< 0.5
Chrysene	0.5	ma/ka	-	-	_	< 0.5
Dibenz(a,h)anthracene	0.5	ma/ka	-	-	-	< 0.5
Fluoranthene	0.5	ma/ka	-	-	-	< 0.5
Fluorene	0.5	ma/ka	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	ma/ka	-	-	-	< 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	%	-	-	-	112
p-Terphenyl-d14 (surr.)	1	%	-	-	-	147
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	1	mg/kg	< 1	< 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	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	135	143	-	-
Tetrachloro-m-xylene (surr.)	1	%	131	109	-	-



Client Sample ID Sample Matrix			HA04 0.2-0.3 Soil	HA05 0-0.1 Soil	HA06 0-0.1 Soil	HA07 0-0.1 Soil
Eurofins   mgt Sample No.			S18-De03145	S18-De03146	S18-De03147	S18-De03148
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
% Moisture	1	%	15	16	28	35
Heavy Metals						
Arsenic	2	mg/kg	-	-	8.4	4.0
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	19	18
Copper	5	mg/kg	-	-	47	34
Lead	5	mg/kg	-	-	34	10
Mercury	0.1	mg/kg	-	-	< 0.1	< 0.1
Nickel	5	mg/kg	-	-	20	11
Zinc	5	mg/kg	-	-	340	94

Client Sample ID			HA08 0-0.1	HA09 0-0.1	HA10 0-0.1	HA11 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03149	S18-De03150	S18-De03151	S18-De03152
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions					
Comments			R16			
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 200	< 20	23	-
TRH C15-C28	50	mg/kg	< 500	< 50	59	-
TRH C29-C36	50	mg/kg	< 500	< 50	64	-
TRH C10-36 (Total)	50	mg/kg	< 500	< 50	146	-
втех						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	69	67	74	-
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions					
Comments			R16			
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 500	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 500	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 1000	< 100	110	-
TRH >C34-C40	100	mg/kg	< 1000	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	110	-
Polycyclic Aromatic Hydrocarbons		-				
Comments			G01			
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	6.1	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	12	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5



Client Sample ID			HA08 0-0.1	HA09 0-0.1	HA10 0-0.1	HA11 0-0.1
			5011	5011	5011	5011
Eurofins   mgt Sample No.			S18-De03149	S18-De03150	S18-De03151	S18-De03152
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Anthracene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	91	120	132	123
p-Terphenyl-d14 (surr.)	1	%	102	INT	INT	INT
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 2	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	< 10	< 1	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	112	134	138	-
Tetrachloro-m-xylene (surr.)	1	%	98	109	113	-
% Moisture	1	%	16	23	16	14



Client Sample ID Sample Matrix Eurofins   mgt Sample No. Date Sampled			HA08 0-0.1 Soil S18-De03149 Nov 30, 2018	HA09 0-0.1 Soil S18-De03150 Nov 30, 2018	HA10 0-0.1 Soil S18-De03151 Nov 30, 2018	HA11 0-0.1 Soil S18-De03152 Nov 30, 2018
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	8.2	11	-	9.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	18	21	-	17
Copper	5	mg/kg	73	27	-	22
Lead	5	mg/kg	55	23	-	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	15	10	-	8.9
Zinc	5	mg/kg	150	59	-	35

Client Sample ID			HA12 0-0.1	HA13 0-0.1	HA14 0-0.1	HA16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03153	S18-De03154	S18-De03155	S18-De03156
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions					
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
TRH C10-C14	20	mg/kg	-	< 20	-	28
TRH C15-C28	50	mg/kg	-	< 50	-	65
TRH C29-C36	50	mg/kg	-	< 50	-	69
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	162
втех						
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	%	-	66	-	65
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions					
Naphthalene <sup>N02</sup>	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	-	< 20	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100	-	120
TRH >C34-C40	100	mg/kg	-	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-	120
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 <sup>N07</sup>	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



Client Sample ID			HA12 0-0.1	HA13 0-0.1	HA14 0-0.1	HA16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03153	S18-De03154	S18-De03155	S18-De03156
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				, ,
Polycyclic Aromatic Hydrocarbons	2011	0				
Benzo(k)fluoranthene	0.5	ma/ka	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	126	127	129	128
p-Terphenyl-d14 (surr.)	1	%	INT	INT	INT	INT
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	< 0.1	< 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	< 0.1	< 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
	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
	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
Endosulian sulphate	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	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
Hentachlor	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 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	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	139	127	136	146
Tetrachloro-m-xylene (surr.)	1	%	116	105	115	125
% Moisture	1	%	22	26	17	22
Heavy Metals						
Arsenic	2	mg/kg	12	13	5.5	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	20	24	16	27
Copper	5	mg/kg	27	38	16	16
Lead	5	mg/kg	30	30	15	29
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1



Client Sample ID			HA12 0-0.1	HA13 0-0.1	HA14 0-0.1	HA16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mgt Sample No.			S18-De03153	S18-De03154	S18-De03155	S18-De03156
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit				
Heavy Metals						
Nickel	5	mg/kg	10	14	7.1	8.2
Zinc	5	mg/kg	45	320	16	37

Client Sample ID			HA17 0-0.1	HA18 0-0.1	HA19 0-0.1	HA20 0-0.1		
Sample Matrix			Soil	Soil	Soil	Soil		
Eurofins   mgt Sample No.			S18-De03157	S18-De03158	S18-De03159	S18-De03160		
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018		
Test/Reference	LOR	Unit						
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions							
TRH C6-C9	20	mg/kg	-	< 20	-	< 20		
TRH C10-C14	20	mg/kg	-	< 20	-	20		
TRH C15-C28	50	mg/kg	-	59	-	< 50		
TRH C29-C36	50	mg/kg	-	57	-	< 50		
TRH C10-36 (Total)	50	mg/kg	-	116	-	< 50		
втех								
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	%	-	72	-	87		
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions							
Naphthalene <sup>N02</sup>	0.5	mg/kg	-	< 0.5	-	< 0.5		
TRH C6-C10	20	mg/kg	-	< 20	-	< 20		
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	-	< 20	-	< 20		
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50		
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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	< 0.5		
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6		
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2		
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Dibenz(a.h)anthracene	0.5		-	< 0.5	< 0.5	< 0.5		
Fluoranthene	0.5 m		-	< 0.5	< 0.5	< 0.5		
Fluorene	orene 0.5 mg		-	< 0.5	< 0.5	< 0.5		
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		



Client Sample ID			HA17 0-0.1	HA18 0-0.1	HA19 0-0.1	HA20 0-0.1		
Sample Matrix			5011	5011	5011			
Eurofins   mgt Sample No.			S18-De03157	S18-De03158	S18-De03159	S18-De03160		
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018		
Test/Reference	LOR	Unit						
Polycyclic Aromatic Hydrocarbons								
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5		
2-Fluorobiphenyl (surr.)	1	%	-	135	129	136		
p-Terphenyl-d14 (surr.)	1	%	-	INT	INT	184		
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	1	mg/kg	< 1	-	< 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	< 0.1	-	< 0.1	-		
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-		
Dibutylchlorendate (surr.)	1	%	148	-	135	-		
l etrachloro-m-xylene (surr.)	1	%	134	-	111	-		
% Moisture	1	%	30	17	18	16		
Heavy Metals								
Arsenic	2	mg/kg	9.5	6.6	10	13		
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4		
Chromium	5	mg/kg	26	14	16	16		
Copper	5	mg/kg	28	28	30	21		
Lead	5	mg/kg	32	22	22	36		
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1		
Nickel	5	mg/kg	13	17	19	10		
Zinc	5	mg/kg	66	250	67	63		



Client Sample ID			HA21 0-0.1	HA22 0-0.1	TP01 0-0.1	TP01 0.5-0.6		
Sample Matrix			Soil	Soil	Soil	Soil		
Eurofins   mgt Sample No.			S18-De03161	S18-De03162	S18-De03163	S18-De03164		
Date Sampled			Nov 30, 2018	Nov 30, 2018	Dec 03, 2018	Dec 03, 2018		
Test/Reference	LOR	Unit						
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions							
TRH C6-C9	20	mg/kg	< 20	< 20	-	-		
TRH C10-C14	20	mg/kg	21	< 20	-	-		
TRH C15-C28	50	mg/kg	270	< 50	-	-		
TRH C29-C36	50	mg/kg	450	< 50	-	-		
TRH C10-36 (Total)	50	mg/kg	741	< 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	%	66	70	-	-		
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions							
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	-	-		
TRH C6-C10	20	mg/kg	< 20	< 20	-	-		
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	-	-		
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-		
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	-	-		
TRH >C16-C34	100	mg/kg	580	< 100	-	-		
TRH >C34-C40	100	mg/kg	440	< 100	-	-		
TRH >C10-C40 (total)*	100	mg/kg	1020	< 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 <sup>N07</sup>	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	%	-	123	-	-		
p-Terphenyl-d14 (surr.)	1	%	-	INT	-	-		



Client Sample ID			HA21 0-0.1	HA22 0-0.1	TP01 0-0.1	TP01 0.5-0.6	
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins   mgt Sample No.			S18-De03161	S18-De03162	S18-De03163	S18-De03164	
Date Sampled			Nov 30, 2018	Nov 30, 2018	Dec 03, 2018	Dec 03, 2018	
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	1	mg/kg	-	< 1	< 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	-	< 0.1	< 0.1	-	
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-	
Dibutylchlorendate (surr.)	1	%	-	136	132	-	
Tetrachloro-m-xylene (surr.)	1	%	-	116	112	-	
		1					
% Clay	1	%	-	-	-	33	
Conductivity (1:5 aqueous extract at 25°C as rec.)	5	uS/cm	-	-	-	190	
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	-	5.1	
% Moisture	1	%	22	21	13	18	
Heavy Metals		T					
Arsenic	2	mg/kg	11	8.0	-	-	
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	-	
Chromium	5	mg/kg	18	23	-	-	
Copper	5	mg/kg	34	28	-	-	
Lead	5	mg/kg	23	38	-	-	
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	-	
ickel 5		mg/kg	12	13	-	-	
Zinc		mg/kg	62	51	-	-	
Cation Exchange Capacity							
Cation Exchange Capacity	0.05	meq/100g	-	-	-	17	



Client Sample ID			TP01 3-3.1	TP02 0-0.1	TP02 1-1.1	QA01		
Sample Matrix			Soil	Soil	Soil	Soil		
Eurofins   mgt Sample No.			S18-De03165	S18-De03166	S18-De03167	S18-De03168		
Date Sampled			Dec 03, 2018	Dec 03, 2018	Dec 03, 2018	Nov 30, 2018		
Test/Reference	LOR	Unit	,			,		
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions	Offic						
TRH C6-C9	20	ma/ka	_	_	_	< 20		
TRH C10-C14	20	ma/ka	-	-	-	< 20		
TRH C15-C28	50	ma/ka	-	-	-	65		
TRH C29-C36	50	ma/ka	-	-	-	51		
TRH C10-36 (Total)	50	ma/ka	-	-	-	116		
BTEX		55						
Benzene	0.1	ma/ka	-	-	-	< 0.1		
Toluene	0.1	ma/ka	-	-	-	< 0.1		
Ethylbenzene	0.1	ma/ka	-	-	-	< 0.1		
m&p-Xylenes	0.2	ma/ka	-	-	-	< 0.2		
o-Xvlene	0.1	ma/ka	-	-	-	< 0.1		
Xylenes - Total	0.3	ma/ka	-	-	-	< 0.3		
4-Bromofluorobenzene (surr.)	1	%	-	-	-	64		
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions							
Naphthalene <sup>N02</sup>	0.5	ma/ka	-	-	-	< 0.5		
TRH C6-C10	20	ma/ka	-	-	-	< 20		
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	ma/ka	-	-	-	< 20		
TRH >C10-C16	50	ma/ka	-	-	-	< 50		
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	ma/ka	-	-	-	< 50		
TRH >C16-C34	100	mg/kg	-	-	-	< 100		
TRH >C34-C40	100	ma/ka	-	-	-	< 100		
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 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 <sup>N07</sup>	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	-	0.7		
Total PAH*	0.5	mg/kg	-	< 0.5	-	0.7		
2-Fluorobiphenyl (surr.)	1	%	-	122	-	137		
p-Terphenyl-d14 (surr.)	1	%	-	INT	-	INt		



Client Sample ID			TP01 3-3.1	TP02 0-0.1	TP02 1-1.1	QA01		
Sample Matrix			Soil	Soil	Soil	Soil		
Eurofins   mgt Sample No.			S18-De03165	S18-De03166	S18-De03167	S18-De03168		
Date Sampled			Dec 03, 2018	Dec 03, 2018	Dec 03, 2018	Nov 30, 2018		
Test/Reference	LOR	Unit						
Organochlorine Pesticides								
Comments						G01		
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	< 1		
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	< 0.5		
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	< 0.5		
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	< 0.5		
a-BHC	0.05	mg/kg	-	< 0.05	-	< 0.5		
Aldrin	0.05	mg/kg	-	< 0.05	-	< 0.5		
b-BHC	0.05	mg/kg	-	< 0.05	-	< 0.5		
d-BHC	0.05	mg/kg	-	< 0.05	-	< 0.5		
Dieldrin	0.05	mg/kg	-	< 0.05	-	< 0.5		
Endosulfan I	0.05	mg/kg	-	< 0.05	-	< 0.5		
Endosulfan II	0.05	mg/kg	-	< 0.05	-	< 0.5		
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	< 0.5		
Endrin	0.05	mg/kg	-	< 0.05	-	< 0.5		
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	< 0.5		
Endrin ketone	0.05	mg/kg	-	< 0.05	-	< 0.5		
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	< 0.5		
Heptachlor	0.05	mg/kg	-	< 0.05	-	< 0.5		
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	< 0.5		
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.5		
Methoxychlor	0.2	mg/kg	-	< 0.2	-	< 2		
Toxaphene	1	mg/kg	-	< 1	-	< 10		
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	-	< 0.1	-	< 0.1		
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1		
Dibutylchlorendate (surr.)	1	%	-	120	-	123		
Tetrachloro-m-xylene (surr.)	1	%	-	98	-	103		
% Clay	1	%	23	-	24	-		
Conductivity (1:5 aqueous extract at 25°C as rec.)	5	uS/cm	620	-	180	-		
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	4.6	-	5.3	-		
% Moisture	1	%	11	17	16	18		
Heavy Metals		-						
Arsenic	2	mg/kg	-	-	-	14		
Cadmium	0.4	mg/kg	-	-	-	< 0.4		
Chromium	5	mg/kg	-	-	-	29		
Copper	5	mg/kg	-	-	-	51		
Lead	5	mg/kg	-	-	-	34		
Mercury	0.1	mg/kg	-	-	-	< 0.1		
Nickel	5	mg/kg	-	-	-	23		
Zinc	5	mg/kg	-	-	-	260		
Cation Exchange Capacity								
Cation Exchange Capacity	0.05	meq/100g	7.5	-	13	-		



Client Sample ID			QA02	SP01	SP03	HA15 0-0.1		
Sample Matrix			Soil	Soil	Soil	Soil		
Eurofins   mgt Sample No.			S18-De03169	S18-De03173	S18-De03174	S18-De03176		
Date Sampled			Nov 30, 2018	Nov 30. 2018	Nov 30. 2018	Nov 30, 2018		
	LOR	Unit						
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions	Offic						
TRH C6-C9	20	ma/ka	< 20	< 20	< 20	< 200		
TRH C10-C14	20	ma/ka	< 20	25	< 20	8700		
TRH C15-C28	50	ma/ka	55	50	< 50	53000		
TRH C29-C36	50	ma/ka	73	< 50	< 50	7000		
TRH C10-36 (Total)	50	ma/ka	128	75	< 50	68700		
BTEX		55						
Benzene	0.1	ma/ka	< 0.1	< 0.1	< 0.1	< 0.5		
Toluene	0.1	ma/ka	< 0.1	< 0.1	< 0.1	< 0.5		
Ethylbenzene	0.1	ma/ka	< 0.1	< 0.1	< 0.1	< 0.5		
m&p-Xylenes	0.2	ma/ka	< 0.2	< 0.2	< 0.2	< 1		
o-Xvlene	0.1	ma/ka	< 0.1	< 0.1	< 0.1	< 0.5		
Xylenes - Total	0.3	ma/ka	< 0.3	< 0.3	< 0.3	< 1.5		
4-Bromofluorobenzene (surr.)	1	%	73	65	71	82		
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions		-					
Naphthalene <sup>N02</sup>	0.5	ma/ka	< 0.5	< 0.5	< 0.5	37		
TRH C6-C10	20	ma/ka	< 20	< 20	< 20	< 200		
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	ma/ka	< 20	< 20	< 20	< 200		
TRH >C10-C16	50	ma/ka	< 50	< 50	< 50	19000		
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	ma/ka	< 50	< 50	< 50	19000		
TRH >C16-C34	100	ma/ka	100	< 100	< 100	48000		
TRH >C34-C40	100	ma/ka	< 100	< 100	< 100	< 10000		
TRH >C10-C40 (total)*	100	mg/kg	100	< 100	< 100	67000		
Polycyclic Aromatic Hydrocarbons								
Benzo(a)pyrene TEQ (lower bound) *	0.5	ma/ka	< 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	2.0		
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	10		
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 <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Fluoranthene	0.5	mg/kg	< 0.5	0.5	< 0.5	2.2		
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.4		
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	1.4		
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	10		
Pyrene	0.5	mg/kg	< 0.5	0.5	< 0.5	1.9		
Total PAH*	0.5	mg/kg	< 0.5	1	< 0.5	28.9		
2-Fluorobiphenyl (surr.)	1	%	121	126	133	INT		
p-Terphenyl-d14 (surr.)	1	%	INT	INT	INT	INT		



Client Sample ID			QA02	SP01	SP03	HA15 0-0.1		
Sample Matrix			Soil	Soil	Soil	Soil		
Eurofins   mgt Sample No.			S18-De03169	S18-De03173	S18-De03174	S18-De03176		
Date Sampled			Nov 30, 2018	Nov 30, 2018	Nov 30, 2018	Nov 30, 2018		
Test/Reference	LOR	Unit						
Organochlorine Pesticides								
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-		
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-		
Toxaphene	1	mg/kg	< 1	< 1	< 1	-		
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-		
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-		
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-		
Dibutylchlorendate (surr.)	1	%	124	149	140	-		
Tetrachloro-m-xylene (surr.)	1	%	90	135	117	-		
% Moisture	1	%	17	24	16	9.7		
Heavy Metals								
Arsenic	2	mg/kg	11	7.3	8.4	11		
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4		
Chromium	5	mg/kg	14	19	22	32		
Copper	5	mg/kg	21	110	23	17		
Lead	5	mg/kg	32	33	26	36		
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1		
Nickel	5	mg/kg	9.6	29	15	10		
Zinc	5	mg/kg	63	200	96	140		



