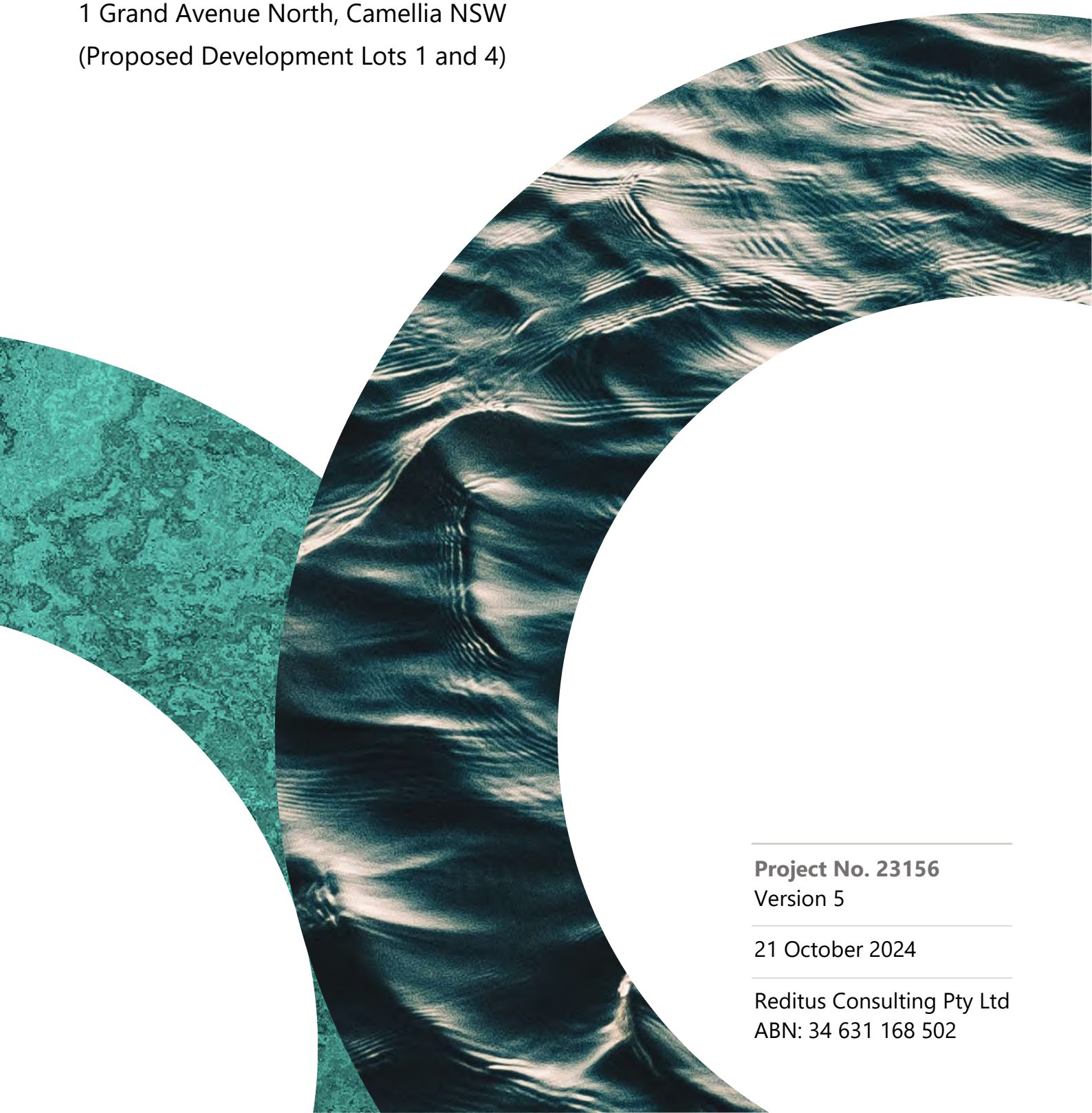
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Remedial Action Plan

1 Grand Avenue North, Camellia NSW
(Proposed Development Lots 1 and 4)



Project No. 23156
Version 5

21 October 2024

Reditus Consulting Pty Ltd
ABN: 34 631 168 502

Remedial Action Plan

1 Grand Avenue North, Camellia NSW

(Proposed Development Lots 1 and 4)

DOCUMENT CONTROL

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This report has been prepared for Billbergia Group Pty Ltd in accordance with the terms and conditions of appointment for proposal P23156 dated 26 June 2023. Reditus Consulting Pty Ltd (ABN 34 631 168 502) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

This report has been prepared in consultation with and reviewed by Certified Environmental Practitioner Site Contamination Specialists in accordance with NSW EPA's Contaminated Land Consultant Certification Policy.

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Abbreviations

TERM	DEFINITION
° C	Degrees Celsius
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AF/FA	Asbestos Fines / Fibrous Asbestos
AFFF	Aqueous Film Forming Foam
AHD	Australian Height Datum
ASC	Assessment of Site Contamination
BGL	Below Ground Level
BTEX	Benzene Toluene Ethylbenzene Xylene
BTOC	Below Top of Casing
C&D	Construction and Demolition
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DO	Dissolved Oxygen
DQO	Data Quality Objective
EI	Remediation Action Plan
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
ESL	Ecological Screening Level
GDE	Groundwater Dependant Ecosystem
HIL	Health Investigation Level
HSL	Health Screening Level
LGA	Local Government Area
LOR	Limit-Of-Reporting
ML	Management Limits
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure (2013)
NPI	National Pollutant Inventory
NSW	New South Wales
PAH	Polycyclic Aromatic Hydrocarbons

TERM	DEFINITION
OCP	Organochloride Pesticides
OPP	Organophosphorus Pesticides
PACM	Potentially Asbestos Containing Material
PCB	Polychlorinated Biphenyls
PFAS	Per- and polyfluoroalkyl Substances
PID	Photoionisation Detector
PPM	Parts Per Million
PQL	Practical Quantification Limit
QA/QC	Quality Assurance / Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAC	Soil Assessment Criteria
SD	Standard Deviation
SDS	Safety Data Sheet
SWL	Standing Water Level
TOC	Top-of-Casing
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UPSS	Underground Petroleum Storage Systems
USCS	Unified Soil Classification System
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

1 Introduction

Reditus Consulting Pty Ltd (Reditus) was engaged by Billbergia Group Pty Ltd (Billbergia) (the client) to prepare a Remedial Action Plan (RAP) for the proposed commercial/industrial development of a portion of the former James Hardie site located at Grand Avenue North, Camellia NSW. Refer to **Figure 1, Appendix A** for the development areas (i.e., proposed Lots 1 and 4) to which this RAP applies. The subject area relevant to this RAP (proposed development lots 1 and 4) covers an approximate area of 4.56 ha. The site is currently predominantly covered with hardstand, which is to remain undisturbed, and is used for storage of materials, general plant and equipment, and shipping containers for several tenants.

Reditus notes that this report, including its conclusions and recommendations, must be read in conjunction with the Statement of Limitations provided in **Section 14.**

1.1 Background

cap larger site was acquired in 1917 by James Hardie & Company Pty Ltd (James Hardie), then trading as the Asbestos Slate and Sheet Manufacturing Company Limited, and development of the site is believed to have commenced at or around that time. Based on information available on the Parramatta City Council website it is believed that prior to 1917 the main use of the area of the site was for agricultural or residential purposes.

Filling of the western portion of the site is believed to have commenced from the earliest occupation by James Hardie with that part of the site being progressively filled and developed between 1917 and the mid-1960s. The fill comprised mainly asbestos wastes but also included a significant volume of boiler ash. The asbestos waste comprised friable pulp waste from the manufacturing process as well as, presumably, out of specification and excess bonded asbestos products. Some of the products may have been coated with bitumen, zinc silicate and other paints. No records were found which mentioned imported fill being used on the site.

Other chemicals, mainly hydrocarbon-based (e.g., diesel, hydraulic oil and petrol) were extensively used and stored on the site and are believed potentially to have been disposed on site.

James Hardie continued production of fibrous cement products until 1993 when production ceased, and the site was decommissioned. Between 1995 and 2001 the buildings were demolished to slab levels and building rubble was used to level some areas of the site where there were steps in the slabs. The site was acquired by Sydney Water Corporation (SWC) in 1996, but they did not occupy the site.

In 1999 SWC formally notified NSW EPA under section 60 of the Contaminated Land Management Act 1997 that the site was contaminated and may have posed a Significant Risk of Harm. In 2000 SWC entered into a Voluntary Remediation Agreement (VRA) with NSW EPA to clean up surface asbestos contamination at the site and to improve surface seals (concrete and bituminous concrete pavements) to ensure that buried asbestos waste was isolated so that exposure pathways to humans and the environment were not present.

The VRA also contained a Contamination Management Plan to ensure that remedial measures implemented were effective and maintained into the future. On 14 May 2003 the EPA gave notice that the terms of the VRA had been satisfactorily completed.

Billbergia acquired the site in 2007. The original intent was to subdivide the site into three lots and lease these lots to commercial industrial operations including a Remondis waste recycling facility and warehousing. However, after the development proposal by Remondis was rejected, it is understood that Billbergia now wish to redevelop a portion of the site (the northern half of the site) as commercial/industrial including warehousing.

The site is largely underlain by asbestos impacted fill material, with depths ranging from 5m in the western portion to 0.2m below ground level (m bgl) in the eastern portion of the site. Reditus considered that due to historical investigations predominantly identifying the presence of asbestos visually rather than quantitatively, there were limitations to the data in understanding the potential impact on fill comprising natural materials and the underlying natural soil. In addition to the asbestos impacted fill, former petroleum hydrocarbon storage areas were identified on the site, understood to be related to a former operation of an "oil press" which had impacted underlying groundwater. The impacted area was excavated by CES in 2008 and the groundwater within the excavation underwent in-situ chemical

oxidation. Monitoring wells were resampled in 2009 following remedial works, and concentrations were below the threshold set by CES. Reditus consider that the threshold of 10,000µg/L for TRH C_{10}-C_{36} set by CES may present a vapour intrusion risk to the proposed development. In addition to hydrocarbon impacted groundwater, heavy metals, copper and zinc have reportedly been detected above the adopted groundwater criteria during the AWT, 2001 investigation.

Following review of the historical data, and the following data gaps were identified:

- Over 60 sampling locations have been completed since 1995, which exceeds the minimum of 50 locations for a site 4 ha in size, however all the data is at least 15 years old, with some data collected over 27 years ago.
- The chemical contaminant characteristics are likely to have changed overtime. It was advised that resampling of locations where human health exceedances exist and there is a risk of vapour intrusion from groundwater. This will assist in determining if the cap and contain strategy is suitable for the site and ensuring that the groundwater and soil vapour concentrations are not unacceptable for the proposed remedial works.
- Completion of groundwater sampling at existing wells to establish a representative baseline of groundwater concentrations based on current site conditions.

The Reditus DGI (April 2023) informed the preparation of this revised RAP and determined the appropriate remedial strategy.

1.2 Objectives

The objective of this RAP is to document the activities, procedures, control measures, contingencies, and validation requirements to facilitate effective remediation of contamination identified in historical investigations (refer Section 4) and to inform planning requirements of State Environmental Planning Policy (SEPP) Resilience and Hazards 2021 Chapter 4 Remediation of Land.

Specifically, Clause 4.6(1)(b) and clause 4.6(1)(c) SEPP 2021 requires a consent authority to consider whether land can be made suitable for the intended land use prior to approving development.

The objectives of the RAP are consistent with Section 1.5 of NSW EPA (2020) *contaminated land guidelines for consultants reporting on contaminated land and* were designed to set remediation objectives and document the process to remediate contamination at the site.

A Development Application (DA/573/2023) has been lodged by the client with Parramatta City Council and Council issued a request for further information on 7 December 2023. The proposed development includes the construction and use of two warehouse or distribution centres with associated earthworks, landscaping, and ancillary works. Reditus understands that the proposed development includes development of Lots 1 and 4 and a proposed new road (stage 1). Proposed development Lots 2 and 3 are understood to be subject to Stage 2 construction works, however are not within the scope of the current investigation/remediation area. Correspondence received from City of Parramatta (Council), dated 7 December 2023 echoed the deficiencies identified by Reditus in the Historical Environmental Report Review and Advice (R01, dated 2023, updated in April 2024), and pursuant to Section 4 of the correspondence, Council requested the following:

i. *The report does not cover the entire area subject to the DA and should extend to cover the entirety of the site.*
ii. *There is a large data gap in the provided data; missing and/or outdated data is also provided. The only data that was available for Reditus to complete the RAP was at least 15 years old and some data exceeding 27 years. The data that supports this report is outdated and therefore the information provided is not reliable or accurate and is not accepted.*
iii. *The report refers to the applicants desire to "redevelop the site as mixed-use commercial on the lower floors and residential above". This should be confirmed that the report refers to the correct land use.*
iv. ***The RAP includes site plans of incorrect development.***
v. ***Details of the proposed breach of the existing cap and details of any excavation works that will breach this cap have not been provided.***
vi. ***The site currently is subject to a covenant with a Site Management Plan for the contamination status of the site. Further consideration of the impacts relating to the covenant and site management plan have not been addressed, noting that the NSW EPA are the only authority that can vary the covenant and their approval is required.***
vii. ***The RAP does not detail whether the existing cap is proposed to be removed or replaced with the Conceptual Cap Design. This advice is presumed that this will be placed on top of the existing cap. The Conceptual Cap Design details that up to 0.7m of fill is required. This fill has not been considered in any of the architectural, civil or landscape plans. This is especially important as this may conflict with the VRZ and flood planning levels.***

Given the above, the following is to be submitted:

viii. *A Detailed Report that includes up to date soil and groundwater testing (including sampling from all existing monitoring wells within the site). Additionally, if applicable, a soil vapour assessment should be conducted using current methodologies endorsed by NSW EPA (page 11 of RAP). This is also a requirement as stated by the NSW Acid Sulfate Manual for works in areas mapped as Class 4, a preliminary hydrology study should be undertaken to determine if the activity is likely to affect the groundwater levels.*
Revised RAP that reflects the investigation of the detailed report. Note – the Detailed Report and RAP must include the responses to the matters raised above. A review of the Detailed Report and RAP by and independent accredited site auditor.

ix. *Notice of completion of remediation work notice in accordance with the State Environmental Planning Policy (Resilience and Hazards) 2021.*

x. *A copy of the site audit reports referenced in the RAP (reports GN268-1 and GN268-1B).*

xi. *A copy of the letter from the NSW EPA with notice that terms of the Voluntary Remediation Agreement had been satisfactorily completed.*

The items highlighted in bold above relate to the items to be addressed in the RAP to fulfill Council requirements. The RAP amendment has been prepared to satisfy Council's Request for Information (PAN-371504, DA/573/2023); and to update the site conditions and contamination status following completion of the Reditus Data Gap Investigation (April 2024) and revision of the Reditus Historical Environmental Report Review (April 2024).

Reditus notes that this report, including its conclusions and recommendations, must be read in conjunction with the Statement of Limitations provided in **Section 21.**

1.3 Scope of Works

To achieve the objectives outlined above, Reditus completed the following:

- Summarise the findings of the preliminary and detailed site investigations and risk assessment (where applicable) and present the refined conceptual site model.
- Document the identified contamination risks to human health and/or the environment.
- Set remediation objectives that ensure the remediated site will be suitable for its current and/or proposed use and which will result in no unacceptable risk to human health or to the environment and state remediation criteria.
- Development of a further refined conceptual site model following completion of a data gap assessment;
- Define the extent of remediation required across the site.
- Assess options and remedial technologies to achieve the remediation objectives and select and justify a preferred approach, which must include the consideration of the principles of ecologically sustainable development.
- Document in detail all procedures and plans to reduce risks posed by contamination to acceptable levels for the proposed site use.
- Establish the environmental safeguards required to complete the remediation in an environmentally acceptable manner, including consideration of the potential for off-site impacts (such as air quality, odour, and aesthetics).
- Address contingencies and unexpected finds protocols.
- Identify the necessary approvals and licences required by regulatory authorities including any items contained in development consent conditions.
- Clearly outline waste classification, handling, and tracking requirements in accordance with the Guidelines for the NSW Site Auditor Scheme and Waste Classification Guidelines (EPA 2014).
- Ensure remediation is consistent with relevant laws, policies (including planning instruments and policies) and guidelines, specifically noting that NSW EPA have registered a public positive covenant on the tile of the site under s29 of the CLM Act and s88E of the Conveyancing Act 1918. The terms of the covenant require site owners to maintain remediation of the site pursuant to the requirements detailed in Site Management Plan. Eastern Portion Former Janes Hardie Site. Grand Avenue Camellia, prepared by Sydney Water (dated 17 March 2004), notably that the existing hardstand cap remains undisturbed.
- The SMP has been developed to impact potential impacts associated with contaminated media at the site including safeguards to protect on-site workers during routine maintenance at the site (including intrusive drilling works, as considered by Reditus) as any required excavation may expose contaminated soils.

- Identify how successful implementation of the remedial action plan will be demonstrated, for example the validation requirements by documentation of site works and sampling and analysis etc (when sampling and analysis is required, a validation sampling and analysis quality plan must be included, with clearly defined acceptance validation criteria indicating what statistics will be used and any trend analysis (if required) following remediation.
- Validation reporting requirements following completion of remediation, documenting all site contamination remediation works have been satisfactorily completed and that the site has been demonstrated to be suitable for the proposed development.
- Conform to the requirements of the National Environmental Protection Council (Assessment of Site Contamination) National Environment Protection Measure 1999 (as amended in 2013) ('ASC NEPM, 2013') and the NSW EPA (2020) *contaminated land guideline for consultants reporting on contaminated land*.

2 Site Identification

The site identification details for the site have been prepared in general accordance with the NSW EPA (2020) Consultants Reporting on Contaminated Land and the ASC NEPM (2013) Field Checklist for 'site Information'. The site identification information for the proposed Lots 1 and 4 has been summarised in **Table 2-1** below.

Table2-1 *Site Identification*

ITEM	DETAIL
Address	1 Grand Ave North, Camellia NSW
Title and Land Information	Currently: • Lot 1 DP579735 • Part Lot 2 DP1248549
Site Area	Total Site Area (Lot 1 & Lot 4): 4.56 hectares Proposed Lot 1: approximately 2.6 hectares Proposed Lot 4: approximately 1.96 hectares
Local Government Area	City of Parramatta
Site Coordinates to the approximate centre of the Site (GDA2020 MGA Zone 56)	Easting: 317310 Northing: 6256258
Zoning	As per the *Parramatta Local Environmental Plan 2021*. IN3 – Heavy Industrial
Current Owner	Billbergia Group Pty Ltd
Current Land Use	Hardstand storage and commercial/industrial units
Future Land Use	Proposed commercial warehousing.
Trigger for Assessment	To satisfy requirements relating to State Environmental Planning Policy (SEPP) Resilience and Hazards, chapter 4, Remediation of Land and facilitate the submission of a Development Application for a proposed industrial warehousing development.
Surrounding Land Uses	The land uses currently surrounding the site include: • **North:** Immediately to the north is the south bank of the Parramatta River, zoned W2 'Recreational Waterways' and is characterised by a concrete wall and/or mangrove vegetation and visible debris, including asbestos- containing material fragments. Immediately north of the site, the area is zoned IN1 General Industrial and The University of Western Sydney Parramatta campus, zoned 'SP2 Educational Establishment' is located north west of the site also on the opposite side of the Parramatta River.

	• **South:** light industrial and commercial buildings zoned as 'B5 Business Development' and further south, beyond to Grand Avenue are the grounds of the Rosehill Racecourse, zoned 'R2 Private Recreation'. • **East:** an industrial estate zoned 'IN3 Heavy Industrial'. • **West:** Immediately to the west is the Clyde to Carlingford Rail Corridor, zoned 'SP2 Infrastructure' and Camellia suburban railway station, then vacant land (historically the western portion of the James Hardie site), mixed light industrial, retail and warehouse buildings located west of the site, including a Sydney Water building (possibly a pumping station), and zoned as 'B5 Business Development'. Access to the rail corridor is prevented by a perimeter fence 'A' Class Hoarding.
Site Layout	**Figure 1, Appendix A**

2.1 Site History

The following information is summarised from the CES (December 2007) Report, site audit reports (GN268-1 and GN268-1B) and based on a review of reports and other documents provided on previous investigations of the site.

The site history was reviewed and present in site audit report (GN268-1) and more recent site audit report (GN268-1B). A summary is provided below:

The site was acquired in 1917 by James Hardie & Company Pty Ltd (James Hardie), then trading as the Asbestos Slate and Sheet Manufacturing Company Limited, and development of the site is believed to have commenced at or around that time. Based on information available on the Parramatta City Council website it is believed that prior to 1917 the main use of the area of the site was for agricultural or residential purposes.

Filling of the western portion of the site is believed to have commenced from the earliest occupation by James Hardie with that part of the site being progressively filled and developed between 1917 and the mid-1960s. The fill comprised mainly asbestos wastes but also included a significant volume of boiler ash. The asbestos waste comprised friable pulp waste from the manufacturing process as well as, presumably, out of specification and excess bonded asbestos products. Some of the products may have been coated with bitumen, zinc silicate and other paints. No records were found which mentioned imported fill being used on the site.

Other chemicals, mainly hydrocarbon-based (e.g., diesel, hydraulic oil and petrol) were extensively used and stored on the site and are believed potentially to have been disposed on site.

James Hardie continued production of fibrous cement products until 1993 when production ceased, and the site was decommissioned. Between 1995 and 2001 the buildings were demolished to slab levels and building rubble was used to level some areas of the site where there were steps in the slabs. The site was acquired by Sydney Water Corporation (Sydney Water) in 1996 but did not occupy the site.

In 1999 Sydney Water formally notified NSW EPA under section 60 of the Contaminated Land Management Act 1997 that the site was contaminated and may have posed a Significant Risk of Harm. In 2000 Sydney Water entered into a Voluntary Remediation Agreement (VRA) with NSW EPA to clean up surface asbestos contamination at the site and to improve surface seals (concrete and bituminous concrete pavements) to ensure that buried asbestos waste was isolated so that exposure pathways to humans and the environment were not present.

The VRA also contained a Contamination Management Plan to ensure that remedial measures implemented were effective and maintained into the future. On 14 May 2003 the EPA gave notice that the terms of the VRA had been satisfactorily completed.

Billbergia acquired the site in 2007. The original intent was to subdivide the site into three lots and lease these lots to commercial industrial operations including a Remondis waste recycling facility and warehousing. However, after the development proposal by Remondis was rejected, it is understood that Billbergia now wish to redevelop the site as mixed-use commercial on the lower floors and residential above.

Above ground structures had been demolished to the pavement and ground floor level and the site cleared.

Approximately 95 percent of the site was sealed with either concrete or bituminous concrete pavements with the remaining unsealed areas comprising landscaped areas, and embankments. A number of areas were covered with

crush demolition rubble, mainly comprising concrete and brick fragments. Based on information in a report prepared by Australian Water Technologies (AWT 2001) some of these areas are underlain by concrete slabs. It is noted that the AWT (2001) investigation of the rubble covered areas was not comprehensive and it is possible that some of these areas may not be underlain with concrete slabs. Refer to site inspection observations discussed in Section 4 below.

Most of the area of the site is underlain by fill impacted with asbestos to varying degrees ranging from deep fill (approximately 5 metres Below Ground Level (m bgl)) containing abundant asbestos contamination in the western part, to relatively shallow fill (approximately 0.2 m bgl) in the eastern part of the site (refer **Figure 3**, **Appendix A**). Previous assessment for the presence of asbestos was mainly by visual observation. Consequently, the impact of asbestos contamination on fill comprising natural materials (e.g., clay, silt etc) and natural soil underlying the site is not fully understood. This is confirmed by Reditus' review of the data.

Previous investigations highlighted an area in the central northern part of the site (towards the central southern portion of the subject site boundary) where petroleum hydrocarbon contamination, believed to have resulted from the former operation of an "oil press". Groundwater sampled from wells located in and adjacent to oil press area were contaminated with hydrocarbons. This area was excavated by CES in 2008 and the groundwater within the excavation underwent in-situ chemical oxidation. Monitoring wells surrounding the excavation were sampled on three occasions in 2009 following remediation. The groundwater in these monitoring wells reported concentrations of total recoverable hydrocarbons TRH C_{10}-C_{36} below the 10,000ug/L threshold set by CES. Reditus noted, however, that these concentrations of TRH C_{10}-C_{36} may still present a vapour intrusion to the proposed commercial/industrial development. The most recent Reditus (2024) Data Gap Investigation which consisted of soil vapour, soil and groundwater sampling, confirmed that vapour intrusion poses a negligible risk to the proposed commercial/industrial development. A summary of the findings of the DGI can be found in **Section 9.1** of this report.

Groundwater samples previously collected from wells across the site were contaminated with heavy metals (copper, lead and zinc (AWT 2001) however, given the distribution of the heavy metal impacts in groundwater samples across the site, it was considered by CES and the Auditor that they represented a regional characteristic of the groundwater. Reditus generally agree with this statement. Reditus completed a groundwater monitoring event (GME) in March 2024 which consisted of installation of fifteen (15) groundwater monitoring wells; and sampling of the new wells and four (4) existing serviceable wells. The GME provided a recent dataset and established a current baseline of the contamination status of groundwater at the site. Reditus confirmed the presence of heavy metals in groundwater, predominantly copper and zinc and concluded that results were not consistent with significant contamination; and concentrations are likely representative of background conditions in an urbanised environment. Concentrations of total recoverable hydrocarbons in three existing wells with historical data available were reported TRH had reduced in two of three wells (MWA102, MWA103); with only minor detections of TRH F1 in the third location (MW/C46) compared to non-detects in 2007. Reditus concluded that the primary area of concern in groundwater related to MW409 within Area A of the site. This area was formerly subject to remediation by CES 2008, with groundwater treated via in-situ chemical oxidation. This is the only location sampled during 2024 where concentrations of PAHs, VOCs and naphthalene were above the LOR. TRH F2 and F3 were also detected two orders of magnitude above the next highest concentration reported during 2024. Hydraulically downgradient wells did not reflect the same magnitude of concentrations, however nearby wells MWA102, MW407, MW410 and MW412 reported elevated concentrations above the LOR, which suggests contamination is likely localised. Reditus concluded that the vapour intrusion risk posed to the development was low and remediation of groundwater at the site was not required.

A summary of the findings of the DGI can be found in **Section 9.1** of this report; with a detailed discussion of results provided in the Reditus (2024) Data Gap Investigation Report.

A number Underground Storage Tanks (USTs), previously used to store diesel oil and petrol, were reported to have been decommissioned and to remain on the site but it was not clear whether they had been appropriately abandoned in accordance with Workcover requirements and Australian Institute of Petroleum guidelines. Further, the precise location of the USTs was not provided in previous reports.

Areas located outside of the proposed Lot 1 and Lot 4 development area:

During the site inspection, areas located in the central southern part of the wider site, outside of the subject site and proposed development area near the western boundary were inspected for the presence of surface manifestations of the reported USTs. Only one fill/dip point was located in the areas indicated by previous reports. The areas were substantially covered either with crushed concrete or thickly overgrown with weeds. It was noted that in the area where it was expected to find the diesel oil UST in the western part of the site the pavement was marked with yellow hash marks. Similar marks were noted in the vicinity of the area indicated by URS (2006) as containing USTs in the southern central part of the site. It should be noted that these USTs are located outside of the proposed development area.

Two UST fill/dip points not noted in previous reports were located immediately to the south of an area described as a former “pipe dipping tank” in the south-eastern part of the wider site (i.e., outside of the proposed development area). It should be noted that these UST fill/dip points are located outside of the proposed development area.

The area of the former pipe dipping tank was delineated by a low kerb around the eastern, southern and western sides of the wider site area (i.e., outside of the proposed development area). What appeared to be bitumen spills were noted on the surface of the concrete within the kerb.

A circular impression was noted in the concrete surface adjacent to the south eastern corner of the wider site area (i.e., outside of the proposed development area) formerly occupied by the pipe dipping tank. The impression had a diameter of approximately four metres and is believed to either be the remains of a bund wall which previously contained above ground tanks or to be the remains of the base of a large above ground storage tank. The content of the tank/tanks is not known but the area may correspond with a reported spill of white spirit (URS 2006).

Evidence for a further UST reportedly located some 30 metres to the west of the former pipe dipping tank (outside of the proposed development area) was not found during site inspections performed by CES (2007).

3 Site Setting and Surrounding Environment

A summary of the site setting surrounding environment as detailed within the CES (December 2007) report is summarised in **Table 3-1** below.

Table 3-1 *Site Setting and Surrounding Environment*

ITEM	DETAIL
Topography	Review of the Parramatta River 9130-3-N,1:25,000 Topographic Map indicates that the site has an elevation of approximately 10m Australian Height Datum (AHD). The site and surrounding area are relatively flat with the exception of the embankment along the Parramatta River foreshore which slopes from the site towards the Parramatta River.
Hydrology	Site conditions noted by CES (2007) and Reditus during the site walkover conducted 6th July 2023 (refer Section 3.1) confirmed that the majority of the site is sealed with concrete and bitumen. Rainfall in this instance would be expected to preferentially conform to site topography and runoff towards the Parramatta River. Review of CES (2007) indicates the presence of a number of stormwater and spoon drains on the site, likely to drain into the Parramatta River.
Regional Geology and Soils	The local geology has been described in the Geology of the Sydney 1:250 000 sheet, as being Quaternary comprising alluvium, gravel, sand, silt and clay. The topography as described in the Sydney 1: 1 00 000 soil landscape series sheet comprises level plain to hummocky terrain, extensively disturbed by human activities including the complete disturbance, removal and/or burial of soil. Slopes are generally <30% and local relief <1 0 metres. A soil landscape is an area of land that has recognisable and specifiable topographies and soils. The geographic characteristics on this site correspond with the features described in the soil landscape series as belonging to the Disturbed Terrain. The Disturbed Terrain Soil Landscape generally consists of fill materials such as soil, rock, building and waste materials. Turfed areas are commonly capped with up to 40 cm of sandy loam or 60cm of compacted clay over fill or waste materials. The limitations of this soil landscape are dependent on the nature of the fill materials present however can include mass movement, low wet strength materials, impermeable soil, poor drainage, localised low fertility and toxic materials. Vegetation across the Disturbed Terrain was originally cleared and replaced with turf or grasslands. Weeds are common across these disturbed areas. . The soil lithology encountered during the historical CES (2007) investigation included: • **Fill:** Fill material generally comprising fibrous and bonded asbestos, building rubble, concrete, sand and clay was identified beneath the hardstand from depths of 0.2m to beyond 5.0m. Fill was found to be shallower in the eastern areas of the site (to typically less than 0.4m) whilst deeper extending beyond 5.0m in the east (refer **Figure 3**, **Appendix A**). • **Natural:** Natural material was identified to predominantly consist of alluvial silts, typical of or a river deposition al profile, overlaying red/grey clays which graded to clayey silt, becoming wetter with depth.