## 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 (regarding both quality and NATA accreditation).

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	Dec 06, 2018	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 06, 2018	14 Day
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 06, 2018	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 06, 2018	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 06, 2018	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Dec 06, 2018	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Dec 06, 2018	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Clay	Brisbane	Dec 07, 2018	6 Day
- Method: LTM-GEN-7040			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Dec 06, 2018	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
Metals M8	Sydney	Dec 06, 2018	28 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Sydney	Dec 09, 2018	7 Day
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Dec 10, 2018	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Sydney	Dec 04, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

eurofins mgt ABN-50.005 e.mail : Envin web : www.eu					)85 521 Sales@eurofins.com 'ofins.com.au			<b>M</b> 2- 0 Pl N Si	Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271			<b>Sydney</b> Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				66 7	Brisb 1/21 Mura Phon NATA	ane Smallwo rrie QLE e : +61 \ # 1261	ood Place D 4172 7 3902 4600 i1 Site # 20794	Po 2/ Ki Pi N. Si	erth 91 Leach Hig ewdale WA hone : +61 8 ATA # 1261 te # 23736	jhway 105 9251 9600			
Co Ad Pro	mpany Name: dress: oject Name: oject ID:	JBS & G Aus Level 1, 50 M Sydney NSW 2000 MAMRE RO/ 55607	etralia (NSW) largaret St AD	P/L			Or Re Ph Fa	der N port <del>/</del> one: x:	o.: #:	63 02	31102 2 824	2 5 030	0				Fur	R D P C	eceiv ue: riorit; ontac	ved: y: ct Nar	me: [	Dec 3, 2 Dec 10, 5 Day Daniel D	018 6:38 2018 enaro	PM libba Vaid	łva
Sample Detail						% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	271														Х							
Sydi	ney Laboratory	- NATA Site # 1	8217				Х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					
Bris	bane Laboratory	y - NATA Site #	20794			Х																			
Pert	h Laboratory - N	ATA Site # 237	36																						
Exte	rnal Laboratory			1	1																_				
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	HA01 0-0.1	Nov 30, 2018		Soil	S18-De03141						х		x		Х	х	Х		х		1				
2	HA02 0-0.1	Nov 30, 2018		Soil	S18-De03142		х				х	х			х	х	Х		Х		1				
3	HA03 0-0.1	Nov 30, 2018		Soil	S18-De03143		х				х				х	х	Х		х		1				
4	HA04 0-0.1	Nov 30, 2018		Soil	S18-De03144						х				х	х	Х		Х		1				
5	HA04 0.2-0.3	Nov 30, 2018		Soil	S18-De03145							х					Х				1				
6	HA05 0-0.1	05 0-0.1 Nov 30, 2018 Soil S18-De03146									х				х	Х		Х		1					
7	HA06 0-0.1	0.1 Nov 30, 2018 Soil S18-De03147												Х		Х				1					
8	HA07 0-0.1	Nov 30, 2018		Soil	S18-De03148		Х				Х				х		Х				1				
9	HA08 0-0.1	Nov 30, 2018		Soil	S18-De03149		Х				Х	Х			Х	Х	Х		Х		]				

eurofins mgt ABN-50 005 e.mail : Enviro web : www.eur			)85 521 Sales@eurofins.com ofins.com.au			<b>M</b> 20 P N S	Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271			Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				66 7	Brisb 1/21 Mura Phon NATA	ane Smallwo rrie QLE e : +61 A # 1261	rood Place D 4172 7 3902 4600 i1 Site # 20794	Perth 2/91 Le Kewda Phone NATA Site # 2	each Highway lle WA 6105 ∶ +61 8 9251 960 # 1261 23736	00		
Company Name Address: Project Name:	BS & G Australia (NSV Level 1, 50 Margaret St Sydney NSW 2000 MAMRE ROAD	/) P/L			Or Re Ph Fa	der N port # one: x:	o.: #:	6	31102 2 824	2 5 030	0					R D P C	Receiv Due: Priority Contac	ved: y: ct Nar	D€ D€ 5 ∣ me: D;	ec 3, 2018 ec 10, 201 Day aniel Dena	6:38 PM 8 Iro	
Project ID:	55607														Euro	ofins	mgt	Analy	ytical Servic	ces Manag	ger : Nibha \	/aidya
Sample Detail					Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH				
Melbourne Labora	tory - NATA Site # 1254 & 1	4271														Х						
Sydney Laborator	y - NATA Site # 18217				Х	Х	Х	X	Х	Х	X	X	Х	Х	Х	Х	X	Х	-			
Brisbane Laborate	bry - NATA Site # 20794			X															-			
Perth Laboratory	NATA Site # 23736	Coil	S18 De02150						v	v			v		v				-			
11 HA10.0.0.1	Nov 30, 2018	Soil	S18-De03150		×				× ×	× ×			<u> </u>	×	×				-			
12 HA11 0-0 1	Nov 30, 2018	Soil	S18-De03157		x				x				x		X				-			
13 HA12 0-0 1	Nov 30, 2018	Soil	S18-De03153						x	х			x		X				1			
14 HA13 0-0.1	Nov 30, 2018	Soil	S18-De03154		х				x	X			x	x	X		x		1			
15 HA14 0-0.1	Nov 30, 2018	Soil	S18-De03155		-				X	X			X		X				1			
16 HA16 0-0.1	Nov 30, 2018	Soil	S18-De03156						х	х			х	х	х		x		1			
17 HA17 0-0.1	Nov 30, 2018	Soil	S18-De03157		х					х			х		х				1			
18 HA18 0-0.1	Nov 30, 2018	Soil	S18-De03158		х				х				х	х	х		x		1			
19 HA19 0-0.1	Nov 30, 2018	Soil	S18-De03159		х			l	х	Х			х		х				1			
20 HA20 0-0.1	Nov 30, 2018	Soil	S18-De03160		Х				х				Х	Х	Х		X		1			
21 HA21 0-0.1	Nov 30, 2018	Soil	S18-De03161		Х								Х	Х	Х		Х		]			

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Cc Ac Pr Pr	ompany Name: Idress: oject Name: oject ID:	JBS & G Aus Level 1, 50 M Sydney NSW 2000 MAMRE RO/ 55607	tralia (NSW) P/L largaret St AD			Or Re Ph Fa	der N port # one: x:	o.: #:	6 0	31102 2 824	2 5 030	00				Eur	F C F C	Receiv Due: Priority Contac	ed: /: :t Nar Analy	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day Ime: Daniel Denaro
		Sa	nple Detail		% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	НОГД	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	
Melt	oourne Laborate	ory - NATA Site	# 1254 & 14271														Х			
Syd	ney Laboratory	- NATA Site # 1	8217			х	х	Х	Х	Х	Х	X	Х	Х	X	Х	Х	X	Х	_
Bris	bane Laborator	y - NATA Site #	20794		Х	<u> </u>						<u> </u>			<u> </u>					_
Pert	h Laboratory - N	ATA Site # 237	36																	4
22	HA22 0-0.1	Nov 30, 2018	Soil	S18-De03162		X				X	X	<u> </u>		X	X	X		X		-
23	TP01 0-0.1	Dec 03, 2018	Soil	S18-De03163							X					X				4
24	TP01 0.5-0.6	Dec 03, 2018	Soil	S18-De03164	X				X			-				X	X			-
25	TP00 0.0.4	Dec 03, 2018	Soil	S18-De03165	X				X	v	v				-	X	X			-
26	TP02 0-0.1	Dec 03, 2018	Soil	S18-De03166	~				~	X	X					X	v			-
27	1122 1-1.1	Dec 03, 2018	Soil	518-De03167	X				X	~	v			~		X	X			-
28		Nov 30, 2018	Soil	518-De03168		X			<u> </u>	X	X			X		X	<u> </u>			-
29	QA02	NOV 30, 2018	Soll	S18-De03169							×	+				X				-
30		Dec 03, 2018	vvater	518-De03170						×	~	+		~					×	-
31		Nov 30, 2018	vvater	S18 Dc03171								+							A V	-
22		Nov 30, 2018	vvater	S10-De03172		v				v	v			v	× ×	v		-	^	-
১১	3201	1007 30, 2018	501	1918-De031/3		Ň				X	Ň			X		Ň	1	X		

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Co Ao Pr Pr	ompany Name: Idress: oject Name: oject ID:	JBS & G Aus Level 1, 50 N Sydney NSW 2000 MAMRE RO	stralia (NSW) I /argaret St AD	P/L			Or Re Ph Fa	der N port a none: ix:	o.: #:	6 0	31102 2 824	<u>2</u> 5 030	0					F C F C	Receiv Due: Priority Contac	ved: y: ct Nar	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day <b>ne:</b> Daniel Denaro	
		00007															Euro	ofins	mgt	Analy	rtical Services Manager : Nibh	a Vaidya
		Sa	mple Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Mell	oourne Laborate	ory - NATA Site	# 1254 & 142	71														х				
Syd	ney Laboratory	- NATA Site # 1	8217				Х	X	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	X	Х		
Bris	bane Laborator	y - NATA Site #	20794			Х																
Pert	h Laboratory - I	ATA Site # 237	36								<u> </u>											
34	SP03	Nov 30, 2018		Soil	S18-De03174		X				X	Х			X	X	Х		X			
35	FRAG-01	Nov 30, 2018		Building Materials	S18-De03175			X														
36	HA15 0-0.1	Nov 30, 2018		Soil	S18-De03176						х				х	х	х		x			
37	FRAG-03	Nov 30, 2018		Building Materials	S18-De03177			х														
38	HA15 0-0.1	Nov 30, 2018		US Leachate	S18-De03310						x			х	х							
39	HA01 0.2-0.3	Nov 30, 2018		Soil	S18-De03326				х													
40	HA02 0.2-0.3	Nov 30, 2018		Soil	S18-De03327				Х													
41	HA05 0.2-0.3	Nov 30, 2018		Soil	S18-De03328				Х				ļ									
42	HA08 0.2-0.3	Nov 30, 2018		Soil	S18-De03329				Х													
43	HA09 0.2-0.3	Nov 30, 2018		Soil	S18-De03330				Х													
44	HA10 0.2-0.3	Nov 30, 2018		Soil	S18-De03331				Х												j	

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Company Name:   JBS & G Australia (NSW) P/L     Address:   Level 1, 50 Margaret St     Sydney   NSW 2000     Project Name:   MAMRE ROAD     Project ID:   55607			Ore Re Ph Fa	der N port # one: x:	o.: #:	6 0	31102 2 824	2 5 030	0				Euro	R D P C	eceiv Jue: Priority Contac	ed: /: :t Nar Analy	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day Ime: Daniel Denaro Iytical Services Manager : Nibha Vaidy	ra
Sample Detail		% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Melbourne Laboratory - NATA Site # 1254 & 14271														х				
Sydney Laboratory - NATA Site # 18217			Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	X	Х	_	
Brisbane Laboratory - NATA Site # 20794		Х															4	
Perth Laboratory - NATA Site # 23736																	-	
45 HA11 0.2-0.3 Nov 30, 2018 Soil S	S18-De03332				X												-	
46     HA12 U.2-U.3     Nov 30, 2018     Soil     Soil       47     HA12 0.2 0.2     Nov 20, 2019     Soil     8-De03333				X												-		
41     ITA 13 U.2-U.3     INUV 3U, 2U I8     S0II     S       48     HA14 0 2-0 3     Nov 30 2019     Soil     S	S18-De02225				×												-	
40 HA16 0 2-0 3 Nov 30 2018 Soil S	S18-De03335				X												-	
H0     H0     U <thu< th="">     U     U     <thu< th=""></thu<></thu<>	S18-De03330				X												-	
51 HA18 0 2-0 3 Nov 30 2018 Soil	S18-De03337				X												-	
52 HA19 0 2-0 3 Nov 30 2018 Soil	S18-De03330				x												4	
53 HA20 0.2-0.3 Nov 30, 2018 Soil	S18-De03340				X	<u> </u>											1	
54 TP01 0.2-0.3 Dec 03 2018 Soil	S18-De03341				X	<u> </u>											1	
55 TP01 1-1.1 Dec 03, 2018 Soil	S18-De03342				X												1	
56     TP01 2-2.1     Dec 03, 2018     Soil     S	S18-De03343				Х													

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Co Ao Pr	ompany Name: Idress: oject Name:	JBS & G Australia (NSW) Level 1, 50 Margaret St Sydney NSW 2000 MAMRE ROAD	P/L			Or Re Ph Fa	der N port ; ione: x:	o.: #:	6 0.	31102 2 824	<u>2</u> 5 030	0					R D P C	eceiv Due: Priority Contac	ed: /: :t Nar	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day ame: Daniel Denaro	
	oject iD.	55007														Euro	ofins	mgt	Analy	lytical Services Manager : Nibha Vaidya	
		Sample Detail			% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Mell	bourne Laborato	ory - NATA Site # 1254 & 14	271														Х			_	
Syd	ney Laboratory	- NATA Site # 18217				X	X	Х	X	Х	Х	X	X	Х	X	Х	Х	X	Х	4	
Bris	bane Laborator	y - NATA Site # 20794			X															-	
F	TP02 0 2 0 2	Doo 02 2018	Soil	S18 Do02244				v												-	
58	TP02 0.2-0.3	Dec 03, 2018	Soil	S18-De03345				x												-	
50	TP02 0.3-0.0	Dec 03, 2018	Soil	S18-De03345				x												-	
60	TP02 3-3 1	Dec 03, 2018	Soil	S18-De03347				x												1	
61	SP02	Nov 30, 2018	Soil	S18-De03348				X												1	
62	SP04	Nov 30, 2018	Soil	S18-De03349				X												-	
63	SP05	Nov 30, 2018	Soil	S18-De03350				х												1	
64	SP06	Nov 30, 2018	Soil	S18-De03351				х												1	
65	FRAG02	Nov 30, 2018	Building Materials	S18-De03352				х													
66	HA15 0.2-0.3	Nov 30, 2018	Soil	S18-De03353				х													
Tes	t Counts				3	17	2	28	3	25	20	1	1	26	20	32	3	20	2		



### Internal Quality Control Review and Glossary

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.

- 2. All soil 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. 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
сос	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
СР	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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 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					
втех					
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		1			
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	



Endosulfan sulphate     mg/kg     < 0.05
Endrin     mg/kg     < 0.05     Pass       Endrin aldehyde     mg/kg     < 0.05
Endrin aldehyde     mg/kg     < 0.05     Pass       Endrin ketone     mg/kg     < 0.05
Endrin ketone     mg/kg     < 0.05     Pass       g-BHC (Lindane)     mg/kg     < 0.05
g-BHC (Lindane)     mg/kg     < 0.05     Pass       Heptachlor     mg/kg     < 0.05
Heptachlor     mg/kg     < 0.05     Pass       Heptachlor epoxide     mg/kg     < 0.05
Heptachlor epoxide     mg/kg     < 0.05     Pass     Image       Hexachlorobenzene     mg/kg     < 0.05
Hexachlorobenzene     mg/kg     < 0.05     Pass     Person       Methoxychlor     mg/kg     < 0.2
Methoxychlor     mg/kg     < 0.2     Pass       Toxaphene     mg/kg     < 1
Toxaphene     mg/kg     < 1     Pass       Method Blank     Polychlorinated Biphenyls     mg/kg     < 0.5     Pass       Aroclor-1016     mg/kg     < 0.5
Method Blank     Polychlorinated Biphenyls     mg/kg     < 0.5     Pass       Aroclor-1016     mg/kg     < 0.5
Polychlorinated Biphenyls     mg/kg     < 0.5     Pass       Aroclor-1016     mg/kg     < 0.5
Aroclor-1016   mg/kg   < 0.5   Pass     Aroclor-1221   mg/kg   < 0.1
Aroclor-1221   mg/kg   < 0.1   Pass     Aroclor-1232   mg/kg   < 0.5
Aroclor-1232   mg/kg   < 0.5   Pass     Aroclor-1242   mg/kg   < 0.5
Aroclor-1242   mg/kg   < 0.5   0.5   Pass     Aroclor-1248   mg/kg   < 0.5
Aroclor-1248 mg/kg < 0.5 0.5 Pass   Aroclor-1254 mg/kg < 0.5
Aroclor-1254     mg/kg     < 0.5     Pass       Aroclor-1260     mg/kg     < 0.5
Aroclor-1260     mg/kg     < 0.5     Pass       Total PCB*     mg/kg     < 0.5
Total PCB*     mg/kg     < 0.5     Pass       Method Blank     %     < 1     1     Pass
Method Blank     %     < 1     1     Pass
% Clay     %     < 1     1     Pass
Method Blank
Heavy Metals
Arsenic mg/kg < 2 2 Pass
Cadmium     mg/kg     < 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     Pass
Nickel mg/kg < 5 5 Pass
Zinc     mg/kg     < 5     Pass
LCS - % Recovery
Total Recoverable Hydrocarbons - 1999 NEPM Fractions
TRH C6-C9     %     71     70-130     Pass       TRU C40 C44     %     105     70.430     Pass
IRE C10-C14 % 105 70-130 Pass
Benzene % 81 70-130 Pass
Delizence     %     01     70-130     Pass       Toluene     %     82     70-130     Pass
Totdene     76     62     70-130     Fass       Ethylhenzene     %     86     70-130     Pass
m&n-Xvlenes % 81 70-130 Pass
o-Xvlene % 82 70-130 Pass
Xylenes - Total     %     81     70-130     Pass
LCS - % Recovery
Total Recoverable Hydrocarbons - 2013 NEPM Fractions
Naphthalene % 101 70-130 Pass
TRH C6-C10 % 72 70-130 Pass
TRH >C10-C16 % 108 70-130 Pass
LCS - % Recovery
Polycyclic Aromatic Hydrocarbons
Acenaphthene % 111 70-130 Pass
Acenaphthylene % 110 70-130 Pass
Anthracene     %     104     70-130     Pass


Benz(a) prince         %         105         M         705.30         Pass           Benz(a) prince         %         103         70.130         Pass           Benz(a) h)perfere         %         103         70.130         Pass           Benz(a) h)perfere         %         113         70.130         Pass           Benz(a) h)perfere         %         113         70.130         Pass           Chysene         %         116         70.130         Pass           Debnz(a) hyperfere         %         114         70.130         Pass           Flooranthene         %         114         70.130         Pass           Flooranthene         %         114         70.130         Pass           Premarthene         %         105         70.130         Pass           Premarthene         %         102         70.130         Pass           Premarthene         %         102         70.130         Pass           Al-DDD         %         123         70.130         Pass           AdvDD         %         123         70.130         Pass           AdvDD         %         123         70.130         Pass	Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benzolghjørne         %         110         70130         Pass           Benzolghjørne         %         103         70130         Pass           Benzolghjørne         %         103         70130         Pass           Benzolghjørne         %         113         70130         Pass           Benzolghjørne         %         116         70130         Pass           Dibenzolghjørne         %         110         70130         Pass           Dibenzolghjørne         %         110         70130         Pass           Fluoranhene         %         111         70130         Pass           Fluoranhene         %         114         70130         Pass           Robenzizskypene         %         114         70130         Pass           Premantmene         %         114         70130         Pass           CS-skecovery         70130         Pass         70130         Pass           CGanchiorine Pasticies         124         70130         Pass           A4-DD1         %         123         70130         Pass           A4-DD1         %         123         70130         Pass           Addin	Benz(a)anthracene	%	105		70-130	Pass	
Benzolghilpionanthene         %         103         Image: Constraint of the second s	Benzo(a)pyrene	%	110		70-130	Pass	
Benzo(h)genytene         %         130         70-130         Pass           Benzo(h)genytene         %         116         70-130         Pass           Dibenzo(h)genytene         %         116         70-130         Pass           Dibenzo(h)gene         %         110         70-130         Pass           Envorathene         %         114         70-130         Pass           Fluorantene         %         114         70-130         Pass           Indenof 1.3-schypree         %         114         70-130         Pass           Naghthalene         %         114         70-130         Pass           Privene         %         114         70-130         Pass           Cogmochlorine Pesticies          70-130         Pass           Cogmochlorine Pesticies          70-130         Pass           44-DDD         %         128         70-130         Pass           44-DDT         %         128         70-130         Pass           Addin         %         123         70-130         Pass           Addin         %         123         70-130         Pass           Endosulfan 10 <td< td=""><td>Benzo(b&amp;j)fluoranthene</td><td>%</td><td>103</td><td></td><td>70-130</td><td>Pass</td><td></td></td<>	Benzo(b&j)fluoranthene	%	103		70-130	Pass	
Benzel/Nuoranthene         %         113         M         70-130         Pass           Chrysne         %         116         70-130         Pass           Chrysne         %         110         70-130         Pass           Fluoranthene         %         114         70-130         Pass           Fluoranthene         %         114         70-130         Pass           Indenof1,2.3-cd/pyrene         %         114         70-130         Pass           Naphthalene         %         114         70-130         Pass           Pyrene         %         114         70-130         Pass           CS * Recover          70-130         Pass            CA: Option         %         123         70-130         Pass           4.4'DDE         %         123         70-130         Pass           4.4'DDT         %         123         70-130         Pass           Adrin         %         123         70-130         Pass           Adrin         %         123         70-130         Pass           Dieldrin         %         123         70-130         Pass           Endosufan Ligo	Benzo(g.h.i)perylene	%	130		70-130	Pass	
Chysene         %         116         //         70-130         Pass           Dibenz(ah)anthracene         %         110         70-130         Pass           Fluoranthone         %         114         70-130         Pass           Fluoranthone         %         114         70-130         Pass           Indend(1.2.Acd)pyrene         %         114         70-130         Pass           Naphthalene         %         114         70-130         Pass           Phenanthrene         %         114         70-130         Pass           Organochlorine Setticides         ////////////////////////////////////	Benzo(k)fluoranthene	%	113		70-130	Pass	
Diberval         %         110         Pail         70-130         Pais           Fluorance         %         114         70-130         Pais         I           Indenol 1.3-3-cdpyree         %         114         70-130         Pais         I           Indenol 1.3-3-cdpyree         %         114         70-130         Pais         I           Naphthalone         %         114         70-130         Pais         I           Verse         %         114         70-130         Pais         I           CS-% Recovery         V         70-130         Pais         I         I         70-130         Pais           C4-DDE         %         114         V         70-130         Pais         I           A4-DDE         %         123         V         70-130         Pais         I           A4-DDE         %         123         V         70-130         Pais         I           Admin         %         123         V         70-130         Pais         I           Deladrin         %         123         V         70-130         Pais         I           Endosulfan I         %         124	Chrysene	%	116		70-130	Pass	
Fluoranthene         %         114         //>         70-130         Pass           Fluorene         %         107         70-130         Pass           Naphthalene         %         114         70-130         Pass           Naphthalene         %         114         70-130         Pass           Pyrene         %         114         70-130         Pass           Pyrene         %         114         70-130         Pass           CS - % Recovery         70-130         Pass         70-130         Pass           CA-+ODD         %         124         70-130         Pass           4.4-DDE         %         123         70-130         Pass           4.4-DDT         %         128         70-130         Pass           4.4-DDT         %         128         70-130         Pass           4.4-DDT         %         123         70-130         Pass           4.4-DDT         %         123         70-130         Pass           Addin         %         123         70-130         Pass           Addin         %         124         70-130         Pass           Endosulfan I	Dibenz(a.h)anthracene	%	110		70-130	Pass	
Fluorene         %         107         70-130         Pass           Inden012.3-odjprene         %         114         70-130         Pass           Phenanthrene         %         112         70-130         Pass           Phenanthrene         %         105         70-130         Pass           Pyrene         %         105         70-130         Pass           CS-% Recovery         70-130         Pass         70-130         Pass           C4:*DDE         %         124         70-130         Pass           4.4'DDE         %         123         70-130         Pass           -8HC         %         123         70-130         Pass           Endosulfan I         %         123         70-130         Pass           Endosulfan I         %         124         70-130         Pass           Endosulfan I         %         124         70-130         Pass           Endosulfan I         %	Fluoranthene	%	114		70-130	Pass	
Indeno(1.2.3-cd)pyrene         %         114         ///>         70-130         Pass           Naphthalene         %         112         70-130         Pass           Pyrene         %         114         70-130         Pass           CS-% Recovery         70-130         Pass         70-130         Pass           CS-% Recovery         70-130         Pass         70-130         Pass           4.4-DDD         %         123         70-130         Pass           4.4-DDT         %         123         70-130         Pass           4.4-DDT         %         123         70-130         Pass           a.B+C         %         125         70-130         Pass           b.BHC         %         123         70-130         Pass           cdshtn         %         123         70-130         Pass           beHC         %         123         70-130         Pass           cdshtn         %         124         70-130         Pass           Endosulfan II         %         125         70-130         Pass           Endosulfan sulphate         %         124         70-130         Pass <td< td=""><td>Fluorene</td><td>%</td><td>107</td><td></td><td>70-130</td><td>Pass</td><td></td></td<>	Fluorene	%	107		70-130	Pass	
Naphthalene         %         112         ///>         70-130         Pass           Phenanthrene         %         105         ///>         70-130         Pass           Prene         %         114         //         70-130         Pass           UCS - % Recovery         //         //         70-130         Pass           Organochlorine Pesticides         //         //         70-130         Pass           4.4-DDD         %         123         //         70-130         Pass           4.4-DDE         %         128         //         70-130         Pass           A.4/-DDT         %         128         //         70-130         Pass           Aldrin         %         123         //         70-130         Pass           Deldrin         %         98         //         70-130         Pass           Endsulfan I         %         123         //         70-130         Pass           Endosulfan sulphate         %         127         //         70-130         Pass           Endrin aldehyde         %         124         //         70-130         Pass           Endrin aldehyde         %	Indeno(1.2.3-cd)pyrene	%	114		70-130	Pass	
Phenanthrene         %         106         70-130         Pass           Pyrene         %         114         70-130         Pass           CS - % Recovery         70-130         Pass         70-130         Pass           4.4-DD         %         124         70-130         Pass           4.4-DDT         %         123         70-130         Pass           4.4-DDT         %         128         70-130         Pass           A.4-DDT         %         128         70-130         Pass           A.4-DDT         %         128         70-130         Pass           A.4-DDT         %         128         70-130         Pass           A.4-DT         %         98         70-130         Pass           A.4-DT         %         98         70-130         Pass           B.BC         %         123         70-130         Pass           B.BC         %         123         70-130         Pass           Endosulfan I         %         126         70-130         Pass           Endosulfan sulphate         %         126         70-130         Pass           Endini ketone         % <td< td=""><td>Naphthalene</td><td>%</td><td>112</td><td></td><td>70-130</td><td>Pass</td><td></td></td<>	Naphthalene	%	112		70-130	Pass	
Pyrene         %         114         70-130         Pass           LCS - % Recovery	Phenanthrene	%	105		70-130	Pass	
LCS - % Recovery         Image: Control of the positicides         Image: Control of the positicides           4.4-DDD         %         123         70-130         Pass           4.4-DDT         %         123         70-130         Pass           4.4-DDT         %         123         70-130         Pass           a-BHC         %         119         70-130         Pass           Adrin         %         125         70-130         Pass           b-BHC         %         98         70-130         Pass           d-BHC         %         123         70-130         Pass           d-BHC         %         123         70-130         Pass           endosulfan         %         123         70-130         Pass           Endosulfan II         %         127         70-130         Pass           Endosulfan II         %         127         70-130         Pass           Endin aldehyde         %         126         70-130         Pass           Endin kotone         %         126         70-130         Pass           endin kotone         %         126         70-130         Pass           endin kotone         <	Pvrene	%	114		70-130	Pass	
Organochlorine PesticidesImage: state sta	LCS - % Recovery			л – Г			
4.4-DDD       %       124       70-130       Pass         4.4-DDE       %       123       70-130       Pass         4.4-DDT       %       128       70-130       Pass         a.8HC       %       119       70-130       Pass         Aldrin       %       125       70-130       Pass         b.BHC       %       98       70-130       Pass         b.BHC       %       98       70-130       Pass         b.BHC       %       123       70-130       Pass         Dieldrin       %       123       70-130       Pass         Endosulfan II       %       127       70-130       Pass         Endosulfan sulphate       %       127       70-130       Pass         Endosulfan sulphate       %       122       70-130       Pass         Endrin debryde       %       124       70-130       Pass         Endrin katone       %       124       70-130       Pass         Endrin katone       %       124       70-130       Pass         G_BHC       %       124       70-130       Pass         Heytachlor epoxide       %       124 <td>Organochlorine Pesticides</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Organochlorine Pesticides						
4.4-DDE       %       123       70-130       Pass         4.4-DDT       %       128       70-130       Pass         a-BHC       %       119       70-130       Pass         Aldrin       %       125       70-130       Pass         Aldrin       %       125       70-130       Pass         b-BHC       %       98       70-130       Pass         b-BHC       %       123       70-130       Pass         d'BHC       %       123       70-130       Pass         Endosulfan 1       %       127       70-130       Pass         Endosulfan 1       %       127       70-130       Pass         Endosulfan sulphate       %       127       70-130       Pass         Endrin sulphate       %       124       70-130       Pass         Endrin ladehyde       %       124       70-130       Pass         Endrin ketone       %       124       70-130       Pass         Gradin       %       124       70-130       Pass         Heptachlor epoxide       %       108       70-130       Pass         Methoxychlor       %       108 <td>4.4'-DDD</td> <td>%</td> <td>124</td> <td></td> <td>70-130</td> <td>Pass</td> <td></td>	4.4'-DDD	%	124		70-130	Pass	
4.4-DDT       %       128       70-130       Pass         a-BHC       %       119       70-130       Pass         Aldrin       %       125       70-130       Pass         Aldrin       %       125       70-130       Pass         Aldrin       %       123       70-130       Pass         belHC       %       123       70-130       Pass         Dieldrin       %       123       70-130       Pass         Endosulfan I       %       123       70-130       Pass         Endosulfan I       %       127       70-130       Pass         Endosulfan Sulphate       %       127       70-130       Pass         Endrin aldehyde       %       126       70-130       Pass         Endrin ketone       %       126       70-130       Pass         Endrin ketone       %       124       70-130       Pass         g-BHC (Lindane)       %       124       70-130       Pass         Heptachlor epoxide       %       124       70-130       Pass         Heptachlor epoxide       %       108       70-130       Pass         LCS - % Recovery       <	4.4'-DDE	%	123		70-130	Pass	
aBHC         %         119         70.130         Pass           Aldrin         %         125         70.130         Pass           bBHC         %         98         70.130         Pass           bBHC         %         123         70.130         Pass           bBHC         %         123         70.130         Pass           Dieldrin         %         123         70.130         Pass           Endosulfan 1         %         127         70.130         Pass           Endosulfan sliphate         %         127         70.130         Pass           Endrin sliphate         %         126         70.130         Pass           Endrin ladehyde         %         126         70.130         Pass           Endrin ketone         %         126         70.130         Pass           gBHC (Lindane)         %         124         70.130         Pass           gBHC (Lindane)         %         124         70.130         Pass           Heptachlor bepxide         %         118         70.130         Pass           LCS * Recovery          70.130         Pass            Polychlorinated Bip	4.4'-DDT	%	128		70-130	Pass	
Addrin         No.         125         120.00         Pass           b-BHC         %         98         70-130         Pass         100.00         100.00         100.00         100.00         100.00         Pass         100.00         100.00         Pass         100.00	a-BHC	%	119		70-130	Pass	
b-BHC         %         98         70-130         Pass           d-BHC         %         123         70-130         Pass           Dieldrin         %         123         70-130         Pass           Endosulfan I         %         123         70-130         Pass           Endosulfan II         %         127         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endrin aldehyde         %         122         70-130         Pass           Endrin aldehyde         %         125         70-130         Pass           Endrin ketone         %         126         70-130         Pass           Endrin ketone         %         128         70-130         Pass           Endrin ketone         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           Heptachlor epoxide         %         127         70-130         Pass           Hestachlor opoxide         %         108         70-130         Pass           LCS - % Recovery         118         70-130         Pass         100      <	Aldrin	%	125		70-130	Pass	
definition         %         123         70-130         Pass           Dieldrin         %         123         70-130         Pass           Endosulfan I         %         123         70-130         Pass           Endosulfan II         %         127         70-130         Pass           Endosulfan subpate         %         127         70-130         Pass           Endosulfan subpate         %         127         70-130         Pass           Endosulfan subpate         %         124         70-130         Pass           Endrin         %         124         70-130         Pass           Endrin aldehyde         %         124         70-130         Pass           Endrin aldehyde         %         124         70-130         Pass           Endrin aldehyde         %         124         70-130         Pass           Endrin ketone         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           Heptachlor epoxide         %         108         70-130         Pass           LCS - & Recovery         108         70-130         Pass	b-BHC	%	98		70-130	Pass	
Dieldrin         No         123         To-130         Pass           Endosulfan I         %         127         70-130         Pass           Endosulfan II         %         127         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endrin         %         124         70-130         Pass           Endrin aldehyde         %         125         70-130         Pass           Endrin aldehyde         %         124         70-130         Pass           GaBHC (Lindane)         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           LCS - & Recovery         %         108         70-130         Pass           LCS - & Recovery          70-130         Pass            Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130	d-BHC	%	123		70-130	Pass	
Industry         Industry         Industry         Industry         Industry           Endosulfan II         %         127         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endrin aldehyde         %         125         70-130         Pass           Endrin ketone         %         126         70-130         Pass           Endrin ketone         %         126         70-130         Pass           Endrin ketone         %         126         70-130         Pass           Endrin ketone         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           Heptachlor epoxide         %         127         70-130         Pass           Methoxychlor         %         118         70-130         Pass           LCS - % Recovery          103         70-130         Pass           LCS - % Recovery          92         70-130         Pass           LCS - % Recovery          92         70-130	Dieldrin	%	123		70-130	Pass	
Industrian II         No.         Tell         Total         Total           Endosulfan II         %         125         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endosulfan sulphate         %         127         70-130         Pass           Endrin         %         124         70-130         Pass           Endrin aldehyde         %         125         70-130         Pass           Endrin ketone         %         126         70-130         Pass           g-BHC (Lindane)         %         124         70-130         Pass           Heptachlor opxide         %         124         70-130         Pass           Heptachlor opxide         %         124         70-130         Pass           Heptachlor opxide         %         124         70-130         Pass           Methoxychlor         %         118         70-130         Pass           LCS - % Recovery          70-130         Pass            Arcolor-1260         %         103         70-130         Pass           LCS - % Recovery          70-130         Pass	Endosulfan I	%	127		70-130	Pass	
Interview         No         10	Endosulfan II	%	125		70-130	Pass	
Interview         No	Endosulfan sulphate	%	127		70-130	Pass	
Indim         No	Endrin	%	124		70-130	Pass	
Initial data         Initial data         Initial data         Initial data           Endrin Recone         %         124         70-130         Pass           g-BHC (Lindane)         %         124         70-130         Pass           Heptachlor         %         124         70-130         Pass           Heptachlor epoxide         %         127         70-130         Pass           Hexachlorobenzene         %         108         70-130         Pass           Methoxychlor         %         118         70-130         Pass           ICS - % Recovery         %         118         70-130         Pass           Polychlorinated Biphenyls         %         103         70-130         Pass           Arcolor-1260         %         103         70-130         Pass           Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           LCS - % Recovery	Endrin aldehyde	%	125		70-130	Pass	
Instruction         No	Endrin ketone	%	126		70-130	Pass	
Join Clanser         No. 101         No. 101         No. 101         No. 101           Heptachlor         %         124         70-130         Pass           Heptachlor         %         127         70-130         Pass           Hexachlorobenzene         %         108         70-130         Pass           Methoxychlor         %         118         70-130         Pass           LCS - % Recovery         %         118         70-130         Pass           Polychlorinated Biphenyls         %         103         70-130         Pass           Arcclor-1260         %         103         70-130         Pass           Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           LCS - % Recovery          %         100         70-130         Pass           LCS - % Recovery          %         92         70-130         Pass           LCS - % Recovery           70-130         Pass           LCS - % Recovery           70-130         Pass           Cadmium         %         104         70-130         Pass           Cadmium         %	g-BHC (Lindane)	%	124		70-130	Pass	
Heptachlor epoxide         %         127         T0-130         Pass           Hetachlorobenzene         %         108         70-130         Pass           Methoxychlor         %         118         70-130         Pass           LCS - % Recovery         %         118         70-130         Pass           Polychlorinated Biphenyls         ////////////////////////////////////	Heptachlor	%	124		70-130	Pass	
Inspiration operation         Instrumt         Instrumt         Instrumt           Hexachlorobenzene         %         108         70-130         Pass           Methoxychlor         %         118         70-130         Pass           LCS - % Recovery           70-130         Pass           Polychlorinated Biphenyls           70-130         Pass           Aroclor-1260         %         103         70-130         Pass           LCS - % Recovery           70-130         Pass           % Clay         %         100         70-130         Pass           Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           LCS - % Recovery           70-130         Pass            LCS - % Recovery           70-130         Pass            LCS - % Recovery           70-130         Pass            Codnuctivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           LCS - % Recovery           92         70-130         Pass	Heptachlor epoxide	%	127		70-130	Pass	
Instantion of the second sec	Hexachlorobenzene	%	108		70-130	Pass	
LCS - % Recovery       Image: Constraints of the constrand of the co	Methoxychlor	%	118		70-130	Pass	
Polychlorinated Biphenyls         Image: model of the second of the	LCS - % Recovery			1 1			
Arocior-1260       %       103       70-130       Pass         LCS - % Recovery       %       100       70-130       Pass         % Clay       %       100       70-130       Pass         Conductivity (1:5 aqueous extract at 25°C as rec.)       %       92       70-130       Pass         LCS - % Recovery       %       100       70-130       Pass          Heavy Metals            Pass         Arsenic       %       107       70-130       Pass          Cadmium       %       104       70-130       Pass          Chromium       %       104       70-130       Pass          Copper       %       104       70-130       Pass          Lead       %       104       70-130       Pass          Nickel       %       103       70-130       Pass          Lead       %       104       70-130       Pass          Mercury       %       98       70-130       Pass          Nickel       %       105       70-130       Pass	Polychlorinated Biphenyls						
LCS - % Recovery       Mode       Answer       Mode       Answer       Mode       Mode <th< td=""><td>Aroclor-1260</td><td>%</td><td>103</td><td></td><td>70-130</td><td>Pass</td><td></td></th<>	Aroclor-1260	%	103		70-130	Pass	
% Clay         %         100         70-130         Pass           Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           LCS - % Recovery         W         92         70-130         Pass         M           Heavy Metals         107         70-130         Pass         M <td>LCS - % Recovery</td> <td></td> <td></td> <td>1 I</td> <td></td> <td></td> <td></td>	LCS - % Recovery			1 I			
Conductivity (1:5 aqueous extract at 25°C as rec.)         %         92         70-130         Pass           LCS - % Recovery	% Clav	%	100		70-130	Pass	
LCS - % Recovery       Image: Constraint of the constraint of	Conductivity (1:5 aqueous extract at 25°C as rec.)	%	92		70-130	Pass	
Heavy Metals         //         //         //         //         //         //           Arsenic         %         107         70-130         Pass         //<	LCS - % Recovery			н – н			
Arsenic       %       107       70-130       Pass         Cadmium       %       104       70-130       Pass         Chromium       %       104       70-130       Pass         Copper       %       103       70-130       Pass         Lead       %       104       70-130       Pass         Mercury       %       98       70-130       Pass         Nickel       %       105       70-130       Pass         Zinc       %       106       70-130       Pass	Heavy Metals						
Cadmium         %         104         70-130         Pass           Chromium         %         104         70-130         Pass           Copper         %         103         70-130         Pass           Lead         %         104         70-130         Pass           Mercury         %         98         70-130         Pass           Nickel         %         105         70-130         Pass           Zinc         %         106         70-130         Pass	Arsenic	%	107		70-130	Pass	
Chromium         %         104         70-130         Pass           Copper         %         103         70-130         Pass           Lead         %         104         70-130         Pass           Mercury         %         98         70-130         Pass           Nickel         %         105         70-130         Pass           Zinc         %         106         70-130         Pass	Cadmium	%	104		70-130	Pass	
Copper         %         103         70-130         Pass           Lead         %         104         70-130         Pass           Mercury         %         98         70-130         Pass           Nickel         %         105         70-130         Pass           Zinc         %         106         70-130         Pass	Chromium	%	104		70-130	Pass	
Lead         %         104         70-130         Pass           Mercury         %         98         70-130         Pass           Nickel         %         105         70-130         Pass           Zinc         %         106         70-130         Pass	Copper	%	103		70-130	Pass	
Mercury         %         98         70-130         Pass           Nickel         %         105         70-130         Pass           Zinc         %         106         70-130         Pass	Lead	%	104		70-130	Pass	
Nickel         %         105         70-130         Pass           Zinc         %         106         70-130         Pass	Mercury	%	98		70-130	Pass	
Zinc % 106 70-130 Pass	Nickel	%	105		70-130	Pass	
	Zinc	%	106		70-130	Pass	



Test Lab Samp		QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery				T	1	1		
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1				
TRH C6-C9	S18-De06542	NCP	%	71		70-130	Pass	
Spike - % Recovery				T	1	T		
ВТЕХ				Result 1				
Benzene	S18-De06542	NCP	%	83		70-130	Pass	
Toluene	S18-De06542	NCP	%	83		70-130	Pass	
Ethylbenzene	S18-De06542	NCP	%	88		70-130	Pass	
m&p-Xylenes	S18-De06542	NCP	%	83		70-130	Pass	
o-Xylene	S18-De06542	NCP	%	86		70-130	Pass	
Xylenes - Total	S18-De06542	NCP	%	84		70-130	Pass	
Spike - % Recovery				-				
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1				
Naphthalene	S18-De06542	NCP	%	86		70-130	Pass	
TRH C6-C10	S18-De06542	NCP	%	72		70-130	Pass	
Spike - % Recovery						-	-	
Polycyclic Aromatic Hydrocarbons	5			Result 1				
Acenaphthene	S18-De11793	NCP	%	112		70-130	Pass	
Acenaphthylene	S18-De11793	NCP	%	112		70-130	Pass	
Anthracene	S18-De11793	NCP	%	110		70-130	Pass	
Benz(a)anthracene	S18-De11793	NCP	%	114		70-130	Pass	
Benzo(a)pyrene	S18-De11793	NCP	%	111		70-130	Pass	
Benzo(b&j)fluoranthene	S18-De11793	NCP	%	102		70-130	Pass	
Benzo(g.h.i)perylene	S18-No43260	NCP	%	99		70-130	Pass	
Benzo(k)fluoranthene	S18-De11793	NCP	%	113		70-130	Pass	
Chrysene	S18-De11793	NCP	%	120		70-130	Pass	
Dibenz(a.h)anthracene	S18-De11793	NCP	%	117		70-130	Pass	
Fluoranthene	S18-De11793	NCP	%	120		70-130	Pass	
Fluorene	S18-De11793	NCP	%	109		70-130	Pass	
Indeno(1.2.3-cd)pyrene	S18-De11793	NCP	%	128		70-130	Pass	
Naphthalene	S18-De11793	NCP	%	113		70-130	Pass	
Phenanthrene	S18-De11793	NCP	%	115		70-130	Pass	
Pyrene	S18-De11793	NCP	%	121		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1260	S18-De12025	NCP	%	113		70-130	Pass	
Spike - % Recovery						-		
Organochlorine Pesticides				Result 1				
4.4'-DDD	S18-De07449	NCP	%	129		70-130	Pass	
Dieldrin	S18-De12025	NCP	%	107		70-130	Pass	
Spike - % Recovery						-		
Heavy Metals				Result 1				
Arsenic	S18-De03150	CP	%	99		70-130	Pass	
Cadmium	S18-De03150	CP	%	102		70-130	Pass	
Chromium	S18-De03150	CP	%	103		70-130	Pass	
Copper	S18-De03150	СР	%	107		70-130	Pass	
Lead	S18-De03150	СР	%	104		70-130	Pass	
Mercury	S18-De03150	СР	%	108		70-130	Pass	
Nickel	S18-De03150	CP	%	109		70-130	Pass	
Zinc	S18-De03150	СР	%	97		70-130	Pass	
Spike - % Recovery					-			
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1				
TRH C10-C14	S18-De03154	CP	%	122		70-130	Pass	
Spike - % Recovery								