ITEM	DETAIL
Acid Sulfate Soils (ASS)	Review of the 1:25 000 Prospect/Parramatta River Acid Sulfate Soil Risk Map (DLWC, 1997) indicates that there is a high probability of the occurrence of acid sulfate soils within the natural soil profile located on the Site. DLWC (1997) indicates that in areas of disturbed terrain, soil investigations are required to assess the potential for acid sulfate soils. This is likely to be apparent wherever fill materials exist across the Site. Whilst deep excavation below the extent of fill material is not expected to occur as part to the development it is understood that piling will be required, therefore the presence of ASS is considered to be an issue for the proposed development. The likelihood of potential ASS (PASS) at various locations across the site, predicates the need for an ASS management plan, where natural soils will be dewatered or exposed to the atmosphere during the proposed excavation works. Reditus completed an ASS investigation as part of the scope of the DGI report. A total of six (6) samples were analysed for ASS using the Chromium Reducible Sulfur (SCr) method. One sample (MW402_2.0) had a positive acid and sulfur trail exceeding the criterion. The pH was slightly acidic at 6.2 pH units; however, it is not considered significant and is not < 4 pH units. The results indicate there is some potential acidity from the acid and sulfur trail, but it is unlikely to be true acid sulfate soils. The remaining five (5) samples did not indicate the presence of potential acid sulfate soils (PASS). The material from MW402_2.0 may be classified as PASS. The current data does not suggest that it there is true acid sulfate soil at the site. Reditus recommended the presence of PASS should be considered when choosing a suitable piling method and any spoil generated should be classified in accordance with the NSW EPA (2014) Waste Classification Guidelines. The proposed development will result in filling of the site and likely piling where dewatering will not be required. The proposed development will not affect groundwater levels beneath the site and therefore the underlying PASS will remain unimpacted.
Registered Groundwater Bore Search	A review of Review of the Minview (Accessed 17 July 2023) indicated that there 47 registered bores within a 1 km radius of the site. Each of the bores are for monitoring purposes, installed to depths ranging between 3.5m and 11.4m.
Yield and Inferred Groundwater Quality	LNAPL was Identified in groundwater during the CES (2007) investigation within the central northern portion of the site at locations EWM01 (0.5cm apparent thickness), EMW02 (1-3mm apparent thickness) and the groundwater well MWWC (1-3mm apparent thickness), located adjacent to the Parramatta River. LNAPL was not reported by Reditus during the 2024 GME, however it is noted that only four (4) existing wells were serviceable. Several groundwater sampling locations exceeded the groundwater investigation levels for BTEX, TRH, PAH and heavy metals. Much of this data is also outdated and Reditus recommend that a site wide groundwater monitoring round is conducted of all existing monitoring wells (where possible) to determine current groundwater quality. This was completed by Reditus in March 2024, with a summary of the main findings included in **Section 4** of this report.
Regional Hydrogeology	A review of the Hydrogeology Map of Australia (Geoscience Australia) indicates the aquifer type beneath the site is porous, extensive with low-moderate productivity.
Inferred Groundwater Flow Direction	Although site topography is relatively flat, groundwater is inferred to flow towards the north to the Parramatta River, noting that wells along the northern boundary adjacent to the Parramatta River foreshore are tidally influenced.

ITEM	DETAIL
Depth to Water Table	During the groundwater monitoring event that accompanied the CES (2007) investigation, standing water levels were reported between 1.67m and 4.93m below top of casing (btoc). A data logger installed by CES in a groundwater well adjacent to the Parramatta River (MWA09) indicated that groundwater was tidally influenced with fluctuations of approximately 0.2m. The most recent GME completed by Reditus (2024) indicated standing water levels (SWL) ranged from 0.7 to 4.62 mbtoc, with locations of the wells west of Area A in the northern central portion of the site (highest SWL) and north of Area C in the south eastern portion of the site (lowest SWL).
Groundwater Dependant Ecosystems	No Groundwater Dependant Ecosystems (GDE's) were identified within a 2km radius of the site.
Groundwater Embargoes	The Parramatta River is situated adjacent to the northern site boundary
Sensitive Environments	The nearest sensitive environments are summarised as follows: • Parramatta River and foreshore – beyond the northern site boundary.

3.1 Site Description

A recent walkover of the site (proposed Lots 1 and 4) was completed on 6th July 2023 by Reditus' Principal Environmental Scientist, Dean Stafford. The site was observed to be currently used as hardstand and storage of materials, general plant and equipment and shipping containers for several tenants. There were several areas of note where surface activities have damaged the surface capping of the site and soil beneath the current surface cap is at risk of being exposed.

4 Site History & Previous Investigations

A significant number of historical investigations have been undertaken at the site between 1994 and 2011. The following reports have been provided for review in preparation of the RAP:

- ENVIRON Australia Pty Ltd (April 2011) Site Audit Report, 1 Grand Avenue, Camellia.
- Consulting Earth Scientists (5 August 2010) Re: Five Year Audit and Review of Site Management Plan, June 2010, 1 Grand Ave Camellia NSW.
- Consulting Earth Scientists (17 September 2009) Re: Area A Groundwater Remediation, 1 Grand Ave Camellia NSW.
- Consulting Earth Scientists (2008) RAP and Addendum RAP – not available at the time this report was prepared, however summary taken from ENVIRON SAR.
- Consulting Earth Scientists (10 December 2007) Targeted Environmental Site Assessment. 1 Grand Avenue, Camellia NSW.
- ENVIRON Australia Pty Ltd (November 2006) Site Audit Report, Western Site, 1 Grand Avenue Camellia.
- URS (31 October 2006) Phase II Environmental Site Assessment, Sydney Water Camellia Western Site, 1 Grand Avenue, Camellia NSW.
- Sydney Water (17 March 2004) Site Management Plan, Eastern Portion of former James Hardie Site, Grand Avenue, Camellia.
- Sydney Water Corporation (22 May 2003) Resampling of Groundwater Monitoring Wells, Former James Hardie Site, Camellia.
- Sydney Water Corporation (7 February 2003) Completion of Voluntary Remediation Agreement – Former James Hardie Site, Camellia.
- Sydney Water Corporation (19 July 2002) Resampling of Groundwater Monitoring Wells, Former James Hardie Site, Camellia.
- Australian Water Technologies (June 2001) Soil Sampling and Groundwater Monitoring, prepared for Sydney Water Corporation, Former James Hardie Site, Grand Ave Camellia.
- NSW EPA (5 October 2000) Voluntary Remedial Agreement for Former James Hardie Site, 1 Grand Avenue, Camellia.
- NSW EPA (30 March 2000) Contamination at former James Hardie Site, 1 Grand Avenue, Camellia.
- Australian Water Technologies (November 1999) Contamination Management Plan prepared for Sydney Water Corporation, Former James Hardie Site, Grand Ave Camellia.
- Woodward-Clyde (7 July 1995) Remediation Report James Hardie, Camellia, 1 Grand Avenue Camellia NSW 2142.
- Woodward-Clyde (12 July 1995) Phase II Audit Site Investigations, James Hardie – Camellia, 1 Grand Avenue Camellia NSW 2142.
- Woodward-Clyde (13 July 1995) Adjacent Sites Consideration Report James Hardie – Camellia, 1 Grand Avenue Camellia NSW 2142.
- Woodward-Clyde (14 December 1994) Phase I Environmental Audit Report on the James Hardie Property, Camellia, 1 Grand Avenue Camellia NSW 2142.

The following reports prepared by Reditus were reviewed to inform the decisions made in this RAP amendment:

- Reditus (13 February 2024) Sampling Analysis Quality Plan (SAQP) – 1 Grand Avenue North, Camellia NSW. Ref: 23156RP02.
- Reditus (12 April 2024) Review: Historical Environmental Report Review and Advice – 1 Grand Avenue North, Camellia NSW, Ref: 23156LTR01_v2
- Reditus (15 April 2024) Data Gap Investigation – 1 Grand Avenue North, Camellia NSW, Ref: 23156LTR04_v1

5 Conceptual Site Model

Based on the information presented within the Reditus (2024) DGI report a Conceptual Site Model (CSM) has been prepared for the site to identify complete and potential pathways between known or potential source(s) and the receptor(s). The ASC NEPM 2013 defines a CSM as:

> *"A representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors"*

The essential elements of the CSM, as required by the ASC NEPM (NEPC, 2013), include an understanding of:

- Known and potential sources of contamination and contaminants of concern including the mechanism(s) of contamination (e.g., 'top down' spill or sub-surface release from corroded tank or pipe).
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air) and human and ecological receptors.
- Potential and complete exposure pathways.

5.1 Known Contamination Sources

Recent soil and groundwater sampling undertaken by URS (2006) and CES (2007) was reviewed by Reditus (refer *Review: Historical Environmental Report Review and Advice – 1 Grand Avenue North, Camellia NSW* (Reditus 2023)). This review report was recently updated by Reditus (v2, April 2024) following completion of the Data Gap Investigation. The most recent historical investigations by URS (2006) and CES (2007) comprised 36 sampling locations and 14 sampling locations, respectively, completed across the proposed development area (i.e., Lots 1 and 4). WWC (1995) had previously also undertaken some sampling (estimated 10 sampling locations). Refer to **Figure 2, Appendix A** for historical sampling locations. The most recent Reditus sampling program (2024) comprised of installation of 6 soil vapour sampling pins; 15 groundwater monitoring wells; and 14 boreholes. It is noted that one borehole location was terminated due to a void space underlying the slab; and one soil vapour sampling pin contained moisture and could not be sampled. The results of the DGI informed that the chemical contamination status of the site has not changed significantly, with concentrations of hydrocarbons in groundwater attenuating overtime. Reditus concluded that the cap and contain strategy presented for the site is the most appropriate to manage the contamination in soil. The risk of vapour intrusion was assessed, and Reditus are satisfied that the site in its current state is unlikely to pose a vapour intrusion risk to the commercial/industrial development.

5.1.1 Soil Comparison to Commercial/Industrial Guidelines

Soil investigation data collected since 1995 on the site was collated and compared to the National Environmental Protection Measure (NEPM) 1999 (revised 2013) Investigation Levels for Soil and Groundwater for Commercial/Industrial land use. The combined summary results table for soil is included in **Appendix B**. It is noted as, the majority of the site is proposed to be covered by buildings, roadways and hardstand, and the likely remedial strategy will be the application of a capping layer over the entire site, ecological criteria are not considered relevant and have not been adopted in this assessment. The samples that were reported above the adopted commercial/industrial health investigation levels and health screening levels are as follows:

TRH impacts are known to be associated with the area in the vicinity of the sewage discharge point, the former oil press, mould wash down area, acid tank, former USTs, pipe dipping tank and the former boiler house. The lateral and vertical extent of impacts has not been determined. Many of these areas are located outside of the proposed development area (i.e., Lots 1 and 4). It is unlikely and additional remediation for TRH exceeding management limits at two locations (BH08 and ESB36) will be required for the subject site. The site is currently managed through a Site Management Plan (SMP) which is recorded on a positive covenant on the property lodged by the EPA under section 88E(3) of the Conveyancing Act 1919.

Samples with elevated TRH or PAH concentrations are likely attributed to surface activities. Onsite fill has generally been adequately characterised for inorganic and organic contaminants. Reditus agree with the Auditor's opinion, that any impacts are more likely to be associated with specific historical activities.

A limited number of potential contaminating activities (above ground tanks and small pits) were not targeted. Given that these activities are minor in the scale of the larger site, the risk of gross impact requiring remediation, remaining undetected is considered to be low.

A majority of the soil collected from the subject site indicates that it is currently suitable for the proposed development, subject to the appropriate management/remediation of the asbestos in soil. The estimated volume of soil containing asbestos onsite (i.e., within proposed Lots 1 and 4 only) is approximately 50,000m^3. Remediation of the site using containment methods will likely be a preferred solution compared to excavation and offsite disposal.

The most recent Reditus (2024) DGI investigation identified exceedances to the management limits for petroleum hydrocarbons criteria in soil.

The NEPM (2013) states the following with regards to the use of Management Limits (Reditus emphasis):

> *'Application of the Management Limits require consideration of site-specific factors such as the depth of building basements and services and depth to groundwater, to determine a maximum depth to which these limits should apply. The management limits have less relevance at operating industrial sites which have no or limited sensitive receptors in the area of potential impact. When management limits are exceeded, further site-specific assessment and management may enable any identified risk to be addressed.'*

Management Limits are additional considerations to HSLs reflecting the nature and properties of petroleum hydrocarbons, including:

- Formulation of observable LNAPL;
- Fire and explosion hazards (of which there is a low likelihood on the site given the long chain nature and absence of volatile compounds reported in soil samples); and
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services. It is noted as the entire site will likely be capped to facilitate development, the impact of hydrocarbons on (future) in-ground services for the development will be minimised/avoided by the placement of clean engineering fill around the service and in each service trench).

The locations where exceedances were recorded were within Area A (former mould wash down area and oil press), which has previously been subject to remediation by CES 2008 due to the presence of hydrocarbons in soil and groundwater. It appears that residual contamination and impact to the soil and groundwater in this area of the site remains, however concentrations in groundwater are significantly reduced compared to historical data. It is acknowledged that the recent exceedances are within the same order of magnitude as the adopted criteria of 1000 mg/kg. Reditus note that the risks posed to current site users from the elevated TRH concentrations are considered low due to the presence of a continuous layer of concrete hardstand at the site. The risk posed to future site users is also considered low as additional capping material is proposed to be placed on the site, and management will occur under the SMP. Management limits are designed as a third phase assessment after vapour and groundwater risk assessments have been completed. The soil vapour and groundwater results do not indicate the concentrations of TRH warrant remedial activity. The hydrocarbon impacted material is expected to be capped at a depth below where access is likely to be required by intrusive maintenance workers; and any in-ground services excavated into the fill will contain a high visibility marker layer lining the service trench, with clean engineered backfill around the service to limit the direct contact exposure pathway to intrusive maintenance workers.

5.1.2 Groundwater Comparison to Guidelines

Groundwater investigation data collected since 1995 on the site was collated and compared to the ANZG (2018) 95% Freshwater Guidelines and the NEPM 1999 (revised 2013) Health Screening Levels (HSL-D) for Soil and Groundwater for Commercial/Industrial land use. The combined summary results table for groundwater samples collected from the subject site (only) is included in **Appendix B**.

Given the time since the site was in operation, the Reditus agrees with the Auditor that hydrocarbon impacts to groundwater are localised. The nature of other impacts to groundwater has been established as being regional, i.e., copper and zinc impacts which are consistent with those previously reported 'that the potential risk has not been fully assessed but would be removed with remediation of the source.'

There are numerous potential sources of groundwater contamination onsite but there has been sufficient investigation to conclude that significant impact to groundwater is likely to be only associated with a limited number of potentially impacting activities. The finding of localised rather than widespread impacts, except for regional metal concentrations, is consistent with a surface sealed site and a flat topography.

Previous investigations have highlighted an area in the central northern portion of the site where petroleum hydrocarbon contamination, believed to have resulted from the former operation of an "oil press". This area was excavated by CES in 2008, and groundwater in the excavation underwent in-situ chemical oxidation. Review of the recent groundwater analytical data indicates that significant contamination in groundwater is not present at the site.

There are several heavy metals (predominantly copper and zinc) which were recorded at concentrations which exceed the adopted criteria. These heavy metals are commonly found at elevated concentrations within urban areas in Sydney, particularly in areas with a historical and continued commercial industrial land use. It is considered that these concentrations do not pose a significant risk to receptors, and this has been previously confirmed by the previous site Auditor. The most recent sampling event confirmed the presence of heavy metals which are likely to be consistent with regional concentrations.

A total of four (4) existing wells were serviceable to sample onsite. It is noted that concentrations of TPH reported two wells had reduced to less than the limit of reporting or by an order of magnitude since the historical sampling event. Minor detections of TPH were detected during the 2024 event at one location, compared to non-detects in 2007. This well is located within Area C, which is characterised by two former USTs and a former pipe dipping tank. Historical data was not available for the fourth existing well.

It appears the primary area of concern regarding groundwater is at MW409. This well is the only location were concentrations of PAHs, VOCs and naphthalene were detected above the LOR, and concentrations of TRH F2 and F3 were detected at 14.97 and 20 mg/L, respectively. Anthracene and phenanthrene were detected at this location an order of magnitude above the criteria. Concentrations of total recoverable hydrocarbons in this location are two orders of magnitude above the next highest concentration reported during 2024. This well is located in the south western corner of Area A, and hydraulically downgradient wells did not reflect the same magnitude of concentrations, however nearby wells, MWA102, MW407, MW410 and MW412 did report concentrations of TRH above the LOR, which suggests the contamination is likely localised. As downgradient wells close to Parramatta River did not report concentrations above criteria, Reditus consider the risk posed to offsite receptors is low.

The evidence collected to date indicates that a localised hotspot remains around MW409 within Area A, which based on the current data, does not warrant further remedial activity, and it is likely attributed to residual contamination following remediation of this area. Given that the concentrations of TRH in groundwater do not pose a vapour intrusion risk, the cap and contain strategy is considered suitable for the commercial industrial development.

5.1.3 Soil Vapour

Reditus installed 6 soil vapour sub slab pins in areas of concern during March 2024. Subsequent sampling of 5 serviceable pins for TRH, BTEX and VOCs confirmed that the vapour intrusion risk is low. Although detections were present above the limit of reporting, all soil vapour samples were below the relevant HSL-D and interim HIL-D for commercial industrial land use.

5.2 Potential and Complete Exposure Pathways

5.2.1 Human Health – Inhalation Pathway

The results of the historical investigations suggest a potential complete inhalation (of respirable fibres) pathway exists for current and future intrusive maintenance/construction workers and future site users on-site from asbestos in soil.

5.2.2. Human Health – Direct and Ingestion Contact Pathway

The results of the historical investigations suggest a potential exists for future site users and maintenance/construction workers to have direct contact with impacted soils.

5.2.2 Human Health – Inhalation / Vapour Intrusion Pathway

It was considered necessary to assess whether an inhalation and/or vapour source may be present onsite for future site users and construction and maintenance workers in the context of the proposed development. The purpose for assessing vapour intrusion as a pathway is to ensure that the USTs potentially left in-situ with insufficient records for appropriate decommissioning and former hydrocarbon remediation areas do not pose an unacceptable risk to the future site users. In addition, vapour investigation was necessary to ensure that a vapour intrusion risk is not present from elevated concentrations of TPH in groundwater at the site.

Reditus conclude that the vapour intrusion pathway is incomplete based on the most recent soil vapour and groundwater sampling event.

5.2.3 Ecological – Aquatic Ecosystems

The site is in proximity to the Parramatta River, and it has been previously determined by historical investigations and by the previous Site Auditor that the risk posed to Parramatta River is low. Reditus consider the pathway to Parramatta River being potentially complete, however the most recent sampling event confirmed that the contaminant concentrations of heavy metals were consistent with urbanised background concentrations. Isolated detections of TRH, naphthalene and PAHs were considered to be localised, and wells located hydraulically downgradient in the inferred direction of groundwater flow were not considered to be impacted. Reditus conclude that the groundwater impacts are regional (heavy metals) or in the case of hydrocarbons and naphthalene, are likely attributed to historical site activities; and are at concentrations in isolated locations which are not anticipated to impact the receiving water quality.

5.3 Potential Exposure Pathway Assessment

A tabular CSM has been prepared for the site based on the known and potential sources of contamination at the site, the associated COPC and potentially affected media refined from the review of the historical reports ((refer Section 4) and summarised under separate cover (refer Reditus 2024 *Review: Historical Environmental Report Review and Advice – 1 Grand Avenue North, Camellia NSW;* with a detailed summary of each report provided in *Reditus 2024 Data Gap Investigation*) as provided in **Table 5-1** below.

Potential transport mechanisms of contamination relevant to the site include:

- Leaching of contamination from uncontrolled fill to the underlying groundwater.
- Spills, leaks, and deposition of contamination from historical land use both on and surrounding the site.

Table 5-1 *Exposure Pathway Assessment*

SOURCE	COPC	EXPOSURE PATHWAY	RECEPTOR	EXPOSURE
Uncontrolled filling **Extensive areas of buried asbestos waste (as AF, FA, and ACM) is present in fill under the existing hardstand to depths ranging between 0.2 and extending beyond 5.0m. Potential exists for co-contaminants including petroleum hydrocarbons resulting from wastes as well as resulting from activities including, but not limited to underground fuel storage. The following areas of concern are considered relevant to Development Lots 1 and 4 (as per CES, 2010):** **A: former oil press area and mould wash down facility in the northern central part of the site**. **Part C: the former pipe dipping tank in the south eastern part of the site where fibrous cement pipes were coated with bitumen**. **D: along former railway spur extending across the site from close to the southern boundary to close to the northern boundary in the central western part of the site (reported to be oil stained)**. **F: in the area of a UST previously used to store diesel on the western boundary**. **H: surface locations where PACM resulting from the use of ACM or spillage of washout resulting from the former manufacturing processes were observed across the site.**	Asbestos, BTEX, TRH, PAHs Eight priority heavy metals including hexavalent chromium	• Inhalation of respirable fibres. • Ingestion of mobilised dust. • Migration to Parramatta River or leaching through subsurface soils into underlying groundwater. • Vapour intrusion due to former USTs and oil press.	Current and future: • Site users/visitors. • Construction workers. • Maintenance workers. • Offsite users (fugitive dust). • Offsite receptors.	**Possible** There is evidence to suggest a complete source-pathway-receptor linkage exists for current and future site users with relation to identified AF, FA and ACM and co-contaminants within fill. The pathway to Parramatta River is potentially complete, however concentrations are not considered to pose an unacceptable risk to the receiving water body. The vapour intrusion pathway is considered incomplete due to concentrations of volatile contaminants in soil vapour and groundwater below the commercial industrial land use criteria.

5.4 Data Gaps

Following comparison of historical data (URS (2006) and CES (2007)) against the National Environmental Protection Measure (NEPM) 1999 (revised 2013) Investigation Levels for Soil and Groundwater for Commercial/Industrial land use. (*Review: Historical Environmental Report Review and Advice – 1 Grand Avenue North, Camellia NSW* (Reditus 2023), Reditus considered several data gaps exist, as discussed below.

The NSW EPA (2022) *Sampling Design Guidelines – Part 1* recommend that approximately 50 samples locations are completed to characterise a site with an area of 4.0Ha. Reditus have calculated over 60 sample locations that have been tested since 1995. The data therefore meets the minimum sampling density requirements; however, all the data is a least 15 years old with some exceeding 27 years.

The contaminant characteristics will likely have changed since the data was collected (potentially now lower in concentration – hydrocarbon related contaminants). Reditus recommended revisiting locations where human health exceedances exist, particularly where there is a risk of vapour intrusion from groundwater, with a view of collecting recent groundwater data (where possible) and soil vapour data using current methodologies endorsed by NSW EPA. Reditus have reviewed all the soil contamination data and have drawn boundaries around exceedances, to determine the likely volume of impacted soil, and to determine whether a capping layer is a suitable remedial strategy for the subject site.

A majority of the groundwater data was considered to be outdated and not representative of current site conditions. Groundwater conditions will have likely changed since the latest monitoring round. Reditus recommended that a round of groundwater sampling from all existing monitoring wells within the subject site (where wells still exist) be conducted to help understand potential impacts to the proposed development and allow a suitable remedial strategy to be selected when preparing the remedial action plan for the site. The results of the groundwater monitoring completed by Reditus (2024) determined the need for a soil vapour assessment to determine whether there exists an unacceptable vapour intrusion risk to potential human health receptors (both commercial occupants and maintenance workers in a trench) from primary (USTs) and secondary contamination source based on the proposed development.

The number of wells sampled during the data gap investigation were determined following a site walkover to establish whether they are lost and/ or their serviceability; and it was concluded that four (4) existing wells were serviceable and were sampled as part of the DGI.

Reditus completed the Data Gap Investigation works in March 2024, (DGI Report, dated April 2024). A total of fifteen (15) monitoring wells (MW401-MW415) were installed, with soil sampling of fill and natural material; and thirteen (13) soil bores (BH416-BH425 and BH427-BH429) were completed to provide an updated chemical contamination status of the site. It is noted that the scope of works included drilling of the additional fourteen (14) soil bores, however BH426 was terminated due to a void space below the concrete slab; and six (6) soil vapour pins were installed, with five (5) sampled due to moisture in one location.

Based on the findings of the Data Gap Investigation, Reditus concluded the following:

- A human health or ecological risk is unlikely to be present onsite including a vapour inhalation pathway in the context of the proposed development.
- Asbestos remains as the primary constituent contributing to contamination in soil. Analysis of soil samples for chemical contaminants confirms that gross contamination is not present. However, exceedances to management limits for petroleum hydrocarbons were detected in three locations within Area A of the site, located in the northern central portion of the site. Reditus concluded that the risk posed to receptors is low, and management limits are generally applied as a screening tool rather than a clean-up criterion. Due to the proposed cap and contain strategy, capping of the hydrocarbon impacted material and management under the SMP is considered to be an acceptable strategy.
- Acid sulfate soil analysis completed across the site suggests that there is potential acid sulfate soils (PASS) present on the site, due to the detection of a sulfur trail exceeding criteria in one location. Reditus concluded that this was not representative of actual ASS, however, have the potential to become true ASS if oxidised. The presence of PASS should be considered when choosing a suitable piling method, and any spoil generated should be classified in accordance with NSW EPA (2014) Waste Classification Guidelines. The water table is not expected to be lowered during construction works.

- Heavy metal concentrations which were in exceedance of the adopted criteria have been determined to be representative of urban ambient conditions, with no trend present between up and downgradient groundwater locations.
- The primary area of concern remains to be Area A, where elevated concentrations of TRH and PAH were detected in groundwater. PAHs exceeded the adopted criteria in one location, however hydraulically downgradient wells did not report detections, therefore Reditus concluded that the PAH contamination is likely to be limited to MW409.
- The soil vapour results suggest that the site in its current state does not pose an unacceptable risk to the proposed commercial industrial development.

Reditus acknowledge that NSW EPA have registered a public positive covenant on the title of the site under s29 of the CLM Act and s88E of the Conveyancing Act 1918. The terms of the covenant require site owners to maintain remediation of the site pursuant to the requirements detailed in the *Site Management Plan, Eastern Portion Former James Hardie Site, Grand Avenue Camellia, prepared by Sydney Water* (17 March 2004). The SMP provides safeguards to protect onsite workers during routine maintenance at the site and potential exposure of contaminated soils. Conformance with the SMP requires adequate protection measures to be in place to control intrusive activities that may pose an exposure risk to workers; or may disturbed contaminated fill; as well as seeking approval from NSW EPA prior to excavation works at the site.

Reditus concluded that the Data Gap Investigation has not identified additional contaminants in soil, groundwater or soil vapour that would require significant alterations to the proposed remedial strategy; and the identified contamination onsite is not expected to impact the proposed commercial industrial development. Reditus note that residual hydrocarbon contamination is evident within Area A, which was formerly subject to remedial activities.

The results of this Data Gap Investigation have informed the revision to this Remedial Action Plan to document the activities, procedures, control measures, contingencies, and validation requirements to facilitate effective remediation of contamination identified in historical investigations; and planning requirements of State Environmental Planning Policy (SEPP) Resilience and Hazards 2021 Chapter 4 Remediation of Land. Specifically, Clause 4.6(1)(b) and clause 4.6(1)(c) SEPP 2021 requires a consent authority to consider whether land can be made suitable for the intended land use prior to approving development.

6 Data Quality Objectives

The Data Quality Objective (DQO) process is a systematic planning tool based on the scientific method for establishing criteria for data quality and for developing data collection designs. The DQO defines the experimental process required to test a hypothesis. The DQO process has been developed to ensure that efforts relating to data collection are cost effective, by eliminating unnecessary, duplicative or overly precise data whilst at the same time, ensuring the data collected is of sufficient quality and quantity to support defensible decision making.

It is recognised that the most efficient way to accomplish these goals is to establish criteria for defensible decision making before data collection begins and develop a data collection design based on these criteria. By using the DQO process to plan the investigation effort, the relevant parties can improve the effectiveness, efficiency and defensibility of a decision in a resource and cost-effective manner.

The DQO process consists of seven steps, which are designed to clarify the study objectives, define the appropriate type of data and specify tolerable levels of potential decision errors. The seven-step DQO process adopted for this RAP can be summarised as:

- **Step 1: State the Problem** – concisely describe the problem to be studied. Review prior studies and existing information to gain a sufficient understanding to define the problem.
- **Step 2: Identify the Decision** – identify what questions the study will attempt to resolve, and what actions may result.
- **Step 3: Identify the Inputs to the Decision** – identify the information that needs to be obtained and the measurements that need to be taken to resolve the decision statement.
- **Step 4: Define the Study Boundaries** – specify the time periods and spatial area to which decisions will apply. Determine when and where data should be collected.
- **Step 5: Develop a Decision Rule** – define the statistical parameter of interest, specify the action level, and integrate the previous DQO outputs into a single statement that describes the logical basis for choosing among alternative actions.
- **Step 6: Specify Tolerable Limits on Decision Errors** – define the decision maker's tolerable decision error rates based on a consideration of the consequences of making an incorrect decision; and
- **Step 7: Optimise the Design** –evaluate information from the previous steps and generate alternative data collection designs. Choose the most resource-effective design that meets all DQOs.

The DQOs are provided in **Table 6-1** below and were derived in accordance with Australian Standard 4482.1-2005 'Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds' (AS 4482.1-1997).

Table 6-1 *Data Quality Objectives*

ITEM	DETAIL
Step 1: State the problem	Based on the findings of the historical and recent investigations at the site (refer **Section 4 and 5.4**) and site audit reports (GN268-1 and GN268-1B), the identified contamination is considered to present an unacceptable risk to potential on-site human receptors and as such precludes subsequent redevelopment of the site. Potential sources of contamination have been identified beneath the existing hardstand, specifically, asbestos fines (AF), fibrous asbestos (FA) and asbestos containing materials (ACM) within fill from depths of 0.2m to beyond 5.0m (refer **Figure 3**, **Appendix A**). Based on the findings of the investigation, the site can be made suitable for the proposed commercial land use, subject to adherence to this RAP and subsequent remediation/removal/or management of identified asbestos contamination. The most recent DGI completed by Reditus (2024) established a baseline of the current chemical concentrations of contaminants in soil, groundwater and soil vapour. Reditus concluded that hydrocarbon impacted soils and groundwater were still present onsite, however at concentrations which had stabilised and/or decreased since the historical investigations were completed in the late 90s and early 2000's. Reditus concluded the vapour intrusion risk from volatile contaminants in soil vapour and groundwater was low and concentrations were below the adopted commercial industrial criteria. Further remediation is not considered necessary at the site, with asbestos still the primary constituent contributing to contamination at the site. Elevated TRH exceeding the management limits for petroleum hydrocarbon criteria were detected in soil in the northern central portion of the site which was historically subject to hydrocarbon remediation by CES 2008. It appears that residual contamination and impact to the soil and groundwater in this area of the site remains, however concentrations in groundwater are significantly reduced compared to historical data. The management limits exceedance at BH419_1.2 is > 250% of the adopted criteria, and exceedance of this threshold generally deems it to be a "hotspot". However, it is acknowledged that exceedances are within the same order of magnitude as the adopted criteria of 1000 mg/kg. Reditus note that the risks posed to current site users from the elevated TRH concentrations are considered low due to the presence of a continuous layer of concrete hardstand at the site. The risk posed to future site users is also considered low as additional capping material is proposed to be placed on the site, and management will occur under the SMP. Management limits refer to interpretation of the management of soil from explosion and fire risk and indicate the potential presence of separate phase in water table and vadose zone. Management limits are designed as a third phase assessment after vapour and groundwater risk assessments have been completed. The soil vapour and groundwater results do not indicate the concentrations of TRH warrant remedial activity. The hydrocarbon impacted material will be capped at a depth below where access is likely to be required by intrusive maintenance workers.