Test	Lab Sample ID	ple ID QA Source Units Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
Total Recoverable Hydrocarbons -	bons - 2013 NEPM Fractions Result 1								
TRH >C10-C16	S18-De03154	CP	%	125			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S18-De03161	CP	%	104			70-130	Pass	
Cadmium	S18-De03161	CP	%	104			70-130	Pass	
Chromium	S18-De03161	CP	%	104			70-130	Pass	
Copper	S18-De03161	CP	%	98			70-130	Pass	
Lead	S18-De03161	CP	%	96			70-130	Pass	
Mercury	S18-De03161	CP	%	97			70-130	Pass	
Nickel	S18-De03161	CP	%	102			70-130	Pass	
Zinc	S18-De03161	CP	%	95			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDE	S18-De03163	CP	%	128			70-130	Pass	
4.4'-DDT	S18-De03163	CP	%	65			70-130	Fail	Q08
a-BHC	S18-De03163	CP	%	125			70-130	Pass	
Aldrin	S18-De03163	CP	%	128			70-130	Pass	
b-BHC	S18-De03163	CP	%	102			70-130	Pass	
d-BHC	S18-De03163	CP	%	124			70-130	Pass	
Endosulfan I	S18-De03163	CP	%	126			70-130	Pass	
Endosulfan II	S18-De03163	CP	%	129			70-130	Pass	
Endosulfan sulphate	S18-De03163	СР	%	127			70-130	Pass	
Endrin	S18-De03163	СР	%	129			70-130	Pass	
Endrin aldehyde	S18-De03163	СР	%	114			70-130	Pass	
Endrin ketone	S18-De03163	СР	%	109			70-130	Pass	
g-BHC (Lindane)	S18-De03163	СР	%	119			70-130	Pass	
Heptachlor	S18-De03163	CP	%	122			70-130	Pass	
Heptachlor epoxide	S18-De03163	CP	%	127			70-130	Pass	
Hexachlorobenzene	S18-De03163	CP	%	111			70-130	Pass	
Methoxychlor	S18-De03163	CP	%	75			70-130	Pass	
Toxaphene	S18-De03163	CP	%	117			70-130	Pass	
Toot	Lab Sampla ID	QA	Unito	Booult 1			Acceptance	Pass	Qualifying
Test		Source	Units	Result I			Limits	Limits	Code
Duplicate				1			1		
Polychlorinated Biphenyls				Result 1	Result 2	RPD			ļ
Aroclor-1016	S18-De12024	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	ļ
Aroclor-1221	S18-De12024	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	ļ
Aroclor-1232	S18-De12024	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	ļ
Aroclor-1242	S18-De12024	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	ļ
Aroclor-1248	S18-De12024	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	ļ
Aroclor-1254	S18-De12024	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	ļ
Aroclor-1260	S18-De12024	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	ļ
Duplicate				1	1				
	l			Result 1	Result 2	RPD			
% Moisture	S18-De03142	CP	%	15	13	10	30%	Pass	ļ
Duplicate				1					
Organochlorine Pesticides	[			Result 1	Result 2	RPD			
Chlordanes - Total	S18-De03146	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	



Duplicate											
Organochlorine Pesticides				Result 1	Result 2	RPD					
d-BHC	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Dieldrin	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Endosulfan I	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Endosulfan II	S18-De03146	СР	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Endosulfan sulphate	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Endrin	S18-De03146	СР	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Endrin aldehyde	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Endrin ketone	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
g-BHC (Lindane)	S18-De03146	СР	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Heptachlor	S18-De03146	СР	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Heptachlor epoxide	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Hexachlorobenzene	S18-De03146	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass			
Methoxychlor	S18-De03146	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass			
Toxaphene	S18-De03146	CP	mg/kg	< 1	< 1	<1	30%	Pass			
Duplicate											
•				Result 1	Result 2	RPD					
% Moisture	S18-De03152	CP	%	14	13	5.0	30%	Pass			
Duplicate											
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1	Result 2	RPD					
TRH C6-C9	S18-De03154	CP	mg/kg	< 20	< 20	<1	30%	Pass			
Duplicate				•							
BTEX				Result 1	Result 2	RPD					
Benzene	S18-De03154	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Toluene	S18-De03154	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Ethylbenzene	S18-De03154	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
m&p-Xylenes	S18-De03154	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass			
o-Xylene	S18-De03154	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Xylenes - Total	S18-De03154	СР	mg/kg	< 0.3	< 0.3	<1	30%	Pass			
Duplicate											
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1	Result 2	RPD					
Naphthalene	S18-De03154	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
TRH C6-C10	S18-De03154	CP	mg/kg	< 20	< 20	<1	30%	Pass			
Duplicate											
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1	Result 2	RPD					
TRH C10-C14	S18-De03156	CP	mg/kg	28	32	13	30%	Pass			
TRH C15-C28	S18-De03156	CP	mg/kg	65	64	2.0	30%	Pass			
TRH C29-C36	S18-De03156	CP	mg/kg	69	96	33	30%	Fail	Q15		
Duplicate				-			-				
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1	Result 2	RPD					
TRH >C10-C16	S18-De03156	CP	mg/kg	< 50	< 50	<1	30%	Pass			
TRH >C16-C34	S18-De03156	CP	mg/kg	120	140	16	30%	Pass			
TRH >C34-C40	S18-De03156	CP	mg/kg	< 100	< 100	<1	30%	Pass			
Duplicate				-							
Polycyclic Aromatic Hydrocarbons	5			Result 1	Result 2	RPD					
Acenaphthene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Acenaphthylene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Anthracene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benz(a)anthracene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(a)pyrene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(b&j)fluoranthene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(g.h.i)perylene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(k)fluoranthene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Chrysene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Dibenz(a.h)anthracene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			



Duplicate												
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD						
Fluoranthene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass				
Fluorene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass				
Indeno(1.2.3-cd)pyrene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass				
Naphthalene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass				
Phenanthrene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass				
Pyrene	S18-De03159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass				
Duplicate												
Heavy Metals				Result 1	Result 2	RPD						
Arsenic	S18-De03160	CP	mg/kg	13	12	4.0	30%	Pass				
Cadmium	S18-De03160	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass				
Chromium	S18-De03160	CP	mg/kg	16	19	14	30%	Pass				
Copper	S18-De03160	CP	mg/kg	21	25	18	30%	Pass				
Lead	S18-De03160	CP	mg/kg	36	33	8.0	30%	Pass				
Mercury	S18-De03160	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass				
Nickel	S18-De03160	CP	mg/kg	10	11	12	30%	Pass				
Zinc	S18-De03160	CP	mg/kg	63	62	2.0	30%	Pass				
Duplicate												
				Result 1	Result 2	RPD						
% Moisture	S18-De03162	CP	%	21	19	9.0	30%	Pass				
Duplicate												
				Result 1	Result 2	RPD						
% Clay	M18-Oc24970	NCP	%	8.8	8.8	<1	30%	Pass				
Duplicate												
Cation Exchange Capacity				Result 1	Result 2	RPD						
Cation Exchange Capacity	B18-De02102	NCP	meq/100g	13	13	5.0	30%	Pass				
Duplicate					1 1							
				Result 1	Result 2	RPD						
Conductivity (1:5 aqueous extract at 25°C as rec.)	S18-De03165	СР	uS/cm	620	580	7.0	30%	Pass				
pH (1:5 Aqueous extract at 25°C as rec.)	S18-De03165	СР	pH Units	4.6	4.6	pass	30%	Pass				
Duplicate												
				Result 1	Result 2	RPD						
% Moisture	S18-De03176	CP	%	9.7	8.4	14	30%	Pass				



#### Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

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

G01 The LORs have been raised due to matrix interference

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).

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.

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.

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

The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference

Q15 The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

R16 The LORs have been raised due to the high concentration of one or more analytes

#### Authorised By

# Nibha Vaidya Analytical Services Manager Andrew Sullivan Senior Analyst-Organic (NSW) Chris Bennett Senior Analyst-Metal (VIC) Gabriele Cordero Senior Analyst-Inorganic (NSW) Gabriele Cordero Senior Analyst-Metal (NSW) Jonathon Angell Senior Analyst-Inorganic (QLD) Nibha Vaidya 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.

Eurofine; Ing 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 Eurofine in the liable for consequential damages including, but not limited to, lost provide, damages for datalines and lost and from this report. In or case shall Eurofine in the liable for most production arising for this report.



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 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention:

Daniel Denaro

631102-W MAMRE ROAD 55607 Dec 03, 2018

Report	
Project name	
Project ID	
Received Date	

Client Sample ID			RIN01	R20 <b>TS</b>	тв
Sample Matrix			Water	Water	Water
Eurofins   mgt Sample No.			S18-De03170	S18-De03171	S18-De03172
Date Sampled			Dec 03, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions				
Naphthalene <sup>N02</sup>	0.01	mg/L	< 0.01	89	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	70	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions				
TRH C6-C9	0.02	mg/L	< 0.02	76	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	91	< 0.001
Toluene	0.001	mg/L	< 0.001	89	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	87	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	80	< 0.002
o-Xylene	0.001	mg/L	< 0.001	88	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	83	< 0.003
4-Bromofluorobenzene (surr.)	1	%	77	93	84
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene <sup>N07</sup>	0.001	mg/L	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-



Client Sample ID			RIN01	R20TS	ТВ
Sample Matrix			Water	Water	Water
Eurofins   mgt Sample No.			S18-De03170	S18-De03171	S18-De03172
Date Sampled			Dec 03, 2018	Nov 30, 2018	Nov 30, 2018
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons	-				
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	INT	-	-
p-Terphenyl-d14 (surr.)	1	%	54	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4.4'-DDD	0.0001	mg/L	< 0.0001	-	-
4.4'-DDE	0.0001	mg/L	< 0.0001	-	-
4.4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	-	-
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	-	-
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	-	-
Dibutylchlorendate (surr.)	1	%	113	-	-
Tetrachloro-m-xylene (surr.)	1	%	73	-	-
Heavy Metals		r			
Arsenic	0.001	mg/L	< 0.001	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-
Chromium	0.001	mg/L	< 0.001	-	-
Copper	0.001	mg/L	< 0.001	-	-
Lead	0.001	mg/L	< 0.001	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.001	mg/L	< 0.001	-	-
Zinc	0.005	mg/L	< 0.005	-	-



### 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 (regarding both quality and NATA accreditation).

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 - 2013 NEPM Fractions	Sydney	Dec 04, 2018	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Dec 04, 2018	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 04, 2018	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 04, 2018	14 Day
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 04, 2018	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 04, 2018	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Dec 04, 2018	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Dec 10, 2018	28 Day
- Method: LTM-MET-3040 Metals in Waters. Soils & Sediments by ICP-MS			

	eurofins mgt ABN-50 005 e.mail : Envir web : www.en				085 521 Sales@eurofins.com ofins.com.au			<b>M</b> 2- 0 Pl N Si	Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271			Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 206 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				Brisbane 1/21 Smallwood Place Murarrie QLD 4172 66 Phone : +61 7 3902 460 NATA # 1261 Site # 207 7				Po 2/ Ki Pi N. Si	erth 91 Leach Hig ewdale WA hone : +61 8 ATA # 1261 te # 23736	Jhway 105 9251 9600			
Co Ad Pro	Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MAMRE ROAD         Project ID:       55607						Or Re Ph Fa	der N port <del>/</del> one: x:	o.: #:	63 02	31102 2 824	2 5 030	0				Fur	R D P C	eceiv ue: riorit; ontac	ved: y: ct Nar	me: [	Dec 3, 2 Dec 10, 5 Day Daniel D	018 6:38 2018 enaro	PM libba Vaid	łva
Sample Detail						% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH					
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	271														Х							
Sydi	ney Laboratory	- NATA Site # 1	8217				Х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					
Bris	bane Laboratory	y - NATA Site #	20794			Х																			
Pert	h Laboratory - N	ATA Site # 237	36																						
Exte	rnal Laboratory			1	1																_				
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	HA01 0-0.1	Nov 30, 2018		Soil	S18-De03141						х		x		Х	х	Х		х		1				
2	HA02 0-0.1	Nov 30, 2018		Soil	S18-De03142		х				х	х			х	х	Х		Х		1				
3	HA03 0-0.1	Nov 30, 2018		Soil	S18-De03143		х				х				х	х	Х		х		1				
4	HA04 0-0.1	Nov 30, 2018		Soil	S18-De03144						х				х	х	Х		Х		1				
5	HA04 0.2-0.3	Nov 30, 2018		Soil	S18-De03145							х					Х				1				
6	HA05 0-0.1	Nov 30, 2018		Soil	S18-De03146							х				х	Х		Х		1				
7	HA06 0-0.1	Nov 30, 2018		Soil	S18-De03147										Х		Х				1				
8	HA07 0-0.1	Nov 30, 2018		Soil	S18-De03148		Х				Х				х		Х				1				
9	HA08 0-0.1	Nov 30, 2018		Soil	S18-De03149		Х				Х	Х			Х	Х	Х		Х		]				

Image: Second				05 085 521 iroSales@eurofins.com eurofins.com.au			<b>M</b> 20 P N S	Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271				<b>Syc</b> Uni 16 I Lan Pho NA	<b>Iney</b> t F3, Bu Mars Ro ne Cove one : +6 TA # 12	uilding F bad West N 1 2 990 61 Site	ISW 200 0 8400 # 18217	66 7	Brisb 1/21 Murat Phon NATA	ane Smallwo rrie QLE e : +61 \ # 1261	ood Place D 4172 7 3902 4600 11 Site # 20794	Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 4 NATA # 1261 Site # 23736		ray 5 51 9600
Company Name:JBS & G Australia (NSW) P/LAddress:Level 1, 50 Margaret StSydneyNSW 2000Project Name:MAMRE ROADProject ID:55607					Or Re Ph Fa	der N port <del>/</del> one: x:	o.: #:	6 0.	31102 2 824	<u>2</u> 5 030	0					R D P C	Receiv Due: Priorit <u>:</u> Contac	red: y: ct Nar	[ [ me: [	Dec 3, 20 Dec 10, 2 5 Day Daniel De	018 6:38 PN 2018 enaro	1
															Euro	ofins	mgt	Analy	ytical Serv	ices Ma	nager : Nib	ha Vaidya
Sample Detail				% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH				
Melbourne Laborator	y - NATA Site # 1254 & 142	71														Х						
Sydney Laboratory -	NATA Site # 18217				Х	Х	Х	X	Х	Х	X	Х	Х	X	Х	Х	X	Х	4			
Brisbane Laboratory	- NATA Site # 20794			Х															4			
Perth Laboratory - N/	ATA Site # 23736																		4			
10 HA09 0-0.1	Nov 30, 2018	Sol	S18-De03150						X	X			X	X	X				-			
12 HA11 0 0 4	Nov 30, 2018	Soll	S18-De03151							X		-	v	<u> </u>					-			
13 HA12 0-0 1	Nov 30, 2018	Soil	S18-De03152		<u> </u>				×	x	-	-	×		×				1			
14 HA13 0-0 1	Nov 30, 2018	Soil	S18-De03153		x				x	X		<u> </u>	x	x	x		x		-			
15 HA14 0-0 1	Nov 30, 2018	Soil	S18-De03155						X	x			x		X				1			
16 HA16 0-0.1	Nov 30, 2018	Soil	S18-De03156						x	X			x	x	x		x		1			
17 HA17 0-0.1	Nov 30, 2018	Soil	S18-De03157		х				-	X			X		X				1			
18 HA18 0-0.1	Nov 30, 2018	Soil	S18-De03158		х				х				х	x	х		x		1			
19 HA19 0-0.1	Nov 30, 2018	Soil	S18-De03159		х				х	Х			х		х				1			
20 HA20 0-0.1	Nov 30, 2018	Soil	S18-De03160		х			l	х				х	X	х	l	X		1			
21 HA21 0-0.1	Nov 30, 2018	Soil	S18-De03161		Х								Х	Х	Х		X		]			

	🔅 eurofins   mgt			ABN– 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au				N 2 O P N S	Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271				<b>Syc</b> Uni 16 Lar Pho NA	<b>Sydney</b> Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				Brisb 1/21 3 Murat Phon NATA	ane Smallwo rie QLE e : +61 . # 1261	Perth           vood Place         2/91 Leach Highway           D 4172         Kewdale WA 6105           1 7 3902 4600         Phone : +618 9251 9600           61 Site # 20794         NATA # 1261           Site # 23736         Site # 23736	
Cc Ac Pr Pr	ompany Name: Idress: oject Name: oject ID:	JBS & G Aus Level 1, 50 N Sydney NSW 2000 MAMRE RO 55607	stralia (NSW) P/L Aargaret St AD			Or Re Ph Fa	der N port a one: x:	o.: #:	6 0	31102 2 824	2 5 030	0				Euro	F C F C	Receiv Due: Priority Contac	ed: /: :t Nar Analy	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day me: Daniel Denaro Iytical Services Manager : Nibha Vaidya	
	Sample Detail					Asbestos - WA guidelines	Asbestos Absence /Presence	ногр	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Melt	ourne Laborate	ory - NATA Site	# 1254 & 14271														Х				
Syd	ney Laboratory	- NATA Site # 1	8217			х	х	х	Х	х	х	х	х	х	х	х	х	x	Х		
Bris	bane Laborator	y - NATA Site #	20794		Х																
Pert	h Laboratory - I	NATA Site # 237	36	T																_	
22	HA22 0-0.1	Nov 30, 2018	Soil	S18-De03162		Х				Х	Х			Х	X	Х		X		_	
23	TP01 0-0.1	Dec 03, 2018	Soil	S18-De03163							Х					Х				4	
24	TP01 0.5-0.6	Dec 03, 2018	Soil	S18-De03164	X				X							X	X			4	
25	TP01 3-3.1	Dec 03, 2018	Soil	S18-De03165	X				X							X	X			4	
26	TP02 0-0.1	Dec 03, 2018	Soil	S18-De03166						X	X					X				4	
27	1P02 1-1.1	Dec 03, 2018	Soil	S18-De03167	X				X							X	X			-	
28	QA01	Nov 30, 2018	Soil	S18-De03168		X				X	X			X	X	X				-	
29	QA02	Nov 30, 2018	Soil	S18-De03169		X				X	X		<u> </u>	X	X	X				-	
30		Dec 03, 2018	Water	518-De03170					<u> </u>		X			X			<u> </u>		v	-	
31	тр	Nov 30, 2018	vvater																×	-	
22		Nov 30, 2018	vvater	S18 Dc02172		v				v	v			v	v	v		- v	^	4	
33	3501	11107 30, 2018	3011	1310-De031/3		_ ^					^			^	^	^					

	eurofins     mgt     ABN-50 005     e.mail : Envir     web : www.en					005 085 521 nviroSales@eurofins.com w.eurofins.com.au				Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271				<b>Syc</b> Uni 16   Lar Pho NA	<b>Sydney</b> Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 4600 NATA # 1261 Site # 2079			Perth 2/91 Kewo Phon NAT/ Site #	Leach Highway tale WA 6105 e : +61 8 9251 9 À # 1261 ∳ 23736	600
Co Ao Pr Pr	ompany Name: Idress: oject Name: oject ID:	JBS & G Aus Level 1, 50 N Sydney NSW 2000 MAMRE RO 55607	stralia (NSW) I /argaret St AD	P/L		Order No.:ReceivReport #:631102Due:Phone:02 8245 0300PrioritFax:Contact								ved: y: ct Nar	De De 5 [ <b>me:</b> D <i>e</i>	ec 3, 201 ec 10, 20 Day aniel Den	8 6:38 PM 18 aro							
							Eurofins   mgt Analytical Services M									es Mana	iger : Nibha	Vaidya						
Sample Detail						% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	НОГД	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH				
Mell	oourne Laborate	ory - NATA Site	# 1254 & 142	71														х						
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	_			
Bris	bane Laborator	y - NATA Site #	20794			Х															_			
Pert	h Laboratory - N	ATA Site # 237	36		1																-			
34	SP03	Nov 30, 2018		Soil	S18-De03174		X				Х	Х			Х	X	Х		X		-			
35	FRAG-01	Nov 30, 2018		Building Materials	S18-De03175			x																
36	HA15 0-0.1	Nov 30, 2018		Soil	S18-De03176						х				х	х	х		X		1			
37	FRAG-03	Nov 30, 2018		Building Materials	S18-De03177			x													]			
38	HA15 0-0.1	Nov 30, 2018		US Leachate	S18-De03310						х			х	х									
39	HA01 0.2-0.3	Nov 30, 2018		Soil	S18-De03326				х												4			
40	HA02 0.2-0.3	Nov 30, 2018		Soil	S18-De03327				Х												4			
41	HA05 0.2-0.3	Nov 30, 2018		Soil	S18-De03328				Х												4			
42	HA08 0.2-0.3	Nov 30, 2018		Soil	S18-De03329				Х												4			
43	HA09 0.2-0.3	Nov 30, 2018		Soil	S18-De03330				Х												4			
44	HA10 0.2-0.3	Nov 30, 2018		Soil	S18-De03331				Х															

eurofins mgt ABN-50 00 e.mail : Env web : www.			05 085 521 /iroSales@eurofins.com .eurofins.com.au				Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271				<b>Sydney</b> Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				<b>Brisba</b> 1/21 S Murai Phone NATA	ane Smallwo rie QLE e : +61 . # 1261	Perth           vood Place         2/91 Leach Highway           D 4172         Kewdale WA 6105           1 7 3902 4600         Phone: +61 8 9251 9600           61 Site # 20794         NATA # 1261           Site # 23736         Site # 23736	
Company Name:JBS & G Australia (NSW) P/LAddress:Level 1, 50 Margaret StSydneySW 2000Project Name:MAMRE ROADProject ID:55607			Ore Re Ph Fa	der N port # one: x:	o.: #:	6 0	31102 2 824	2 5 030	0				Euro	R D P C	eceiv Jue: Priority Contac	ed: /: :t Nar Analy	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day Ime: Daniel Denaro Iytical Services Manager : Nibha Vaidy	ra
Sample Detail	% Clay	Asbestos - WA guidelines	Asbestos Absence /Presence	ногр	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH			
Melbourne Laboratory - NATA Site # 1254 & 14271														х				
Sydney Laboratory - NATA Site # 18217			Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	X	Х	_	
Brisbane Laboratory - NATA Site # 20794		Х															4	
Perth Laboratory - NATA Site # 23736																	-	
45 HA11 0.2-0.3 Nov 30, 2018 Soil	S18-De03332				X												-	
46         HA12 U.2-U.3         Nov 30, 2018         Soil         Soil <td>518-De03333</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>-</td> <td></td>	518-De03333				X												-	
41         ITA 13 U.2-U.3         INUV 3U, 2U I8         Soli         Sol	S18-De02225				×	-											-	
40 HA16 0 2-0 3 Nov 30 2018 Soil Soil	S18-De03335				X												-	
Here         Here         Solid         Solid <ths< th=""><td>S18-De03330</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td></ths<>	S18-De03330				X												-	
51 HA18 0 2-0 3 Nov 30 2018 Soil	S18-De03337				X												-	
52 HA19 0 2-0 3 Nov 30 2018 Soil	S18-De03330				x												1	
53 HA20 0.2-0.3 Nov 30, 2018 Soil	S18-De03340				X	<u> </u>											1	
54 TP01 0.2-0.3 Dec 03 2018 Soil	S18-De03341				X	<u> </u>											1	
55 TP01 1-1.1 Dec 03, 2018 Soil	S18-De03342				X												1	
56         TP01 2-2.1         Dec 03, 2018         Soil         S	S18-De03343				Х													