ITEM	DETAIL
Step 2: Identify the decision/goal of the study	The goal is to remediate the site such that it is suitable for the proposed commercial land use from a contaminated land perspective. This will be achieved through implementation of remedial management procedures and a site validation sampling plan. The cap is to remain undisturbed with the exception of piling works excavation to facilitate the installation of services. Validation works will confirm conformance pursuant to this RAP (piling works (refer Section 12.2.4) and trenching for services (refer Section 8 and Section 12.2.5)). Suitable clay or shale-based capping material, consisting of ENM or VENM, will be imported and compacted to a minimum thickness of 0.5 metres across the site. In addition to the compacted clay layer, a Geofabric Marker Layer (of high visibility orange coloured fabric) will be installed to act as a marker layer between the clay cap and the underlying impacted fill material. A protective layer of at least 0.2 m of hard material (road base, crushed rock, or recycled concrete) will be placed over the compacted clay to protect it from damage by construction traffic and rainfall. This will form part of the approved cap. This will also address any requirements to maximise the long-term stability of the capping system. Reditus propose that the cap is placed overlying the existing slab to avoid unnecessary disturbance to the asbestos soils; and the risk of exposure to site workers. Reditus advise that appropriate flood planning, and engineering advice is sought to account for additional fill required to fulfill the remedial strategy. This may result in contouring the proposed filling of the site in a way where the minimum capping thickness is 0.7m, and the vertical extent of the cap may need to be thicker in some areas of the site. An accredited surveyor will be commissioned to survey the site before and after the application of the capping material for validation purposes. The implementation of the cap will be enforced through a long-term Environmental Management Plan (EMP). Any minor excavations into the underlying impacted fill material for underground services during the construction process of the proposed development or spoil from piling works will require appropriate management prior to classification and disposal to an approved EPA licenced landfill. If elevated concentrations of COPCs are identified at the site following completion of remediation works and site validation sampling: • What is the extent of the impact? • Does any COPC at the site occur at concentrations that pose or may pose an unacceptable liability or risk to the environment and/or human health to persons who will utilise the future development? • If so, what is the order of priority to minimise the risk and what additional measures are required to mitigate, remediate, or manage the risk? As such, would this significantly alter the current remedial strategy.

Step 3: Identify the information inputs	The inputs to the decisions are: • Physical observations, including visual and olfactory, during site investigations; • Validation of the remedial works to show that the lateral and vertical extent of the capping has been established in accordance with the relevant soil guidelines and the RAP; – Specifically, the only instances where the cap may be breached (piling and/ or underground service installation) will be validated to have been performed in accordance with Section 8 and Sections 12.2.4 and 12.2.5 of the RAP. • Soil analytical data collected from the imported capping material during validation works; • Soil analytical data and waste classification of fill soil from any minor excavations or piling at the site prior to offsite disposal of soil (where required); • Proposed building design; • Existing environmental data; and • Relevant NSW EPA endorsed guidelines. Further key data required to resolve the project problem includes: • Concentrations of COPC in the soil (including asbestos) collected in the study area. • Assessment data gathered to address data gap identified: – Concentrations of COPC in the groundwater collected in the study area – Concentrations of COPC in the soil vapour collected in the study area, should the results of groundwater necessitate the need for a soil vapour assessment • The COPC selected are based on the historical assessment and are listed within Section 5. Given the proposed development if for an industrial warehouse facility, the soil validation assessment criteria have been sourced from the NEPC (as amended 2013) NEPM ASC as follows: Key data required to resolve the project problem included concentrations of COPC in the soil and groundwater collected in the study area, the structure and depth of the underlying site geology and the historical activities conducted within the former operational areas of the site. The COPC selected were based on the historical assessment and are discussed in Section 6. <u>Soil Assessment Criteria:</u> • NEPM ASC (2013) Health Screening Levels (HSLs) D – Commercial/Industrial – Silt; • NEPM ASC (2013) Health investigation Levels (HIL) D – Commercial/Industrial; and • NEPM ASC (2013) Management Limits (ML) – Commercial/Industrial, fine-grained soils. • NEPM ASC (2013) EILs/ESLs are not deemed appropriate for onsite assessment given NEPM ASC (2013) EILs/ESLs are not deemed generally appropriate for commercial end use particularly given the anticipated large areas of hardstand and inaccessible soils. NEPM ASC (2013) HSLs for asbestos contamination in soil – commercial/industrial land use setting

ITEM	DETAIL
	Groundwater Assessment Criteria: • Australian and New Zealand Governments Guidelines for Fresh and Marine Water Quality 2018. Due to the receiving water body being Parramatta River, which is a brackish environment, the marine water quality is appropriate for the site. • National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines, 2011 (ADWG) - Recreational and Aesthetic Criteria (revised September 2022). It is noted the recreational guidance was derived from the drinking water guidelines multiplied by a factor of 10. • NEPM ASC (2013) Health Screening Levels (HSLs) D – Commercial/Industrial Soil Vapour Criteria: • NEPC (2013) NEPM Soil Vapour HSL-D Commercial/Industrial (SVHSL-D) • NEPC (2013) NEPM Interim Soil Vapour HSL-D. Tier 1 investigation levels have been adopted as validation criteria for conservatism and in the absence of site-specific remedial thresholds. Any spoil arising from excavation or piling works for off-site disposal are to be assessed in accordance with the Waste Classification Guidelines. Part 1: Classifying Waste, NSW Department of Climate Change and Water, December 2009 (NSW EPA, 2014). Imported virgin excavated natural material (VENM) or Excavated Natural Material (ENM) as fill or capping material (where required) is to be assessed in accordance with relevant NSW EPA guidance.
Step 4: Define the boundaries of the study	The RAP is restricted to the extents of the proposed development site boundary as shown in **Figure 1**, **Appendix A** and **Appendix C**. The vertical extent of the study boundary is limited to a maximum depth of approximately 7.9 mbgl, the depth of existing groundwater monitoring wells.

Step 5: Develop a decision rule	The following guidelines will be adopted to develop a decision rule: • NSW EPA Contaminated Land Management Guidelines for the NSW Site Auditor Scheme 3rd Edition, October 2017 (NSW EPA 2017). • National Environment Protection (Assessment of Site Contamination) Measure, National Environment Protection Council, revised 2013 (NEPM 2013). • Waste Classification Guidelines. Part 1: Classifying Waste, NSW Department of Climate Change and Water, December 2009 (NSW EPA, 2014). Where unexcepted finds are uncovered, contingency measures will need to be initiated. As impacted fill material will be left on the site, an EMP must be prepared, which will document any ongoing operation and maintenance requirements and responsibilities to ensure that the contaminants do not cause impact to human health/environmental receptors. If any soils have to be excavated and disposed off-site, they will be compared against the criteria provided in NSW EPA (2014) Waste Classification Guidelines. Where required, TCLP and appropriate statistical analysis will be used to interpret the data set. Off-site disposal will be limited to facilities licensed to accept the waste classes determined during remediation. Soils requiring offsite disposal are limited to soil cuttings requiring disposal during piling works (refer Section 12.2.4) and excavation to facilitate the installation of services (refer Section 8 and Section 12.2.5). Imported soil (capping material) will be accompanied by a certificate of Virgin Excavated Natural Material (VENM) or Excavated Natural Material (ENM) and will be sampled and compared against selected validation criteria outlined in Section 7.8 A summary of the decision rules implemented in this RAP are outlined below. ***Was imported clay or shale suitable for use as capping material at the site?*** Imported fill is to be accompanied by a VENM or ENM certificate and validated prior to onsite use. Soil analytical data will be compared against EPA endorsed criteria. If required, statistical analyses of the data will be undertaken in accordance with relevant guideline documents to facilitate the decisions. If the statistical criteria stated above are satisfied, the decision is Yes, and if VENM or ENM certification from the source site is provided regarding suitability for use, the decision will be Yes. If soil analytical data exceeds the EPA endorsed criteria or VENM or ENM certification from the source site is not provided, the decision will be No. ***Has onsite groundwater contamination been managed appropriately?*** A majority of the historical groundwater data predates 2011. Reditus recommend that a round of groundwater sampling from all existing monitoring wells within the subject site (where wells still exist) be conducted to help understand potential impacts to the proposed development and allow a suitable remedial strategy to be selected when preparing the remedial action plan for the site. The results of the groundwater monitoring will determine the need for a soil vapour assessment. Reditus completed a GME in March 2024 which involved sampling of fifteen (15) newly installed wells; and four (4) existing wells. Review of the groundwater analytical data indicates that significant contamination in groundwater is not present at the site. There are several heavy metals (predominantly copper and zinc) which were recorded at concentrations which exceed the adopted criteria. These heavy metals are commonly found at elevated concentrations within urban areas in Sydney, particularly in areas with a historical and continued commercial industrial land use. It is considered that these concentrations do not pose a significant

risk to receptors, and this has been previously confirmed by the site Auditor. As an extra level of assessment, Reditus have compared the groundwater data to the recreational criteria due to the use of Parramatta River by the general public. Contaminants are well below the recreational criteria which suggests that the risk posed to nearby offsite receptors using the river is low.

Concentrations of hydrocarbons in three existing wells sampled with available historical data had reduced by an order of magnitude or to below the limit of reporting in two wells; with minor detections above the limit of reporting in MWA/C46. It appears the primary area of concern regarding groundwater is at MW409. This well is the only location were concentrations of PAHs, VOCs and naphthalene were detected above the LOR, and concentrations of TRH F2 and F3 were detected at 14.97 and 20 mg/L, respectively. Concentrations of hydrocarbons in this location are two orders of magnitude above the next highest concentration reported during 2024. This well is located in the south western corner of Area A, and hydraulically downgradient wells did not reflect the same magnitude of concentrations, however nearby wells, MWA102, MW407, MW410 and MW412 did report concentrations of hydrocarbons above the LOR, which suggests the contamination is likely localised.

The evidence collected to date indicates that a localised hotspot remains around MW409 within Area A, which based on the current data, does not warrant further remedial activity, and it is likely attributed to residual contamination following remediation of this area. Given that the concentrations of TRH in groundwater do not pose a vapour intrusion risk, the cap and contain strategy is considered suitable for the commercial industrial development.

Does soil vapour pose a risk to human health receptors?

Do the results of groundwater monitoring necessitate need for a soil vapour assessment and if so, does a risk exist to future site users. The most recent DGI completed by Reditus (2024) has confirmed that the vapour intrusion risk posed by soil vapour and groundwater is low. Data collected in areas of concern reported volatile contaminant concentrations in soil vapour and groundwater below the adopted commercial industrial criteria.

Has the capping material been placed and compacted to specified minimum thickness consistently across the site, with an underlying marker layer of geofabric?

Validation of the capping thickness and lateral extent (as well as the underlying marker layer) (refer Section 8.0) must be completed to ensure the direct contact exposure pathway has been successfully eliminated.

If the cap validation/verification inspection program and pre/post site elevation survey evaluation identify that the entire site has been capped, with a minimum thickness of 0.5m of compacted clay, overlain by a minimum thickness of 0.2m of hardstand, the cap will be considered adequate to eliminate the direct contact exposure pathway.

If the cap validation/verification inspection program and pre/post site elevation survey evaluation (refer to Section 10.2) identify the cap does not extent across the entire site or if the minimum cap thickness is not achieved, rectification capping works will be required. Subsequent cap validation/verification works will be required once cap rectification works are completed.

Is ongoing management of onsite soil contamination required?

Regardless of any decision provided above, a long term EMP (LTEMP) must be implemented for the ongoing management of onsite soil.

The management plan will be required to ensure that the initial concrete cap remains undisturbed unless under circumstances during site development (piling and trenching), where they will be appropriately managed pursuant to the LTEMP and that the contaminants of concern do not cause impact to human health/environmental receptors.

ITEM	DETAIL
Step 6: Specify tolerable limits on decision errors	***Capping Design and Implementation Errors*** For errors relating to the capping design and implementation, relevant suitably qualified personnel are to ensure that: • The current hardstand capping layer is not disturbed unless with the exception of piling for installation of services the need to install, whereby in each instance it will be appropriately managed. • A suitably constructed capping layer is installed, to industry standard, over the site area; and • That the capping layer constructed, to industry standard, results in a long-term stable barrier. ***Soil Validation Sample Analytical Errors*** The acceptable limits for samples are as follows: • % RPD for laboratory duplicates for TPH and BTEX analysis is less than 60%; and • Recovery of matrix spikes and surrogate spikes is as per the laboratory's Quality Assurance targets accepted under their National Association of Testing Authorities (NATA) accreditation. Precision is measured using the standard deviation 'SD' or Relative Percent Difference '%RPD'. Replicate data for field duplicates of organics is expected to be as follows: • RPD criteria of 50% or less, for concentrations > or = 10 times practical quantitation limits (PQL); • RPD criteria of 75% or less, for concentrations between 5 and 10 times the EQL; and • RPD criteria of 100% or less, for concentrations < 5 times PQL. Replicate data for field duplicates for inorganics, including metals is expected to be as follows: • RPD criteria of 30% or less, for concentrations > or = 10 times PQL; • RPD criteria of 75% or less, for concentrations between 5 and 10 times the EQL; and • RPD criteria of 100% or less, for concentrations < 5 times PQL. Where acceptable limits for field duplicates were not met, a discussion on low biased error will be provided. For this investigation, a decision error of 5% will be considered acceptable This error rate is in accordance with Appendix B of Schedule B(2) of the ASC NEPM. In order to achieve this level of confidence, the investigation has been designed as described below. Intra-laboratory and inter-laboratory duplicates are not required for the sampling of asbestos/ACM in soils due to the 'nugget' nature of asbestos as a contaminant.
Step 7: Optimise the design	Where required, soil samples will be collected at relevant densities as specified in this RAP, changes in geology or in zones of gross contamination and locations selected for efficient and representative sampling. All media sampled will be conducted in accordance with Reditus standard operating procedures (SOPs) and relevant industry guidelines.

7 Remediation Strategy

7.1 Remediation Objectives

The objective of the RAP is to provide a detailed plan of activities, procedures, contingency measures and objectives to ensure the effective and controlled remediation of the site for the proposed industrial warehouse development. It describes the procedures and standards to be followed throughout the project to facilitate successful remediation / management of the site and ensure protection of human health and the environment.

The remediation objectives are outlined as follows:

- Remediate the site to a to render it suitable for a permissible land use under the current zoning as 'IN3 – Heavy Industrial' as specified in the Parramatta Local Environmental Plan 2021;
- Prevent or minimise to the extent practicable further migration of contaminants from source areas that pose an unacceptable risk to either future site occupants (commercial tourist workers and temporary occupants) or environmental receptors;
- Validate the soil remedial/assessment works by demonstrating the impacted fill material has been contained with a suitable cap design, specifically:
  - Geofabric Marker Layer (Orange Fabric); underlying
  - Compacted Clay Capping Layer (minimum compacted thickness of 0.5m); underlying
  - Aggregate (road base, crushed rock or recycled concrete) / Hardstand Layer (minimum thickness of 0.2m); and
  - A long term EMP has been implemented for the ongoing monitoring and maintenance of the cap, as well as the prohibition of growing of vegetables and fruit, and prohibition of groundwater use.
- Validate the remedial works in accordance with the relevant NSW EPA guidelines;
- Document the validation/assessment process; and
- Prepare a long term EMP for ongoing monitoring and maintenance purposes.

7.2 Remediation Options Appraisal

The Contaminated Sites Guidelines for the NSW EPA endorsed NSW Auditor Guidelines 3rd Edition (NSW EPA 2017) states that a site auditor must be satisfied that any proposed or completed remediation is technically feasible, environmentally justifiable and consistent with relevant laws, policies and guidelines. The Auditor Guidelines (NSW EPA 2017) state the Auditors must have regards to:

- National, and relevant NSW EPA endorsed remediation policies.
- The Protection of the Environment Operations Act 1997 (POEO Act) and Regulations for soils to be disposed of in NSW.
- Other legislation such as the Environmentally Hazardous Chemicals Act 1985 (EHC Act) and the Environmental Planning and Assessment Act.
- Relevant technical guidance documents issued by the NSW EPA.

In addition, the guidelines state the preferred hierarchy of options for site remediation and/or management is set out in s.6(16) Assessment of Site Contamination Policy Framework of Schedules A and B of the NEPM (2013), which is followed in NSW.

This means that soil remediation and management is implemented in the following preferred order:

- On-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level.
- Off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site.
- Consolidation and isolation of the soil on-site by containment within a properly designed barrier.

- Removal of contaminated soil to an approved site or facility, followed, where necessary, by replacement with clean fill; or
- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

An appraisal of viable remediation options for the "known contamination: that may be practically implemented at the site" are presented in **Table 7-1** below.

Table 7-1 *Remediation Options Appraisal*

OPTION	DISCUSSION	CONCLUSION
Option 1 *Excavation and off-site disposal of impacted fill*	There are currently suitably licensed waste facilities in NSW capable of receiving the impacted soils (following further assessment and waste classification). Offsite disposal of impacted material is one of the fastest ways of remediating soils impacted at the site.	**Viable, but undesirable** This option ensures the removal of "known" asbestos in soil impacts. Given the estimated volume of soil containing asbestos onsite within proposed Lots 1 and 4 is approximately 50,000m^3 the costs associated with disposal preclude the feasibility in this option. The disturbance of friable asbestos inherently presents a risk to on-site human receptors as well as receptors at a licensed disposal facility. Further, given the scale of the redevelopment this option is likely to be the least preferable. There would involve significant truck movements, road safety concerns and excessive waste generation that could otherwise be avoided Further, pursuant to NSW EPA (2017) *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme*, Section *s.6(16) Assessment of Site Contamination Policy Framework of Schedules A and B* of the NEPM confirms that sustainability should be considered when deciding which remediation option to choose, to achieve an appropriate balance between the benefits and effects of undertaking a remedial option. With consideration of the volume and the risks of disturbing impacted fill, this option is not considered to be viable and an alternative strategy should be considered. It is noted that excavation for underground services and cuttings from piling activities will require handling and off-site disposal to a facility licensed to accept such waste once classified. This is relevant for the recessed docks. The service excavation are to be lined with geofabric to warn intrusive maintenance workers of the potential to come into contact with contaminated soil. Management of the control measures to be put in place when accessing services are to be detailed in the EMP. Recent vapour sampling has confirmed that the risk of vapour intrusion from soil vapour and groundwater is low and acceptable for the commercial/industrial development.
Option 2 *Onsite treatment*	Onsite treatment involving raking, tilling and sparrow picking ACMs. This option is not suitable for remediation of friable asbestos in soil (AF/FA).	**Not viable** Soil treatment is not considered a viable option given there are no known technologies that can viably treat the mixture of contaminations identified at the site.

OPTION	DISCUSSION	CONCLUSION
Option 3 *Do nothing*	To leave the site as it is currently would not be feasible as the material requires excavation to facilitate levels for the development and will require excavation.	**Not permitted** This is not considered a viable option as the current contamination status of the site precludes the proposed development. Remedial activities are required to render the site suitable for the proposed land uses.
Option 4 *'Cap and contain' the impacted fill*	This option eliminates the cost implications and need to dispose to landfill as well as minimises the need to disturb the friable asbestos in soil (AF/FA). This option does not "remove" the contamination and requires the implementation of a long-term environmental management plan.	**Preferable** Considering the volume of soil containing asbestos onsite within proposed Lots 1 and 4 is approximately 50,000m^3 and the risks associated with handling the material, a cap and contain remediation strategy is the most viable option. This option is synonymous with NSW EPA (2017) *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme*, which as prescribed in s.6(16) Assessment of Site Contamination Policy Framework of Schedules A and B of the NEPM confirms that sustainability should be considered when deciding which remediation option to choose, to achieve an appropriate balance between the benefits (no disturbance of impacted fill, less truck movements, less waste to landfill) and effects (reduction is in potential exposure) in consideration of the remedial option. It will eliminate the need to disturb the fill, reduce offsite truck movements and road safety concerns whilst reducing the quantity of waste generation and is preferred in relation to the NSW EPA Waste Hierarchy and the WARR. Irrespective of the implications for having an asbestos management plan (AMP) and that a long-term environmental management (LTEMP) assigned to the site land title documentation are undesirable, this remedial strategy remains the most practicable. It is noted that excavation for underground services and cuttings from piling activities will require handling and off-site disposal to a facility licensed to accept such waste once classified. This is relevant for the recessed docks. The service excavations are to be lined with geofabric to warn intrusive maintenance workers of the potential to come into contact with contaminated soil. Management of the control measures to be put in place when accessing services are to be detailed in the EMP. Recent vapour sampling has confirmed that the risk of vapour intrusion from soil vapour and groundwater is low and acceptable for the commercial/industrial development. The minor spoil which may be generated from piling and installation of services is far less than the potential exposure pathway which may be created if excavation of all fill material is implemented. It is expected that most services can predominantly be installed within the clean capping layer.

7.2.1 Preferred Remediation Option

With consideration to NSW EPA's endorsed guideline hierarchies for soil remediation options and clean-up objectives (NSW EPA 2017), and the site-specific contaminants, proposed development and environmental setting, the preferred remediation strategy is Option 4 – 'Cap-and-containment' of the impacted fill soils. This option is aligned with s.6(16) Assessment of Site Contamination Policy Framework of Schedules A and B of the NEPM as prescribed in NSW EPA (2017) Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme, ensuring that the cap is not

disturbed (unless for purposes of piling or service trench excavation under controls prescribed in Section 8 and Sections 12.2.4 and 12.2.5 of this RAP). The steps to be carried out are outlined below.

- Installation of a Geofabric Marker Layer across the entire site to separate the cap material and the underlying impacted fill material. The Geofabric will be coloured orange to act as a clear marker layer.
- A suitable clay or shale-based capping material (VENM or ENM) will be imported to the site.
- As the capping material is in the process of being imported to the site, the following validation and verification will be undertaken:
- Imported capping material will be accompanied by a letter of VENM or ENM;
- All imported material will be visually verified by onsite personnel;
- Imported material will be arranged into stockpiles so that samples can be collected and compared against selected validation criteria. A detailed soil validation sampling and analytical program is outlined in Table 12.
- The clay capping material will be spread and compacted to a minimum thickness of 0.5m across the entirety of the site. The cap will be compacted under engineering control to a standard suitable for the intended development, or else a standard proposed by the environmental consultant and approved by the Site Auditor;
- A protective layer of at least 0.2m of hard material (road base, crushed rock, or recycled concrete) should be placed over the compacted clay to protect it from damage by construction traffic and rainfall. This will form part of the approved cap. This will also maximise the long-term stability of the capping system.
- For validation of the cap installation, the following validation and verification will be undertaken:
  - Appropriately documented supervision by the appointed certified environmental consultant (EIANZ CEnvP-SCS);
  - An accredited surveyor will be commissioned to conduct a detailed survey of the entire site before and after installation;
  - A compaction test will be conducted to test for the density of the capping material;
  - Once ACM contaminated material has been appropriately capped as per design requirements, the asbestos removalist will inform the Asbestos Removal Contractor and LAA/Occupational Hygienist who will then conduct a visual inspection of the work area.
  - The LAA/Occupational Hygienist will perform a visual inspection of the area.
  - If the cap has been appropriately installed as per design requirements, the LAA/Occupational Hygienist will issue a Visual Inspection report detailing the findings and validating that the ACM material has been successfully capped.
  - If the cap has not been satisfactorily installed the LAA/Occupational Hygienist will inform the asbestos removalist and no Visual Inspection report will be issued. Work will continue until the LAA/Occupational Hygienist is satisfied the cap has been installed appropriately.
  - If there is any excavation of impacted fill soils for the purposes of the construction of the proposed development, this material should be classified and sent to a licenced landfill. The Council request for information required the following to be addressed in the RAP:

    Details of the proposed breach of the existing cap and details of any excavation works that will breach this cap have not been provided.

    It is acknowledged that the current development plans indicate that some subsurface excavation may be required including a recessed dock. The plans do not indicate the depth that these services will be installed to, however Reditus consider it is likely that the services will predominantly be within the top 700mm in the cap. It is noted that excavation for underground services and cuttings from piling activities will require handling and off-site disposal to a facility licensed to accept such waste once classified. The service excavations are to be lined with geofabric to warn intrusive maintenance workers of the potential to come into contact with contaminated soil. Engineered backfill will be placed around the service to ensure that the services are isolated, and are surrounded by clean material. Management of the control measures to be put in place when accessing services are to be detailed in the Environmental Management Plan (EMP) (refer to table 8-1 below for proposed installation of deep services within the contaminated fill material).
- A Validation Report will be prepared.

- Development and implementation of a long-term EMP to outline the monitoring/maintenance requirements of the cap, and also to enforce the prohibition on growing vegetables and fruit on the site.

A suitably experienced environmental professional will supervise all remediation and validation works and compile report/s required to document the site remediation.

8 Remedial Cap Design

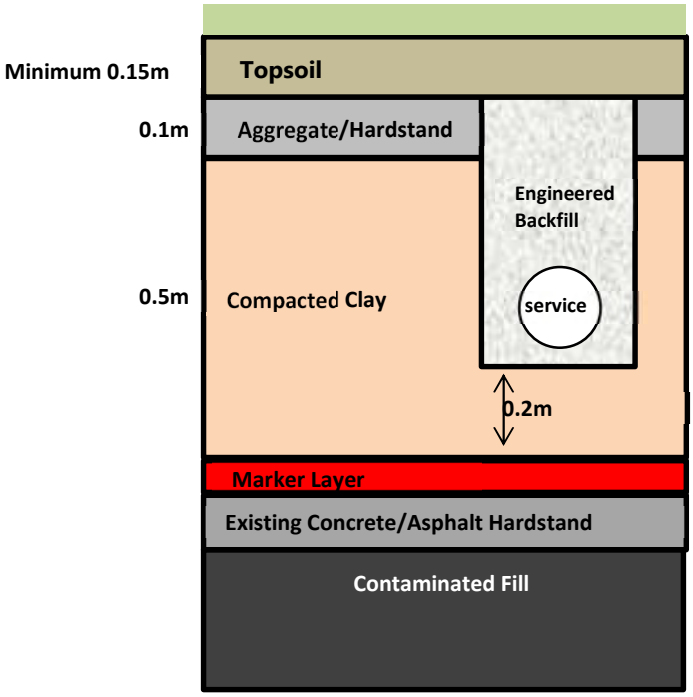
The proposed remedial strategy for the site comprises the construction of a capping layer of imported material, that will act as a physical barrier for contact with the impacted fill beneath the site. Cap Design is discussed further in Section 8.1, which follows. It is noted the following remedial strategy is conceptual only, a specific capping design (i.e architectural plans with site levels etc) will be required to supplement this RAP.

In each instance, the existing hardstand cap is maintained, with the exception of instances where services are required to be installed at depths exceeding 0.7m below the final capping level, as illustrated in **Example B**, **Table 8-1**, which follows.

8.1 Conceptual Cap Design

The following variations have been presented as indicative design options that would achieve the objective of the remediation cap to render the site suitable under a Long-term Environmental Management Plan (LEMP). The sketches provided are indicative in nature only noting that there is variability in the depth of fill across the site.

Table 8-1 *Conceptual Remediation Cap Design*

CONCEPTUAL LAND USE / DEVELOPMENT SCENARIO	INDICATIVE CAP DESIGN SKETCH
EXAMPLE A: SHALLOW UNDERGROUND SERVICES (SERVICE TRENCH WITHIN 0.5m OF FUTURE SITE SURFACE)	
Services within the top 0.5m of current cap. Service trench installed so that there is a minimum of 0.2m thickness of clay cap material between the base of the service trench and the marker layer. Trench is backfilled with engineered backfill to service specification. This design ensures that there is at least a 0.5m physical barrier maintained between the site surface and contamination.	

EXAMPLE B DEEP UNDERGROUND SERVICES (SERVICE TRENCH GREATER THAN 0.5m DEPTH)

Service trench greater than 0.5m depth from surface.

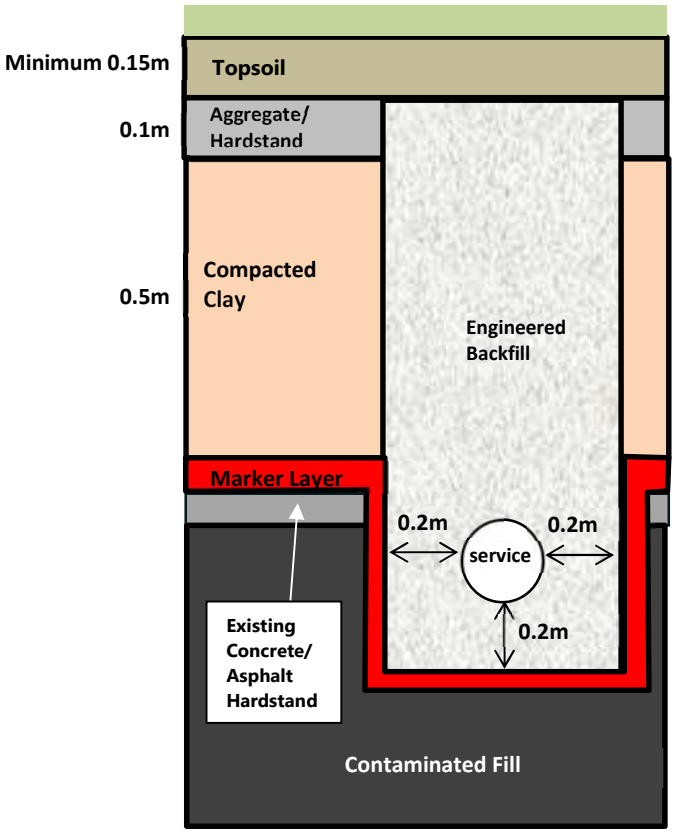
Service trench is of sufficient width and depth to ensure that a minimum of 0.2m engineered backfill exists between the service and the marker layer.

Trench is backfilled with engineered backfill to service specification.

A highly visible and durable Marker Layer (such as an orange geotextile fabric or mesh) to be installed between the trench and contamination (including walls and base.

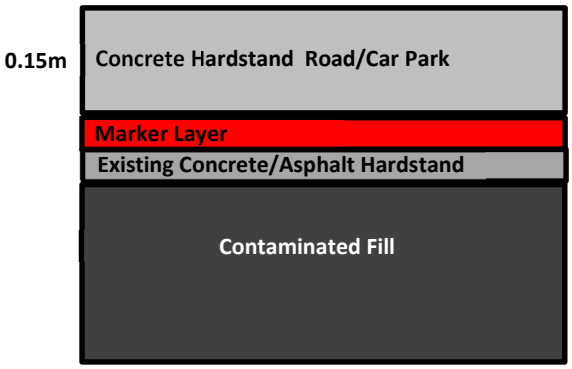
This design ensures that there is at least a 0.5m physical barrier maintained between the site surface and contamination, as well as a 0.2m layer of engineered backfill surrounding the service to allow for any maintenance without breeching the marker layer.

The recent investigation completed by Reditus (2024) has confirmed that the risk of vapour intrusion posed by soil vapour and groundwater is low and below the adopted commercial/industrial criteria. This confirms that the cap is in place as a physical separation barrier between contaminated material and vapour intrusion is not concern.



EXAMPLE C CONCRETE ROADWAYS AND CAR PARKS

In areas of concrete roadways and carparks, a minimum thickness of 0.15m of concrete slab; overlying a highly visible and durable Marker Layer (such as an orange geotextile fabric or mesh) directly overlaying the contaminated asbestos and hydrocarbon impacted fill.