	Curofins   mgt				ABN– 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au				Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271				<b>Syc</b> Uni 16 Lar Pho NA	<b>Sydney</b> Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217				Brisba 1/21 S Murat Phon NATA	ane Smallwo rrie QLE e : +61 v # 1261	Perth           wood Place         2/91 Leach Highway           _D 4172         Kewdale WA 6105           1 7 3902 4600         Phone : +61 8 9251 9600           61 Site # 20794         NATA # 1261           Site # 23736         Site # 23736	
Co Ao Pr	ompany Name: Idress: oject Name:	JBS & G Australia (NSW Level 1, 50 Margaret St Sydney NSW 2000 MAMRE ROAD	P/L			Or Re Ph Fa	der N port ; ione: x:	o.: #:	6 0.	31102 2 824	<u>2</u> 5 030	0					R D P C	eceiv Due: Priority Contac	ed: /: :t Nar	Dec 3, 2018 6:38 PM Dec 10, 2018 5 Day ame: Daniel Denaro	
																Euro	ofins	mgt	Analy	lytical Services Manager : Nibha Vaidya	
Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	НОГД	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	USA Leaching Procedure	Metals M8	BTEX	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH		
Mell	bourne Laborato	ory - NATA Site # 1254 & 14	271														Х			_	
Syd	ney Laboratory	- NATA Site # 18217				X	X	Х	X	Х	Х	X	X	Х	X	Х	Х	X	Х	4	
Bris	bane Laborator	y - NATA Site # 20794			X															-	
Pert	TD02 0 2 0 2	NATA Site # 23/36	Coil	S18 De02244				v												-	
50	TP02 0.2-0.3	Dec 03, 2018	Soil	S18-De03344			-	×						-						-	
50	TP02 0.3-0.0	Dec 03, 2018	Soil	S18-De03345			-	x												-	
60	TP02.3-3.1	Dec 03 2018	Soil	S18-De03347				x												1	
61	SP02	Nov 30, 2018	Soil	S18-De03348				X												1	
62	SP04	Nov 30, 2018	Soil	S18-De03349				X												1	
63	SP05	Nov 30, 2018	Soil	S18-De03350				x						<u> </u>						1	
64	SP06	Nov 30, 2018	Soil	S18-De03351				X												1	
65	FRAG02	Nov 30, 2018	Building Materials	S18-De03352				x													
66	HA15 0.2-0.3	Nov 30, 2018	Soil	S18-De03353				х													
Tes	t Counts				3	17	2	28	3	25	20	1	1	26	20	32	3	20	2		



#### Internal Quality Control Review and Glossary

#### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.

- 2. All soil 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. 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	Quality Systems Manual ver 5.1 US Department of Defense
СР	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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 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		r	1	1	r	
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/L	< 0.01		0.01	Pass	
TRH C6-C10	mg/L	< 0.02		0.02	Pass	
TRH >C10-C16	mg/L	< 0.05		0.05	Pass	
TRH >C16-C34	mg/L	< 0.1		0.1	Pass	
TRH >C34-C40	mg/L	< 0.1		0.1	Pass	
Method Blank		1	1	1		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/L	< 0.02		0.02	Pass	
TRH C10-C14	mg/L	< 0.05		0.05	Pass	
TRH C15-C28	mg/L	< 0.1		0.1	Pass	
TRH C29-C36	mg/L	< 0.1		0.1	Pass	
Method Blank					1	
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	
Method Blank			I I		1	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/L	< 0.001		0.001	Pass	
Acenaphthylene	mg/L	< 0.001		0.001	Pass	
Anthracene	mg/L	< 0.001		0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001		0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001		0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001		0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001		0.001	Pass	
Chrysene	mg/L	< 0.001		0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001		0.001	Pass	
Fluoranthene	mg/L	< 0.001		0.001	Pass	
Fluorene	mg/L	< 0.001		0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001		0.001	Pass	
Naphthalene	mg/L	< 0.001		0.001	Pass	
Phenanthrene	mg/L	< 0.001		0.001	Pass	
Pyrene	mg/L	< 0.001		0.001	Pass	
Method Blank			I I	1	1	
Organochlorine Pesticides						
Chlordanes - Total	mg/L	< 0.001		0.001	Pass	
4.4'-DDD	mg/L	< 0.0001		0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001		0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001		0.0001	Pass	
a-BHC	mg/L	< 0.0001		0.0001	Pass	
Aldrin	mg/L	< 0.0001		0.0001	Pass	
b-BHC	mg/L	< 0.0001		0.0001	Pass	
d-BHC	mg/L	< 0.0001		0.0001	Pass	
Dieldrin	mg/L	< 0.0001		0.0001	Pass	
Endosulfan I	mg/L	< 0.0001		0.0001	Pass	
Endosulfan II	mg/L	< 0.0001		0.0001	Pass	



Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/L	< 0.0001		0.0001	Pass	
Endrin	ma/L	< 0.0001		0.0001	Pass	
Endrin aldehvde	ma/L	< 0.0001		0.0001	Pass	
Endrin ketone	mg/L	< 0.0001		0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001		0.0001	Pass	
Heptachlor	mg/L	< 0.0001		0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001		0.0001	Pass	
Hexachlorobenzene	ma/L	< 0.0001		0.0001	Pass	
Methoxychlor	ma/L	< 0.0001		0.0001	Pass	
Toxaphene	ma/L	< 0.01		0.01	Pass	
Method Blank	<u> </u>	<u> </u>	<u>к</u> – Г			
Heavy Metals						
Arsenic	ma/L	< 0.001		0.001	Pass	
Cadmium	ma/L	< 0.0002		0.0002	Pass	
Chromium	ma/L	< 0.001		0.001	Pass	
Copper	mg/L	< 0.001		0.001	Pass	
Lead	mg/L	< 0.001		0.001	Pass	
Mercury	ma/L	< 0.0001		0.0001	Pass	
Nickel	ma/L	< 0.001		0.001	Pass	
Zinc	mg/L	< 0.005		0.005	Pass	
LCS - % Recovery			г – Т			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	101		70-130	Pass	
TRH C6-C10	%	84		70-130	Pass	
TRH >C10-C16	%	95		70-130	Pass	
LCS - % Recovery			г – Т			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	%	84		70-130	Pass	
TRH C10-C14	%	99		70-130	Pass	
LCS - % Recovery						
BTEX						
Benzene	%	85		70-130	Pass	
Toluene	%	89		70-130	Pass	
Ethylbenzene	%	91		70-130	Pass	
m&p-Xylenes	%	91		70-130	Pass	
o-Xylene	%	90		70-130	Pass	
Xylenes - Total	%	91		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	78		70-130	Pass	
Acenaphthylene	%	85		70-130	Pass	
Anthracene	%	93		70-130	Pass	
Benz(a)anthracene	%	90		70-130	Pass	
Benzo(a)pyrene	%	88		70-130	Pass	
Benzo(b&j)fluoranthene	%	91		70-130	Pass	
Benzo(g.h.i)perylene	%	95		70-130	Pass	
Benzo(k)fluoranthene	%	86		70-130	Pass	
Chrysene	%	88		70-130	Pass	
Dibenz(a.h)anthracene	%	95		70-130	Pass	
Fluoranthene	%	90		70-130	Pass	
Fluorene	%	85		70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	94		70-130	Pass	
Naphthalene	%	84		70-130	Pass	
Phenanthrene	%	91		70-130	Pass	



Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene			%	90			70-130	Pass	
LCS - % Recovery				•	•				
Organochlorine Pesticides									
4.4'-DDD			%	80			70-130	Pass	
4.4'-DDE			%	80			70-130	Pass	
4.4'-DDT			%	80			70-130	Pass	
a-BHC			%	80			70-130	Pass	
Aldrin			%	100			70-130	Pass	
d-BHC			%	80			70-130	Pass	
Dieldrin			%	80			70-130	Pass	
Endosulfan I			%	100			70-130	Pass	
Endosulfan II			%	80			70-130	Pass	
Endosulfan sulphate			%	80			70-130	Pass	
Endrin			%	80			70-130	Pass	
Endrin aldehyde			%	80			70-130	Pass	
Endrin ketone			%	100			70-130	Pass	
g-BHC (Lindane)			%	80			70-130	Pass	
Heptachlor			%	100			70-130	Pass	
Heptachlor epoxide			%	80			70-130	Pass	
Hexachlorobenzene			%	80			70-130	Pass	
Methoxychlor			%	80			70-130	Pass	
LCS - % Recovery			,,,						
Heavy Metals									
Arsenic			%	83			70-130	Pass	
Cadmium			%	93			70-130	Pass	
Chromium			%	97			70-130	Pass	
Copper			%	102			70-130	Pass	
Lead			%	100			70-130	Pass	
Mercury			%	104			70-130	Pass	
Nickel			%	101			70-130	Pass	
Zinc			%	99			70-130	Pass	
		٥A	70					Pass	Qualifying
Test	Lab Sample ID	Source	Units	Result 1			Limits	Limits	Code
Spike - % Recovery				1	1				
Heavy Metals				Result 1					
Arsenic	S18-De03322	NCP	%	88			70-130	Pass	
Cadmium	S18-De03322	NCP	%	98			70-130	Pass	
Chromium	S18-De03322	NCP	%	87			70-130	Pass	
Copper	S18-De03322	NCP	%	82			70-130	Pass	
Lead	S18-De03322	NCP	%	87			70-130	Pass	
Mercury	S18-De03322	NCP	%	89			70-130	Pass	
Nickel	S18-De03322	NCP	%	82			70-130	Pass	
Zinc	S18-De03322	NCP	%	79			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-De04450	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S18-De04450	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S18-De04450	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S18-De04450	NCP	mg/L	0.003	0.003	2.0	30%	Pass	
Lead	S18-De04450	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S18-De04450	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S18-De04450	NCP	mg/L	0.003	0.003	3.0	30%	Pass	
Zinc	S18-De04450	NCP	mg/L	0.008	0.009	20	30%	Pass	



#### Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

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

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).

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.

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

R20 This sample is a Trip Spike and therefore all results are reported as a percentage

#### Authorised By

Nibha Vaidya	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)

1. Juli

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.

Eurofines (ng shail 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 or case shall Eurofine is (ng to be liable for consequential damages including, but not initianted to, its protection, and angle or expenses includied of the performance occept in full and relates only to the instructions, the tests were performed on the segnet.







### CHAIN OF CUSTODY

PROJECT NO .: 557607	an algebra the second states at the	LABORATORY BATCH NO.:										
PROJECT NAME: Murvac, Kenn	ips (reek	SAMPLERS: RU										
DATE NEEDED BY: STAT	Partie	QC LEVEL: NEPM (2013)										
PHONE: Sydney: 02 8245 0300   Perth: 08 9	9488 0100   Brisbane: 07 3112 2688											
SEND REPORT & INVOICE TO: (1) adminnsw	v@jbsg.com.au; (2)dlenaro@jl	bsg.com.au; (3)r.l.U@jbsg.com.au										
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:		50 6	TYPE OF ASBESTOS									
		K St C	ANALYSIS									
		AL BARA	A									
			PM/W									
SAMPLE ID MATRIX	DATE TIME TYPE & PRESERVATIVE	PH R J O I V V V	□ ፵ NOTES:									
BHOZ	IxB, IxJ	XXX										
BH04		$\times$ $\times$ $\times$ $\times$										
BHOG		$\times$ $\times$ $\times$										
BHD7		$\times$ $\times$ $\times$ $\times$ $\times$										
BHOI		X X										
BITO3		X										
BHOS		X										
RINDI	2×V, 1×A IVM	XXXXX										
TS	2.40	X										
TB	2×V	X										
STICKPILE	INB 1xit	XXXXX										
POND	Zx IXA IVM	X X X										
RELINQUISHED BY:	METHOD OF SHIPMENT:	BECEIVED BY: FOR RI	ECEIVING LAB USE ONLY:									
NAME: 0 NOW DATE: 10 119	CONSIGNMENT NOTE NO.	NAME: COOLER SEAL - Yes No	NAME: Manuel COOLER SEAL - Yes No Intact Broken									
OF IRSEG	TRANSPORT CO	DATE: 1670111. S.III COOLER TEMP ???										
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE: COOLER SEAL - Yes No	Intact Broken									
A. D. M. A. A. A. A. A. A. A. A. A. A. A. A. A.		OF:										
OF:	TRANSPORT CO	COOLER TEMP deg C	E - EDTA Draudu ST - Stavila Battlay O - Othor									

IMSO FormsO13 - Chain of Custody - Generic

ABN- 50 005 085 5 e.mail : EnviroSales web : www.eurofins							185 521 Sales@eurofins.com ofins.com.au				Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271				dney it F3, Building F Mars Road e Cove West NSW 2066 one : +61 2 9900 8400 TA # 1261 Site # 18217	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 4600 NATA # 1261 Site # 2079	Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 MATA # 1261 Site # 23736
Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MIRVAC KEMPS CREEK         Project ID:       55607							Or Re Ph Fa:	der N port <del>/</del> one: x:	o.: #:	6: 0:	36089 2 824	) 5 030(	0		Function	Received: Due: Priority: Contact Name:	Jan 16, 2019 5:17 PM Jan 23, 2019 5 Day Daniel Denaro
	Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6			
Mel	oourne Laborato	ory - NATA Site	# 1254 & 142	271			х	х	х	х	Х	х	Х	х			
Syd	ney Laboratory	- NATA Site # 1	8217			Х											
Bris	bane Laborator	y - NATA Site #	20794														
Pert	h Laboratory - N	ATA Site # 237	'36												_		
Exte	ernal Laboratory	,		I	1										-		
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
1	BH02	Jan 16, 2019		Soil	S19-Ja10348			х	Х		Х	Х			]		
2	BH04	Jan 16, 2019		Soil	S19-Ja10349	Х		Х	Х		Х	Х			]		
3	BH06	Jan 16, 2019		Soil	S19-Ja10350							Х	Х				
4	BH07	Jan 16, 2019		Soil	S19-Ja10351	Х						Х	Х				
5	RIN01	Jan 16, 2019		Water	S19-Ja10352								Х				
6	TS	Jan 16, 2019		Water	S19-Ja10353					х							
7	ТВ	Jan 16, 2019		Water	S19-Ja10354					х							
8	STOCKPILE         Jan 16, 2019         Soil         S19-Ja10355											Х	Х				
9	POND	Jan 16, 2019		Water	S19-Ja10356						Х			Х			

eurofins mgt AB			ABN– 50 005 e.mail : Enviro web : www.eu	ABN- 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au			₽ S	Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271					dney it F3, Building F Mars Road ne Cove West NSW 2066 one : +61 2 9900 8400 TA # 1261 Site # 18217	<b>Brisbane</b> 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 4¢ NATA # 1261 Site # 20	Perth           *         2/91 Leach Highway           Kewdale WA 6105           600         Phone : +61 8 9251 9600           0794         NATA # 1261           Site # 23736			
Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MIRVAC KEMPS CREEK         Project ID:       55607				Or Re Ph Fa	rder N eport a none: x:	o.: #:	6. 0.	36089 2 824	5 030	0		Eurofii	Received: Due: Priority: Contact Name: ns   mgt Analytical S	Jan 16, 2019 5:17 PM Jan 23, 2019 5 Day Daniel Denaro Services Manager : Nibha Vaidya				
Sample Detail				Asbestos - AS4964	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6				]		
Melbourne Laboratory - NATA Site # 1254 & 14271							Х	х	Х	Х	Х	Х	х	Х				
Sydney Laboratory - NATA Site # 18217						Х									1			
Brisbane Laboratory - NATA Site # 20794															4			
Per	th Laboratory - N	ATA Site # 237	736	0.11											4			
10	BH01	Jan 16, 2019		Soll	S19-Ja10357		X								4			
11	11         BH03         Jan 16, 2019         Soil         S19-Ja10358           40         BH05         Lar 40, 2040         Sail         S19-Ja10358													-				
12         BH05         Jan 16, 2019         Soil         S19-Ja10359           Test Counts         State         State					3	3	2	2	2	3	5	4	1					



### Certificate of Analysis

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 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention:	Daniel Denaro
Report	636089-AID
Project Name	MIRVAC KEMPS CREEK
Project ID	55607
Received Date	Jan 16, 2019
Date Reported	Jan 23, 2019

#### 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. <i>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</i> .
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 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name	MIRVAC KEMPS CREEK
Project ID	55607
Date Sampled	Jan 16, 2019
Report	636089-AID

Client Sample ID	Eurofins   mgt Sample No.	Date Sampled	Sample Description	Result
BH04	19-Ja10349	Jan 16, 2019	Approximate Sample 478g 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 respirable fibres detected.
BH07	19-Ja10351	Jan 16, 2019	Approximate Sample 528g 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 respirable fibres detected.
STOCKPILE	19-Ja10355	Jan 16, 2019	Approximate Sample 97g Sample consisted of: Fragments of wood chips and plant matter	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres 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 (regarding both quality and NATA accreditation).