9 Remedial Data Gap Investigation Works

Concentrations of COPCs historically identified in groundwater have been shown to generally decrease by an order of magnitude or to below the LOR; with the primary mass of contamination around MW409 (former hydrocarbon remedial area, with chemical oxidation completed by CES 2008). Reditus have concluded that further remediation of groundwater is not considered necessary; and the concentrations are below the commercial industrial health screening level and thereby are unlikely to pose a vapour intrusion risk.

There are numerous potential sources of groundwater contamination onsite but there has been sufficient investigation to conclude that significant impact to groundwater is likely to be only associated with a limited number of potentially impacting activities.

A round of groundwater sampling from all existing monitoring wells (4) within the subject site and fifteen (15) new groundwater wells was completed by Reditus in March 2024 to help understand potential impacts to the proposed development. It was concluded that no further remedial action in groundwater is considered necessary, and the remedial strategy can remain unchanged, with cap and contain considered the most appropriate strategy.

Soil vapour sampling was completed at areas of concern across the site, predominantly in the former oil press and mould wash area within the northern central portion of the site, where historical remedial works for hydrocarbons in soil and groundwater were completed. Results concluded that concentrations of volatile contaminants were below the adopted commercial industrial criteria and therefore no unacceptable vapour intrusion risk remains to commercial occupants and workers in a trench from primary (USTs) and secondary contamination sources.

9.1 DGI Findings

Based on the findings of the Data Gap Investigation, Reditus concludes the following:

- A human health or ecological risk is unlikely to be present onsite including a vapour inhalation pathway in the context of the proposed development.
- Asbestos remains as the primary constituent contributing to contamination in soil. Analysis of soil samples for chemical contaminants confirms that gross contamination is not present. However, exceedances to management limits for petroleum hydrocarbons were detected in three locations within Area A of the site, located in the northern central portion of the site. Reditus concluded that the risk posed to receptors is low, and management limits are generally applied as a screening tool rather than a clean-up criterion. Due to the proposed cap and contain strategy, capping of the hydrocarbon impacted material and management under the SMP is considered to be an acceptable strategy.
- Acid sulfate soil analysis completed across the site suggests that there is potential acid sulfate soils (PASS) present on the site, due to the detection of a sulfur trail exceeding criteria in one location. Reditus concluded that this was not representative of actual ASS, however, have the potential to become true ASS if oxidized. The presence of PASS should be considered when choosing a suitable piling method, and any spoil generated should be classified in accordance with NSW EPA (2014) Waste Classification Guidelines.
- Heavy metal concentrations which were in exceedance of the adopted criteria have been determined to be representative of urban ambient conditions, with no trend present between up and downgradient groundwater locations.
- The primary area of concern remains to be Area A, where elevated concentrations of TRH and PAH were detected in groundwater. PAHs exceeded the adopted criteria in one location, however hydraulically downgradient wells did not report detections, therefore Reditus concluded that the PAH contamination is likely to be limited to MW409.
- The soil vapour results suggest that the site in its current state does not pose an unacceptable risk to the proposed commercial industrial development.

Refer to the Reditus Data Gap Investigation Report (April 2024) for a detailed summary of the sampling methodologies, findings and discussion.

10 Validation Plan

10.1 Validation of Imported Capping Material

The importation of material proposed to be used for capping purposes should be identified and assessed for its proposed use. To validate that the imported clay or shale-based capping materials are ENM or VENM, the following will be undertaken:

- Imported capping material will be accompanied by a letter of VENM or ENM;
- All imported material will be visually verified by onsite personnel;
- Imported material will be transported under a tracking register; and
- Imported material will be arranged into stockpiles so that samples can be collected and compared against selected validation criteria. A detailed soil validation sampling and analytical program is outlined in Table 10.1.

Imported material not meeting the above listed requirements for the clay-based capping layer should not be used as capping material.

Imported hardstand materials (e.g., road base, aggregate, recycled crushed concrete) must also meet a relevant NSW EPA resource recovery exception and order.

10.2 Validation of Cap Installation

For validation of the cap installation, the following validation and verification will be undertaken:

- Appropriately documented supervision by the appointed certified environmental consultant (EIANZ CEnvP-SCS);
- An accredited surveyor will be commissioned to conduct a detailed survey of the entire site before and after installation;
- A compaction test will be conducted to test for the density of the capping material;
- Once ACM contaminated material has been appropriately capped as per design requirements, the asbestos removalist will inform the Asbestos Removal Contractor and LAA/Occupational Hygienist who will then conduct a visual inspection of the work area.
- The LAA/Occupational Hygienist will perform a visual inspection of the area.
- If the cap has been appropriately installed as per design requirements, the LAA/Occupational Hygienist will issue a Visual Inspection report detailing the findings and validating that the ACM material has been successfully capped.
- If the cap has not been satisfactorily installed the LAA/Occupational Hygienist will inform the asbestos removalist and no Visual Inspection report will be issued. Work will continue until the LAA/Occupational Hygienist is satisfied the cap has been installed appropriately.
- If there is any excavation of impacted fill soils for the purposes of the construction of the proposed development, this material should be classified and sent to a licenced landfill.

10.3 Validation Sampling and Analysis

Validation (including collection of soil samples from excavations, stockpiles or piling spoil) will be based on visual observations and sample and analysis outlined in **Table 8-1**.

10.3.1 Soil Sampling Methodology

Any additional investigation or validation samples will be collected by an appropriately trained and experienced environmental professional. Samples will be collected in a method which prevents cross-contamination. These processes are discussed briefly below.

Soil samples will be collected directly from the residual soil surface, the excavator bucket or stockpiled by hand whilst using nitrile gloves which were replaced between each sample. Part of each soil sample will be placed into snap lock plastic bags for screening with a PID and the other part of the sample was placed directly into a laboratory prepared

250 millilitre (mL) glass jar with the details of the sample, including the sample name, the job number, and the date of sampling.

Samples will be placed directly into appropriately labelled, laboratory supplied and preserved sampling containers.

A 10L field screening sample and 500 mL quantification sample from each wall, and 1 per 25 m^2 from the base of each asbestos 'hotspot' excavation will be collected. All samples will be individually screened manually through a 7 x 7 mm sieve. Any ACM or fibrous asbestos (FA) identified will be collected, bagged and weighed by the laboratory using a calibrated scale.

Each 500mL soil sample will be placed into snap lock plastic bag (double bagged), with the details of the sample, including the sample name, the job number, the date of sample and the sample depth, for laboratory analysis of asbestos fines (AF) and FA asbestos in accordance with the NEPC (2013) NEPM, where possible.

Percentage soil asbestos from collected ACM will be calculated as follows:

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

Where:

% Asbestos Content by weight (within asbestos cement materials) = 10% – 15% (Reditus has adopted 15% as a conservative measure).

Soil Density (clay soil type) = 1.8 kg/L.

10.3.2 Soil Laboratory Analyses

NATA accredited labs are to be used for all laboratory analyses of soil. Any method not NATA accredited will require justification.

Laboratory analysis of samples will be conducted with reference to known COPCs. The proposed soil validation sampling and analytical program is outlined in **Table 10-1** which follows.

Table 10-1 *Soil Validation Sampling and Analytical Program*

ITEM	SAMPLE FREQUENCY	ANALYTES	NUMBER OF PROPOSED SAMPLE LOCATIONS
Stockpiled soil arising from excavations to facilitate installation of underground services and piling spoil **All soils requiring off-site disposal are to be pre-classified as Special – Asbestos Waste. Final classification will be in accordance with NSW EPA (2014) Waste Classification Guidelines.**	Sample to be collected at a frequency of three (3) samples for stockpiles less than 75 m^3, plus one (1) sample for every additional 75m^3 in accordance with NSW EPA (2020) Table 5.	TRH, BTEX, PAH, heavy metals, OCP, OPP, PCB, chromium reducible sulfur for acid sulfate soils analysis, toxicity characteristic leaching procedure (TCLP) (as required).	Dependent upon volumes of material excavated – material to be classified in accordance with NSW EPA (2014) Waste Classification Guidelines and NSW EPA Sampling Design Part 1 Application Contaminated Land Guidelines (August 2022). N.B. All stockpiled soils from remediation areas will be presumed to contain asbestos unless area has been validated prior to excavation or classification testing determines otherwise.
Stockpile Footprints	One (1) sample per 25 m^2 and minimum of three (3) samples per footprint.	TRH, BTEX, PAH, heavy metals, OCP, OPP, PCB, asbestos (NEPM).	Quantities are unknown

ITEM	SAMPLE FREQUENCY	ANALYTES	NUMBER OF PROPOSED SAMPLE LOCATIONS
Imported VENM material	One (1) sample per 250 m^3 and minimum of three (3) samples per source site. Review of a VENM certification report from the receiving facility.	TRH, BTEX, PAH, heavy metals, OCP, OPP, PCB, asbestos (NEPM).	Quantities are unknown
Unexpected Finds	To be confirmed by a suitably qualified environmental consultant following the inspection and appropriate characterisation of the contamination.		

10.4 Quality Assurance and Quality Control (QAQC)

The QA/QC program for the site should comprised the following elements:

- Field Duplicate Samples (chemical analytes only): one field duplicate sample to be collected for every 20 primary samples collected (or part thereof). Duplicate samples are to be sent to the primary analytical laboratory to check the accuracy of the analytical results.
- Field Triplicate Samples (chemical analytes only): one field triplicate sample to be collected for every 20 primary samples collected (or part thereof). Triplicate samples are sent to be sent to a secondary analytical laboratory to check the accuracy of the analytical results.
- Rinsate Blank: A rinsate blank to be collected during each sampling event for chemical analytes only. Rinsate blanks are to be collected from rinsing field sampling equipment to assess the effectiveness of the decontamination procedures between sampling locations.
- Trip spike (chemical analytes only): A triplicate spike to be prepared by the NATA accredited laboratory during each soil or groundwater monitoring event for volatile contaminants.
- A Trip Blank (chemical analytes only): A triplicate blank to be prepare by the NATA accredited laboratory with deionised to determine the potential for cross contamination.

10.5 Decontamination

The decontamination procedures will be performed before initial use of re-useable equipment and after each subsequent use. All re-usable sampling equipment must be decontaminated between each sample location by scrubbing with a solution of phosphate-free detergent (i.e., Liquinox) followed by a rinse in potable water.

A rinsate blank must be completed each day of soil (chemical analytes only) or groundwater sampling by running laboratory prepared deionised water over the re-usable sampling equipment for collection directly into laboratory prepared sampling containers for analysis.

A new set of disposable nitrile gloves were used at each location to directly collect samples from the re-useable sampling equipment for placement into the laboratory prepared sampling containers.

10.6 Validation Reporting

A Site Validation Report must be prepared verifying that the site is suitable for the proposed development in general accordance with the NSW EPA (2020) Consultants Reporting on Contaminated Land, documenting the works as completed. This report will contain information including:

- Details of the remediation works conducted.
- Information demonstrating that the objectives of the RAP have been achieved, the sample results of any waste classification, imported material, any waste dockets along with assessment of the data against both the pre-defined data quality objectives and the remediation acceptance criteria.
- Information demonstrating compliance with appropriate regulations and guidelines.

- Any variations to the strategy undertaken during the implementation of the remedial work.
- Details of any environmental incidents occurring during the remedial works and the actions undertaken in response to these incidents.
- Details of any unexpected finds including the additional and remedial works required to appropriately manage the finds.
- Other information as appropriate, including requirements (if any) for ongoing monitoring / management.

The report will serve to document the remediation works for future reference.

The following records will be maintained by the civil contractor during remediation work and will be made available for inclusion into the Validation Report:

- Any complaints made towards the remedial works, the date and time that the complaint was made, and corrective actions taken.
- Records of approvals to remove or dispose soil from the site.
- Suspicious soil material encountered in the materials brought onto site.
- Source of material being brought onto site for the sub-grade layer or for backfilling.
- Dockets for the quantities of material being brought onto site as well as the EPA approvals.
- Any amendments to works which deviate from this RAP, EPA comments to these amendments, as well as any comments and/or endorsements.
- Photographic records of the stockpiled materials as well as stockpile management, and site establishment.

All works will be reported within the site validation plan, however if further investigation uncovers additional contamination the RAP will need to be revised.

Materials imported and exported from the site will be tracked and documented as follows:

- **Material leaving the site:** Include records of disposal dockets, disposal dates and quantity/volume for each material type and provide a tally of total volume/quantity (by waste classification type) against the disposal dockets.
- **Material imported to the site (prior to validation):** Include records of quantity/volume of material imported to the site by type, analytical test results of imported material and the associated material certification (a simple material certification will not be adequate).

10.7 Long Term Environmental Management Plan

A long-term Environmental Management Plan (LTEMP) is required for on-site management of encapsulated contamination and any other potential impacts remaining in-situ.

The LTEMP will be prepared at the completion of remediation works. The LTEMP will promote awareness of the contamination management and the requirements to avoid disturbance (where possible) and provide an outline and maintenance requirements.

While no active long-term management is envisaged, the LTEMP will recommend routine inspections of the capping layer to monitor for erosion, cracking, settlement or movements of the capping slab/pavements and landscape areas. Maintenance would be required if the site inspection indicates that the capping layer is not operating effectively.

The Site Audit Statement will include the LTEMP as an attachment and subsequently will be noted on the planning certificate within areas that contain an encapsulation cell only to ensure future landholders or future developments on the site are aware of the management requirements for the site. It is not expected that privately owned developable lots will have any restrictions on title, it is the intention to place encapsulation cells within open space areas on site.

The Council request for further information noted *the site currently is subject to a covenant with a Site Management Plan for the contamination status of the site. Further consideration of the impacts relating to the covenant and site management plan have not been addressed, noting that the NSW EPA are the only authority that can vary the covenant and their approval is required.* Reditus consider that the positive covenant can be varied if deemed necessary by the prescribed authority (NSW EPA) to enforce the positive covenant. A positive covenant created by Section 88E of the Conveyancing Act 1919 may be varied by an agreement in writing between the registered proprietor and the prescribed authority entitled to enforce the restriction (NSW EPA). The positive covenant requires the land owner to

manage the site and complete required inspections. It is advised that the EMP is enforced under the positive covenant; and discussion with the EPA will be required to vary the positive covenant.

11 Remediation Schedule

The remediation schedule is expected to occur as follows in sequential order:

1. Completion of RDGI:
2. Installation of capping layer (refer Section 10.1)
3. Validate of capping layer by LAA (refer Section 10.2)
4. Install trenches in accordance with Asbestos Management Plan (Section 12)
5. Validate reinstatement (refer Section 10.2)
6. Supervision of piling works and management of spoil in accordance with Asbestos Management Plan (Section 12)
7. Validation of piling works (refer Section 10.2)
8. The occupational hygienist (SafeWork NSW Competent Person or Licenced Asbestos Assessor) will issue a final clearance certificate documenting the works, control air monitoring results, clearance air monitoring results, lawful disposal of waste (including dockets), final site condition and a statement confirming the site (ground surface) is free from visible asbestos. The clearance certificate will be referred to within the **Validation Report**
9. **PREPARE SITE VALIDATION REPORT.**

12 Asbestos Management Plan

12.1 Prior to Commencement of Earthworks

All soil disturbance works are to be undertaken under the direction of an Asbestos Management Plan (AMP) to be prepared prior to disturbing asbestos in soil. The AMP will detail the method for any asbestos air monitoring, if required.

The AMP will provide a detailed plan of activities to assist the appointed contractor and any sub-contractors with the management of known and any further unknown occurrences of ACM.

The AMP will be prepared in accordance with the WHS Act 2011, WHS Regulation 2017, SafeWork NSW Codes of Practice and industry guidance (as applicable).

Works involving the removal or handling of asbestos containing materials and asbestos impacted fill throughout the remediations works and site redevelopment must be completed by a suitably licenced asbestos removalist. The licenced contractor is to follow all the necessary requirements detailed within the WHS Act 2011, WHS Regulation 2017, SafeWork NSW Codes of Practice and industry guidelines. Prior to commencing any removal works the contractor must prepare an asbestos removal control plan (ARCP) and notify NSW SafeWork of the asbestos removal works.

The objective of this AMP is to provide clear guidance on the safe and appropriate actions required during earthwork activities which will or are likely to disturb soil that has been impacted by asbestos and ACM. All works involving the removal, handling and/or disposal of asbestos must be undertaken in accordance with this Asbestos Management Plan.

12.1.1 Roles and Responsibilities

Responsibilities for implementation of the various activities described in the AMP are summarised in **Table 12-1**.

Table 12-1 *Roles and Responsibilities*

ITEM	DETAIL
Person in control of business of undertaking	• Engagement of suitably experienced contract asbestos removal contractors an. • Engage an independent SafeWork NSW Licensed Asbestos Assessor (LAA) to provide full time supervision of site compliance, air monitoring during removal works, and provision of clearance certificate(s) at conclusion of asbestos removal works.
Asbestos Removal Contractor	• Hold the necessary licenses for asbestos removal OR engage a licensed asbestos removal subcontractor to carry out asbestos removal works. • Implementation and provision of the AMP to all site occupants, workers and contractors undertaking intrusive soil works. • Ensure all workers involved in intrusive works are adequately trained in asbestos awareness (as a minimum) and Class A/B asbestos removal training for workers undertaking licenced asbestos removal of bonded (>10m^2) or friable asbestos. • Keep all records relating to this AMP. • Review and ensure all SWMS provided by contractors include potential for asbestos in soil. • Obtained SafeWork NSW approval (notice) of asbestos removal (or disturbance) for asbestos removal work requiring a licence. • Notify SafeWork NSW of air monitoring results above action levels when required.

	• Provide asbestos removal supervisors to ensure the AMP is adhered to and SafeWork NSW notices are adhered to where asbestos removal requiring a license is carried out. • Track asbestos waste (off-site disposal). Use NSW EPA Waste Locate tracking system where asbestos removal requiring a licence is required.
Asbestos Hygienist / SafeWork NSW Licensed Asbestos Assessor	• Licensed Asbestos Assessor or person meeting SafeWork NSW definition of a "competent person" is present on site to ensure work complies with the AMP and WHS legislation, undertake asbestos air-monitoring during removal works (when required), undertake sampling works and clearance inspections where required. • Provide guidance on the methods used during asbestos removal works.

12.1.2 Asbestos Awareness Training and Site Briefing

The Asbestos Removal Contractor shall ensure all employees and contractors working at the site are provided with Asbestos Awareness Training. Asbestos awareness will be provided as part of the site induction programme. The induction programme should also outline the formal procedures to follow should ACM be identified on site.

Visitors to the site are to be briefed on the presence of ACM at the site (where applicable). The Asbestos Removal Contractor is to ensure all personnel working on the site are briefed on the known locations of ACM and are aware of the potential for additional ACM to be unearthed during excavation works.

The site induction should include the following topics:

- Purpose of the training.
- Health risks of asbestos, with relation to soils.
- Types and of asbestos likely to be encountered during intrusive works (i.e., asbestos fibre bundles and fragments of non-friable cement sheeting).
- Roles and responsibilities of personnel under the AMP.
- Location of SafeWork NSW notice of asbestos removal and air monitoring results e.g., displayed at the site entrance, amenities or sign in area.
- Safe work procedures to be followed during intrusive soil works with examples to prevent exposure.
- The correct use of PPE including respiratory protective equipment (RPE).
- How to implement control measures and safe work methods at the site to eliminate or minimise the risk or exposure to workers and building occupants.
- When further assessment is required (e.g., by a Safe Work NSW LAA or "competent person").
- When licenced asbestos removal works are required.
- Air monitoring requirements and exposure standard for airborne asbestos.

The objective of the training is to create changes in behaviour and asbestos management through improved awareness of workers and contractors at the site. The purpose of the training is also to provide understanding to workers and contractors of the health implications with and of exposure to asbestos, the appropriate control measures and their responsibilities and legislative obligations.

12.1.3 Asbestos Terminology

There are multiple terms used to describe the forms of asbestos, depending on the context and which Act, Regulation or guideline is referred to. For this AMP, asbestos material will be primarily referred to as *"bonded less than 10m^2"* in accordance with the NSW WHS Act, NSW WHS Regulations and SafeWork NSW guidance.

NEPM 2013 also addresses asbestos from a land contamination perspective and provides terminology that is based on guidance developed by Western Australia Department of Health (WA DoH), 2009. The relationship between differing terminologies is outlined below in **Table 12-2**.

Table 12-2 *Comparison of Asbestos Terminologies*

NSW WHS REGULATION 2017 / SAFEWORK NSW	NEPM 2013 / WA DOH 2009
Non-friable asbestos	Bonded (non-friable) asbestos containing material (ACM) *Referred to as "ACM" in WA DoH 2009*
Friable asbestos *(Weathered, degraded, easily pulverised by hand)*	Fibrous asbestos (FA)
	Asbestos fines (AF)

The WHS Regulation defines 'non-friable' ACM as any material (other than friable asbestos material) that contains asbestos, including material containing asbestos fibres reinforced with a bonding compound. Non-friable asbestos can include cement or soil containing fragments of asbestos containing material. The fibres are usually well encapsulated within the matrix of the product and therefore not able to be rendered into respirable asbestos fibres unless released by high-speed machining processes.

In contrast to the WHS Regulation definition of non-friable material, the WA DoH, 2009 and subsequently NEPM, 2013, have stated that non-friable ACM is asbestos material in sound condition (although possibly broken or fragmented), and where the asbestos is bound in a matrix such as cement or resin. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve.

The WHS Regulation defines 'friable' asbestos material as that which can be crumbled, pulverised, or reduced to powder by hand pressure when dry. Friable materials are more likely to liberate respirable fibres into the air and pose a higher risk to human health in comparison to non-friable materials. A friable asbestos material is referred to as fibrous asbestos under the WA DoH, 2009 terminology.

In contrast to the WHS Regulation definition of friable material, the WA DoH, 2009 and subsequently NEPM, 2013, have stated that any material less than 7x7mm including asbestos fines resulting from degraded, broken, damaged or weathered (bonded) ACM or fibrous asbestos (friable). This means that a non-friable material has the potential to be classified as asbestos fines and therefore is to be treated as a friable asbestos product.

12.1.4 Asbestos Characterisation

Historical investigations have identified extensive areas of buried asbestos waste (as AF, FA and ACM) present in fill under the existing hardstand to depths ranging between 0.2m and extending beyond 5.0m.

Section 1.1 of SafeWork NSW (2022) *How to manage and control asbestos in the workplace* states:

> *"Work involving asbestos-contaminated soil is not prohibited as long as a competent person has determined the soil does not:*
>
> – *Contain any visible ACM or friable asbestos, or*
>
> – *If friable asbestos is visible, it does not contain more than trace levels of asbestos determined in accordance with AS 4964–2004: Method for the qualitative identification of asbestos in bulk samples."*

12.2 Asbestos Management During Earthworks

The following protocols shall be applied when working in all areas of the sites during trenching excavation works for the installation of underground services as well as piling works. Access to the asbestos work area should be restricted to trained/authorised workers. All Contractors working on the site should be vigilant during earthworks to ensure the prompt identification of potential ACM or asbestos impacted soils across the development site and stop works to inform the Asbestos Removal Contractor and foreman.

If suspected ACM or asbestos impacted soils are observed outside of an Asbestos Work Area, stop work immediately and notify the site supervisor as per the Unexpected Finds Protocol in **Section 14**.

12.2.1 General Requirements for Managing Asbestos Removal

Asbestos must be managed is accordance with the applicable legislation, regulations, codes of practice and industry guidance. Specifically for this project, excavation works within the fill known to be impacted by asbestos must be conducted in accordance with the following:

- NSW Government Work Health and Safety Act 2011.
- NSW Government Chapter 8 Asbestos of the Work Health and Safety Regulation 2017.
- SafeWork NSW CoP: How to Manage and Control Asbestos in the Workplace 2022.
- SafeWork NSW CoP: How to Safely Remove Asbestos 2022.
- NSW Government: Managing asbestos in or on soil 2014.
- Western Australia Department of Health: Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia 2009. As referred to by NEPM 2013 guidance.

It is noted that clause 458(1) of the WHS Regulation 2017, requires a person conducting a business or undertaking that commissions the removal of asbestos must ensure that the asbestos removal work is carried out by a licensed asbestos removalist, except for if the asbestos to be removed is <10 square metres or asbestos containing dust that is not associated with licenced asbestos removal (friable or non-friable) and is considered a "minor contamination".

The asbestos controls documented within this AMP have been prepared in accordance with Chapter 4 *Controls applicable to all types of asbestos removal* of SafeWork NSW (2022) Code of Practice *How to Manage and Control Asbestos in the Workplace*.

12.2.2 Asbestos Removal Control Plan

Not applicable for *"asbestos removal work that does not require a license"*.

12.2.3 SafeWork NSW Notification

Not applicable for *"asbestos removal work that does not require a license"*.

12.2.4 Control of Earthworks, Piling Works and Dust Management

The following information is provided as a guide to control dust during earthworks in areas of known or suspected asbestos impacted soil:

- An Asbestos Work Area (restricted area) is to be established.
- The restricted Asbestos Work Area (proposed excavation/stockpile zones) should be demarcated with appropriate warning signs to prevent unauthorised access.
- Prior to the first removal of the sub surface, dampening with water of the proposed excavation area should occur.
- Prior to movement of stockpiled soils, dampening with water across the stockpile surface should occur.
- During soil movement, material should be monitored to ensure it is appropriately dampened to reduce the likelihood of dust generation.
- If a dump/haulage truck is required to enter the restricted area, the wheels of the truck and the sides of the body should be washed down before the truck leaves the restricted area.
- The excavation surface should be continually monitored and the surface wet down as drying occurs. This process should continue until the ACM or asbestos impacted soils excavation works in the Asbestos Work Area are completed, which relies on the following factors:
- Use of water fogging nozzle (not high-pressure hoses).
- Constant vigilance of trained operators/contractor.

12.2.5 Earthworks to Facilitate Utility Installation

Where personnel are required to work within the designated Asbestos Work Areas and are required to handle, or are likely to come into direct contact with asbestos material, the PPE specified in Section 16.6 will be worn as a minimum requirement.

Following excavation of trenches to facilitate the installation of underground utilities, the trench will be lined with an orange geofabric marker layer. Following utility installation and prior to reinstatement an additional marker player will be player overlying the utility. All trenches will be reinstated in accordance with the cap and contain strategy (refer Section 8.1). Following cap installation, the following validation and verification will be undertaken:

  - Once ACM contaminated material has been appropriately capped as per design requirements, the appointed LAA/Occupational Hygienist will then conduct a visual inspection of the work area.
  - The LAA/Occupational Hygienist will perform a visual inspection of the area.
  - If the cap has been appropriately installed as per design requirements, the LAA/Occupational Hygienist will issue a Visual Inspection report detailing the findings and validating that the ACM material has been successfully capped.
  - If the cap has not been satisfactorily installed the LAA/Occupational Hygienist will inform the asbestos removalist and no Visual Inspection report will be issued. Work will continue until the LAA/Occupational Hygienist is satisfied the cap has been installed appropriately.
  - At least 0.2m of clean engineered backfill will be placed surrounding the service to ensure that an appropriate capping thickness remains in place between the contaminated material and the receptors.

- Any excavation of impacted fill soils for the purposes of the construction of the proposed development, this material should be classified and sent to a licenced landfill.
- All trenches excavated for utility installation will be surveyed for inclusion in the sites LTEMP.

12.2.6 Stockpiling Asbestos Impacted Soils

Asbestos impacted soils requiring temporary stockpiling on site shall be placed in a suitable location and shall be surrounded by flagging or other suitable material to clearly delineate their boundaries. The stockpiles of asbestos impacted soils shall be deemed an 'Asbestos Work Area' and are to have appropriate asbestos warning signs affixed to the boundaries to identify the material as asbestos containing.

Stockpiles will be underlain by an impervious surface comprising Bidim and plastic to prevent tearing and subsequent contact with clean capping material. Irrespective, following removal of stockpiles all footprints will require validation to confirm the absence of contamination including visual inspection by the appointed LAA/Occupational Hygienist and issuance of a clearance certificate for the footprint.

Stockpiles shall be lightly conditioned by water spray or covered by geotextile or similar cover to prevent dust generation. The contractor shall ensure that the material is stockpiled with adequate batter angles to ensure stability.

Silt fences/barriers should be constructed around exposed excavation surfaces and un-bunded stockpile areas to minimise potential migration of sediment, primarily as surface run off, onto other parts of the site. The silt fences shall be inspected regularly by the appointed Contractor for damage and immediately after rain to ensure effective functioning.

Applicable controls should also be documented in the erosion and sediment control plan relating to the project.

12.2.7 Asbestos Exclusion Zone

Security of the site shall be the responsibility of the Asbestos Removal Contractor. Security to the ACM excavation zone shall be maintained by use of appropriate barriers such as warning flagging. Barriers should be visually inspected daily by the Sub-contractor and maintained as necessary, to prevent access to the works area. Signs should be erected prior to excavation works to warn other site workers not to enter the excavation area and maintained for the duration of the works. Several standard signs should be provided (as per SafeWork NSW requirements) which indicate:

- Access by authorised personnel only.
- Asbestos Work Area.

These signs should be approximately 500mm (wide) by 300mm (deed) and attached to the fence at a minimum frequency of 1 per boundary.

12.2.8 Air Monitoring

The ACMs and asbestos impacted soils identified at the site to date are classified as bonded (non-friable). Due to the presence of potential sensitive receptors in vicinity to the site, asbestos fibre air monitoring may be nominated as an additional control. The air monitoring shall be conducted during earthworks where site fill/soil is being disturbed. All air monitoring is to be carried out by a SafeWork NSW accredited Licensed Asbestos Assessor or "Competent Person".

The following presents an overview of the recommended air monitoring programme for the remediation works:

- Asbestos fibre air monitoring will be conducted along the perimeter of the Asbestos Work Area and site boundaries. The number of monitoring locations will be dependent on the size of the Asbestos Work Area but a minimum of five (5) locations.
- Sample collection and analysis should be conducted in accordance with the National Occupational Health and Safety Commission (NOHSC) "Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust [NOHSC: 3003 (2005)] (MFM).
- Sampling should be done with portable asbestos air monitoring pumps fitted with a sampling cartridge housing the asbestos sampling filter.
- The samples will be analysed by a NATA Accredited laboratory and the results reported on NATA Endorsed Certificates of Analysis.
- The samples will be analysed by phase contrast microscopy (PCM) in accordance with the MFM.
- The sampling parameters will be set such that the detection limit of <0.01 fibres/ml is achieved.

It is recommended that asbestos fibre air monitoring should be conducted throughout the duration of soil disturbance works to confirm the control measures implemented are satisfactory and the area is considered safe for reoccupation upon completion of the bulk earthworks.

Sample and analysis work will be conducted by a NATA-accredited laboratory. The results of asbestos air monitoring should be provided to the PCBU and Site Owner following each workday and/ or included in relevant clearance certificates. Air monitoring results should be obtained within 24 hours of sample collection. While this precludes "real time" monitoring, inspections will be made during excavation and loading/unloading works and, if there is any visible dust, light water spays will be used to wet the work areas and prevent the release of airborne asbestos fibres.

12.2.9 PPE and Personal Decontamination

Where personnel are required to work on the ground within the designated Asbestos Work Areas and are required to handle, or are likely to come into direct contact with asbestos material, the following PPE is specified as a minimum requirement:

- Safety boots with rubber soles (to permit easy cleaning).
- Disposable Type 5/6 Tyvek® coveralls, or equivalent. Orange disposable overalls are recommended when working in close proximity to excavators.
- Suitable respiratory protection, i.e., minimum P2 half face respirators.
- Safety glasses (or goggles) and hard hat.
- Gloves.

These requirements do not apply for:

- Equipment operators (excavators, tippers, etc.) who remain inside the equipment cabins whilst inside the Asbestos Work Area. Operators are to enter/exit equipment cabins from clean areas (i.e., outside of the Asbestos Work Area).
- Personnel not inside an Asbestos Work Area.

It is the requirement of each sub-contractor to provide fit-testing records for the respiratory protection that is to be worn.

A decontamination area for personnel will be established at the entrance/exit to each Asbestos Work Area for the use of the personnel conducting the asbestos related works. The decontamination area will comprise a segregated area where the contaminated work clothing and respirators are removed and discarded. Contaminated PPE is to be disposed of in appropriately labelled and lined (with 200µm HDPE) waste bins or bags.

The abovementioned PPE is required for all personnel entering the Asbestos Work Area. Decontamination procedures are required every time personnel leave the work area. Safety boots are to be inspected for any potential ACM debris prior to removing the respirator and exiting the decontamination area.

The decontamination area must not be used for purposes other than decontamination (e.g., as a materials storage area). Personnel will remove disposable protective clothing prior and will be required to ensure that no asbestos soiled clothes or PPE leave the decontamination area.

12.2.10 Decontamination of Plant and Equipment

Excavators (fitted with HEPA filters) and truck windows are to be closed and air conditioning systems set to recycle (not fresh air intake) during all activities inside an Asbestos Work Area.

Trucks, plant and equipment leaving the Asbestos Work Area must be decontaminated (wheels, tracks, undercarriage, etc.) to ensure asbestos impacted soils are not tracked offsite.

The wheels and the sides of the body of the dump truck/haulage truck and excavator should be washed down before the truck leaves the restricted area.

It is recommended a clearance inspection is conducted by a SafeWork NSW LAA on plant and equipment once ACM removal work is complete. This will prevent cross-contamination and personnel potentially coming into contact with asbestos impacted soil.

13 Waste Management

13.1 Waste Classification

Waste classification will be required for all soils to be disposed off-site to ensure waste materials are disposed of in accordance with the requirements of the NSW Protection of the Environment (Waste) Regulation 2014. Waste Classification will be undertaken by an Environmental Consultant based on previous analytical data, field observation, and if required, additional testing. Where required, additional testing is required to characterise the material, it will be conducted in accordance with the procedures described in the NSW EPA Waste Classification Guidelines Part 1: Classifying Waste, 2014.

Irrespective of the final waste classification (General Solid Waste, Restricted Solid Waste or Hazardous Waste) all material will be pre-classified as: **Special Waste – Asbestos**.

In addition, due to the presence of potential acid sulfate soils (PASS) at the site, any piling spoil generated is recommended to be analysed for chromium reducible sulfur suite to confirm if offsite disposal as PASS is required. It is noted that for PASS, stockpiling should occur on a topographically high point, away from drains, with the stockpile kept moist to slow the oxidation process. If the results indicate the material is actual ASS, then disposal to an appropriately licensed facility is required where it will be buried below the water table. Where the material is stockpiled for more than two days, covering the stockpile and appropriate bunding and leachate control is to be implemented to slow the oxidation process.

As noted in the DGI (Reditus 2024), the proposed development is unlikely to impact the water level at the site, therefore the only PASS which will need to be considered is that generated from piling works or excavations.

13.2 Waste Transport and Disposal

The transportation and disposal of asbestos waste shall be in accordance with the EPA-NSW requirements. Before leaving the site, loads containing asbestos contaminated soils should be wetted down and covered.

Clause 79 of the Protection of the Environment Operations (Waste) Regulation 2014 requires waste transporters to provide information to the EPA regarding the movement of any load in NSW of more than 10 square meters of asbestos sheeting, or 100 kilograms of asbestos waste (i.e., asbestos in soil). To fulfil these legal obligations, asbestos waste transporters must use the EPA on-line system WasteLocate.

Waste producers are responsible under the legislation for ensuring that wastes are transported only after all the necessary documents and checks have been completed. Before transporting waste from the Site, the following must occur:

- Ensure the waste has been correctly characterised.
- Ensure the waste transporter is licensed or legally allowed to transport the waste.
- Ensure the landfill facility accepting the waste is licensed to accept asbestos waste.

14 Contingency Plan

A review of remediation works has been undertaken to identify potential risks to meeting the specified site validation criteria. Several potential risks have been identified. These potential scenarios and associated contingencies will be implemented to ensure that validation criteria are met.

14.1 Unexpected Finds

The possibility exists for undiscovered hazards to be present at the site.

Environmental sampling is based on identification of potential chemical analytes that have been identified during a documented process of reviewing historical site activities and previous investigation results. Ground conditions however between sampling points may vary, and further hazards may arise from unexpected sources and/or in unexpected locations. The nature of any undiscovered hazards which may be present at the site are generally detectable through visual or olfactory means, for example:

- Petroleum contaminated soils (staining / discoloration visible).
- Hydrocarbon Organic Compound contaminated soils (odorous).
- Fragments of asbestos-containing materials (visible) not previously detected or asbestos in friable condition.
- Significant ash and/or slag contaminated soils / fill materials (visible).
- USTs that have not been previously identified.

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any unexpected potentially hazardous substance be encountered the works should cease immediately before being assessed by a suitably qualified and experienced environmental professional.

Should material be encountered that is suspected of containing ACM, the following actions are to be undertaken:

- Material that is suspected of containing asbestos must be isolated and the area barricaded to prevent the possible exposure of workers to asbestos. Signs notifying site workers of the presence of asbestos must be placed on the barricades.
- All suspicious material must be assumed to contain asbestos until it has been proven otherwise by laboratory analysis.
- All suspicious material and other unexpected finds are to be logged on the Unexpected Finds Register.

The sampling strategy for each “unexpected find” shall be designed by a suitably qualified and experienced environmental professional. The strategy will, however, be aimed at determining the nature of the substance - that is, is it hazardous and, if so, at concentrations which pose an unacceptable risk to human health or the environment.

Remediation of any unexpected finds will be conducted in accordance with the applicable requirements.

14.2 Remediation Strategy Unsuccessful

Should validation be deemed not suitable for the sites intended land use, then a site-specific risk assessment will be conducted. If the site-specific risk assessment indicates the site is unsuitable that further remedial works will need to occur, and a revised remedial strategy developed.

15 Site Management Plan

The SMP will be the overarching document that for the implementation of environmental control measures during construction. The controls prescribed within this RAP are to be adopted within the SMP and administered by the appointed Principal Contractor.

15.1 Hour of Operation

Remediation works shall only be permitted during the hours indicated in the site works approval (DA Consent Conditions).

15.2 Site Establishment

All safety and environmental controls are to be implemented as the first stage of remediation works. These controls will include:

- Ensure appropriate community consultation has occurred.
- Locate and isolate all required utilities in proximity of the works.
- Work area security fencing.
- Site signage and contact numbers.
- Assess the requirements of dust and odour control measures.
- Sediment fencing.
- Stormwater runoff sediment controls.

15.3 Preparation Works

Prior to the importation of VENM or ENM the emplacement areas will be confirmed to have been validated by a suitability qualified environmental consultant.

15.4 Site Access and Fencing Requirements

During remediation works, high visibility perimeter fencing will be maintained to restrict access to the works area. Only authorised persons will be able to enter the works area.

Vehicle access to the site shall be stabilised to prevent the tracking of soil around the site and the adjoining driveway/access point to the road will be swept or cleaned on an as-needed basis. Any collected materials shall be treated as potentially contaminated and will be suitably managed.

Notwithstanding more stringent site controls, whilst the remediation works are carried out, the site is unattended, and works are not active, high visibility fencing will be placed around the boundary of any excavation to alert any people on site to the presence of the excavation.

15.5 Material Tracking

The quantities of material (disposed offsite) and any other materials brought onto site as part of the remediation works should be recorded in a tracking register.

Prior to the removal of the fill material an accredited surveyor should be commissioned to survey the condition of works. This will allow for the validation of each phase of the remediation works.

15.6 Material Transport

A designated loading area will be established for transport trucks. The transporting contractor shall ensure that there is no material tracked out onto the street and that the load is securely covered. In addition, all site vehicles must leave the site in a forward direction.

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

All carrier of materials and waste must be appropriately licenced to transport the designated material.

15.7 Imported Fill for Design Levels

All imported material will meet the requirements of either the NSW EPA Excavated Natural Material Order (2014) or the comply with the definition of the Virgin Excavated Natural Material (VENM) as defined in the Protection of the Environment Operation Act 1997 (POEO Act). All imported material will be tested in accordance with the validation schedule provided in Table 10.1**Error! Reference source not found.**.

15.8 Soil and Water Management

All works shall be conducted in strict accordance with the soil and water management measures outlined in this section.

To prevent the migration of impacted soil/sediment off site, silt fences shall be constructed at the down-gradient works area boundaries, as per the specifications contained in Managing Urban Stormwater – Soil and Construction Volume 1, 4th Edition, NSW Government, March 2004. Any material which is collected behind the sediment controls shall be treated as potentially contaminated and will be suitably managed.

In a storm event, the sediment controls located on-site will need to be monitored and replaced or altered if necessary. Collected material will need to be suitably managed in accordance with remediation works.

15.9 Stockpiles

All stockpile generated on site must be managed as per Section 12.2.6.

15.10 Noise

The remediation works shall comply with the NSW EPA's Environmental Noise Control Manual for the control of noise from construction sites.

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

15.11 Vibration

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

15.12 Air Quality

Health and air monitoring must be undertaken when a worker is at risk of exposure . The need for health and air monitoring of these workers should be determined based on the potential for exposure, frequency of potential exposure and duration of the work being undertaken.

Consideration must be given to the worker's demographic, medical and occupational history, and records of the worker's personal exposure. The health and air monitoring must include a physical examination of the worker with emphasis on the respiratory system, including standardised respiratory function tests, unless another form of health and air monitoring is recommended by a registered medical practitioner.

15.13 Dust Control

During the remediation, if necessary, dust levels will be monitored and minimised by using mist sprays as necessary on all excavation, stockpiles, and loadout.

Dust shall also be controlled by ensuring vehicles leave via the designated (stabilised) site access points.

Any situations or areas which exceed the asbestos exposure standard are to be controlled to eliminate or minimise risk of exposure.

Any vehicle used to transport asbestos waste should be cleaned before leaving the site and the vehicles load should be covered prior to dispatch.

15.14 Hazardous Materials

Hazardous waste is subject to strict controls regarding its movement and methods for management. If hazardous waste is present onsite storage, haulage and disposal methods will be developed and will be based on the contaminants and concentrations identified.

Any excess excavation soils from the fill material at the site will be stockpiled and classified separately for waste disposal as they may result in a higher level of waste classification (special, hazardous, or restricted waste) due to chemical or other anthropogenic impacts.

Adoption of any strategy for the management of hazardous waste will require close management by a suitably qualified environmental consultant and will increase the time required to complete the remedial works. Liaison with relevant authorities, contractors and landfill disposal or storage sites will be required.

15.15 Removal and Disposal of Contaminated Soil and Asbestos

Any asbestos waste must also be disposed in accordance with the regulatory requirements under clause 42 of the Protection of the Operations (Waste) Regulation 2014 which apply to asbestos waste and includes:

- Waste stored onsite prior to disposal must be done so in an environmentally safe manner.
- Non-friable asbestos must be securely packaged at all times.
- Friable asbestos (if encountered) must be kept in a sealed container.
- Asbestos contaminated soil must be wetted down.
- All asbestos waste must be transported in a covered, leak-proof vehicle (applicable to asbestos impacted soil).
- Asbestos waste can be disposed at a landfill site that can lawfully receive this waste. It is recommended that the landfill is contacted beforehand to find out if the facility can receive the waste and whether there may be any special requirements.
- It is illegal to dispose of asbestos waste in domestic garbage bags.
- It is illegal to re-use, recycle or dump asbestos waste.
- If friable waste requires disposal, then only a company with a Class A removal license is permitted to remove the waste material and air monitoring will be required to be undertaken by a licensed asbestos assessor in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust [NOHSC:3003(1988)].
- If more than 100kg of asbestos waste or 10m^2 (in total) of asbestos sheeting is proposed to be removed from the Site, then information is to be provided to NSW SafeWork and EPA.

15.16 Complaint Reporting and Resolution

Complaints from adjoining site occupants or workers on site will be directed initially to the civil contractor on site. Following that, discussion with the environmental consultant and the complainant will investigate the issue and remedy it as required or applicable.

15.17 Validation

Validation of the remedial works is an integral part of the remediation process.

Validation sampling is used to demonstrate that the remediation objectives have been achieved. Details of the validation program are provided in Section 10.

15.18 Site Dis-establishment

On completion of the remediation works all plant, equipment, safety, and environmental controls shall be removed from the site unless contracted for ongoing redevelopment or construction works.

16 Health and Safety

The principal remedial contractor should prepare a separate work health and safety plan (WHS) prior to the remediation works beginning. The information presented below is not exhaustive and is to be included along with additional relevant information in the WHS plan. The WHS will need to be compliant with relevant guidelines and legislation and consider the information presented within the RAP. As asbestos is likely to occur at the site, the contractor should be suitably licensed, and the WHS plan should outline air monitoring requirements to meet SafeWork Codes of Practice.

The objectives of the health and safety plan are:

- To apply standard procedures that reduce risks resulting from the above works.
- To ensure all employees are provided with appropriate training, equipment, and support to consistently perform their duties in a safe manner; and
- To have procedures to protect other site workers and the general public. These objectives will be achieved by:
- Assignment of responsibilities.
- An evaluation of hazards.
- Establishment of personal protection standards and mandatory safety practices and procedures; and
- Provision for contingencies that may arise while operations are being conducted at the site.

This health and safety section does not provide safety information specific to construction and other demolition or excavation activities carried out by contractors, such as the safe operation, maintenance, and inspection of plant, etc. Contractors will be required to prepare their own Safe Work Method Statements and incident contingency plans for their work activities. All parties working on the site shall comply with all applicable Health and Safety legislation, regulations, codes, and guidelines.

16.1 Responsibilities

Client Supervisor/Manager/Superintendent

The client supervisor/manager is responsible for:

- Advice on obtaining development approval.
- Helping to ensure all works are compliant with the development approval.
- Providing technical and financial progress updates to the client.
- Assisting with community consultation; and
- The client supervisor/manager contact details will be provided prior to the works.

Remediation Contractor

The remediation contractor is responsible for:

- Ensuring all works are undertaken as per the RAP.
- Ensure all works involving the disturbance of the ACM contaminated soils are conducted under the supervision of a suitably qualified Class A or Class B asbestos licensed contractor.
- Ensure all ACM impacted soils are wetted to reduce the potential generation of dust.
- Minimise erosion at the site, including erosion of soils exposed during excavation and demolition works.
- Protect nearby receiving environments from potential contamination.
- Ensure contaminated site plant are decontaminated prior to commencing work in clean soil.
  - Signs and record keeping should indicate the origin and location of contaminated materials.
- No stockpiling of impacted soils (where possible) to prevent cross contamination of clean soils.
- Direct transport form contaminated area to burial site.

- Validated areas should be isolated to prevent cross contamination; and
- Routine site inspections.
- Ensuring all works are undertaken in accordance appropriate regulations and standards.
- Ensuring all works are undertaken as per the health and safety plan.
- Ensuring a copy of the health and safety plan is available at the site during the remediation/validation activities.
- Confirming individuals are competent in performing allotted tasks.
- Liaison with the client supervisor/manager and sub-contractor representatives, as appropriate, regarding safety matters.
- Investigation and reporting of incidents and accidents.

The remediation contractor contact details will be provided prior to commencement of works.

Environmental Consultant

The environmental consultant is responsible for:

- Undertake remediation and validation sampling as per the RAP.
- Ensuring consultant works are undertaken as per the health and safety plan.
- Liaison with the contractor representatives, as appropriate, regarding safety matters.
- Alongside the remediation contractor stockpile and waste tracking.
- Undertake validation and reporting as per the RAP.

The contact details of the responsible parties are provided in Table 14.1 which follows.

Table 16-1 *Contact Details*

CLIENTS SUPERVISOR/MANAGER	DETAILS
Name	TBA
Company	TBA
Address	TBA
Contact Phone	TBA
REMEDIATION CONTRACTOR	
Name	TBA
Company	TBA
Address	TBA
Contact Phone	TBA

ENVIRONMENTAL CONSULTANT	
Name	Dean Stafford
Company	Reditus Consulting
Address	Unit 1A, 29-33 Waratah Street, Kirrawee, NSW, 2232
Contact Phone	0434 657 155

16.2 Other Members of the Site Workforce

Every individual worker is responsible for conducting their allocated tasks in a safe manner and in accordance with their training and experience. They must give due consideration to the safety of all others in their proximity and cooperate in matters of health and safety. All workers must leave their work areas in such a condition that the location will not be hazardous to others at any time.

16.3 Hazards

The known or potential hazards associated with the work activities are listed below:

- Chemical hazards associated with the presence of contaminated soil.
- Physical hazards, including:
- Work in or near excavations.
- Operating machinery.
- Heat stress and UV exposure.
- Underground or overhead services.
- Manual handling.
- Noise.

In the event of the discovery of any condition that would suggest the existence of a situation more hazardous than anticipated, or of any new hazard that could potentially cause serious harm to personnel or the environment, work will be suspended until the Project Manager has been notified and appropriate instructions have been provided to field personnel.

16.4 Contamination Hazards

The main chemical hazards associated with the remediation/validation works are TRH, BTEX, PAH, 8 priority heavy metals.

When working with contaminated materials in general, care must be taken to ensure that the contamination is not introduced to the worker via ingestion, inhalation, or absorption. Personal Protective Equipment (PPE) and decontamination requirements related to the remedial works are summarised in Sections 12.6 and 12.7.

16.5 Physical Hazards

Operating Machinery

Heavy plant and equipment operating in the vicinity of field personnel presents a risk of physical injury. Personnel should always be cognisant of their position in relation to operating machinery. Personnel must wear high visibility clothing when onsite.

Never walk behind or to the side of any operating equipment without the operator's knowledge. Do not assume that the operator knows your position. Personnel should stay at least 1 m from the operational area of heavy equipment, a minimum of 3m outside of the swing radius of an excavator and should not stand directly below any load or piece of equipment (e.g., backhoes, excavators, vehicles).

Work in or Near Excavations

No site personnel are to stand closer than 0.5m to the edge of an excavation. No site personnel are to enter excavation greater than 1 m deep. Additionally, at the end of each day excavations are to be barricaded to prevent access.

Cuts and Abrasions

The manual work associated with the remediation works gives rise to the risk of cuts and abrasions to personnel working in the area. As well as the direct consequences of any cut or abrasion, such injuries can lead to the possibility of exposure to contaminants through the wound as well as diseases such as tetanus. To minimise the risk of direct or indirect injury, personnel will wear the personal protective equipment described.

Heat Stress and UV Exposure

Site personnel may experience heat stress due to a combination of elevated ambient temperatures and the concurrent use of personal protection equipment; this depends in part on the type of work and the time of year.

In addition to heat stress, overexposure to UV radiation in sunlight can result in sunburn to exposed skin. The use of a high protection sunscreen (SPF15 or greater) on all exposed skin is recommended. Hats (including hard hats in specified areas) will also provide additional sun protection during the peak (i.e., 10:00 am to 3:00 pm) sun period. Sunglasses should be worn (where appropriate) to protect eyes from effects of UV exposure.

Underground Services

There is the potential for underground services (electricity, natural gas lines, water, telephone, sewer, and stormwater) to be present beneath the work area. The remediation contractor shall ensure that appropriate procedures will be taken to minimise the risk associated with excavation near services.

Aboveground Electrical Hazards

All electrical plant and equipment must comply with the requirements of Australian Standard AS 3000. Handheld Portable tools shall comply with AS/NZS 3160 "handheld Portable electric tools" and shall be double insulated.

Cord connected Portable hand lamps shall comply with AS/NZS 3118. A Residual Current Device (RCD) shall protect plug-in Portable equipment, which is connected to a supply above Extra Low Voltage - 12-24volts (including equipment supplied from a generator or welding set). RCD protection shall always be provided during maintenance of Portable electrical equipment while the equipment is connected to a power supply above Extra Low Voltage, irrespective of whether power is switched ON or OFF. RCD's shall comply with AS 3190 and shall be type II units, rated to trip at or below 30 milliamps within 40 milliseconds.

Manual Handling

When lifting or handling heavy objects, use correct lifting techniques, bending the knees not the back. If the item to be lifted is too heavy or awkward for one person to lift, seek assistance from other company employees or use mechanical help.

Noise

Long-term exposure to high levels of noise is unlikely. However, operating machinery may cause significant noise exposures for short periods. Earplugs or earmuffs should be worn in any situation where noise levels make normal conversation difficult.

16.6 Personal Protective Equipment

All workers who may come into direct contact with contaminated soil will as a minimum the PPE specified in Section 16.6.

It is further noted that additional PPE may be required as part of the SafeWork NSW permitting process. If this occurs, then the above PPE requirements will be upgraded to reflect SafeWork NSW requirements.

If workers will be exposed to highly odorous soil conditions during remediation works, the following additional PPE should be adopted:

- Impermeable disposable overalls; and
- Half or full-face respirator with organic vapour cartridge.

A PID shall be used to monitor the concentrations of VOCs within the workspace, with the following action levels at which the additional PPE mentioned above is required (refer Table 14-2).

Table 14-2: *PID Breathing Space Screening Criteria*

INSTRUMENT	AIRBORNE LEVELS	LEVEL OF PROTECTION
PID	<1 ppm	No additional protection
PID and/or Drager or Kitagawa tubes	>1 ppm	Half or full faced respirator*
PID and/or Drager or Kitagawa tubes	>10 ppm** or >1 ppm on the site boundary	Stop work, cover excavation to minimise production of hydrocarbons

* If action levels exceed the action level following 5miutes, the use of a respirator is required. Organic respirator cartridge is to be changed daily.

** 10 times the benzene exposure limit as recommended by 3M Respirator Selection Guide.

For areas where a risk of exposure to ACM is present, personal protective clothing should be made from materials that provide protection against fibre penetration and not from wool or other materials that attract fibrous dusts.

All equipment used for the removal of asbestos should be inspected before the commencement of the asbestos removal work, after any repairs and at least once every seven days when it is continually being used. A register with the details of these inspections, the state of the equipment and any repair details should be maintained.

The level of PPE would also need to address / include any other requirements relating to the nature of the activities to be undertaken. Additional PPE may be required at the request of the appropriately asbestos licensed (Class A or Class B) contractor if supervising the works.

All persons engaged in intrusive works within the vicinity of the affected area should wear respiratory protective equipment conforming to the requirements of AS/NZS1716-2003 Respiratory Protective Devices.

16.7 Decontamination Procedures

At the end of the asbestos removal work (if any) and upon leaving the asbestos removal work area, all PPE must be disposed of as asbestos waste or decontaminated and stored in sealed double bags before being removed from the asbestos removal site to be laundered by a laundry with facilities for laundering asbestos-contaminated materials. PPE should be thoroughly wet before being placed in bags.

The additional decontamination procedures specified below will be followed whenever personnel, plant or equipment leave the site.

Personnel

The following steps should be taken to ensure personnel do not leave the site with potentially contaminated clothing:

- wash boots in clean water.
- remove outer gloves and store for reuse.
- remove overalls (if used) and store for reuse.
- remove respirator and goggles (if used) and store clean for reuse or decontamination, as appropriate.
- thoroughly wash hands and face.

If any part of a worker's body comes into direct contact with any potentially contaminated material, the affected part(s) should be immediately washed with clean water.

Vehicle, Plant and Equipment

All equipment, including personal protective equipment, will be washed, or otherwise cleaned to ensure that contaminated soil, water, or dust is removed before it leaves the Site. All plant and equipment will have their outer bodies thoroughly cleaned of soil and sediment before moving off the site or moving from contaminated zones into clean zones.

Plant equipment used to handle contaminated soils, Waste or ACM must not be used until it has been thoroughly decontaminated and a clearance certificate from suitably experience professional issued.

16.8 Contamination Control Zone

The lunch shed/crib hut and office will be located outside of any contamination control zone and will be designated clean zones. Any personal and plant leaving the contamination zone must undergo appropriate decontamination procedures, in a designated area (decontamination zone) as discussed above, prior to entering the site clean zones.

17 Regulatory Approvals/Licensing

17.1 State Environment Planning Policy (Resilience and Hazards) 2021

Pursuant with Section 4.11, the proposed remediation works are considered to be classified as "Category 2" remediation works.

17.2 City of Parramatta LEP 2021

Review of the LEP (2021) indicates there are no provisions in relation to the works proposed to be executed at the site to manage the requirement of State Environment Planning Policy (Resilience and Hazards) 2021.

17.3 Protection of the Environment Operations Act 1997

In relation to the licensing requirements under the Protection of the Environment Operation Act 1997 (POEO Act):

- The works do not fall within the licensing requirements for Contaminated Soil Treatment Works (i.e., works will not incinerate more than 1,000 m^3 of contaminated soil per year, treat and store more than 30,000 m^3 of contaminated soil or disturb more than 3 hectares of contaminated soil); and
- The works do not fall within the licensing requirements for Crushing, Grinding or Separating Works (i.e., works will not process more than 150 tonnes of material per day or 30,000 tonnes of material per year).

All material to be excavated and removed from the site (including associated activities such as classification) will be undertaken in strict accordance with the requirements of the POEO Act 1997. Such requirements include:

- Ensuring waste is classified appropriately and in accordance with relevant guidelines.
- Waste materials are disposed offsite to appropriately licensed facilities.
- Other materials are removed to facilities lawfully able to accept such materials.

In-line with the opinion in relation to designated development, proposed works do not trigger the requirement for a POEO Licence.

17.4 Protection of The Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transporting. The proposed works on the site will not require to be licensed. Section 48 of the Regulation requires that wastes are stored in an environmentally safe manner and that vehicles used to transport waste must be covered when loaded.

The Regulation exempts certain waste streams from the full waste tracking and record keeping requirements. Waste tracking is required only for wastes prescribed on the NSW EPA waste locate website the website should be consulted prior to removing wastes from site. [https://wastelocate.epa.nsw.gov.au].

17.5 Protection of The Environment Operations (Clean Air) Regulation 2010

Requirements in relation to emission from vehicles and general obligations that the occupiers of non-residential premises do not cause air pollution by failing to operate or maintain plant, carry out work or deal with materials in a proper and efficient manner.

17.6 Protection of The Environment Operations (Underground Petroleum Storage System) Regulation 2019

The POEO (UPSS Regulation) aims to minimise the risk to human health and the environment by requiring best practice design, installation, maintenance, and monitoring of UPSS in NSW. All UPSS removal works will need to comply with the UPSS (2019) regulation. Relevant resources are available at

https://www.epa.nsw.gov.au/your-environment/contaminated-land/upss

17.7 Waste Classification Guidelines, Part 1: Classifying Waste

All wastes generated shall be classified and managed in accordance with the NSW EPA Waste Classification Guidelines (2014) and addendum to part 1 (2016).

17.8 Work Health and Safety Act 2011

Requirements in relation to ensure work safety that are enforceable by law, including any asbestos removal works.

17.9 Roads and Rail Transport (Dangerous Goods) Act 1997

Transport of waste classified as Dangerous Goods in accordance with Regulations.

17.10 NSW EPA Asbestos and Waste Tyres Guidelines (2015)

Outlines the legal requirements that consignors, transporters, and occupiers of premises must meet in addition to their obligations under the Waste Regulation.

18 Construction and Environmental Management Plan

The development consent may require a Construction and Environmental Management Plan (CEMP) to be prepared and submitted to Council for approval prior to commencement.

Reditus recommend the appointed contractor refers to the NSW Department of Infrastructure, Planning and Natural Resources (DIPNR) Guideline for the Preparation of Environmental Management Plans 2004.

The CEMP will be the overarching document that for the implementation of environmental control measures during construction. The controls prescribed within this RAP are to be adopted within the CEMP and administered by the appointed Principal Contractor.

As a minimum, the CEMP must detail the following:

- Identify the environmental objectives and outcomes relevant to the proposed development.
- Identify the potential environmental risks that apply to the proposed development.
- Outline the measures that should be implemented to protect the environment during the proposed development.
- Define the responsibilities and reporting requirements relevant to environmental matters and unexpected finds.
- Outline the procedures that should be followed if unidentified finds are encountered during the proposed development.

To ensure compliance with the RAP, the CEMP should also detail the following with regards to the remediation works schedule:

- Communication and sign-off procedure to ensure HOLD POINTs listed in Section 11 are adhered to during the remediation works schedule.
- Procedures for removal of hazardous materials, including.
  - The appointed removal contractor, SafeWork NSW LAA and project Environmental Consultant.
  - HAZMAT removal methodology. Lead paint removal procedure is to be detailed and project specific, ensuring the removal procedure limits the potential for recontamination of the site.
  - Preventative measures to ensure removal works are managed appropriately to prevent recontamination of remediated areas, i.e., by tracking of plant from contaminated areas and/or stockpiling of waste materials.
- Procedures for remediation excavation and validation works, including.
  - HOLD POINTs.
  - Requirement for direction of remediation excavation depth and extent by the appointed project Environmental Consultant in accordance with this RAP.
  - Location of, and methods for storage/stockpiling of contaminated soils prior to off-site disposal.
  - Procedure for granting approval/validation of proposed imported VENM backfill (where required).

19 Approvals, Conditions, Licensing, Legislation & Guidelines

The following approvals/conditions and licences required for the remediation works are detailed below:

- The appointed project Environmental Consultant/Scientist must be suitably and qualified and experienced in the remediation of land. Site Validation Reports should be reviewed and approved by a EIANZ Certified Environmental Practitioner (CEnvP) – Site Contamination Specialist prior to issue to the appointed Site Auditor.
- Visual inspection and clearances of the residual surfaces following removal of asbestos containing materials are to be completed by a SafeWork NSW LAA.
- Any hazardous removal works are to be completed by suitably qualified, experienced, and licenced contractors.
  - Any non-friable asbestos removal shall be by an Asbestos Removalist who holds a SafeWork NSW Bonded (Class B) Asbestos Removal Licence. Note: A licence is required where the surface area of bonded asbestos removed, is greater than 10 m2 (as of January 2008). If there is uncertainty about the quantity of asbestos material, a SafeWork NSW licenced removalist (Class A) must be engaged. All works involving friable asbestos removal shall be completed by a Class A licenced removalist.
- Any material leaving site (whether hazardous or not) must be classified in accordance with the NSW EPA (2014) Waste Classification Guidelines.
- If more than 100kg of asbestos waste or 10m^2 of asbestos sheeting is proposed to be removed from the site, then information is to be provided to the EPA, under the NSW EPA Asbestos and Waste Tyre Guidelines 2015. This guideline contains the legal requirements that consignors, transporters and occupiers of premises must meet in addition to the Waste Regulations.
  - The following requirements are noted:
  - A transporter of Asbestos Waste must be registered as a transporter of Asbestos Waste on WasteLocate before any transport of Asbestos Waste is to occur.
  - The transporter of Asbestos Waste must provide the following information to the NSW EPA upon registration on Waste Locate (https://wastelocate.epa.nsw.gov.au) no later than on delivery of its first load of Asbestos Waste to the receiving facility.
  - Name and address of the transporter.
  - Mobile telephone number of the transporter's registered driver.
  - Email address of the transporter.
  - Trading name or agency name of the transporter.
  - Drivers licence number of the transporter's registered driver.
  - Postal address of the transporter, if different from address.
  - Primary telephone number of transporter.
  - The Australian Business Number (ABN) for the transporting company (if the entity has an ABN).
  - WorkCover licence number of the transporter, if held.
  - The transporter of a load of Asbestos Waste must provide the following information to the NSW EPA by using WasteLocate before the transportation of any load of Asbestos Waste:
  - The type of Asbestos Waste in the load; vehicle registration; number of the vehicle driven by the transporter's registered driver for the specific consignment.
  - A transporter of a load of Asbestos Waste to any premises must scan the EPA Fixed Plate at the premises through their mobile device for each load. Scanning of the EPA Fixed Plate by the transporter for a load enables the occupier to meet its obligations under clause 76(7) or 79(6) (as applicable) of the Waste Regulation for that load.