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 Asbestos - LTM-ASB-8020 Testing SiteExtractedHolding TimeSydneyJan 16, 2019Indefinite

eurofins mgt							ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au						Irne erey Roa nong So : +61 3 a ≠ 1261 254 & 1	ad uth VIC 3175 8564 5000 14271	Sydney Unit F3, Building F 5 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217	Brisbane 1/21 Smallwoo Murarrie QLD Phone : +61 7 NATA # 1261 S	d Place 4172 3902 4600 Site # 20794	Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 NATA # 1261 Site # 23736
Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000						Order No.: Report #: 6360 Phone: 02 8/ Fax:					36089 2 824	) 5 030(	D		Receive Due: Priority Contact	ed: : : Name:	Jan 16, 2 Jan 23, 2 5 Day Daniel De	019 5:17 PM 019 enaro
Pro Pro	ject Name: ject ID:	MIRVAC KEN 55607	MPS CREEK												Eurofins   mgt /	Analytical Se	rvices Mai	nager : Nibha Vaidya
Sample Detail						Asbestos - AS4964	НОГД	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6				
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	71			х	х	х	х	х	х	х	х				
Sydn	ey Laboratory	- NATA Site # 1	8217			Х												
Brisk	ane Laboratory	y - NATA Site #	20794															
Perth	Laboratory - N	ATA Site # 237	36															
Exte	nal Laboratory		0	<b>BI</b> = fuilty														
NO	Sample ID	Sample Date	Time	Matrix														
1	BH02	Jan 16, 2019		Soil	S19-Ja10348			х	х		х	х						
2	BH04	Jan 16, 2019		Soil	S19-Ja10349	Х		Х	Х		Х	Х						
3	BH06	Jan 16, 2019		Soil	S19-Ja10350							Х	Х					
4	BH07	Jan 16, 2019		Soil	S19-Ja10351	X						Х	Х					
5	RIN01	Jan 16, 2019		Water	S19-Ja10352								Х					
6	TS	Jan 16, 2019		Water	S19-Ja10353					Х								
7	ТВ	Jan 16, 2019		Water	S19-Ja10354					Х								
8	STOCKPILE	Jan 16, 2019		Soil	S19-Ja10355	X						Х	Х					
9	POND	Jan 16, 2019		Water	S19-Ja10356						Х			X				

🔅 eurofins	ABN – e.mail : web : w	ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au					Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271			Sydney Unit F3, Building F 75 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217	<b>Brisbane</b> 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 4600 NATA # 1261 Site # 20794	Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 NATA # 1261 Site # 23736		
Company Name:       JBS & G Australia (NSW) P/L         Address:       Level 1, 50 Margaret St         Sydney       NSW 2000         Project Name:       MIRVAC KEMPS CREEK         Project ID:       55607					der N port a ione: ix:	o.: #:	6 0	36089 2 824	9 5 030	0		Receive Due: Priority Contact	ed: Jan 16, Jan 23, : 5 Day : Name: Daniel [	2019 5:17 PM 2019 Denaro
												Eurofins   mgt A	Analytical Services Ma	anager : Nibha Vaidya
Sample Detail					Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6			
Melbourne Laboratory - NATA Site		Х	Х	Х	х	Х	Х	Х	х					
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23	736													
10 BH01 Jan 16, 2019	Soil	S19-Ja10357		х										
11 BH03 Jan 16, 2019	Soil	S19-Ja10358		х										
12 BH05 Jan 16, 2019	Soil	S19-Ja10359		х										
Test Counts			3	3	2	2	2	3	5	4	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. 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.

mgt

#### Units

grand per kilogram	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 Asbe           Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)	estos-Contaminated						
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 NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.	e purposes of the						
AF Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Conside equivalent to "non-bonded / friable".	red under the NEPM as						
FA Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generative materials that do not pass a 7mm x 7mm sieve.	ally restricted to those						
Friable Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes bot outside of the laboratory's remit to assess degree of friability.	h AF and FA. It is						
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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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 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention:

**Daniel Denaro** 

Report Project name Project ID Received Date 636089-S MIRVAC KEMPS CREEK 55607 Jan 16, 2019

Client Sample ID			DUIDO	DUG	DUIDO	DU07
			BHUZ	BHU4	BHU6	BHU/
			5011	5011	5011	501
Eurofins   mgt Sample No.			S19-Ja10348	S19-Ja10349	S19-Ja10350	S19-Ja10351
Date Sampled			Jan 16, 2019	Jan 16, 2019	Jan 16, 2019	Jan 16, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fract	ions					
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 C10-36 (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	%	-	-	60	81
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions					
Naphthalene <sup>N02</sup>	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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	< 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 <sup>N07</sup>	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			BH02	BH04	BH06	BH07
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins I mgt Sample No.			S19-Ja10348	S19-Ja10349	S19-Ja10350	S19-Ja10351
Date Sampled			lan 16, 2019	lan 16, 2019	lan 16, 2019	lan 16, 2019
		1.1.4.14	Jan 10, 2013	Jan 10, 2013	Jan 10, 2013	Jan 10, 2013
Pelvovelia Aromatia Hydrosarbana	LUR	Unit				
	0.5				.05	.0.5
	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphtholone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phononthrono	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
	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
	0.5	111g/kg %	54	121	< 0.5 80	54
p-Terphenyl-d14 (surr.)	1	70 %	58	57	53	63
Organochlorine Pesticides	1	70		51		00
Chlordanes - Total	0.1	ma/ka	< 0.1	< 0.1	< 0.1	< 0.1
4 4'-DDD	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
4 4'-DDF	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
4 4'-DDT	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	ma/ka	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	ma/ka	< 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	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 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	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	117	94	73	93
Tetrachloro-m-xylene (surr.)	1	%	110	100	99	110
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
DICNIORVOS	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2



Client Sample ID			BH02	BH04	BH06	BH07
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins   mot Sample No.			S19-Ja10348	S19-Ja10349	S19-Ja10350	S19-Ja10351
Date Sampled			Jan 16, 2019	Jan 16, 2019	lan 16, 2019	Jan 16, 2019
		Linit	Cull 10, 2010	Cur 10, 2010	oun 10, 2010	oun 10, 2010
Organophosphorus Pesticides	LOK	Offic				
Dimethosto	0.2	malka	- 0.2	- 0.2	- 0.2	- 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfotnion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	2	mg/kg	<2	< 2	<2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
	2	mg/kg	< 2	< 2	<2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	106	77	52	78
Heavy Metals		r				
Arsenic	2	mg/kg	9.6	6.0	8.6	8.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	20	25	26
Copper	5	mg/kg	25	23	14	16
Lead	5	mg/kg	20	15	25	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	11	8.6	8.4
Zinc	5	mg/kg	35	34	27	23
% Moisture	1	%	13	14	15	18

Client Sample ID			G01 STOCKPILE
Sample Matrix			Soil
Eurofins   mgt Sample No.			S19-Ja10355
Date Sampled			Jan 16, 2019
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fract			
TRH C6-C9	20	mg/kg	< 40
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	240
TRH C29-C36	50	mg/kg	160
TRH C10-36 (Total)	50	mg/kg	400



Client Sample ID			G01STOCKPILE
Sample Matrix			Soil
Eurofins   mgt Sample No.			S19-Ja10355
Date Sampled			Jan 16, 2019
Toot/Poforonoo		Linit	Cuil 10, 2010
	LOR	Unit	
Denzene	0.1	~~~//ca	.0.2
Teluene	0.1	mg/kg	< 0.2
Toluene	0.1	mg/kg	< 0.2
	0.1	mg/kg	< 0.2
	0.2	mg/kg	< 0.4
Vulonos Total	0.1	mg/kg	< 0.2
4-Bromofluorobenzene (curr.)	0.3	111g/kg %	<u> </u>
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions	/0	
Nophtholone <sup>N02</sup>		malka	- 1
	0.5	mg/kg	< 1
TRH C6-C10	20	mg/kg	< 40
TPH > C10 C16	<u> </u>	mg/kg	< 40
TPH > C10 C16 loss Nanhthalono (E2) <sup>N01</sup>	50	mg/kg	< 50
	100	mg/kg	220
TRH \C34_C40	100	mg/kg	< 100
TPH >C10-C40 (total)*	100	mg/kg	330
Polycyclic Aromatic Hydrocarbons	100	шу/ку	
Ponzo(a) pyropo TEO (lower bound) *	0.5	ma/ka	< 0.5
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (inedialin bound) *	0.5	ma/ka	1.2
	0.5	mg/kg	- 0.5
Acenaphthylene	0.5	ma/ka	< 0.5
Anthracene	0.5	ma/ka	< 0.5
Benz(a)anthracene	0.5	ma/ka	< 0.5
Benzo(a)pyrene	0.5	ma/ka	< 0.5
Benzo(b&i)fluoranthene <sup>N07</sup>	0.5	ma/ka	< 0.5
Benzo(a,h,i)pervlene	0.5	ma/ka	< 0.5
Benzo(k)fluoranthene	0.5	ma/ka	< 0.5
Chrysene	0.5	ma/ka	< 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	%	65
p-Terphenyl-d14 (surr.)	1	%	64
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



Client Sample ID			G01STOCKPILE
Sample Matrix			Soil
Eurofins   mgt Sample No.			S19-Ja10355
Date Sampled			Jan 16. 2019
	LOR	Unit	
Organochlorine Pesticides	LOIN	Offic	
Endosulfan I	0.05	ma/ka	< 0.05
Endosulfan II	0.05	ma/ka	< 0.05
Endosulfan sulphate	0.05	ma/ka	< 0.05
Endrin	0.05	ma/ka	< 0.05
Endrin aldehvde	0.05	ma/ka	< 0.05
Endrin ketone	0.05	ma/ka	< 0.05
g-BHC (Lindane)	0.05	ma/ka	< 0.05
Heptachlor	0.05	ma/ka	< 0.05
Heptachlor epoxide	0.05	ma/ka	< 0.05
Hexachlorobenzene	0.05	ma/ka	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 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	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	78
Tetrachloro-m-xylene (surr.)	1	%	78
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2



Client Sample ID Sample Matrix Eurofins   mgt Sample No.			<sup>G01</sup> STOCKPILE Soil S19-Ja10355
Date Sampled			Jan 16, 2019
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	93
Heavy Metals			
Arsenic	2	mg/kg	< 2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	< 5
Copper	5	mg/kg	62
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	7.2
Zinc	5	mg/kg	520
% Moisture	1	%	68


## 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 (regarding both quality and NATA accreditation).

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
Eurofins   mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Jan 21, 2019	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins   mgt Suite B10			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Melbourne	Jan 21, 2019	14 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
% Moisture	Melbourne	Jan 16, 2019	14 Day
- Method: LTM-GEN-7080 Moisture			

<b>;</b> ;	eur	ofins	mgt		ABN– 50 005 e.mail : Enviro web : www.eur	085 521 Sales@ rofins.cc	eurofins om.au	s.com	₽ 6 0 8 8 8	lelbourr Monter andenc hone : - ATA # ite # 12	ey Roac ng Sout -61 3 85 1261 54 & 14	I h VIC 3 564 500 271	3175 0	<b>Sy</b> Uni 16 Lar Pho NA	dney it F3, Building F Mars Road ne Cove West NSW 2066 one : +61 2 9900 8400 .TA # 1261 Site # 18217	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 460 NATA # 1261 Site # 207	Perth 2/91 Leach Highway Kewdale WA 6105 00 Phone : +61 8 9251 9600 /94 NATA # 1261 Site # 23736
Company Address: Project Na	Name:	JBS & G Aus Level 1, 50 M Sydney NSW 2000 MIRVAC KEM	tralia (NSW) I largaret St MPS CREEK	P/L			Or Re Ph Fa	der Ne port # one: x:	o.: #:	6 0	36089 2 824	) 5 030	0			Received: Due: Priority: Contact Name:	Jan 16, 2019 5:17 PM Jan 23, 2019 5 Day Daniel Denaro
Project ID:	):	55607													Eurofin	s   mot Analvtical Se	ervices Manager : Nibha Vaidva
Sample Detail						Asbestos - AS4964	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6			
Melbourne L	Laborato	ry - NATA Site	# 1254 & 142	71			х	Х	Х	Х	х	Х	X	Х	_		
Sydney Lab	oratory -	NATA Site # 18	8217			X									_		
Brisbane La	aboratory	- NATA Site #	<u>20794</u>												-		
External Labora	horstory - N	ATA Site # 237	30												-		
No Sam	ple ID	Sample Date	Sampling Time	Matrix	LAB ID										-		
1 BH02		Jan 16, 2019		Soil	S19-Ja10348			х	Х		х	Х			-		
2 BH04		Jan 16, 2019		Soil	S19-Ja10349	х		Х	Х		х	Х			]		
3 BH06		Jan 16, 2019		Soil	S19-Ja10350							х	х				
4 BH07		Jan 16, 2019		Soil	S19-Ja10351	Х						х	х				
5 RIN01		Jan 16, 2019		Water	S19-Ja10352								х				
6 TS		Jan 16, 2019		Water	S19-Ja10353					х							
7 TB		Jan 16, 2019		Water	S19-Ja10354					х							
8 STOCK	KPILE	Jan 16, 2019		Soil	S19-Ja10355	Х						Х	X		1		
9 POND		Jan 16, 2019		Water	S19-Ja10356						Х			Х			

	eurof	fins	mgt		ABN– 50 005 e.mail : Enviro web : www.eu	085 521 Sales@ rofins.co	eurofins om.au	s.com	6 D P N S	<b>leibourn</b> Monter andeno hone : - IATA # <sup>-</sup> ite # 12	<b>ie</b> ey Road ing Sout ⊧61 3 85 1261 54 & 14	I h VIC 3 64 500 271	175 0	<b>Syd</b> Unit 16 I Lan Pho NA <sup>-</sup>	dney It F3, Building F Mars Road - Cove West NSW 2066 one : +61 2 9900 8400 TA # 1261 Site # 18217	<b>Brisbane</b> 1/21 Smallwo Murarrie QLE Phone : +61 NATA # 1261	ood Place 0 4172 7 3902 4600 1 Site # 2079	P0 2/ K6 0 P1 34 N. Si	erth /91 Leach Highway ewdale WA 6105 hone : +61 8 9251 9600 ATT # 1261 ite # 23736	
Company N Address: Project Nat Project ID:	Name: JI Lu S N me: M	BS & G Aus evel 1, 50 N ydney SW 2000 IIRVAC KE 5607	stralia (NSW) P Margaret St MPS CREEK	/L			Or Re Ph Fa	der N port i one: x:	o.: #:	6	36089 2 824	5 030	0		Eurofir	Received: Due: Priority: Contact Nar	ne: ytical Ser	Jan 16, 2 Jan 23, 2 5 Day Daniel D rvices Ma	2019 5:17 PM 2019 Denaro <b>anager : Nibha Vaidya</b>	
Sample Detail					Asbestos - AS4964	НОГД	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6						1	
Melbourne L	aboratory -	NATA Site	# 1254 & 1427	′1			х	х	Х	х	х	Х	х	х						
Sydney Labo	oratory - NA	TA Site # 1	8217			х														
Brisbane La	boratory - N	ATA Site #	20794																	
Perth Labora	atory - NATA	Site # 237	736		1															
10 BH01	Jan	16, 2019	;	Soil	S19-Ja10357		Х													
11 BH03	Jan	16, 2019		Soil	S19-Ja10358		Х													
12 BH05	Jan	16, 2019		Soil	S19-Ja10359		Х													
<b>Test Counts</b>						3	3	2	2	2	3	5	4	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, April 2011 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. 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
ppm: Parts per million	ppb: Parts per billion
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units

ug/L: micrograms per litre %: Percentage 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
сос	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.2 2018
СР	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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 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		1	 -		
втех					
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	ma/ka	< 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	< 0.05	0.05	Pass	
Toxaphene	mg/kg	< 1	1	Pass	
Method Blank					
Organophosphorus Pesticides					
Azinphos-methyl	mg/kg	< 0.2	0.2	Pass	
Bolstar	mg/kg	< 0.2	0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2	0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2	0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2	0.2	Pass	
Coumaphos	mg/kg	< 2	2	Pass	
Demeton-S	mg/kg	< 0.2	0.2	Pass	
Demeton-O	mg/kg	< 0.2	0.2	Pass	
Diazinon	mg/kg	< 0.2	0.2	Pass	
Dichlorvos	mg/kg	< 0.2	0.2	Pass	
Dimethoate	mg/kg	< 0.2	0.2	Pass	
Disulfoton	mg/kg	< 0.2	0.2	Pass	
EPN	mg/kg	< 0.2	0.2	Pass	
Ethion	mg/kg	< 0.2	0.2	Pass	
Ethoprop	mg/kg	< 0.2	0.2	Pass	
Ethyl parathion	mg/kg	< 0.2	0.2	Pass	
Fenitrothion	mg/kg	< 0.2	0.2	Pass	
Fensulfothion	mg/kg	< 0.2	0.2	Pass	
Fenthion	mg/kg	< 0.2	0.2	Pass	
Malathion	mg/kg	< 0.2	0.2	Pass	
Merphos	mg/kg	< 0.2	0.2	Pass	
Methyl parathion	mg/kg	< 0.2	0.2	Pass	
Mevinphos	mg/kg	< 0.2	0.2	Pass	
Monocrotophos	mg/kg	< 2	2	Pass	
Naled	mg/kg	< 0.2	0.2	Pass	
Omethoate	mg/kg	< 2	2	Pass	
Phorate	mg/kg	< 0.2	0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2	0.2	Pass	
Pyrazophos	mg/kg	< 0.2	0.2	Pass	
Ronnel	mg/kg	< 0.2	0.2	Pass	
Terbufos	mg/kg	< 0.2	0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2	0.2	Pass	
Tokuthion	mg/kg	< 0.2	0.2	Pass	
Trichloronate	mg/kg	< 0.2	0.2	Pass	
Method Blank					
Heavy Metals			ļ		
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	



Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery		1				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	%	95		70-130	Pass	
TRH C10-C14	%	106		70-130	Pass	
LCS - % Recovery		1		I		
BTEX						
Benzene	%	86		70-130	Pass	
Toluene	%	90		70-130	Pass	
Ethylbenzene	%	93		70-130	Pass	
m&p-Xylenes	%	91		70-130	Pass	
Xylenes - Total	%	93		70-130	Pass	
LCS - % Recovery		1		T		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	93		70-130	Pass	
TRH C6-C10	%	92		70-130	Pass	
TRH >C10-C16	%	103		70-130	Pass	
LCS - % Recovery		1	Г — Г	T		
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	108		70-130	Pass	
Acenaphthylene	%	110		70-130	Pass	
Anthracene	%	98		70-130	Pass	
Benz(a)anthracene	%	81		70-130	Pass	
Benzo(a)pyrene	%	88		70-130	Pass	
Benzo(b&j)fluoranthene	%	113		70-130	Pass	
Benzo(g.h.i)perylene	%	77		70-130	Pass	
Benzo(k)fluoranthene	%	110		70-130	Pass	
Chrysene	%	112		70-130	Pass	
Dibenz(a.h)anthracene	%	87		70-130	Pass	
Fluoranthene	%	117		70-130	Pass	
Fluorene	%	107		70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	84		70-130	Pass	
Naphthalene	%	114		70-130	Pass	
Phenanthrene	%	95		70-130	Pass	
Pyrene	%	120		70-130	Pass	
LCS - % Recovery		1		1		
Organochlorine Pesticides					_	
Chlordanes - Total	%	100		70-130	Pass	
4.4'-DDD	%	118		70-130	Pass	
4.4'-DDE	%	82		70-130	Pass	
4.4'-DDT	%	84		70-130	Pass	
a-BHC	%	85		70-130	Pass	
Aldrin	%	84		70-130	Pass	
b-BHC	%	82		70-130	Pass	
	%	91		/0-130	Pass	
	%	84		70-130	Pass	
	%	84	<u>├                                    </u>	70-130	Pass	
	%	107		70-130	Pass	
	%	99	<u>├</u>	70-130	Pass	
Enarin Fachia aldebude	%	115	<u>├                                    </u>	70-130	Pass	
	<u>%</u>	113		70-130	Pass	
	%	103		70-130	Pass	
g-внс (Lindane)	%	88		70-130	Pass	



Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor			%	87		70-130	Pass	
Heptachlor epoxide			%	72		70-130	Pass	
Hexachlorobenzene			%	98		70-130	Pass	
Methoxychlor			%	70		70-130	Pass	
LCS - % Recovery								
Organophosphorus Pesticides								
Diazinon			%	103		70-130	Pass	
Dimethoate			%	97		70-130	Pass	
Ethion			%	105		70-130	Pass	
Fenitrothion			%	99		70-130	Pass	
Methyl parathion			%	103		70-130	Pass	
Mevinphos			%	130		70-130	Pass	
LCS - % Recovery					· · ·			
Heavy Metals								
Arsenic			%	89		80-120	Pass	
Cadmium			%	104		80-120	Pass	
Chromium			%	94		80-120	Pass	
Copper			%	91		80-120	Pass	
Lead			%	90		80-120	Pass	
Mercury			%	104		75-125	Pass	
Nickel			%	89		80-120	Pass	
Zinc			%	87		80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery	L							
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M19-Ja07786	NCP	%	116		70-130	Pass	
4.4'-DDD	M19-Ja07786	NCP	%	115		70-130	Pass	
4.4'-DDE	M19-Ja07786	NCP	%	105		70-130	Pass	
4.4'-DDT	M19-Ja07786	NCP	%	95		70-130	Pass	
a-BHC	M19-Ja07786	NCP	%	110		70-130	Pass	
Aldrin	M19-Ja07786	NCP	%	108		70-130	Pass	
b-BHC	M19-Ja07786	NCP	%	101		70-130	Pass	
d-BHC	M19-Ja07786	NCP	%	105		70-130	Pass	
Dieldrin	M19-Ja07786	NCP	%	120		70-130	Pass	
Endosulfan I	M19-Ja07786	NCP	%	121		70-130	Pass	
Endosulfan II	M19-Ja10903	NCP	%	110		70-130	Pass	
Endosulfan sulphate	M19-Ja07786	NCP	%	100		70-130	Pass	
Endrin	M19-Ja07786	NCP	%	110		70-130	Pass	
Endrin aldehyde	M19-Ja07786	NCP	%	90		70-130	Pass	
Endrin ketone	M19-Ja07786	NCP	%	90		70-130	Pass	
g-BHC (Lindane)	M19-Ja07786	NCP	%	125		70-130	Pass	
Heptachlor	M19-Ja07786	NCP	%	95		70-130	Pass	
Heptachlor epoxide	M19-Ja07786	NCP	%	88		70-130	Pass	
Hexachlorobenzene	M19-Ja10903	NCP	%	105		70-130	Pass	
Methoxychlor	M19-Ja07786	NCP	%	115		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M19-Ja16042	NCP	%	98		75-125	Pass	
Cadmium	M19-Ja16042	NCP	%	103		75-125	Pass	
Chromium	M19-Ja16042	NCP	%	117		75-125	Pass	
Copper	M19-Ja16042	NCP	%	108		75-125	Pass	
Lead	M19-Ja16042	NCP	%	100		75-125	Pass	
Mercury	M19-Ja16042	NCP	%	99		70-130	Pass	
Nickel	M19-Ja16042	NCP	%	114		75-125	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	M19-Ja16042	NCP	%	102			75-125	Pass	
Spike - % Recovery	•								
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1					
TRH C6-C9	S19-Ja08925	NCP	%	95			70-130	Pass	
TRH C10-C14	S19-Ja07183	NCP	%	106			70-130	Pass	
Spike - % Recovery							•		
BTEX				Result 1					
Benzene	S19-Ja08925	NCP	%	100			70-130	Pass	
Toluene	S19-Ja08925	NCP	%	95			70-130	Pass	
Ethylbenzene	S19-Ja08925	NCP	%	93			70-130	Pass	
m&p-Xylenes	S19-Ja08925	NCP	%	93			70-130	Pass	
o-Xylene	S19-Ja08925	NCP	%	97			70-130	Pass	
Xylenes - Total	S19-Ja08925	NCP	%	94			70-130	Pass	
Spike - % Recovery				•			•		
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1					
Naphthalene	S19-Ja08925	NCP	%	81			70-130	Pass	
TRH C6-C10	S19-Ja08925	NCP	%	98			70-130	Pass	
TRH >C10-C16	S19-Ja07183	NCP	%	107			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons	5			Result 1					
Acenaphthene	S19-Ja10350	CP	%	95			70-130	Pass	
Acenaphthylene	S19-Ja10350	CP	%	95			70-130	Pass	
Anthracene	S19-Ja10350	СР	%	123			70-130	Pass	
Benz(a)anthracene	S19-Ja10350	СР	%	83			70-130	Pass	
Benzo(a)pyrene	S19-Ja10350	CP	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	S19-Ja10350	СР	%	83			70-130	Pass	
Benzo(a.h.i)pervlene	S19-Ja10350	CP	%	75			70-130	Pass	
Benzo(k)fluoranthene	S19-Ja10350	CP	%	90			70-130	Pass	
Chrysene	S19-Ja10350	CP	%	78			70-130	Pass	
Dibenz(a.h)anthracene	S19-Ja10350	CP	%	95			70-130	Pass	
Fluoranthene	S19-Ja10350	CP	%	103			70-130	Pass	
Fluorene	S19-Ja10350	СР	%	111			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-Ja10350	CP	%	114			70-130	Pass	
Naphthalene	S19-Ja10350	CP	%	80			70-130	Pass	
Phenanthrene	S19-Ja10350	CP	%	120			70-130	Pass	
Pyrene	S19-Ja10350	CP	%	100			70-130	Pass	
Spike - % Recovery					I				
Organophosphorus Pesticides				Result 1					
Diazinon	M19-Ja07809	NCP	%	112			70-130	Pass	
Dimethoate	M19-Ja07809	NCP	%	76			70-130	Pass	
Ethion	M19-Ja07809	NCP	%	120			70-130	Pass	
Fenitrothion	M19-Ja07809	NCP	%	108			70-130	Pass	
Methyl parathion	M19-Ja07809	NCP	%	109			70-130	Pass	
Mevinphos	M19-Ja07809	NCP	%	117			70-130	Pass	
Test	Lab Sample ID	QA	Units	Result 1			Acceptance	Pass	Qualifying
Duplicate	l	cource		l			Linita	Linita	JULE
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M19-Ja10068	NCP	ma/ka	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M19la10068	NCP	ma/ka	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDF	M19la10068	NCP	ma/ka	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M19-Ja10068	NCP	ma/ka	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M19la10068	NCP	ma/ka	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M19la10068	NCP	ma/ka	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate	ļ								
Organochlorine Pesticides				Result 1	Result 2	RPD			
d-BHC	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M19-Ja10068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M19-Ja10068	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M19-Ja10068	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M19-Ja10068	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M19-Ja10068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	



Duplicate											
Heavy Metals				Result 1	Result 2	RPD					
Arsenic	M19-Ja16042	NCP	mg/kg	8.7	8.8	1.0	30%	Pass			
Cadmium	M19-Ja16042	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass			
Chromium	M19-Ja16042	NCP	mg/kg	27	28	3.0	30%	Pass			
Copper	M19-Ja16042	NCP	mg/kg	13	13	1.0	30%	Pass			
Lead	M19-Ja16042	NCP	mg/kg	29	29	1.0	30%	Pass			
Mercury	M19-Ja16042	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Nickel	M19-Ja16042	NCP	mg/kg	19	19	1.0	30%	Pass			
Zinc	M19-Ja16042	NCP	mg/kg	50	51	1.0	30%	Pass			
Duplicate		•									
				Result 1	Result 2	RPD					
% Moisture	B19-Ja12178	NCP	%	1.7	1.5	10	30%	Pass			
Duplicate											
Polycyclic Aromatic Hydrocarbons	6			Result 1	Result 2	RPD					
Acenaphthene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Acenaphthylene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Anthracene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benz(a)anthracene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(a)pyrene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(b&j)fluoranthene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(g.h.i)perylene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Benzo(k)fluoranthene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Chrysene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Dibenz(a.h)anthracene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Fluoranthene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Fluorene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Indeno(1.2.3-cd)pyrene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Naphthalene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Phenanthrene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Pyrene	S19-Ja10349	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
Duplicate											
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1	Result 2	RPD					
TRH C6-C9	S19-Ja08924	NCP	mg/kg	< 20	< 20	<1	30%	Pass			
TRH C10-C14	S19-Ja07182	NCP	mg/kg	< 20	< 20	<1	30%	Pass			
TRH C15-C28	S19-Ja07182	NCP	mg/kg	< 50	< 50	<1	30%	Pass			
TRH C29-C36	S19-Ja07182	NCP	mg/kg	< 50	< 50	<1	30%	Pass			
Duplicate				1				•			
BTEX				Result 1	Result 2	RPD					
Benzene	S19-Ja08924	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Toluene	S19-Ja08924	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Ethylbenzene	S19-Ja08924	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
m&p-Xylenes	S19-Ja08924	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass			
o-Xylene	S19-Ja08924	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass			
Xylenes - Total	S19-Ja08924	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass			
Duplicate				1	1						
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1	Result 2	RPD					
Naphthalene	S19-Ja08924	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass			
TRH C6-C10	S19-Ja08924	NCP	mg/kg	< 20	< 20	<1	30%	Pass			
TRH >C10-C16	S19-Ja07182	NCP	mg/kg	< 50	< 50	<1	30%	Pass			
TRH >C16-C34	S19-Ja07182	NCP	mg/kg	< 100	< 100	<1	30%	Pass			
TRH >C34-C40	S19-Ja07182	NCP	mg/kg	< 100	< 100	<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**

Description
The LORs have been raised due to matrix interference
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).
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.
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.
Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

## Authorised By

N07

Nibha Vaidya	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

**Glenn Jackson General Manager** 

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

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





NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention:

**Daniel Denaro** 

## Report Project name Project ID Received Date

636089-W MIRVAC KEMPS CREEK 55607 Jan 16, 2019

Client Sample ID			RIN01	R20TS	тв	POND
Sample Matrix			Water	Water	Water	Water
Furofins I mat Sample No			S19-Ja10352	S19-Ja10353	S19-Ja10354	S19-Ja10356
Date Sampled			lan 16, 2019	lan 16, 2019	lan 16, 2019	lan 16, 2019
		l la it	Jan 10, 2013	Jan 10, 2013	Jan 10, 2013	Jan 10, 2013
Test/Reference	LUR	Unit				
	0.02		.0.02			.0.02
	0.02	mg/L	< 0.02	-	-	< 0.02
TRH C15-C28	0.05	mg/L	< 0.05	-	-	< 0.05
TRH C20-C36	0.1	mg/L	< 0.1	-	-	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-	< 0.1
BTEX	0.1	ing/∟	< 0.1			< 0.1
Benzene	0.001	ma/l	< 0.001	01	< 0.001	< 0.001
	0.001	mg/L	< 0.001	100	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	110	< 0.001	< 0.001
m&p-Xylenes	0.001	mg/L	< 0.001	110	< 0.007	< 0.001
o-Xylene	0.002	mg/L	< 0.002	120	< 0.002	< 0.002
Xvlenes - Total	0.003	mg/L	< 0.003	110	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	<u> </u>	64	80	111	83
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions	70				
Naphthalene <sup>N02</sup>	0.01	mg/L	< 0.01	-	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	-	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	< 0.02	-	-	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	0.05	mg/L	< 0.05	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	< 0.1
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	-	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-	-
Anthracene	0.001	mg/L	< 0.001	-	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-	-
Benzo(b&j)fluoranthene <sup>N07</sup>	0.001	mg/L	< 0.001	-	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-	-
Chrysene	0.001	mg/L	< 0.001	-	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-	-
Fluorene	0.001	mg/L	< 0.001	-	-	-



Client Sample ID			RIN01	R20 <b>TS</b>	тв	POND	
Sample Matrix			Water	Water	Water	Water	
Eurofins I mgt Sample No.			S19-Ja10352	S19-Ja10353	S19-Ja10354	S19-Ja10356	
Date Sampled			Jan 16, 2019	Jan 16, 2019	Jan 16, 2019	Jan 16, 2019	
		Linit	Cuil 10, 2010	Cuil 10, 2010	Can 10, 2010		
Polycyclic Aromatic Hydrocarbons	LOK	Offic					
Indeped 1.2.2 cd/pyrope	0.001	ma/l	< 0.001				
Naphtholone	0.001	mg/L	< 0.001	-	-	-	
Deponthropo	0.001	mg/L	< 0.001	-	-	-	
Prienanumene	0.001	mg/L	< 0.001	-	-	-	
	0.001	mg/L	< 0.001		-		
2 Eluorobiohonyl (curr.)	1	0/⊥ 0/	< 0.001 64	-	-	-	
p-Terphenyl-d14 (surr.)	1	70 0/_	77		_		
Organochlorine Pesticides	I	70		_	_	_	
Chlordonoo Totol	0.001	ma/l	- 0.001			< 0.001	
	0.001	mg/L	< 0.001	-	-	< 0.001	
	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
2-BHC	0.0001	mg/L	< 0.0001		_	< 0.0001	
	0.0001	mg/L	< 0.0001		_	< 0.0001	
b-BHC	0.0001	mg/L	< 0.0001		-	< 0.0001	
d-BHC	0.0001	mg/L	< 0.0001		-	< 0.0001	
Dieldrin	0.0001	mg/L	< 0.0001	_	_	< 0.0001	
Endosulfan I	0.0001	mg/L	< 0.0001	_	_	< 0.0001	
Endosulfan II	0.0001	mg/L	< 0.0001	_	_	< 0.0001	
Endosulfan sulphate	0.0001	mg/L	< 0.0001	_	_	< 0.0001	
Endrin	0.0001	ma/l	< 0.0001	_	-	< 0.0001	
Endrin aldehvde	0.0001	ma/L	< 0.0001	-	-	< 0.0001	
Endrin ketone	0.0001	ma/l	< 0.0001	-	-	< 0.0001	
g-BHC (Lindane)	0.0001	ma/L	< 0.0001	-	-	< 0.0001	
Heptachlor	0.0001	ma/L	< 0.0001	-	-	< 0.0001	
Heptachlor epoxide	0.0001	ma/L	< 0.0001	-	-	< 0.0001	
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
Methoxychlor	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
Toxaphene	0.01	mg/L	< 0.01	-	-	< 0.01	
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	-	-	< 0.001	
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	-	-	< 0.001	
Dibutylchlorendate (surr.)	1	%	121	-	-	53	
Tetrachloro-m-xylene (surr.)	1	%	81	-	-	60	
Organophosphorus Pesticides							
Azinphos-methyl	0.002	mg/L	< 0.002	-	-	< 0.002	
Bolstar	0.002	mg/L	< 0.002	-	-	< 0.002	
Chlorfenvinphos	0.002	mg/L	< 0.002	-	-	< 0.002	
Chlorpyrifos	0.02	mg/L	< 0.02	-	-	< 0.02	
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	-	-	< 0.002	
Coumaphos	0.02	mg/L	< 0.02	-	-	< 0.02	
Demeton-S	0.02	mg/L	< 0.02	-	-	< 0.02	
Demeton-O	0.002	mg/L	< 0.002	-	-	< 0.002	
Diazinon	0.002	mg/L	< 0.002	-	-	< 0.002	
Dichlorvos	0.002	mg/L	< 0.002	-	-	< 0.002	
Dimethoate	0.002	mg/L	< 0.002	-	-	< 0.002	
Disulfoton	0.002	mg/L	< 0.002	-	-	< 0.002	
EPN	0.002	mg/L	< 0.002	-	-	< 0.002	



Client Sample ID			RIN01	R20 <b>TS</b>	тв	POND	
Sample Matrix			Water	Water	Water	Water	
Eurofins   mgt Sample No.			S19-Ja10352	S19-Ja10353	S19-Ja10354	S19-Ja10356	
Date Sampled			Jan 16, 2019	Jan 16, 2019	Jan 16, 2019	Jan 16, 2019	
Test/Reference	LOR	Unit					
Organophosphorus Pesticides							
Ethion	0.002	mg/L	< 0.002	-	-	< 0.002	
Ethoprop	0.002	mg/L	< 0.002	-	-	< 0.002	
Ethyl parathion	0.002	mg/L	< 0.002	-	-	< 0.002	
Fenitrothion	0.002	mg/L	< 0.002	-	-	< 0.002	
Fensulfothion	0.002	mg/L	< 0.002	-	-	< 0.002	
Fenthion	0.002	mg/L	< 0.002	-	-	< 0.002	
Malathion	0.002	mg/L	< 0.002	-	-	< 0.002	
Merphos	0.002	mg/L	< 0.002	-	-	< 0.002	
Methyl parathion	0.002	mg/L	< 0.002	-	-	< 0.002	
Mevinphos	0.002	mg/L	< 0.002	-	-	< 0.002	
Monocrotophos	0.002	mg/L	< 0.002	-	-	< 0.002	
Naled	0.002	mg/L	< 0.002	-	-	< 0.002	
Omethoate	0.002	mg/L	< 0.002	-	-	< 0.002	
Phorate	0.002	mg/L	< 0.002	-	-	< 0.002	
Pirimiphos-methyl	0.02	mg/L	< 0.02	-	-	< 0.02	
Pyrazophos	0.002	mg/L	< 0.002	-	-	< 0.002	
Ronnel	0.002	mg/L	< 0.002	-	-	< 0.002	
Terbufos	0.002	mg/L	< 0.002	-	-	< 0.002	
Tetrachlorvinphos	0.002	mg/L	< 0.002	-	-	< 0.002	
Tokuthion	0.002	mg/L	< 0.002	-	-	< 0.002	
Trichloronate	0.002	mg/L	< 0.002	-	-	< 0.002	
Triphenylphosphate (surr.)	1	%	99	-	-	57	
Heavy Metals							
Arsenic	0.001	mg/L	< 0.001	-	-	< 0.001	
Cadmium	0.0002	mg/L	< 0.0002	-	-	< 0.0002	
Chromium	0.001	mg/L	< 0.001	-	-	< 0.001	
Copper	0.001	mg/L	< 0.001	-	-	< 0.001	
Lead	0.001	mg/L	< 0.001	-	-	< 0.001	
Mercury	0.0001	mg/L	< 0.0001	-	-	< 0.0001	
Nickel	0.001	mg/L	< 0.001	-	-	< 0.001	
Zinc	0.005	mg/L	< 0.005	-	-	< 0.005	



## 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 (regarding both quality and NATA accreditation).

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
Eurofins   mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jan 22, 2019	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jan 18, 2019	14 Day
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 18, 2019	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 22, 2019	7 Day
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Jan 18, 2019	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins   mgt Suite B10			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jan 22, 2019	7 Day
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jan 22, 2019	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Melbourne	Jan 22, 2019	7 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			

ABN- 50 005 088 e.mail : EnviroSa web : www.eurofi				085 521 Sales@ rofins.cc	85.521 iales@eurofins.com ∋fins.com.au				Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271			<b>Sy</b> Uni 16 Lar Phe NA	dney it F3, Building F Mars Road ne Cove West NSW 2066 one : +61 2 9900 8400 .TA # 1261 Site # 18217	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 460 NATA # 1261 Site # 207	Perth 2/91 Leach Highway Kewdale WA 6105 00 Phone : +61 8 9251 9600 /94 NATA # 1261 Site # 23736		
Company Address: Project Na	Name:	JBS & G Aus Level 1, 50 M Sydney NSW 2000 MIRVAC KEM	tralia (NSW) I largaret St MPS CREEK	P/L			Or Re Ph Fa	der Ne port # one: x:	o.: #:	6 0	36089 2 824	) 5 030	0			Received: Due: Priority: Contact Name:	Jan 16, 2019 5:17 PM Jan 23, 2019 5 Day Daniel Denaro
Project ID:	):	55607													Eurofin	s   mot Analvtical Se	ervices Manager : Nibha Vaidva
Sample Detail						Asbestos - AS4964	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6			
Melbourne L	Laborato	ry - NATA Site	# 1254 & 142	71			х	Х	Х	Х	х	Х	X	Х	_		
Sydney Lab	oratory -	NATA Site # 18	8217			X									_		
Brisbane La	aboratory	- NATA Site #	<u>20794</u>												-		
External Labora	horstory - N	ATA Site # 237	30												-		
No Sam	ple ID	Sample Date	Sampling Time	Matrix	LAB ID										-		
1 BH02		Jan 16, 2019		Soil	S19-Ja10348			х	Х		х	Х			-		
2 BH04		Jan 16, 2019		Soil	S19-Ja10349	х		Х	Х		х	Х			]		
3 BH06		Jan 16, 2019		Soil	S19-Ja10350							х	х				
4 BH07		Jan 16, 2019		Soil	S19-Ja10351	Х						х	х				
5 RIN01		Jan 16, 2019		Water	S19-Ja10352								х				
6 TS		Jan 16, 2019		Water	S19-Ja10353					х							
7 TB		Jan 16, 2019		Water	S19-Ja10354					х							
8 STOCK	KPILE	Jan 16, 2019		Soil	S19-Ja10355	Х						Х	X		1		
9 POND		Jan 16, 2019		Water	S19-Ja10356						Х			Х			

	eurof	fins	mgt		ABN– 50 005 e.mail : Enviro web : www.eu	085 521 Sales@ rofins.co	eurofins om.au	s.com	€ 0 P N S	<b>leibourn</b> Monter andeno hone : - IATA # <sup>-</sup> ite # 12	<b>ie</b> ey Road ing Sout ⊧61 3 85 1261 54 & 14	I h VIC 3 64 500 271	175 0	<b>Syd</b> Unit 16 I Lan Pho NA <sup>-</sup>	dney It F3, Building F Mars Road - Cove West NSW 2066 one : +61 2 9900 8400 TA # 1261 Site # 18217	<b>Brisbane</b> 1/21 Smallwo Murarrie QLE Phone : +61 NATA # 1261	ood Place 0 4172 7 3902 4600 1 Site # 2079	P0 2/ K6 0 P1 34 N. Si	erth /91 Leach Highway ewdale WA 6105 hone : +61 8 9251 9600 ATT # 1261 ite # 23736	
Company N Address: Project Nat Project ID:	Company Name: JBS & G Australia (NSW) P/L   Address: Level 1, 50 Margaret St   Sydney NSW 2000   Project Name: MIRVAC KEMPS CREEK   Project ID: 55607				Or Re Ph Fa	der N port i one: x:	o.: #:	6	36089 2 824	5 030	0		Eurofir	Received: Due: Priority: Contact Nar	ne: ytical Ser	Jan 16, 2 Jan 23, 2 5 Day Daniel D rvices Ma	2019 5:17 PM 2019 Denaro <b>anager : Nibha Vaidya</b>			
Sample Detail				Asbestos - AS4964	НОГД	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins   mgt Suite B14	Moisture Set	Eurofins   mgt Suite B10	Eurofins   mgt Suite B6						1		
Melbourne L	aboratory -	NATA Site	# 1254 & 1427	′1			х	х	Х	х	х	Х	х	х						
Sydney Labo	oratory - NA	TA Site # 1	8217			х														
Brisbane La	boratory - N	ATA Site #	20794																	
Perth Labora	atory - NATA	Site # 237	736		1															
10 BH01	Jan	16, 2019	;	Soil	S19-Ja10357		Х													
11 BH03	Jan	16, 2019		Soil	S19-Ja10358		Х													
12 BH05	12 BH05 Jan 16, 2019 Soil S19-Ja10359					Х														
<b>Test Counts</b>						3	3	2	2	2	3	5	4	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, April 2011 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. 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
ppm: Parts per million	ppb: Parts per billion
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units

ug/L: micrograms per litre %: Percentage 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
сос	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.2 2018
СР	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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 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/L	< 0.02	0.02	Pass	
TRH C10-C14	mg/L	< 0.05	0.05	Pass	
TRH C15-C28	mg/L	< 0.1	0.1	Pass	
TRH C29-C36	mg/L	< 0.1	0.1	Pass	
Method Blank		1	 -		
втех					
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	
Method Blank				-	
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene	mg/L	< 0.01	0.01	Pass	
TRH C6-C10	mg/L	< 0.02	0.02	Pass	
TRH >C10-C16	mg/L	< 0.05	0.05	Pass	
TRH >C16-C34	mg/L	< 0.1	0.1	Pass	
TRH >C34-C40	mg/L	< 0.1	0.1	Pass	
Method Blank				-	
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	< 0.001	0.001	Pass	
Acenaphthylene	mg/L	< 0.001	0.001	Pass	
Anthracene	mg/L	< 0.001	0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001	0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001	0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001	0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001	0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001	0.001	Pass	
Chrysene	mg/L	< 0.001	0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001	0.001	Pass	
Fluoranthene	mg/L	< 0.001	0.001	Pass	
Fluorene	mg/L	< 0.001	0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001	0.001	Pass	
Naphthalene	mg/L	< 0.001	0.001	Pass	
Phenanthrene	mg/L	< 0.001	0.001	Pass	
Pyrene	mg/L	< 0.001	0.001	Pass	
Method Blank		1	1	r	
Organochlorine Pesticides					
Chlordanes - Total	mg/L	< 0.001	0.001	Pass	
4.4'-DDD	mg/L	< 0.0001	0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001	0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001	0.0001	Pass	
a-BHC	mg/L	< 0.0001	0.0001	Pass	
Aldrin	mg/L	< 0.0001	0.0001	Pass	
b-BHC	mg/L	< 0.0001	0.0001	Pass	
d-BHC	mg/L	< 0.0001	0.0001	Pass	
Dieldrin	mg/L	< 0.0001	0.0001	Pass	
Endosulfan I	mg/L	< 0.0001	0.0001	Pass	
Endosulfan II	mg/L	< 0.0001	0.0001	Pass	



Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	ma/L	< 0.0001	0.0001	Pass	
Endrin	mg/L	< 0.0001	0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001	0.0001	Pass	
Endrin ketone	mg/L	< 0.0001	0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001	0.0001	Pass	
Heptachlor	mg/L	< 0.0001	0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001	0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001	0.0001	Pass	
Methoxychlor	mg/L	< 0.0001	0.0001	Pass	
Toxaphene	mg/L	< 0.01	0.01	Pass	
Method Blank					
Organophosphorus Pesticides					
Azinphos-methyl	mg/L	< 0.002	0.002	Pass	
Bolstar	mg/L	< 0.002	0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002	0.002	Pass	
Chlorpyrifos	mg/L	< 0.02	0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002	0.002	Pass	
Coumaphos	mg/L	< 0.02	0.02	Pass	
Demeton-S	mg/L	< 0.02	0.02	Pass	
Demeton-O	mg/L	< 0.002	0.002	Pass	
Diazinon	mg/L	< 0.002	0.002	Pass	
Dichlorvos	mg/L	< 0.002	0.002	Pass	
Dimethoate	mg/L	< 0.002	0.002	Pass	
Disulfoton	mg/L	< 0.002	0.002	Pass	
EPN	mg/L	< 0.002	0.002	Pass	
Ethion	mg/L	< 0.002	0.002	Pass	
Ethoprop	mg/L	< 0.002	0.002	Pass	
Ethyl parathion	mg/L	< 0.002	0.002	Pass	
Fenitrothion	mg/L	< 0.002	0.002	Pass	
Fensulfothion	mg/L	< 0.002	0.002	Pass	
Fenthion	mg/L	< 0.002	0.002	Pass	
Malathion	mg/L	< 0.002	0.002	Pass	
Merphos	mg/L	< 0.002	0.002	Pass	
Methyl parathion	mg/L	< 0.002	0.002	Pass	
Mevinphos	mg/L	< 0.002	0.002	Pass	
Monocrotophos	mg/L	< 0.002	0.002	Pass	
Naled	mg/L	< 0.002	0.002	Pass	
Omethoate	mg/L	< 0.002	0.002	Pass	
Phorate	mg/L	< 0.002	0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02	0.02	Pass	
Pyrazophos	mg/L	< 0.002	0.002	Pass	
Ronnel	mg/L	< 0.002	 0.002	Pass	
Terbufos	mg/L	< 0.002	 0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002	 0.002	Pass	
Tokuthion	mg/L	< 0.002	0.002	Pass	
Trichloronate	mg/L	< 0.002	0.002	Pass	
Method Blank		<u> </u>			
Heavy Metals			 		
Arsenic	mg/L	< 0.001	 0.001	Pass	
Cadmium	mg/L	< 0.0002	 0.0002	Pass	
Chromium	mg/L	< 0.001	 0.001	Pass	
Copper	mg/L	< 0.001	 0.001	Pass	
Lead	mg/L	< 0.001	 0.001	Pass	
Mercury	mg/L	< 0.0001	0.0001	Pass	



Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Nickel	ma/L	< 0.001	0.001	Pass	
Zinc	ma/L	< 0.005	0.005	Pass	
LCS - % Recovery	<u> </u>				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	%	99	70-130	Pass	
TRH C10-C14	%	98	70-130	Pass	
LCS - % Recovery					
BTEX					
Benzene	%	101	70-130	Pass	
Toluene	%	88	70-130	Pass	
Ethylbenzene	%	91	70-130	Pass	
m&p-Xylenes	%	89	70-130	Pass	
Xvlenes - Total	%	89	70-130	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene	%	78	70-130	Pass	
TRH C6-C10	%	100	70-130	Pass	
TRH >C10-C16	%	106	70-130	Pass	
LCS - % Recovery	,,,		1		
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	%	80	70-130	Pass	
Acenaphthylene	%	79	70-130	Pass	
Anthracene	%	72	70-130	Pass	
Benz(a)anthracene	%	73	70-130	Pass	
Benzo(a)pyrene	%	99	70-130	Pass	
Benzo(b&i)fluoranthene	%	111	70-130	Pass	
Benzo(a,h,i)pervlene	%	89	70-130	Pass	
Benzo(k)fluoranthene	%	111	70-130	Pass	
Chrysene	%	83	70-130	Pass	
Dibenz(a,b)anthracene	%	91	70-130	Pass	
Eluoranthene	%	80	70-130	Pass	
Fluorene	%	87	70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	111	70-130	Pass	
Naphthalene	%	78	70-130	Pass	
Phenanthrene	%	83	70-130	Pass	
Pyrene	%	81	70-130	Pass	
LCS - % Recovery	,,,		1		
Organochlorine Pesticides					
4.4'-DDD	%	93	70-130	Pass	
4.4'-DDE	%	123	70-130	Pass	
4.4'-DDT	%	92	70-130	Pass	
a-BHC	%	81	70-130	Pass	
Aldrin	%	111	70-130	Pass	
b-BHC	%	90	70-130	Pass	
d-BHC	%	95	70-130	Pass	
Dieldrin	%	116	70-130	Pass	
Endosulfan I	%	95	70-130	Pass	
Endosulfan II	%	82	70-130	Pass	
Endosulfan sulphate	%	88	70-130	Pass	
Endrin	%	108	70-130	Pass	
Endrin aldehvde	%	108	70-130	Pass	
Endrin ketone	%	112	70-130	Pass	
g-BHC (Lindane)	%	81	70-130	Pass	
Heptachlor epoxide	%	91	70-130	Pass	



Test		Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code	
Hexachlorobenzene			%	116		70-130	Pass	
Methoxychlor			%	94		70-130	Pass	
LCS - % Recovery								
Organophosphorus Pesticides								
Diazinon			%	88		70-130	Pass	
Dimethoate			%	75		70-130	Pass	
Ethion			%	74		70-130	Pass	
Fenitrothion			%	94		70-130	Pass	
Methyl parathion			%	100		70-130	Pass	
Mevinphos			%	86		70-130	Pass	
LCS - % Recovery								
Heavy Metals								
Arsenic			%	100		80-120	Pass	
Cadmium			%	97		80-120	Pass	
Chromium			%	97		80-120	Pass	
Copper			%	95		80-120	Pass	
Lead			%	96		80-120	Pass	
Mercury			%	95		75-125	Pass	
Nickel			%	100		80-120	Pass	
Zinc			%	97		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 Fract	ions		Result 1				
TRH C6-C9	S19-Ja07214	NCP	%	110		70-130	Pass	
TRH C10-C14	M19-Ja09860	NCP	%	75		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S19-Ja07214	NCP	%	96		70-130	Pass	
Toluene	S19-Ja07214	NCP	%	94		70-130	Pass	
Ethylbenzene	S19-Ja07214	NCP	%	98		70-130	Pass	
m&p-Xylenes	S19-Ja07214	NCP	%	99		70-130	Pass	
o-Xylene	S19-Ja07214	NCP	%	100		70-130	Pass	
Xylenes - Total	S19-Ja07214	NCP	%	99		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1				
Naphthalene	S19-Ja07214	NCP	%	101		70-130	Pass	
TRH C6-C10	S19-Ja07214	NCP	%	110		70-130	Pass	
TRH >C10-C16	M19-Ja09860	NCP	%	75		70-130	Pass	
Spike - % Recovery				1	r	1		
Polycyclic Aromatic Hydrocarbons	5			Result 1				
Acenaphthene	M19-Ja10726	NCP	%	81		70-130	Pass	
Acenaphthylene	M19-Ja10726	NCP	%	82		70-130	Pass	
Anthracene	M19-Ja10726	NCP	%	77		70-130	Pass	
Benz(a)anthracene	M19-Ja10726	NCP	%	87		70-130	Pass	
Benzo(a)pyrene	M19-Ja10726	NCP	%	100		70-130	Pass	
Benzo(b&j)fluoranthene	M19-Ja10726	NCP	%	104		70-130	Pass	
Benzo(g.h.i)perylene	M19-Ja10726	NCP	%	82		70-130	Pass	
Benzo(k)fluoranthene	M19-Ja10726	NCP	%	103		70-130	Pass	
Chrysene	M19-Ja10726	NCP	%	89		70-130	Pass	
Dibenz(a.h)anthracene	M19-Ja10726	NCP	%	96		70-130	Pass	
Fluoranthene	M19-Ja10726	NCP	%	93		70-130	Pass	
Fluorene	M19-Ja10726	NCP	%	90		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M19-Ja10726	NCP	%	78		70-130	Pass	
Naphthalene	M19-Ja10726	NCP	%	70		70-130	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M19-Ja10726	NCP	%	92			70-130	Pass	
Pyrene	M19-Ja10726	NCP	%	91			70-130	Pass	
Spike - % Recovery								-	
Heavy Metals				Result 1					
Arsenic	S19-Ja09001	NCP	%	96			75-125	Pass	
Cadmium	S19-Ja09001	NCP	%	95			75-125	Pass	
Chromium	S19-Ja09001	NCP	%	95			75-125	Pass	
Copper	S19-Ja09001	NCP	%	92			75-125	Pass	
Lead	S19-Ja09001	NCP	%	94			75-125	Pass	
Mercury	S19-Ja09001	NCP	%	92			70-130	Pass	
Nickel	S19-Ja09001	NCP	%	95			75-125	Pass	
Zinc	S19-Ja09001	NCP	%	93			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1	Result 2	RPD			
TRH C6-C9	S19-Ja08928	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M19-Ja17169	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M19-Ja17169	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M19-Ja17169	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Ja08928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S19-Ja08928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S19-Ja08928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S19-Ja08928	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S19-Ja08928	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S19-Ja08928	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1	Result 2	RPD			
Naphthalene	S19-Ja08928	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S19-Ja08928	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M19-Ja17169	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M19-Ja17169	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M19-Ja17169	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons	5			Result 1	Result 2	RPD			
Acenaphthene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	



Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4.4'-DDD	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDE	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDT	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
d-BHC	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan sulphate	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos	S19-Ja09001	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	S19-Ja09001	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	S19-Ja09001	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-O	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phorate	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	S19-Ja09001	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	



Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	S19-Ja09001	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S19-Ja09001	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S19-Ja09001	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S19-Ja09001	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S19-Ja09001	NCP	mg/L	< 0.005	< 0.005	<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
R20	This sample is a Trip Spike and therefore all results are reported as a percentage

## Authorised By

Nibha Vaidya	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)

Glenn Jackson General Manager Final report - this Report replaces any previously issued Report

- Indicates Not Requested

 $^{\star}$  Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please  $\underline{\text{click here.}}$ 

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## Appendix K Detailed QA/QC Assessment

## QA/QC Results

The QA/QC result for soil samples collected are summarised in **Table K.1** and discussed below. Detailed QA/QC results are included following the discussion of DQI exceedances below.

Data Quality Indicator	Results	DOO met?
Precision	incounts	Dee met.
	0-88% BPDs	
Blind duplicates (intra laboratory)	Intra laboratory samples were analysed at a rate of 1 per 20	Partial <sup>1</sup>
	samples	
	0-1/15% RPDs	
Blind duplicates (inter laboratory)	Inter laboratory samples were analysed at a rate of 1 per 20	Partial <sup>1</sup>
Dinia adplicates (inter laboratory)	samples	i ai tiai
Laboratory duplicator	U-55% RFD	Voc
		163
Accuracy	20 samples.	
Accuracy	71.1200/ recovery	
	/1-130% recovery	
Laboratory control samples (LCS)	Laboratory control samples were completed at a suitable	Yes
	density with respect to laboratory batch size and sample	
	analyses.	
	51-184%	<b>5</b>
Surrogate spikes	Surrogate spikes were completed for all organic sample	Partial <sup>1</sup>
	analyses	
	65-130% recovery	
Matrix spikes	Matrix spikes were completed at a suitable density with	Partial <sup>1</sup>
	respect to laboratory batch size and sample analyses.	
Representativeness		
Samples extracted and analysed within	All primary and duplicate samples were extracted within	Yes
holding times	appropriate holding times.	
Sampling appropriate for media and	Samples were collected using appropriate methodology with	
analytes	regard to the sample media (soil) and analytes (volatile, semi-	Yes
	volatile and low volatility organics and inorganics)	
	70-130%	
Trip spike	One completed per sampling event and associated laboratory	Yes
	batch	
	<lor< td=""><td></td></lor<>	
Trip blank	One completed per sampling event and associated laboratory	Yes
	batch	
	<lor all="" analytes="" blanks.<="" for="" in="" rinsate="" td=""><td></td></lor>	
Rinsate blank	One completed per sampling event and associated laboratory	Yes
	batch	
	<lor< td=""><td></td></lor<>	
Laboratory Blank	One completed per sampling event and associated laboratory	Yes
	batch	
Standard operating procedures used for	Standard operating procedures used as listed in JBS&G (2017)	
sample collection and handling	employed for all sampling events and samples collected	Yes
Comparability		
Standard analytical methods used for		
all analyses	Standard analytical methods used as shown in Appendix K	Yes
	Sampling was conducted by the same field staff member	
Consistent field conditions, field staff	Standard operating procedures were implemented	
and laboratories	throughout the works. Field conditions remained the same	Yes
	throughout the works.	
Limits of reporting appropriate and		
consistent	Limits of reporting were consistent and appropriate	Yes
Completenecs	1	



Data Quality Indicator	Results	DQO met?
Soil description and COCs completed and appropriate	All field documentation and COCs were completed appropriately.	Yes
Appropriate documentation	All field documentation was appropriately completed.	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 designed to address the requirements of the investigation such that a representative data set could be established. All critical samples were analysed for appropriate contaminants of concern and the QA/QC assessment confirmed the reliability of this data.	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 validation criteria for all soil analytes.	Yes

Notes: 1. See discussion below for notes

## Precision

## Soil Blind Duplicates (intra laboratory)

The rate of blind duplicate sampling and analysis for soils was 2 blind duplicates per 34 primary samples for heavy metals, TRH, BTEXN, PAH, OCP, PCB and asbestos. As such, the frequency of duplicate sample analysis for all key contaminants of concern met/exceeded the nominated DQI frequency.

High RPDs in the blind duplicate samples can be expected when materials are heterogeneous and/ or when analyte concentrations are close to LOR. Furthermore, the results of samples with elevated RPDs were below the adopted site criteria. Therefore, the elevated RPDs are considered not to affect the overall precision of the data set.

## Soil Split Duplicates (inter laboratory)

The rate of split duplicate sampling and analysis for soils was 2 split duplicates per 34 primary samples for heavy metals, TRH, BTEXN, PAH, OCP, PCB and asbestos. As such, the frequency of duplicate sample analysis for all key contaminants of concern met/exceeded the nominated DQI frequency.

High RPDs in the blind duplicate samples can be expected when materials are heterogeneous and/ or when analyte concentrations are close to LOR. Furthermore, the results of samples with elevated RPDs were below the adopted site criteria. Therefore, the elevated RPDs are considered not to affect the overall precision of the data set.

## Laboratory Duplicates

The laboratory completed a total of 10 laboratory duplicate soil samples, within the JBS&G acceptance criteria of 1 in 20 samples. All laboratory duplicates had RPDs within the JBS&G DQI of 0-50%.

## Accuracy

## Laboratory Control Samples

A total of 10 soil and 5 water laboratory control samples (LCS) were tested, meeting the DQIs. All LCS were reported as having recoveries within the JBS&G acceptable range of 70-130%.

## Surrogate Spikes

Surrogate spikes were conducted in conjunction with organic contaminant analysis of all samples. Surrogate spikes generally reported recoveries within the JBS&G acceptable range of 70%-130%.



The surrogate spike recoveries outside of the target range are not considered to affect the overall reliability of the data set as concentrations in characterisation samples were close to or below the laboratory's LOR and/or within the laboratories NATA accredited limits (50%-150%).

## Matrix Spikes

All matrix spikes reported recoveries within the JBS&G acceptable range of 70% – 130% with the exception of matrix spike S18-De03163-SPK with an RPD of 65% for 4.4 DDT. The laboratory notes that an acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference. Additionally, JBS&G note the recorded RPDs are within the laboratories NATA accredited limits (50%-150%) and therefore is not considered to affect the reliability of the data set.

## Sampling appropriate for media and analytes

All sampling works completed during the investigation were conducted in accordance with JBS&G standard operating procedures as outlined in the Sampling, Analysis, and Quality Plan prepared for the assessment. Sample locations were undertaken for the purposes of visual inspection and/or olfactory assessment of fill/soil conditions and the collection of samples was considered appropriate for identified COPC.

All PIDs used throughout the field works were factory calibrated by Air-Met Scientific Pty Ltd. Air-Met calibration certificates and daily field check calibration sheets are presented in **Appendix I**.

All samples were collected wearing a new pair of disposable nitrile gloves.

## Holding Times

Copies of Sample Receipt Notes (SRNs) are included in relevant sections of the report (**Appendix K**) and sample extraction/analysis dates were reported in each laboratory report. All soil analyses were undertaken within appropriate holding times for the respective analytes.

## Trip Spike

A trip spike was submitted with characterisation samples collected during the assessment. All trip spike recoveries were generally within the JBS&G acceptable limit of 70%-130%.

## <u>Trip Blank</u>

A storage blank sample was carried during the characterisation soil sampling event and was submitted with the lab batch, meeting the overall nominated frequency thresholds. There were no reported concentrations of BTEX compounds above the laboratory LOR, achieving the nominated DQIs.

## Rinsate Blank

A rinsate sample was prepared during the sampling event and subsequently submitted to the lab for analysis of key contaminants of concern. All subsequent contaminant concentrations were below the laboratory LOR.

## Laboratory Blank

8 soil and 5 water laboratory blanks were completed per sampling event and analytes were all below the laboratory limit of reporting LOR.

All non-single use field equipment was decontaminated as per the procedure identified in Section 5.

Experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods.

The laboratory LORs are consistent and are considered appropriate.

## Comparability



Eurofins, the primary laboratory, and Envirolab, the secondary laboratory, were NATA accredited during the time of the investigation for all analytical methods used. The laboratories used similar analytical methods and the analytical data was considered to be comparable between the laboratories as indicated by the results of inter-laboratory duplicate analyses. Where different LORs were adopted by the laboratories, the primary laboratory typically had a lower LOR than the secondary laboratory, and as such, consideration of the data set was not impacted.

JBS&G note the LOR for a few samples was raised due to matrix interference. All other samples reported concentrations of the same analytes below the standard LOR, therefore, these are not considered to influence the reliability of the dataset.

Furthermore, the samples collected for assessment purposes are considered comparable as all samples were collected by experienced JBS&G personnel in accordance with standard JBS&G sampling methods.

## Completeness

## **Documentation**

All laboratory documentation is complete and correct. Chain of custody documentation is provided with laboratory reports in **Appendix K.** 

## Frequency for QC Samples

QC sample frequency DQOs were achieved for all analyses including heavy metals, TRH, BTEX, PAHs, PCBs, OCPs and asbestos and therefore the data set is complete and reliable.

## Assessment of QA/QC

The field sampling and handling procedures produced QA/QC results which indicate that the collected soil analytical data are of an acceptable quality and suitable for use with respect to characterisation of the assessment area.

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 for this project were analysed.

JBS&G note that for some samples, the LOR for TRH was raised. JBS&G note that the raised LOR is for a compound in a sample that already has TRH reported in excess of the adopted site criteria, therefore this is not considered to impact upon the reliability of the data set.

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality in order to achieve the objectives of the investigation.



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