- If the EPA Fixed Plate at an occupier's premises is not scanned by the transporter, the occupier must provide the EPA in writing the date and time of delivery of the load of Asbestos Waste, the vehicle registration number of the vehicle driven by or on behalf of the transporter for the specific consignment.

All remediation works on the site must be undertaken with all due regard to the environment and to statutory requirements. Work on site is to comply with the requirements of the following National and NSW legislation and guidelines:

- Work Health and Safety Act 2011.
- Work Health and Safety Regulation 2017.
- Protection of the Environment (Operations) Act 1997.
- Protection of the Environment Operations (Waste) Regulation 2014.
- NSW Environment Protection Authority (2014) 'Waste Classification Guidelines'.
- NSW SafeWork (2014) 'Managing Asbestos In or On Soil'.
- NSW Government (2019) Code of Practice. How to Manage and control Asbestos in the Workplace.
- NSW Government (2019) Code of Practice. How to Safely Remove Asbestos.
- Australian Standard: Guide to lead paint management, Part 2: Residential and commercial buildings (AS 4361.2 - 2017).
- Control of Workplace Hazardous Substances, Code of Practice, WorkCover Authority of NSW, 2006.
- National Code of Practice for the Control of Workplace Hazardous Substances, National Occupational Health and Safety Commission: 2007, 1994.
- The Demolition of Structures, Australian Standard AS2601, 2001.
- AS/NZS 4361.2:2017 Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings.
- National Environment Protection (Assessment of Site Contamination) Measure 1999 amended May 2013 (ASC NEPM 2013).

The requirements of the RAP must be explained to all site workers and visitors (as required) as a part of an induction process to the site CEMP and a copy is to be maintained on site during site works. Furthermore, the CEMP development is to incorporate the approvals, conditions, licensing, legislation, and guidelines listed above to ensure adherence to this RAP.

20 Conclusions and Recommendations

The objectives of the remediation will be achieved subject to the successful implementation of the actions contained in this RAP.

This RAP has been prepared with consideration to available information, existing reports (as specified in Section 4.0) and applicable regulatory provisions. The remediation strategy has been based on the documented site condition, which has been adequately characterised by previous investigations and considers asbestos in soil as the primary contaminant of concern warranting remediation.

Following the Reditus (2024) Data Gap Investigation, it is confirmed that the cap and contain remedial strategy is suitable for the site; no further remedial works are required to address residual groundwater contamination; and there is no unacceptable risk posed by soil vapour and groundwater intrusion from volatile contaminants for the commercial/industrial development.

Validation will be subject to the successful implementation of the AMP (Section 12) and this RAP for the project. Refer to the requirements prescribed within **Section 8** and **Section 10**.

The RAP includes a suitable strategy for 'cap-and-containment' of the impacted fill soils to reduce the risk of exposure to future site users. The remediation strategy is considered appropriate to render the site suitable for the proposed commercial land use. These conclusions are made in the context of the report objectives and with the limitations in **Section 21** of this report.

Based on the above, Reditus considers that the site can be made suitable for the proposed commercial development subject to conformance with this RAP and supporting detailed design capping documentation.

21 Limitations

This report has been prepared in accordance with the scope of services described in the **Section 1.3**. The letter has been prepared for the sole use of the client and has been prepared in accordance with a scope of work agreed by the client.

The report or document does not purport to provide legal advice and any conclusions or recommendations made should not be relied upon as a substitute for such advice.

The report does not constitute a recommendation by Reditus for the client or any other party to engage in any commercial or financial transaction and any decision by the client or other party to engage in such activities is strictly a matter for the client.

The report relies upon data, surveys, measurements and results taken at or under the Site at particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the client. Furthermore, the report has been prepared solely for use by the client and Reditus accepts no responsibility for its use by other parties. The client agrees that Reditus' report or associated correspondence will not be used or reproduced in full or in part for promotional purposes and cannot be used or relied upon by any other individual, party, group or company in any prospectus or offering. Any individual, party, group or company seeking to rely on this report cannot do so and should seek their own independent advice.

No warranties, express or implied, are made. Subject to the scope of work undertaken, Reditus assessment is limited strictly to identifying typical environmental conditions associated with the subject property based on the scope of work and testing undertaken and does not include and evaluation of the structural conditions of any buildings on the subject property or any other issues that relate to the operation of the Site and operational compliance of the Site with state or federal laws, guidelines, standards or other industry recommendations or best practice. Scope of work undertaken for assessments are agreed in advance with the client and may not necessarily comply with state or federal laws or industry guidelines for the type of assessment conducted.

Additionally, unless otherwise stated Reditus did not conduct soil, air or wastewater analyses including asbestos or perform contaminated sampling of any kind. Nor did Reditus investigate any waste material from the property that may have been disposed off-site or undertake and assessment or review of related site waste management practices.

The results of this assessment are based upon (if undertaken as part of the scope work) a site inspection conducted by Reditus personnel and/or information from interviews with people who have knowledge of site conditions and/or information provided by regulatory agencies. All conclusions and recommendations regarding the property are the professional opinions of the Reditus personnel involved with the project, subject to the qualifications made above.

While normal assessments of data reliability have been made, Reditus assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Reditus, or developments resulting from situations outside the scope of this project/assessment.

Reditus is not engaged in environmental auditing and/or reporting of any kind for the purpose of advertising sales promoting, or endorsement of any client's interests, including raising investment capital, recommending investment decisions, or other publicity purposes. Reditus assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Reditus, or developments resulting from situations outside the scope of this project.

In relation the conduct of asbestos inspections or the preparation of hazardous materials reports Reditus has conducted inspections and the identification of hazardous material within the constraints presented by the property. Whilst efforts are made to access areas not normally accessed during normal use of the Site to identify the presence of asbestos or other hazardous material, unless explicitly tested no guarantee can be provided that such material is or is not present.

Reditus' professional opinions are based upon its professional judgment, experience, and training. These opinions are also based upon data derived from the limited testing and analysis described in this report or reports reviewed. It is possible that additional testing and analysis might produce different results and/or different opinions or other opinions. Reditus has limited its investigation(s) to the scope agreed upon with its client. Reditus believes that its opinions are reasonably supported by the testing and analysis that has been undertaken (if any), and that those opinions have been developed according to the professional standard of care for the environmental consulting

profession in this area at this time. Other opinions and interpretations may be possible. That standard of care may change and new methods and practices of exploration, testing and analysis may develop in the future, which might produce different results.

22 References

Environmental Planning

NSW Environmental Planning and Assessment Act (the EP&A Act) 1979.

NSW State Environmental Planning Policy Number (SEPP) Resilience and Hazards 2021. Superseding SEPP55 – Remediation of Land, 1998.

Site Contamination

NSW Contaminated Land Management Act (the CLM Act 1997).

NSW EPA statutory guidelines made or approved under section 105 of the CLM Act, including:

- *NSW EPA Guidelines for the NSW Site Auditor Scheme (3rd Edition), 2017.*
- *NSW EPA Guidelines for Consultants Reporting on Contaminated Land, 2020.*
- *NSW EPA Sampling Design Guidelines, August 2022.*

National Environment Protection Council (1999, Revised 2013) National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 – Schedule B1 Guideline on Investigation levels for Soil and Groundwater (NEPC, 2013).

Waste

NSW Protection of the Environment Operations Act (POEO Act) 1997.

NSW Protection of the Environment Operations (Waste) Regulations 2014.

NSW EPA Waste Classification Guidelines, Part 1 Classifying Waste, 2014.

NSW EPA Resource Recovery Order, Excavated Natural Material Order under Part 9, Clause 93 of POEO Waste Regulation 2014 (the ENM Order 2014).

Asbestos

NSW Work Health and Safety Act, 2011 (WHS Act 2011).

NSW Work Health and Safety Regulations, 2017 (WHS Reg 2017), Chapter 8 Asbestos, 2017 (NSW WHS Reg 2017).

NSW EPA Managing Asbestos in or on Soil, 2014 (NSW EPA 2014).

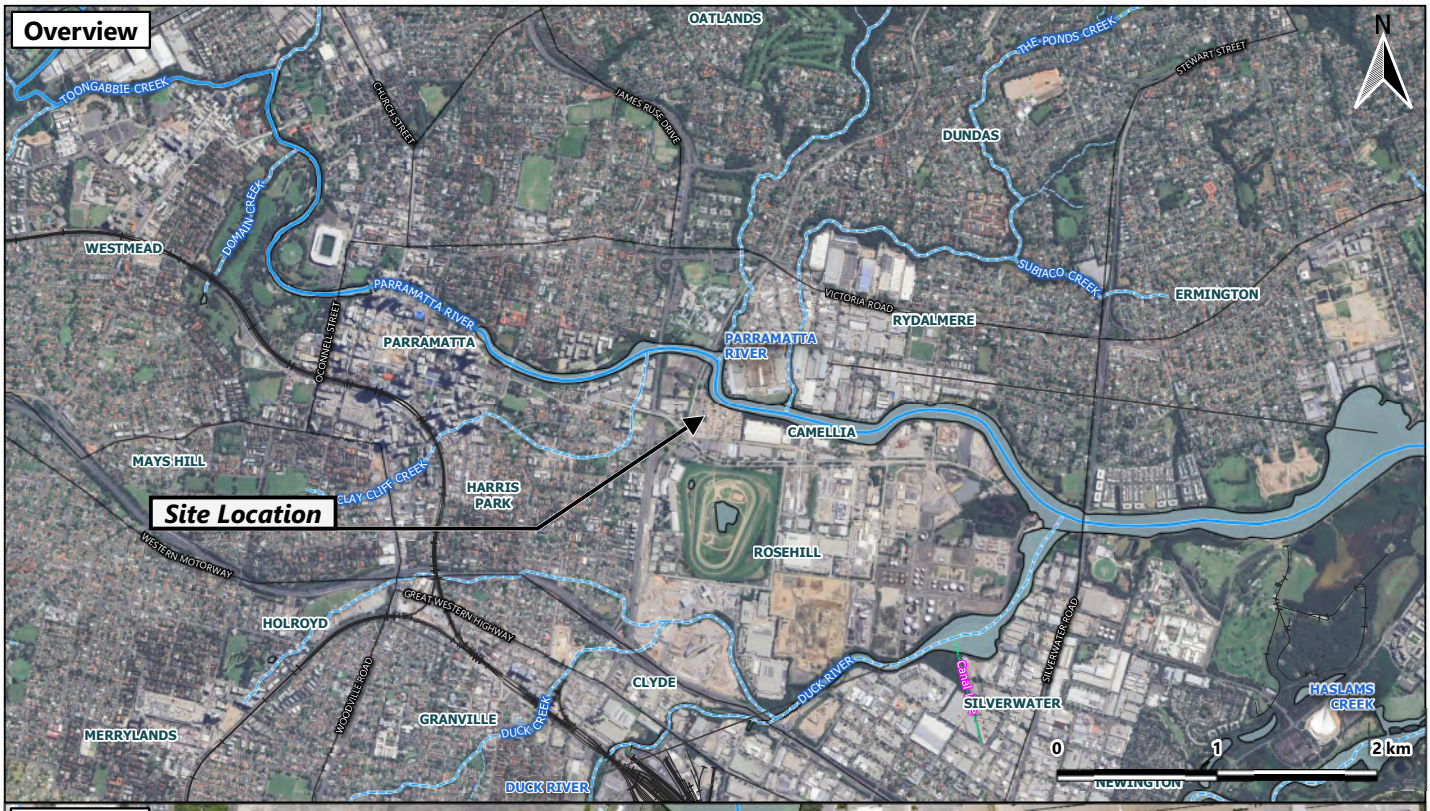
Western Australia Department of Health Guidelines for the Assessment Remediation and Management of Asbestos Contaminated Sites in Western Australia 2009 (WA DoH, 2009) as referred to by NEPM 2013

A

Figures



REDITUS





Map	
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Date of Export	
18/04/2024	
Author	**Approver**
JP	GB
Data Source	
Metromap, Google Maps, Open Street Map, NSW Government	

Legend

- Site Boundary
- Lot Boundaries
- Major Roads
- Railways
- Surface Water

Watercourses

- Rivers
- Stream (Perennial)
- Stream (Non-Perennial)
- Unnamed Stream (Non-Perennial)
- Other Channels

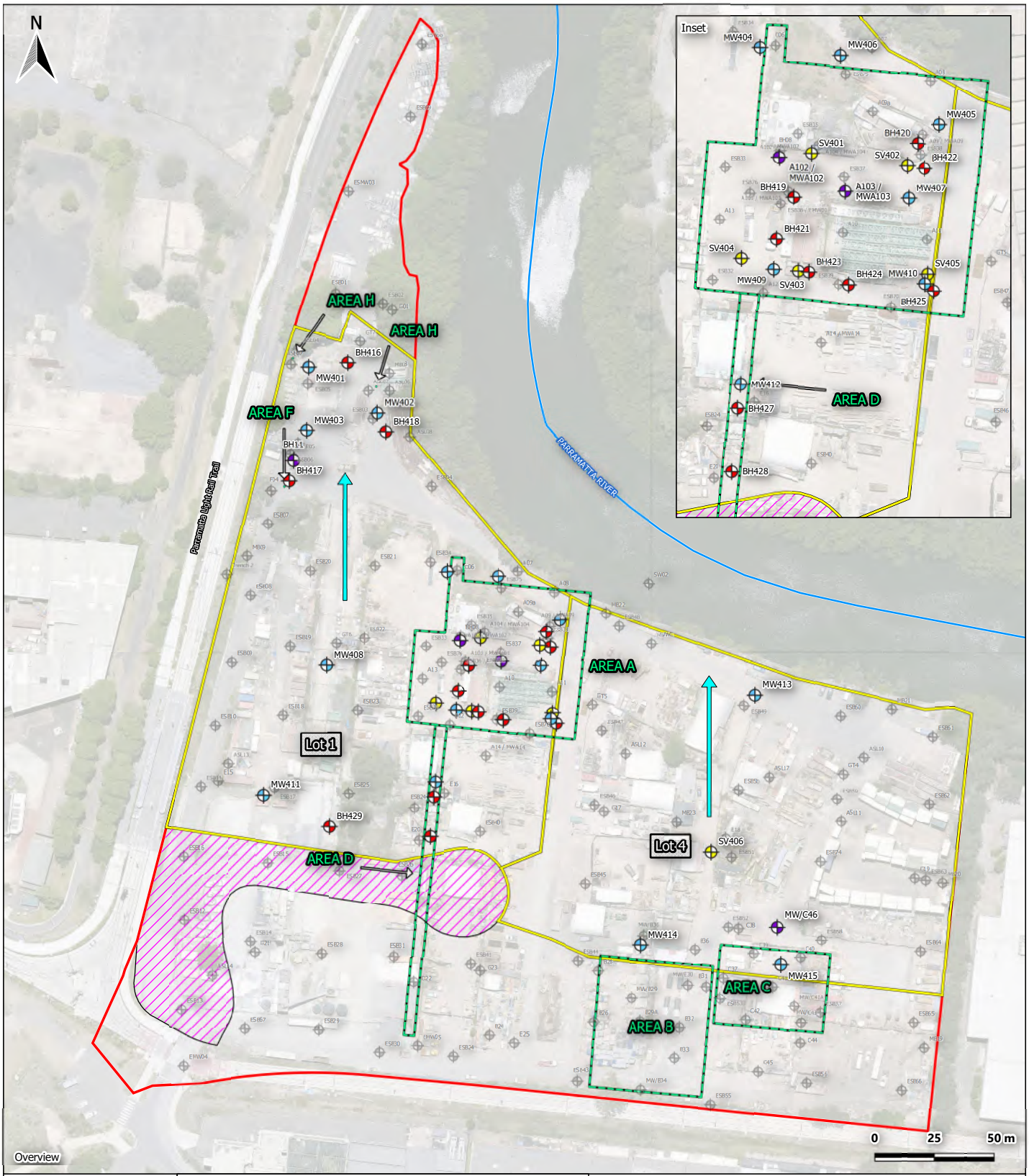
Figure 1 - Site Location

1 Grand Avenue, Camellia NSW 2142

23156RP01 - Remedial Action Plan

Billbergia Pty Ltd

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Map	
23156_rp01_f02_locs_v01	
Date of Export	**Map Scale (approx. at A3)**
18/04/2024	1:1,601
Author	**Approver**
JP	GB
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Investigation Area Boundary (Lots 1 & 4)
- Greater Site Boundary
- Areas of Environmental Concern (AECs)
- Cul-de-sac

Watercourses

- Stream (Perennial)
- Inferred Groundwater Flow Direction
- Historical Sample Locations

Sample Locations

- Borehole
- Groundwater Monitoring Well
- Vapour Point
- Existing Servicable Wells

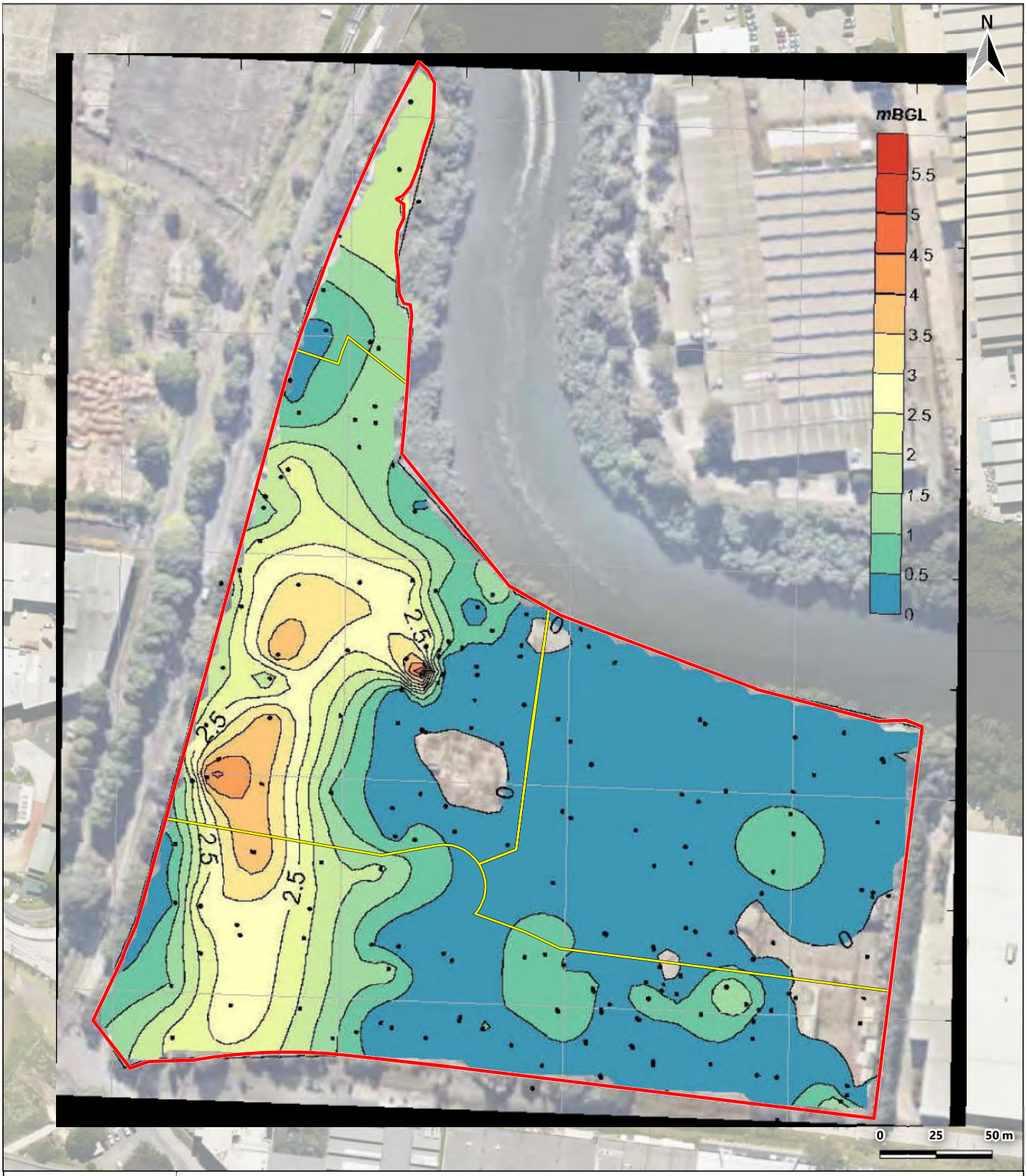
Figure 2 - Historical and Recent Sample Locations

1 Grand Avenue, Camellia NSW 2142

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Map	
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Date of Export	**Map Scale (approx. at A3)**
18/04/2024	1:2,050
Author	**Approver**
JP	DS
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Lots 1 and 4

Figure 3 - Asbestos Fill Contours

1 Grand Avenue, Camellia NSW 2142

23156RP01 - Remedial Action Plan

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B

Historical Analytical Results Summary Tables



Remedial Action Plan
1 Grand Avenue North, Camellia, NSW 2142
Billbergia Group Pty Ltd
23156RP01_v2

Table 1
Soil Analytical Results Summary

REDITUS

					BTEX							TRH							TPH					PAH						
					Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5	0.1	0.1	0.1	0.2	0.1	0.3	20	20	50	50	100	100	100	20	20	50	50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																														
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																														
>=0m, <1m					NL	3	NL	NL			230		260		NL															
>=1m, <2m					NL	3	NL	NL			NL		370		NL															
>=2m, <4m					NL	3	NL	NL			NL		630		NL															
>=4m					NL	3	NL	NL			NL		NL		NL															
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil												800		1,000		5,000	10,000													
Field ID	**Map ID**	**Depth**	**Date**	**Lab Report**																										
BH416_1.3	**BH416**	**1.3**	**13 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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MW405_0.4	**BH405**	**0.4**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW405_1.0	**BH405**	**1**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW406_0.6	**BH406**	**0.6**	**15 Mar 2024**	**1079347**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW406_1.3	**BH406**	**1.3**	**15 Mar 2024**	**1079347**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	**62**	**62**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW407_0.15	**BH407**	**0.15**	**12 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW407_2.0	**BH407**	**2**	**12 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW408_0.8	**BH408**	**0.8**	**13 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW408_2.0	**BH408**	**2**	**13 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW409_0.6	**BH409**	**0.6**	**12 Mar 2024**	**1078902**	**1.8**	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	**1,900**	**1,898.2**	**1,800**	<100	**3,700**	<20	**1,100**	**2,500**	**97**	**3,697**	**1.4**	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5
MW409_3.0	**BH409**	**3**	**12 Mar 2024**	**1078902**	**5.7**	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	**2,300**	**2,294.3**	**2,300**	<100	**4,600**	<20	**1,300**	**3,400**	**97**	**4,797**	**2.1**	<0.5	**1.1**	<0.5	<0.5	<0.5	<0.5
MW410_0.2	**BH410**	**0.2**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	**88**	<50	**88**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW410_1.0	**BH410**	**1**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW411_0.1	**BH411**	**0.1**	**15 Mar 2024**	**1079347**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	**320**	**180**	**500**	<20	<20	**140**	**230**	**370**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW411_3.6	**BH411**	**3.6**	**15 Mar 2024**	**1079347**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	**23**	<50	**58**	**81**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW412_0.1	**BH412**	**0.1**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	**200**	<100	**200**	<20	<20	**190**	**55**	**245**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW412_2.0	**BH412**	**2**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW413_0.5	**BH413**	**0.5**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	**22**	**22**	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW413_1.0	**BH413**	**1**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW414_0.6	**BH414**	**0.6**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW414_2.0	**BH414**	**2**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW414_3.0	**BH414**	**3**	**14 Mar 2024**	**1078902**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW415_0.5	**BH415**	**0.5**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW415_3.0	**BH415**	**3**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW419_0.5	**BH419**	**0.5**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	**550**	**550**	**520**	<100	**1,070**	<20	**320**	**700**	<50	**1,020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW419_1.2	**BH419**	**1.2**	**11 Mar 2024**	**1078902**	**3.1**	<0.1	<0.1	**0.2**	**1.0**	**0.5**	**1.5**	<20	<20	**3,300**	**3,296.9**	**2,100**	<500	**5,400**	<20	**1,800**	**3,800**	<250	**5,600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW420_0.3	**BH420**	**0.3**	**12 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW420_2.0	**BH420**	**2**	**12 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW421_0.3	**BH421**	**0.3**	**12 Mar 2024**	**1078902**	**5.1**	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	**2,200**	**2,194.9**	**3,200**	<100	**5,400**	<20	**1,000**	**4,200**	**170**	**5,370**	**1.1**	**0.9**	**1.0**	<0.5	<0.5	<0.5	<0.5
MW421_0.8	**BH421**	**0.8**	**12 Mar 2024**	**1078902**	**2.3**	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	**2,000**	**1,997.7**	**2,600**	<100	**4,600**	<20	**830**	**3,600**	**160**	**4,590**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW422_0.3	**BH422**	**0.3**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW422_0.15	**BH422**	**0.15**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW423_0.4	**BH423**	**0.4**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	**20**	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW423_1.0	**BH423**	**1**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW424_0.3	**BH424**	**0.3**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW424_0.6	**BH424**	**0.6**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW425_0.5	**BH425**	**0.5**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	**51**	<50	**51**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW425_2.0	**BH425**	**2**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW427_0.1	**BH427**	**0.1**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	**560**	**260**	**820**	<20	<20	**280**	**390**	**670**	<0.5	<0.5	<0.5	**0.5**	<0.5	**0.5**	<0.5
MW427_2.5	**BH427**	**2.5**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	**130**	**130**	<20	<20	<50	**85**	**85**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH429_2.9	**BH429**	**2.9**	**11 Mar 2024**	**1079347**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	**170**	<100	**170**	<20	<20	**96**	**100**	**196**	<0.5	<0.5	<0.5	**2.1**	3.8	**1.8**	<0.5
BH429_3.3	**BH429**	**3.3**	**11 Mar 2024**	**1079347**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	**<50**	**<50**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DUP1	**DUP1**	**-**	**11 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	**670**	**290**	**960**	<20	**29**	**320**	**420**	**769**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DUP2	**DUP2**	**-**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DUP3	**DUP3**	**-**	**14 Mar 2024**	**1078902**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Environmental St: Environmental Standards
2013, NEPM 2013 **2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil**
2013, NEPM 2013 **2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand**
NEPM, NEPM 201: **NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil**

Table 1
Soil Analytical Results Summary

REDITUS

					PAH Continued												Inorganics	Metals								
					Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of total)	Moisture Content (dried @ 103°C)	Arsenic	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	2	0.4	1	5	5	5	0.1	5	5
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil														40	40	4,000		3,000	900	3,600		240,000	1,500	730	6,000	400,000
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																										
>=0m, <1m											NL															
>=1m, <2m											NL															
>=2m, <4m											NL															
>=4m											NL															
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil																										
Field ID	**Map ID**	**Depth**	**Date**	**Lab Report**																						
BH416_1.3	**BH416**	**1.3**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**8.7**	**7.1**	<0.4	<1	<5	<5	<5	<0.1	<5	**15**
BH416_1.7	**BH416**	**1.7**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**26**	**48**	<0.4	<1	**21**	**31**	**20**	<0.1	**36**	**120**
BH417_1.9	**BH417**	**1.9**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**17**	**15**	<0.4	<1	**9.7**	**8.4**	**6.8**	<0.1	<5	**7.8**
BH417_3.0	**BH417**	**3**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**16**	**4.0**	<0.4	<1	**8.0**	**11**	**6.9**	<0.1	<5	**9.2**
BH418_1.0	**BH418**	**1**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**19**	**3.2**	<0.4	<1	**8.1**	**9.4**	**23**	<0.1	<5	**23**
BH418_1.6	**BH418**	**1.6**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**32**	**13**	<0.4	<1	**11**	**11**	**15**	<0.1	**8.5**	**23**
BH428_0.5	**BH428**	**0.5**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**11**	**8.9**	<0.4	<1	**20**	**18**	**72**	**0.2**	**12**	**140**
BH428_1.0	**BH428**	**1**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**14**	**3.4**	<0.4	<1	**12**	**12**	**52**	<0.1	**5.6**	**99**
MW401_0.8	**BH401**	**0.8**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**15**	**6.6**	<0.4	<1	**19**	**19**	**27**	<0.1	**8.0**	**19**
MW401_1.3	**BH401**	**1.3**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**13**	**4.9**	<0.4	<1	**7.7**	**9.0**	**10.0**	<0.1	<5	**9.9**
MW402_0.2	**BH402**	**0.2**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**8.4**	<2	<0.4	<1	**8.8**	**64**	<5	<0.1	**42**	**46**
MW402_0.7	**BH402**	**0.7**	**14 Mar 2024**	**1078902**	**1.1**	**1.5**	<0.5	**3.1**	<0.5	**0.7**	<0.5	**1.5**	**3.3**	**1.9**	**2.2**	**15**	**25**	**4.7**	<0.4	<1	**61**	**38**	**74**	<0.1	**94**	**35**
MW403_2.0	**BH403**	**2**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**28**	**12**	<0.4	<1	**11**	**13**	**27**	<0.1	**17**	**29**
MW403_3.0	**BH403**	**3**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**15**	**4.6**	<0.4	<1	**16**	**17**	**11**	<0.1	<5	**14**
MW404_0.1	**BH404**	**0.1**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**12**	**2.1**	<0.4	<1	**13**	**6.7**	**19**	<0.1	<5	**24**
MW404_1.3	**BH404**	**1.3**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**13**	**2.1**	<0.4	<1	**7.3**	**5.0**	**9.2**	<0.1	<5	**8.0**
MW405_0.4	**BH405**	**0.4**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**15**	**7.9**	<0.4	<1	**22**	**12**	**33**	<0.1	**12**	**45**
MW405_1.0	**BH405**	**1**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**16**	<2	<0.4	<1	**9.4**	**8.7**	**7.2**	<0.1	**5.7**	**14**
MW406_0.6	**BH406**	**0.6**	**15 Mar 2024**	**1079347**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**14**	**4.5**	<0.4	<1	**19**	**12**	**18**	<0.1	**8.4**	**21**
MW406_1.3	**BH406**	**1.3**	**15 Mar 2024**	**1079347**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**11**	**8.6**	<0.4	<1	**16**	**15**	**18**	<0.1	**8.9**	**53**
MW407_0.15	**BH407**	**0.15**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**24**	**4.3**	<0.4	**3.7**	**15**	**5.6**	**11**	<0.1	<5	<5
MW407_2.0	**BH407**	**2**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**14**	**7.0**	<0.4	<1	**16**	**9.1**	**9.0**	<0.1	<5	**13**
MW408_0.8	**BH408**	**0.8**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**22**	**3.7**	<0.4	<1	**5.5**	**7.2**	**13**	<0.1	<5	**70**
MW408_2.0	**BH408**	**2**	**13 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**17**	**2.3**	<0.4	<1	**11**	**8.3**	**9.4**	<0.1	<5	<5
MW409_0.6	**BH409**	**0.6**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	**3.4**	<0.5	**1.6**	**4.1**	**0.7**	**0.6**	**1.2**	**12**	**14**	<2	<0.4	<1	<5	**5.3**	**8.6**	<0.1	<5	<5
MW409_3.0	**BH409**	**3**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	**4.1**	<0.5	**3.9**	**5.8**	**0.9**	**0.6**	**1.2**	**18**	**10**	<2	<0.4	<1	<5	<5	**5.2**	<0.1	<5	<5
MW410_0.2	**BH410**	**0.2**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**11**	**3.0**	<0.4	<1	**15**	**12**	**13**	<0.1	**6.7**	**15**
MW410_1.0	**BH410**	**1**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**18**	**6.1**	<0.4	<1	**22**	**15**	**17**	<0.1	**5.2**	**14**
MW411_0.1	**BH411**	**0.1**	**15 Mar 2024**	**1079347**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**17**	**36**	**0.5**	<1	**29**	**40**	**65**	<0.1	**65**	**270**
MW411_3.6	**BH411**	**3.6**	**15 Mar 2024**	**1079347**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**31**	**18**	<0.4	<1	**14**	**11**	**27**	<0.1	**11**	**21**
MW412_0.1	**BH412**	**0.1**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5	**0.7**	**0.6**	**1.2**	**1.4**	**12**	**3.4**	<0.4	<1	**33**	**48**	**19**	<0.1	**82**	**75**
MW412_2.0	**BH412**	**2**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**19**	**2.4**	<0.4	<1	**7.1**	<5	**8.5**	<0.1	<5	**7.8**
MW413_0.5	**BH413**	**0.5**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**16**	**8.2**	<0.4	<1	**12**	**13**	**16**	<0.1	<5	**15**
MW413_1.0	**BH413**	**1**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**14**	**9.8**	<0.4	<1	**12**	**16**	**13**	<0.1	<5	**23**
MW414_0.6	**BH414**	**0.6**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**17**	**3.0**	<0.4	<1	**18**	**6.0**	**12**	<0.1	<5	**11**
MW414_2.0	**BH414**	**2**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**18**	**11**	<0.4	<1	**20**	**16**	**20**	<0.1	**5.2**	**7.5**
MW414_3.0	**BH414**	**3**	**14 Mar 2024**	**1078902**	-	-	-	-	-	-	-	-	-	-	-	-	**15**	-	-	-	-	-	-	-	-	-
MW415_0.5	**BH415**	**0.5**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**18**	**9.6**	<0.4	<1	**20**	**19**	**26**	<0.1	<5	**19**
MW415_3.0	**BH415**	**3**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**15**	**3.8**	<0.4	<1	**9.5**	**13**	**12**	<0.1	<5	**24**
MW419_0.5	**BH419**	**0.5**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	**0.7**	<0.5	**0.9**	**1.0**	<0.5	**0.6**	**1.2**	**2.6**	**14**	**2.4**	<0.4	<1	**11**	**11**	**15**	<0.1	**8.4**	**17**
MW419_1.2	**BH419**	**1.2**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	**1.8**	<0.5	**4.0**	**3.5**	<0.5	**0.6**	**1.2**	**9.3**	**9.7**	<2	<0.4	<1	**7.0**	<5	<5	<0.1	<5	**6.0**
MW420_0.3	**BH420**	**0.3**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**13**	**3.2**	<0.4	<1	**15**	**12**	**6.9**	<0.1	**8.4**	**21**
MW420_2.0	**BH420**	**2**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**11**	**2.5**	<0.4	<1	**5.3**	<5	**5.3**	<0.1	<5	**9.5**
MW421_0.3	**BH421**	**0.3**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	**4.1**	<0.5	**4.2**	**10**	<0.5	**0.6**	**1.2**	**21**	**12**	**3.7**	<0.4	<1	**14**	**9.2**	**13**	<0.1	**5.6**	**12**
MW421_0.8	**BH421**	**0.8**	**12 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	**2.3**	<0.5	**2.0**	**3.4**	<0.5	**0.6**	**1.2**	**7.7**	**13**	**3.6**	<0.4	<1	**10**	<5	**12**	<0.1	<5	**11**
MW422_0.3	**BH422**	**0.3**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**18**	**4.5**	<0.4	<1	**14**	**8.0**	**13**	<0.1	**5.9**	**12**
MW422_0.15	**BH422**	**0.15**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**19**	**6.8**	<0.4	<1	**36**	**17**	**37**	<0.1	**27**	**42**
MW423_0.4	**BH423**	**0.4**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**25**	**4.5**	<0.4	<1	**21**	**12**	**16**	<0.1	**6.9**	**11**
MW423_1.0	**BH423**	**1**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**22**	**6.2**	<0.4	<1	**23**	**18**	**24**	<0.1	**11**	**20**
MW424_0.3	**BH424**	**0.3**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**28**	**2.2**	<0.4	<1	**16**	**8.2**	**12**	<0.1	**5.1**	**7.5**
MW424_0.6	**BH424**	**0.6**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**20**	**5.5**	<0.4	<1	**22**	**11**	**14**	<0.1	**6.1**	**8.8**
MW425_0.5	**BH425**	**0.5**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**15**	<2	<0.4	<1	**13**	<5	**8.0**	<0.1	<5	<5
MW425_2.0	**BH425**	**2**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**23**	**8.8**	<0.4	<1	**32**	**25**	**23**	<0.1	**11**	**19**
MW427_0.1	**BH427**	**0.1**	**11 Mar 2024**	**1078902**	**0.7**	<0.5	<0.5	**1.0**	<0.5	**0.5**	<0.5	<0.5	**1.0**	**0.7**	**1.2**	**4.2**	**7.1**	**5.3**	<0.4	<1	**19**	**29**	**54**	<0.1	**9.6**	**110**
MW427_2.5	**BH427**	**2.5**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**17**	**2.1**	<0.4	<1	**7.2**	**8.4**	**8.5**	<0.1	**6.2**	**11**
BH429_2.9	**BH429**	**2.9**	**11 Mar 2024**	**1079347**	**2.1**	2.1	0.8	**2.2**	<0.5	**2.1**	<0.5	1.0	**2.1**	**5.4**	**5.4**	**20**	**26**	**2.7**	<0.4	<1	**8.6**	**22**	**16**	<0.1	**28**	**37**
BH429_3.3	**BH429**	**3.3**	**11 Mar 2024**	**1079347**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**13**	**2.2**	<0.4	<1	**17**	**5.9**	**13**	<0.1	**5.2**	**12**
DUP1	**DUP1**	**-**	**11 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	**0.5**	<0.5	<0.5	<0.5	<0.5	**0.7**	**0.6**	**1.2**	**1.2**	**7.5**	**5.4**	<0.4	<1	**17**	**27**	**51**	<0.1	**12**	**140**
DUP2	**DUP2**	**-**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**16**	**4.2**	<0.4	<1	**9.4**	**10**	**11**	<0.1	<5	**23**
DUP3	**DUP3**	**-**	**14 Mar 2024**	**1078902**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**1.2**	<0.5	**14**	**3.8**	<0.4	<1	**7.1**	**7.9**	**7.9**	<0.1	<5	**11**

Environmental St: Environmental Standards
2013, NEPM 2013 **2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil**
2013, NEPM 2013 **2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapo**
NEPM, NEPM 201: **NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / I**

Table 2
Groundwater Analytical Results Summary

REDITUS

				BTEX								TRH							TPH				
				Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
				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				0.005	0.001	0.001	0.001	0.002	0.001	0.002	0.001	0.02	0.02	0.05	0.05	0.1	0.1	0.1	0.02	0.05	0.1	0.05	0.05
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)				0.07	0.7	0.18	0.08																
ADWG 2022 Aesthetic						0.025	0.003			0.02													
ADWG Recreational					0.01	8	3			6													
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand																							
>=2m, <4m				NL	5	NL	NL			NL			6		NL								
>=4m, <8m				NL	5	NL	NL			NL			6		NL								
>=8m				NL	5	NL	NL			NL			7		NL								
Laboratory ID	**Field ID**	**Date**	**Lab Report**																				
MW401	**MW401**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.5	<0.5	<1	<1	<1	<0.02	<0.5	<1	<1	<1
MW402	**MW402**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW403	**MW403**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.5	<0.5	<1	<1	<1	<0.02	<0.5	<1	<1	<1
MW404	**MW404**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW405	**MW405**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW406	**MW406**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW407	**MW407**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	**0.22**	**0.22**	<0.1	<0.1	**0.22**	<0.02	**0.23**	<0.1	<0.1	**0.23**
MW408	**MW408**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.5	<0.5	<1	<1	<1	<0.02	<0.5	<1	<1	<1
MW409	**MW409**	**25 Mar 2024**	**1082020**	**0.03**	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	**15**	**14.97**	**20**	<0.1	**35**	<0.02	**6.5**	**28**	**0.3**	**34.8**
MW410	**MW410**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	**0.06**	**0.06**	<0.1	<0.1	<0.1	<0.02	<0.05	**0.1**	<0.1	**0.1**
MW411	**MW411**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW412	**MW412**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	**0.05**	**0.05**	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW413	**MW413**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW414	**MW414**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MW415	**MW415**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MWA101	**BH11**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MWA102	**MWA102**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	**0.13**	**0.13**	<0.1	<0.1	**0.13**	<0.02	<0.05	**0.4**	<0.1	**0.4**
MWA103	**MWA103**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
MWA104	**MW/C46**	**26 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	**0.04**	**0.04**	<0.05	<0.05	<0.1	<0.1	<0.1	**0.03**	<0.05	<0.1	<0.1	<0.1
DUP1	**DUP1**	**25 Mar 2024**	**1082020**	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	-	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1	<0.1
TRIP1	**TRIP1**	**25 Mar 2024**	**ES2410202**	<0.005	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05

Environmental Standards
ANZG, Recreational derived from drinking water guidelines x 10
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Table 2
Groundwater Analytical Results Summary

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				PAH																Metals						
				Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Arsenic (filtered)	Cadmium (filtered)	Chromium (hexavalent) (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.001	0.001	0.001	0.001	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0005	0.001	0.0001	0.005	0.001	0.001	0.001	0.0001
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)						0.0004		0.0002						0.0014			0.07	0.002			0.013 (V) 0.024 (III)	0.0055	0.0044	0.001	0.0013	0.0044	0.0004
ADWG 2022 Aesthetic																									1		
ADWG Recreational																					0.1	0.02	0.5		20	0.1	0.01
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand																											
>=2m, <4m																	NL										
>=4m, <8m																	NL										
>=8m																	NL										
Laboratory ID	**Field ID**	**Date**	**Lab Report**																								
MW401	**MW401**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.001**	<0.001	<0.001	**0.001**	**0.001**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW402	**MW402**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.004**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW403	**MW403**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.009**	<0.0002	<0.005	<0.001	**0.007**	**0.001**	<0.0001
MW404	**MW404**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW405	**MW405**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW406	**MW406**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW407	**MW407**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	**0.001**	**0.009**	**0.009**	<0.0001
MW408	**MW408**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.001**	<0.001	<0.001	**0.001**	**0.005**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW409	**MW409**	**25 Mar 2024**	**1082020**	**0.004**	**0.001**	**0.004**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.014**	<0.001	**0.011**	**0.021**	**0.002**	**0.057**	**0.005**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW410	**MW410**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW411	**MW411**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.003**	<0.0002	<0.005	**0.001**	**0.003**	<0.001	<0.0001
MW412	**MW412**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW413	**MW413**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW414	**MW414**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MW415	**MW415**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.002**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MWA101	**BH11**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.008**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MWA102	**MWA102**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MWA103	**MWA103**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.002**	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
MWA104	**MW/C46**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	**0.001**	<0.001	<0.0001
DUP1	**DUP1**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.005	<0.001	<0.001	<0.001	<0.0001
TRIP1	**TRIP1**	**25 Mar 2024**	**ES2410202**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0005	<0.001	<0.0001	<0.01	<0.001	**0.001**	<0.001	<0.0001

Environmental Standards
ANZG, Recreational derived from drinking water guidelines x 10
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Table 2
Groundwater Analytical Results Summary

	Nickel (filtered)	Zinc (filtered)
	mg/L	mg/L
EQL	0.001	0.005
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)	0.07	0.008
ADWG 2022 Aesthetic		3
ADWG Recreational	0.2	
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand		
>=2m, <4m		
>=4m, <8m		
>=8m		
Laboratory ID	**Field ID**	**Date**	**Lab Report**		
MW401	**MW401**	**26 Mar 2024**	**1082020**	<0.001	**0.011**
MW402	**MW402**	**26 Mar 2024**	**1082020**	**0.001**	**0.010**
MW403	**MW403**	**26 Mar 2024**	**1082020**	**0.001**	**0.023**
MW404	**MW404**	**26 Mar 2024**	**1082020**	<0.001	**0.014**
MW405	**MW405**	**25 Mar 2024**	**1082020**	<0.001	**0.015**
MW406	**MW406**	**25 Mar 2024**	**1082020**	<0.001	**0.013**
MW407	**MW407**	**25 Mar 2024**	**1082020**	**0.002**	**0.026**
MW408	**MW408**	**25 Mar 2024**	**1082020**	**0.003**	**0.014**
MW409	**MW409**	**25 Mar 2024**	**1082020**	<0.001	**0.013**
MW410	**MW410**	**25 Mar 2024**	**1082020**	**0.001**	**0.012**
MW411	**MW411**	**26 Mar 2024**	**1082020**	**0.002**	**0.013**
MW412	**MW412**	**26 Mar 2024**	**1082020**	<0.001	**0.013**
MW413	**MW413**	**25 Mar 2024**	**1082020**	<0.001	**0.016**
MW414	**MW414**	**26 Mar 2024**	**1082020**	<0.001	**0.010**
MW415	**MW415**	**26 Mar 2024**	**1082020**	**0.002**	**0.013**
MWA101	**BH11**	**26 Mar 2024**	**1082020**	**0.001**	**0.011**
MWA102	**MWA102**	**25 Mar 2024**	**1082020**	<0.001	**0.011**
MWA103	**MWA103**	**25 Mar 2024**	**1082020**	<0.001	**0.017**
MWA104	**MW/C46**	**26 Mar 2024**	**1082020**	<0.001	**0.014**
DUP1	**DUP1**	**25 Mar 2024**	**1082020**	<0.001	**0.015**
TRIP1	**TRIP1**	**25 Mar 2024**	**ES2410202**	<0.001	<0.005

Environmental Standards
ANZG, Recreational derived from drinking water guidelines x 10
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Table 2
Groundwater Analytical Results Summary

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				VOCs																				
				Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	Total MAH	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene
				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				0.005	0.005	0.001	0.001	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)							0.27		0.4	1.9		0.7					1.9	0.9			1.1			
ADWG 2022 Aesthetic																0.001				0.02		0.0003		
ADWG Recreational												0.3				15	0.03					0.4		
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand																								
>=2m, <4m																								
>=4m, <8m																								
>=8m																								
Laboratory ID	**Field ID**	**Date**	**Lab Report**																					
MW401	**MW401**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW402	**MW402**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW403	**MW403**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW404	**MW404**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW405	**MW405**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW406	**MW406**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW407	**MW407**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW408	**MW408**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW409	**MW409**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	**0.002**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW410	**MW410**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW411	**MW411**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW412	**MW412**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW413	**MW413**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW414	**MW414**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW415	**MW415**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MWA101	**BH11**	**26 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MWA102	**MWA102**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MWA103	**MWA103**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MWA104	**MW/C46**	**26 Mar 2024**	**1082020**	**0.046**	**0.046**	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
DUP1	**DUP1**	**25 Mar 2024**	**1082020**	<0.005	<0.005	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TRIP1	**TRIP1**	**25 Mar 2024**	**ES2410202**	-	-	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Environmental Standards
ANZG, Recreational derived from drinking water guidelines x 10
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Table 2
Groundwater Analytical Results Summary

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				VOCs Continued																					
				Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.005	0.005	0.005	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)								0.24	0.055			0.77						4	0.03		0.33	0.07				0.1
ADWG 2022 Aesthetic									0.01											0.004						
ADWG Recreational								0.03	3							0.04				0.3		0.5				0.003
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand																										
>=2m, <4m																										
>=4m, <8m																										
>=8m																										
Laboratory ID	**Field ID**	**Date**	**Lab Report**																							
MW401	**MW401**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW402	**MW402**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW403	**MW403**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW404	**MW404**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW405	**MW405**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW406	**MW406**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW407	**MW407**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW408	**MW408**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW409	**MW409**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW410	**MW410**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW411	**MW411**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW412	**MW412**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW413	**MW413**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW414	**MW414**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MW415	**MW415**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MWA101	**BH11**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MWA102	**MWA102**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MWA103	**MWA103**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
MWA104	**MW/C46**	**26 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	**0.043**	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	**0.003**	<0.001	<0.001	<0.001	<0.005	<0.005
DUP1	**DUP1**	**25 Mar 2024**	**1082020**	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
TRIP1	**TRIP1**	**25 Mar 2024**	**ES2410202**	-	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05

Environmental Standards
ANZG, Recreational derived from drinking water guidelines x 10
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Table 2
Groundwater Analytical Results Summary

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				Solvents							Halogenated Hydrocarbons
				Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Vinyl acetate	Iodomethane
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.005	0.05	0.005	0.005	0.001	0.001	0.05	0.001
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)											
ADWG 2022 Aesthetic											
ADWG Recreational											
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand											
>=2m, <4m											
>=4m, <8m											
>=8m											
Laboratory ID	**Field ID**	**Date**	**Lab Report**								
MW401	**MW401**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW402	**MW402**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW403	**MW403**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW404	**MW404**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW405	**MW405**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW406	**MW406**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW407	**MW407**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW408	**MW408**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	**0.019**	<0.001	<0.001	-	<0.001
MW409	**MW409**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW410	**MW410**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW411	**MW411**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW412	**MW412**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW413	**MW413**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW414	**MW414**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MW415	**MW415**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MWA101	**BH11**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MWA102	**MWA102**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MWA103	**MWA103**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
MWA104	**MW/C46**	**26 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
DUP1	**DUP1**	**25 Mar 2024**	**1082020**	<0.005	-	<0.005	<0.005	<0.001	<0.001	-	<0.001
TRIP1	**TRIP1**	**25 Mar 2024**	**ES2410202**	<0.05	<0.05	<0.05	-	-	<0.005	<0.05	<0.005

Environmental Standards
ANZG, Recreational derived from drinking water guidelines x 10
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Table 3
Soil Vapour Analytical Results Summary

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	BTEX						TRH			TPH	PAH
	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2 minus Naphthalene)	C10-C12 Fraction	Naphthalene
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	mg/m3	µg/m3	µg/m3	µg/m3
EQL	1.6	7.5	2.2	4.4	2.2	6.6	0.1	0.1	100	100	10.5
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs											
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Sand											
>=0m, <1m	4,000	4,800,000	1,300,000			840,000		680	500,000		3,000
>=1m, <2m	10,000	16,000,000	4,600,000			3,200,000		2,800	2,400,000		15,000
>=2m, <4m	30,000	39,000,000	11,000,000			8,000,000		7,000	NL		35,000
>=4m, <8m	65,000	84,000,000	25,000,000			18,000,000		15,000	NL		75,000
>=8m	130,000	NL	53,000,000			37,000,000		32,000	NL		150,000

Field ID	Date	Lab Report Number										
SV401	**25 Mar 2024**	**1082511**	<4	**810**	**110**	**310**	**69**	**380**	**30**	**29**	**480**	**480**	<29
SV402	**25 Mar 2024**	**1082511**	<5	**260**	**56**	**160**	**47**	**210**	**34**	**34**	**1,200**	**1,200**	<32
SV403	**25 Mar 2024**	**1082511**	**68**	**400**	**73**	**240**	**83**	**330**	**37**	**36**	**1,100**	**1,300**	**190**
SV404	**25 Mar 2024**	**1082511**	<5	**330**	**62**	**180**	**51**	**230**	**46**	**45**	**1,200**	**1,200**	<30
SV406	**25 Mar 2024**	**1082511**	<5	**290**	**47**	**160**	**48**	**210**	**36**	**35**	**1,500**	**1,500**	<30
DUP1	**25 Mar 2024**	**1082511**	<5	**150**	**41**	**130**	**42**	**170**	**34**	**34**	**970**	**970**	<30

Table 3
Soil Vapour Analytical Results Summary

REDITUS

	VOCs																			
	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-methyl-4 ethyl benzene	Benzyl chloride	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
EQL	2.7	3.4	2.7	2	2	15	2.5	3.6	3	2	2.3	2.5	3	3	2.5	2.6	3.4	5.2	19.4	3.1
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs	230,000																			
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusio																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m, <8m																				
>=8m																				

Field ID	Date	Lab Report Number																		
SV401	25 Mar 2024	1082511	<8	<10	<8	<6	<6	<42	**20**	<10	<8	<6	<6	**9.2**	<8	<8	**11**	<7	<10	<15	<54	<9
SV402	25 Mar 2024	1082511	<8	<10	<8	<6	<6	<45	**17**	<11	<9	<6	<7	<8	<9	<9	**10**	<8	<10	<16	<58	<9
SV403	25 Mar 2024	1082511	<8	<10	<8	<6	<6	<44	**460**	<10	<9	<6	<7	**150**	<9	<9	**130**	<8	<10	<15	<56	<9
SV404	25 Mar 2024	1082511	<8	<10	<8	<6	<6	<44	**21**	<10	<9	<6	<7	**28**	<9	<9	**16**	<8	<10	<15	<56	<9
SV406	25 Mar 2024	1082511	<8	<10	<8	<6	<6	<44	**68**	<10	<9	<6	<7	**19**	<9	<9	**28**	<8	<10	<15	<56	<9
DUP1	25 Mar 2024	1082511	<8	<10	<8	<6	<6	<44	**21**	<10	<9	<6	<7	<7	<9	<9	**12**	<8	<10	<15	<56	<9

Table 3
Soil Vapour Analytical Results Summary

REDITUS

	VOCs Continued																		
	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Cyclohexane	Dichlorodifluoromethane	Dichloromethane	Freon 113	Hexachlorobutadiene	Styrene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
EQL	2.3	4.3	5.3	2.4	10.3	2	2.3	3.5	2.5	17.4	3.8	21.3	2.1	2.7	3.4	2	2.3	2.8	2.5
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs						300								80	8,000				100
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusio																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m, <8m																			
>=8m																			

Field ID	Date	Lab Report Number																		
SV401	**25 Mar 2024**	**1082511**	<6	<12	<15	<7	<29	<6	<6	<10	<7	<49	<11	<60	**7.7**	<8	<10	<6	<6	<8	<7
SV402	**25 Mar 2024**	**1082511**	<7	<13	<16	<7	<31	<6	<7	<10	<8	<52	<11	<64	<6	<8	<10	<6	<7	<8	<8
SV403	**25 Mar 2024**	**1082511**	<7	<12	<15	<7	<30	<6	<7	**63**	<7	<50	<11	<62	<6	<8	**19**	<6	<7	<8	<7
SV404	**25 Mar 2024**	**1082511**	<7	<12	<15	**13**	<30	<6	<7	<10	<7	<50	<11	<62	<6	<8	**18**	<6	<7	<8	<7
SV406	**25 Mar 2024**	**1082511**	<7	<12	<15	<7	<30	<6	<7	<10	<7	<50	<11	<62	<6	<8	<10	<6	<7	<8	<7
DUP1	**25 Mar 2024**	**1082511**	<7	<12	<15	<7	<30	<6	<7	<10	<7	<50	<11	<62	<6	<8	<10	<6	<7	<8	<7

Table 3
Soil Vapour Analytical Results Summary

REDITUS

	Solvents															Other	NA		
	1,3-Butadiene	1,4-Dioxane	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Ethanol	Heptane	Hexane	MTBE	2-Propanol	Tetrahydrofuran	Vinyl acetate	Helium	2,2,4-Trimethylpentane	Freon 114	Propene
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	MOL %	µg/m3	µg/m3	µg/m3
EQL	2.2	7.2	5.9	8.2	2.1	16.6	1.6	15.6	9.4	2.1	5	7.2	50	1.5	7	0.05	9.3	3.5	8.6
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs																			
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusic																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m, <8m																			
>=8m																			

Field ID	Date	Lab Report Number																	
SV401	25 Mar 2024	1082511	<6	<20	<17	<23	<6	**210**	<4	<44	**1,100**	<6	<14	<20	<140	<4	<20	<0.14	<26	<10	<24
SV402	25 Mar 2024	1082511	<7	<22	<18	<25	<6	**99**	<5	<47	<28	<6	<15	<22	<150	<4	<21	<0.15	<28	<10	<26
SV403	25 Mar 2024	1082511	<6	<21	**63**	<24	<6	**570**	<5	<45	**500**	<6	<14	<21	<145	<4	<20	<0.14	<27	<10	**580**
SV404	25 Mar 2024	1082511	<6	<21	<17	<24	<6	**200**	<5	<45	**1,100**	<6	<14	<21	<145	<4	<20	<0.14	<27	<10	<25
SV406	25 Mar 2024	1082511	<6	<21	<17	<24	<6	**150**	<5	<45	**10,000**	<6	<14	<21	<145	<4	<20	<0.14	<27	<10	<25
DUP1	25 Mar 2024	1082511	<6	<21	<17	<24	<6	**160**	<5	<45	**11,000**	<6	<14	<21	<145	<4	<20	<0.14	<27	<10	<25

Table 4
Soils Results - Acid Sulfate Soils Assessment

							Acid Sulfate Soils - Acid Base Accounting		Acid Sulphate Soils - Acidity Trail		Acid Sulphate Soils - ANC		Acid Sulphate Soils - Liming Rate	Acid Sulphate Soils - pH	Acid Sulphate Soils - Potential Acidity		Acid Sulphate Soils - Retained Acidity		Acid Sulphate Soils - Sulfur Trail
							Net Acidity (acidity units)	Net Acidity (sulfur units)	Titratable Actual Acidity (sulfur units)	Titratable Actual Acidity	Acid Neutralising Capacity	Acid Neutralising Capacity (sulfur units)	Liming Rate	pHKCl	Chromium Reducible Sulphur (acidity units)	Chromium Reducible Sulfur	HCl Extractable Sulfur	Net Acid Soluble Sulfur	KCl Extractable Sulfur
							mole H+/t	%S	%S	mole H+/t	%CaCO3	%S	kg CaCO3/t	-	mole H+/t	%w/w	%S	%S	%
						EQL	10	0.02	0.01	5	0.05	0.05	0.75		3		0.005	0.005	0.005
ASSMAC Acid Sulfate Soil Manual (1998) Table 4.4, 1000 tonnes disturbed, medium grained soil texture.							36		36							0.06			
ASSMAC Acid Sulfate Soil Manual (1998) Table 4.4, 1000 tonnes disturbed, coarse soil texture.							18		18							0.03			
NASS Guidance (2018): National acid sulfate soils identification and laboratory methods manual.																0.01			
Field ID	Map ID	Depth (m)	Date	Matrix Type	Matrix Description	Lab Report Number													
MW402_2.0	BH402	2	14 Mar 2024	Soil	Natural	1078902	50	0.08	0.004	2.4	-	-	3.8	6.2	48	0.076	-	-	-
MW407_5.5	BH407	5.5	14 Mar 2024	Soil	Natural	1078902	<10	<0.02	0.004	2.2	-	-		6.1	<3	<0.005	-	-	-
MW411_3.8	BH411	3.8	14 Mar 2024	Soil	Natural	1078902	18	0.03	0.017	11	-	-		5.3	7.8	0.013	-	-	-
MW413_7.0	BH413	7	14 Mar 2024	Soil	Natural	1078902	13	0.02	0.016	10	-	-	1.0	5.3	3.2	0.005	-	-	-
MW414_3.0	BH414	3	14 Mar 2024	Soil	Natural	1078902	<10	<0.02	0.007	4.1	-	-	<1	5.6	<3	<0.005	-	-	-
MW415_5.0	BH415	5	14 Mar 2024	Soil	Natural	1078902	29	0.05	0.041	26	-	-	2.2	4.9	3.7	0.006	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

						BTEX							TRH Fractions NEPM v1999					TRH fractions NEPM v2013							
						Benzene	Ethylbenzene	Toluene	Xylene Total	Xylene (m & p)	Xylene (o)	Sum of BTEX Detects Only	>C10 - C36 (Sum of total)	C6 - C9	C10 - C14	C15 - C28	C29-C36	C6-C10	>C10-C16	>C16-C34	>C34-C40	F1 less BTEX	F2 less Naphthalene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil																							
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																							
0-1m						**3**	**NL**	**NL**	**230**													**260**	**NL**
1-2m						**3**	**NL**	**NL**	**NL**													**370**	**NL**
2-4m						**3**	**NL**	**NL**	**NL**													**630**	**NL**
>4m						**3**	**NL**	**NL**	**NL**													**NL**	**NL**
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																		**800**	**1000**	**3500**	**10,000**		
	Depth (mbgl)			Coordinate (Approx) MGA Z56																			
Location	From	To	Date	Easting	Northing	Original Lith Code																	
BH07		0.50	1/01/1995	317282.8278	6256223.189		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
BH07		0.40	1/01/1995	317282.8278	6256223.189		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
BH07		1.00	1/01/1995	317282.8278	6256223.189		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
BH08		0.20	1/01/1995	317292.0812	6256309.532		<1	<1	<1	<1	-	-	**0**	-	<10	**1400**	**8500**	**100**	**See TPH NEPM v1999 for potential exceedances**				
BH08		1.75	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-		-	-	-	-	-					
BH08		0.50	1/01/1995	317292.0812	6256309.532		<1	<1	<1	<1	-	-	**0**	-	<10	**600**	**3700**	<100	**See TPH NEPM v1999 for potential exceedances**				
BH11		0.50	1/01/1995	317213.9542	6256376.398		<1	<1	<1	<1	-	-	**0**	-	<10	<20	**170**	<100	**See TPH NEPM v1999 for potential exceedances**				
BH11			1/01/1995	317213.9542	6256376.398		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
BH11		1.25	1/01/1995	317213.9542	6256376.398		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB07		1.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-		-	-	-	-	-					
MB07		3.50	1/01/1995	317279.5763	6256512.127		<1	<1	<1	<1	-	-	**0**	-	<10	<20	**740**	**50**	**See TPH NEPM v1999 for potential exceedances**				
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-		-	-	-	-	-					
MB07		2.50	1/01/1995	317279.5763	6256512.127		<1	<1	<1	<1	-	-	**0**	-	<10	<20	**110**	<100	**See TPH NEPM v1999 for potential exceedances**				
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-		-	-	-	-	-					
MB07		2.25	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-		-	-	-	-	-					
MB07		2.30	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-		-	-	-	-	-					
MB07		5.80	1/01/1995	317279.5763	6256512.127		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB08		0.50	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB08		1.80	1/01/1995	317261.9	6256418.9		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB08		1.20	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB08		1.25	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB08		1.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB08		2.30	1/01/1995	317261.9	6256418.9		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB08		1.50	1/01/1995	317261.9	6256418.9		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB08		1.75	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB08		2.90	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-		-	-	-	-	-					
MB09		1.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-		-	-	-	-	-					
MB09		2.00	1/01/1995	317202.7	6256342.1		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB10		0.40	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-		-	-	-	-	-					
MB10		2.30	1/01/1995	317216.9682	6256294.234		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB10		0.50	1/01/1995	317216.9682	6256294.234		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB10		2.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-		-	-	-	-	-					
MB10		3.00	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-		-	-	-	-	-					
MB10		1.20	1/01/1995	317216.9682	6256294.234		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB10		4.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-		-	-	-	-	-					
MB11		1.75	1/01/1995	317188.0076	6256189.661		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB11		4.50	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-		-	-	-	-	-					
MB11		2.90	1/01/1995	317188.0076	6256189.661		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB11		5.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-		-	-	-	-	-					
MB12		0.40	1/01/1995	317247.7431	6256132.348		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB12		0.75	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-		-	-	-	-	-					
MB12		2.50	1/01/1995	317247.7431	6256132.348		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB12		3.00	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-		-	-	-	-	-					
MB13		2.75	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-		-	-	-	-	-					
MB13		3.00	1/01/1995	317236.6246	6256190.185		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB14		0.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-		-	-	-	-	-					
MB14		4.50	1/01/1995	317336.3847	6256113.092		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB14		1.25	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-		-	-	-	-	-					
MB14		1.30	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-		-	-	-	-	-					
MB14		1.40	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-		-	-	-	-	-					
MB14		4.50	1/01/1995	317336.3847	6256113.092		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB14			1/01/1995	317336.3847	6256113.092		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB15		5.75	1/01/1995	317370.2558	6256151.79		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB15		0.75	1/01/1995	317370.2558	6256151.79		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB15		3.00	1/01/1995	317370.2558	6256151.79		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB16		2.75	1/01/1995	317387.4552	6256155.197		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB16		3.00	1/01/1995	317387.4552	6256155.197		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB16		0.50	1/01/1995	317387.4552	6256155.197		<1	<1	<1	<1	-	-	**0**	-	<10	<20	**160**	**100**	**See TPH NEPM v1999 for potential exceedances**				
MB17		0.25	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-		-	-	-	-	-					
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-		-	-	-	-	-					
MB17		1.40	1/01/1995	317436.5964	6256152.183		<1	<1	<1	<1	-	-	**0**	-	<10	<20	**130**	**60**	**See TPH NEPM v1999 for potential exceedances**				
MB17		0.30	1/01/1995	317436.5964	6256152.183		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-		-	-	-	-	-					
MB17		0.50	1/01/1995	317436.5964	6256152.183		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB17		6.75	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-		-	-	-	-	-					
MB18		0.25	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-		-	-	-	-	-					
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-		-	-	-	-	-					
MB18		6.75	1/01/1995	317445.5782	6256102.807		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB18		0.30	1/01/1995	317445.5782	6256102.807		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB18		0.50	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-		-	-	-	-	-					
MB18			1/01/1995	317445.5782	6256102.807		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-		-	-	-	-	-					
MB20		0.25	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-		-	-	-	-	-					
MB20		0.30	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-		-	-	-	-	-					
MB20		1.50	1/01/1995	317493.1	6256205.8		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB20		0.20	1/01/1995	317493.1	6256205.8		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB20		0.75	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-		-	-	-	-	-					
MB20		0.80	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-		-	-	-	-	-					
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-	-	-		-	-	-	-	-					
MB21		0.75	1/01/1995	317472	6256278.5		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB21		0.50	1/01/1995	317472	6256278.5		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB21		2.25	1/01/1995	317472	6256278.5		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB21		2.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-		-	-	-	-	-					
MB21		6.25	1/01/1995	317472	6256278.5		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB21		6.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-		-	-	-	-	-					
MB22		0.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB22		3.75	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB22			1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB22		2.00	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB22		4.25	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB22		4.30	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB22		5.25	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB22		5.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB22		4.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB22		4.30	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB22		6.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-		-	-	-	-	-					
MB23		0.30	1/01/1995	317380.3789	6256231.071		<1	<1	<1	<1	-	-	**0**	-	<10	**110**	**300**	<100	**See TPH NEPM v1999 for potential exceedances**				
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-		-	-	-	-	-					
MB23		1.50	1/01/1995	317380.3789	6256231.071		<1	<1	<1	<1	-	-	**0**	-	<10	<20	<100	<100					
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-		-	-	-	-	-					
Trench 1	0.25	0.30	1/01/1995	317280	6256528		-	-	-	-	-	-		-	-	-	-	-					
Trench 2	0.10	0.20	1/01/1995	317195	6256336		-	-	-	-	-	-		-	-	-	-	-					
Trench 2	0.10	0.40	1/01/1995	317195	6256336		-	-	-	-	-	-		-	-	-	-	-					
Trench 2		0.20	1/01/1995	317195	6256336		-	-	-	-	-	-		-	-	-	-	-					
ESB01		1.20	13/12/2005	317239.8	6256452.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB01		2.00	13/12/2005	317239.8	6256452.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB02		0.60	13/12/2005	317259.3	6256448		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB02		1.40	13/12/2005	317259.3	6256448		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB03		0.60	13/12/2005	317259.3	6256448		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB03		1.00	13/12/2005	317255	6256400.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB04		0.20	13/12/2005	317280.1	6256372.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**570**	<2	<50	**460**	**110**	**See TPH NEPM v1999 for potential exceedances**				
ESB06		0.20	13/12/2005	317220.7	6256385.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**350**	<2	<50	**230**	**120**	**See TPH NEPM v1999 for potential exceedances**				
ESB06		0.50	13/12/2005	317220.7	6256385.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB06		1.00	13/12/2005	317220.7	6256385.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**790**	<2	<50	**630**	**160**	**See TPH NEPM v1999 for potential exceedances**				
ESB06		2.50	13/12/2005	317220.7	6256385.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB07		0.50	13/12/2005	317211.6	6256356		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**220**	<2	<50	**100**	**120**	**See TPH NEPM v1999 for potential exceedances**				
ESB07		2.20	13/12/2005	317211.6	6256356		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB08		0.50	13/12/2005	317204	6256326.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB09		2.90	13/12/2005	317196.2	6256298.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB09		0.20	13/12/2005	317196.2	6256298.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**920**	<2	<50	**460**	**460**	**See TPH NEPM v1999 for potential exceedances**				
ESB09		1.20	13/12/2005	317196.2	6256298.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**120**	<2	<50	**120**	-	**See TPH NEPM v1999 for potential exceedances**				
ESB10		2.00	13/12/2005	317189.3	6256271.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**1660**	<2	<50	**1410**	**250**	**See TPH NEPM v1999 for potential exceedances**				
ESB10		1.20	13/12/2005	317189.3	6256271.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB11		0.50	13/12/2005	317183.6	6256246.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB11		2.90	13/12/2005	317183.6	6256246.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB17		0.50	13/12/2005	317214.4	6256246		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB17		2.10	13/12/2005	317214.4	6256246		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB18		1.00	13/12/2005	317217.6	6256276.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB18		2.00	13/12/2005	317217.6	6256276.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB19		0.20	13/12/2005	317220.7	6256304.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB19		2.50	13/12/2005	317220.7	6256304.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB20		0.20	13/12/2005	317229.3	6256336.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	-	<2	<50	<100	<100					
ESB20		3.20	13/12/2005	317229.3	6256336.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**70**	<2	**70**	<100	<100	**See TPH NEPM v1999 for potential exceedances**				
ESB21		0.20	15/12/2005	317256.4	6256338.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**50**	<2	**50**	<100	<100	**See TPH NEPM v1999 for potential exceedances**				
ESB21		2.70	15/12/2005	317256.4	6256338.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	**0**	**380**	<2	<50	**380**	<100	**See TPH NEPM v1999 for potential exceedances**				

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							BTEX							TRH Fractions NEPM v1999					TRH fractions NEPM v2013					
							Benzene	Ethylbenzene	Toluene	Xylene Total	Xylene (m & p)	Xylene (o)	Sum of BTEX Detects Only	+C10 - C36 (Sum of total)	C6 - C9	C10 - C14	C15 - C28	C29-C36	C6-C10	>C10-C16	>C16-C34	>C34-C40	F1 less BTEX	F2 less Naphthalene
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil																								
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																								
0-1m							3	NL	NL	230													260	NL
1-2m							3	NL	NL	NL													370	NL
2-4m							3	NL	NL	NL													630	NL
>4m							3	NL	NL	NL													NL	NL
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																			800	1000	3500	10,000		
	Depth (mbgl)			Coordinate (Approx) MGA Z56																				
Location	From	To	Date	Easting	Northing	Original Lith Code																		
ESB23		0.20	15/12/2005	317248.9	6256278		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	790	<2	<50	790	<100	See TPH NEPM v1999 for potential exceedances					
ESB23		1.70	15/12/2005	317248.9	6256278		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	610	<2	<50	440	170	See TPH NEPM v1999 for potential exceedances					
ESB25		0.70	15/12/2005	317245.2	6256243.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB25		1.00	15/12/2005	317245.2	6256243.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB27		1.00	15/12/2005	317241.4	6256211.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	420	<2	<50	260	160	See TPH NEPM v1999 for potential exceedances					
ESB27		3.50	15/12/2005	317241.4	6256211.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	120	<2	<50	120	<100	See TPH NEPM v1999 for potential exceedances					
ESB32		0.50	15/12/2005	317274.3	6256275.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB32		1.40	15/12/2005	317274.3	6256275.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB33		0.20	15/12/2005	317277.7	6256305.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB33		0.50	15/12/2005	317277.7	6256305.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB34		0.50	15/12/2005	317279.3	6256340.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	3250	<2	<50	1130	2120	See TPH NEPM v1999 for potential exceedances					
ESB34		2.20	15/12/2005	317279.3	6256340.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB35		1.00	15/12/2005	317296	6256313.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB35		4.40	15/12/2005	317296	6256313.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	530	8	80	450	<100	See TPH NEPM v1999 for potential exceedances					
ESB36		0.80	15/12/2005	317291.7	6256295.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	11,730	8	2520	8980	230	See TPH NEPM v1999 for potential exceedances					
ESB36		5.00	15/12/2005	317291.7	6256295.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	1700	4	360	1340	<100	See TPH NEPM v1999 for potential exceedances					
ESB37		0.50	15/12/2005	317308.7	6256302.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB37		3.00	15/12/2005	317308.7	6256302.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB38		2.00	15/12/2005	317328.1	6256308.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB39		0.10	15/12/2005	317306.9	6256274.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB39		1.60	16/12/2005	317306.9	6256274.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB42		0.20	19/12/2005	317289	6256133.8		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB42		0.50	19/12/2005	317289	6256133.8		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB45		0.50	19/12/2005	317344.1	6256205.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB45		1.30	19/12/2005	317344.1	6256205.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB46		0.20	19/12/2005	317347.9	6256238.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB46		0.50	19/12/2005	317347.9	6256238.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB47		0.20	19/12/2005	317351	6256270.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB47		1.40	19/12/2005	317351	6256270.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB48		0.50	19/12/2005	317358.1	6256313.8		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB48		3.10	19/12/2005	317358.1	6256313.8		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	4	<50	<100	<100	See TPH NEPM v1999 for potential exceedances					
ESB49		0.50	19/12/2005	317410.5	6256280.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB49		2.00	19/12/2005	317410.5	6256280.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB50		0.20	19/12/2005	317408.3	6256245.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB50		1.40	19/12/2005	317408.3	6256245.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB51		0.50	19/12/2005	317405.3	6256217.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB51		1.20	19/12/2005	317405.3	6256217.1		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB52		0.10	19/12/2005	317403.5	6256187.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB52		0.50	19/12/2005	317403.5	6256187.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB54		0.20	19/12/2005	317389.9	6256125.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	1190	<2	<50	800	390	See TPH NEPM v1999 for potential exceedances					
ESB54		0.50	19/12/2005	317389.9	6256125.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	14,460	<2	<50	13,300	1150	See TPH NEPM v1999 for potential exceedances					
ESB58		0.20	20/12/2005	317442.6	6256182.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB58		0.60	20/12/2005	317442.6	6256182.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB59		0.20	20/12/2005	317449.2	6256241		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB59		0.50	20/12/2005	317449.2	6256241		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB60		0.50	20/12/2005	317450.8	6256275.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB60		1.00	20/12/2005	317450.8	6256275.7		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB61		0.20	20/12/2005	317489.3	6256267.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB61		2.90	20/12/2005	317489.3	6256267.3		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB62		0.20	20/12/2005	317487.8	6256238.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	1620	<2	<50	600	1020	See TPH NEPM v1999 for potential exceedances					
ESB62		1.30	20/12/2005	317487.8	6256238.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB63		0.50	20/12/2005	317486.3	6256207.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB63		1.40	20/12/2005	317486.3	6256207.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB64		0.20	20/12/2005	317484.1	6256177.5		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB64		0.50	20/12/2005	317484.1	6256177.5		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB68		0.50	20/12/2005	317275.5	6256556.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB68		2.00	20/12/2005	317275.5	6256556.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB69		0.20	20/12/2005	317270.9	6256526.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB69		2.00	20/12/2005	317270.9	6256526.4		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB70		3.00	21/12/2005	317320.6	6256268.2		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	270	<2	<50	150	120	See TPH NEPM v1999 for potential exceedances					
ESB71		1.00	21/12/2005	317244.7	6256495		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	620	<2	<50	420	200	See TPH NEPM v1999 for potential exceedances					
ESB71		4.00	21/12/2005	317244.7	6256495		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB72		2.00	21/12/2005	317176.5	6256129.8		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB72		5.00	22/12/2005	317176.5	6256129.8		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB73		0.50	22/12/2005	317273.9	6256137.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB73		4.00	22/12/2005	317273.9	6256137.9		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB74		1.00	22/12/2005	317442.1	6256214.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB74		4.00	22/12/2005	317442.1	6256214.6		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB75		3.00	22/12/2005	317308.8	6256329.5		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB75		5.00	22/12/2005	317308.8	6256329.5		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	-	<2	<50	<100	<100						
ESB76		5.00	22/12/2005	317284.2	6256298.5		<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	0	1000	<2	240	760	<100	See TPH NEPM v1999 for potential exceedances					
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A08	0.40	0.50	26/10/2007	317329.8945	6256328.501	ALLUVIUM	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A08	3.00	3.10	26/10/2007	317329.8945	6256328.501	CLAYEY SILT	-	-	-	-	-	-		-	-	-	-	-						
A09	0.50	0.60	26/10/2007	317327.7978	6256313.824	SILTY CLAY	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A09	2.60	2.70	26/10/2007	317327.7978	6256313.824	CLAYEY SAND	-	-	-	-	-	-		-	-	-	-	-						
A09a	0.40	0.50	29/10/2007	317315.2177	6256321.097	FILL	<0.2	<0.5	<0.5	0.5	0.5	<0.5	0.5	-	<10	100	2640	1710	See TPH NEPM v1999 for potential exceedances					
A09a	0.70	0.80	29/10/2007	317315.2177	6256321.097	ALLUVIUM	-	-	-	-	-	-		-	-	-	-	-						
A10	0.15	0.25	25/10/2007	317308.1414	6256288.861	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A10	3.00	3.10	25/10/2007	317308.1414	6256288.861	SILT	-	-	-	-	-	-		-	-	-	-	-						
A11	1.00	1.20	25/10/2007	317329.1083	6256286.764	CLAY	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A11	4.50	4.80	25/10/2007	317329.1083	6256286.764	SILTY CLAY	-	-	-	-	-	-		-	-	-	-	-						
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A12	2.00	2.20	29/10/2007	317286.9124	6256272.349	CLAYEY SILT	-	-	-	-	-	-		-	-	-	-	-						
A13	0.20	0.30	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-	-	-		-	-	-	-	-						
A13	1.00	1.20	25/10/2007	317275.3806	6256292.006	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
A13	2.00	2.10	25/10/2007	317275.3806	6256292.006	SAND	-	-	-	-	-	-		-	-	-	-	-						
A14	0.40	0.50	26/10/2007	317302.1134	6256256.624	ALLUVIUM	-	-	-	-	-	-		-	-	-	-	-						
A14	2.50	2.70	26/10/2007	317302.1134	6256256.624	SILTY CLAY	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<0.2	<0.5	0.7	1.5	1.5	<0.5	2.2	-	<10	150	340	<100	See TPH NEPM v1999 for potential exceedances					
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<0.2	<0.5	0.6	1.5	1.5	<0.5	2.1	-	<10	110	320	<100	See TPH NEPM v1999 for potential exceedances					
B27	3.00	3.10	23/10/2007	317359.9034	6256134.951	CLAY	-	-	-	-	-	-		-	-	-	-	-						
B35	0.30	0.40	24/10/2007	317367.5039	6256183.83	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	390	130	See TPH NEPM v1999 for potential exceedances					
B35	4.00	4.10	24/10/2007	317367.5039	6256183.83	SAND	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	<0.2	<0.5	-	-	-	<0.5	0	-	-	-	-	<100						
B36	4.70	4.80	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-		-	-	-	-	-						
C31	0.10	0.30	22/10/2007	317394.016	6256161.919	CLAY	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
C31	4.00	4.10	22/10/2007	317394.016	6256161.919	CLAYEY SILT	-	-	-	-	-	-		-	-	-	-	-						
C32	0.10	0.20	22/10/2007	317383.278	6256145.371	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	140	<100	See TPH NEPM v1999 for potential exceedances					
C32	3.00	3.10	22/10/2007	317383.278	6256145.371	SILTY CLAY	-	-	-	-	-	-		-	-	-	-	-						
C38	0.20	0.30	23/10/2007	317407.747	6256186.389	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
C38	2.00	2.10	23/10/2007	317407.747	6256186.389	CLAYEY SILT	-	-	-	-	-	-		-	-	-	-	-						
C39	0.10	0.20	23/10/2007	317414.261	6256176.179	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-		-	-	-	-	-						
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-		-	-	-	-	-						
C40	0.30	0.40	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-		-	-	-	-	-						
C40	3.00	3.10	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-		-	-	-	-	-						
C46	2.00	2.10	24/10/2007	317424.119	6256186.565	SILTY CLAY	-	-	-	-	-	-		-	-	-	-	-						
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	<0.2	<0.5	<0.5	<1	<1	<0.5	0	-	<10	<50	<100	<100						
C46	0.40	0.60	24/10/2007	317424.119	6256186.565	CLAY	-	-	-	-	-	-		-	-	-	-	-						
D06	0.30	0.40	26/10/2007	317290.153	6256336.375	FILL	<0.2	1.2	<0.5	10.5	6.3	4.2	11.7	-	27	<50	<100	<100	See TPH NEPM v1999 for potential exceedances					
D06	2.00	2.10	26/10/2007	317290.153	6256336.375	SANDY SILT	-	-	-	-	-	-		-	-	-	-	-						
E15	3.90	4.10	26/10/2007	317190.162	6256248.355	ALLUVIUM	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
E18	0.15	0.25	25/10/2007	317402.466	6256224.413	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
E18	2.20	2.40	29/10/2007	317402.466	6256224.413	SILTY CLAY	-	-	-	-	-	-		-	-	-	-	-						
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.2	<0.5	<0.5	<1	<1	<0.5	0	-	<10	<50	<100	<100						
F05	5.80	6.00	29/10/2007	317223.786	6256389.011	SAND	-	-	-	-	-	-		-	-	-	-	-						
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
G01	4.60	4.80	26/10/2007	317263.078	6256445.231	SAND	-	-	-	-	-	-		-	-	-	-	-						
G17	0.10	0.20	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-	-	-		-	-	-	-	-						
G17	0.30	0.40	25/10/2007	317351.591	6256235.68	FILL	<0.2	<0.5	<0.5	<1	<0.5	<0.5	0	-	<10	<50	<100	<100						
G17	4.50	4.80	25/10/2007	317351.591	6256235.68	SAND	-	-	-	-	-	-		-	-	-	-	-						
G19	2.00	2.10	23/10/2007	317481.332	6256207.866	CLAY	-	-	-	-	-	-		-	-	-	-	-						
G19	4.00	4.10	23/10/2007	317481.332	6256207.866	CLAYEY SILT	-	-	-	-	-	-		-	-	-	-	-						

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

Location	Depth (mbgl) From	To	Date	Coordinate (Approx) MGA Z56 Easting	Northing	Original Lith Code	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene	Carcinogenic PAH as B(a)P TEQ
							Metals										PAH																	
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil							3000		900	3600	240,000		1500	730	6000	400,000															4000			40
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																																		
0-1m																														NL				
1-2m																														NL				
2-4m																														NL				
>4m																														NL				
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																																		
BH07		0.50	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		0.40	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		1.00	1/01/1995	317282.8278	6256223.189		6.5	19	<0.5	21	7.5	-	13	0.02	4.5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.20	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		1.75	1/01/1995	317292.0812	6256309.532		7	29	0.5	8.5	22	-	45	0.03	7.5	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.50	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		0.50	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11			1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		1.25	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		1.50	1/01/1995	317279.5763	6256512.127		8.5	190	5	33	22	-	33	0.055	63	225	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	0.09	0.08	<0.5
MB07		3.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		6.5	95	<0.5	17	19	-	26	0.045	27	120	<0.05	<0.05	<0.05	0.17	0.13	0.14	<0.05	0.09	0.17	<0.05	0.25	<0.05	<0.05	<0.05	<0.05	0.17	0.31	0.19
MB07		2.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.25	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB07		2.30	1/01/1995	317279.5763	6256512.127		5	40	1	9.5	10	-	10	0.02	4.5	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		5.80	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		0.50	1/01/1995	317261.9	6256418.9		7	130	<0.5	19	68	-	115	0.04	25	55	<0.05	<0.05	<0.05	0.13	0.14	0.16	0.13	0.08	0.13	<0.05	0.16	<0.05	0.08	<0.05	1.28	0.1	0.17	0.16
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.20	1/01/1995	317261.9	6256418.9		7	190	<0.5	49	48	-	85	0.05	105	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.25	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	0.14	0.14	0.15	0.11	0.08	0.14	<0.05	0.2	<0.05	0.07	<0.05	1.45	0.2	0.22	0.17
MB08		1.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		2.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.50	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.75	1/01/1995	317261.9	6256418.9		6	66	<0.5	10	8.5	-	18	0.03	15	23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		2.90	1/01/1995	317261.9	6256418.9		5.5	62	2	10	13	-	5.5	0.01	4.5	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		1.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		2.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.40	1/01/1995	317216.9682	6256294.234		7.5	100	<0.5	10	21	5100	220	0.025	32	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.30	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.50	1/01/1995	317216.9682	6256294.234		6	190	3.5	8.5	15	5400	12	0.015	45	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		3.00	1/01/1995	317216.9682	6256294.234		4	175	1.5	30	15	6000	20	0.03	50	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		1.20	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		4.50	1/01/1995	317216.9682	6256294.234		5	95	0.5	1.5	15	15,000	2.5	0.01	27	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		1.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		4.50	1/01/1995	317188.0076	6256189.661		5	89	<0.5	10	12	-	2	0.02	8	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		2.90	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		5.75	1/01/1995	317188.0076	6256189.661		5.5	90	<0.5	10	18	-	1	0.025	10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.40	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.75	1/01/1995	317247.7431	6256132.348		4.5	68	<0.5	12	10	-	1.5	0.01	5.5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		2.50	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		3.00	1/01/1995	317247.7431	6256132.348		5.5	10	<0.5	7.5	3.5	-	9.5	0.01	1.5	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		2.75	1/01/1995	317236.6246	6256190.185		5	110	<0.5	2	2.5	-	1	0.01	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		3.00	1/01/1995	317236.6246	6256190.185		5.5	140	<0.5	3	4.5	-	0.5	0.041	1.5	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		0.50	1/01/1995	317336.3847	6256113.092		6	20	<0.5	15	10	-	29	0.015	4.5	90	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.25	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB14		1.30	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.40	1/01/1995	317336.3847	6256113.092		5	20	<0.5	19	12	-	15	0.01	9.5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14			1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		5.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		0.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		3.00	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		2.75	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		3.00	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		0.50	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.25	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB17		0.30	1/01/1995	317436.5964	6256152.183		8	120	<0.5	19	62	-	11	0.01	10	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		1.40	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		4.5	42	<0.5	18	26	-	21	0.01	21	26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		6.75	1/01/1995	317436.5964	6256152.183		6	45	<0.5	25	20	-	10	0.02	6	35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB18		0.25	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	0.1	0.37	0.23	0.39	0.17	0.15	0.51	<0.05	0.66	<0.05	<0.05	0.08	4.1	0.86	0.58	0.42
MB18		0.30	1/01/1995	317445.5782	6256102.807		6	155	<0.5	26	15	-	23	0.02	3.5	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		6.75	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.50	1/01/1995	317445.5782	6256102.807		5.5	44	<0.5	49	18	-	23	0.015	1.5	18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB18			1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		5.5	76	<0.5	22	47	-	23	0.01	26	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.25	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB20		0.30	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		1.50	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.75	1/01/1995	317493.1	6256205.8		4.5	27	<0.5	25	20	-	24	0.015	30	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB20		0.80	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		7	26	<0.5	10	19	-	15	0.015	4.5	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB21		0.75	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		2.25	1/01/1995	317472	6256278.5		7	48	<0.5	7.5	17	-	17	0.01	1.5	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB21		2.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		6.25	1/01/1995	317472	6256278.5		4.5	10	<0.5	6	6.5	-	4	0.02	0.5	9.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB21		6.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		0.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		3.75	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22			1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		2.00	1/01/1995	317354.6944	6256321.49		6	90	<0.5	16	32	-	16	0.04	29	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05
MB22		4.30	1/01/1995	317354.6944	6256321.49		5	9	<0.5	8	8.5	-	15	0.02	2.5	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.25	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	0.08	0.09	0.11	0.09	<0.05	0.09	<0.05	<0.05	<0.05	0.06	<0.05	0.52	<0.05	<0.05	0.10
MB22		4.30	1/01/1995	317354.6944	6256321.49		5.5	35	<0.5	8	9.5	-	9	0.015	2.5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		5.25	1/01/1995	317354.6944	6256321.49		4.5	15	<0.5	4.5	7.5	-	3.5	0.01	1	6.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB22		5.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0	<0.05	<0.05	<0.5
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		6.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		10	24	<0.5	15	14	-	33	0.02	8.5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		3	19	<0.5	9.5	3.5	-	10	0.025	5.5	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 1	0.25	0.30	1/01/1995	317280	6256528		6.5	26	<0.5	14	13	-	29	0.035	4.5	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	0.12	<0.05	0.1	<0.05	<0.05	0.12	<0.05	0.18	<0.05	<0.05	<0.05	1.1	0.42	0.16	0.12
Trench 2	0.10	0.40	1/01/1995	317195	6256336		14	130	5.5	18	42	-	55	0.0355	7	3020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2		0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	0.16	0.08	0.12	<0.05	<0.05	0.18	<0.05	0.25	<0.05	<0.05	<0.05	1.54	0.54	0.21	0.17
ESB01		1.20	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB01		2.00	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB02		0.60	13/12/2005	317259.3	6256448		12	-	12	56	44	-	161	<0.1	61	122	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB02		1.40	13/12/2005	317259.3	6256448		<5	-	<1	6	7	-	24	<0.1	2	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB03		0.60	13/12/2005	317259.3	6256448		<5	-	<1	8	60	-	<5	<0.1	82	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB03		1.00	13/12/2005	317255	6256400.4		<5	-	<1	8	8	-	24	<0.1	3	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB04		0.20	13/12/2005	317280.1	6256372.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB06		0.20	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB06		0.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB06		1.00	13/12/2005	317220.7	6256385.3		6	-	5	48	20	-	66	<0.1	58	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB06		2.50	13/12/2005	317220.7	6256385.3		<5	-	<1	7	7	-	9	<0.1	<2	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB07		0.50	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB07		2.20	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB08		0.50	13/12/2005	317204	6256326.2		<5	-	<1	10	7	-	13	<0.1	3	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB09		2.90	13/12/2005	317196.2	6256298.2		8	-	<1	11	12	-	6	<0.1	<2	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB09		0.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB09		1.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB10		2.00	13/12/2005	317189.3	6256271.7		7	-	19	63	734	-	77	<0.1	52	56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB10		1.20	13/12/2005	317189.3	6256271.7		6	-	<1	12	9	-	10	<0.1	3	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB11		0.50	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	1.1	<0.5	0.5	<0.5
ESB11		2.90	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB17		0.50	13/12/2005	317214.4	6256246		<5	-	<1	27	14	-	11	<0.1	26	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB17		2.10	13/12/2005	317214.4	6256246		<5	-	<1	12	5	-	<5	<0.1	14	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB18		1.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB18		2.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB19		0.20	13/12/2005	317220.7	6256304.9		<5	-	<1	34	20	-	80	<0.1	30	62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB19		2.50	13/12/2005	317220.7	6256304.9		<5	-	<1	68	32	-	<5	0.4	74	13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ESB20		0.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB20		3.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB21		0.20	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB21		2.70	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

	Depth (mbgl)			Coordinate (Approx) MGA Z56			Metals										PAH																	
Location	From	To	Date	Easting	Northing	Original Lith Code	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene	Carcinogenic PAH as B(a)P TEQ
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil							**3000**		**900**	**3600**	**240,000**		**1500**	**730**	**6000**	**400,000**															**4000**			**40**
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																																		
0-1m																														**NL**				
1-2m																														**NL**				
2-4m																														**NL**				
>4m																														**NL**				
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																																		
ESB23		0.20	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB23		1.70	15/12/2005	317248.9	6256278		<5	-	<1	2	<5	-	<5	<0.1	<2	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB25		0.70	15/12/2005	317245.2	6256243.3		8	-	<1	54	24	-	12	<0.1	128	62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB25		1.00	15/12/2005	317245.2	6256243.3		<5	-	<1	8	6	-	10	<0.1	2	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB27		1.00	15/12/2005	317241.4	6256211.1		<5	-	1	13	27	-	11	<0.1	25	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB27		3.50	15/12/2005	317241.4	6256211.1		<5	-	2	16	20	-	11	<0.1	27	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB32		0.50	15/12/2005	317274.3	6256275.6		<5	-	<1	14	6	-	11	<0.1	3	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB32		1.40	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB33		0.20	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB33		0.50	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB34		0.50	15/12/2005	317279.3	6256340.3		<5	-	2	34	42	-	428	0.1	13	1040	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB34		2.20	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB35		1.00	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB35		4.40	15/12/2005	317296	6256313.9		<5	-	<1	8	9	-	10	<0.1	<2	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB36		0.80	15/12/2005	317291.7	6256295.1		<5	-	<1	11	10	-	10	<0.1	4	13	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	15.2	<0.5	7.4	31	<0.5	<0.5	<0.5
ESB36		5.00	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	2.7	1.9	<0.5	<0.5
ESB37		0.50	15/12/2005	317308.7	6256302.7		<5	-	<1	2	<5	-	<5	<0.1	<2	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB37		3.00	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB38		2.00	15/12/2005	317328.1	6256308.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB39		0.10	15/12/2005	317306.9	6256274.7		<5	-	<1	11	<5	-	16	<0.1	2	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB39		1.60	16/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB42		0.20	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB42		0.50	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB45		0.50	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB45		1.30	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB46		0.20	19/12/2005	317347.9	6256238.6		<5	-	7	85	13	-	339	<0.1	79	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB46		0.50	19/12/2005	317347.9	6256238.6		7	-	<1	24	8	-	9	<0.1	<2	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB47		0.20	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB47		1.40	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB48		0.50	19/12/2005	317358.1	6256313.8		<5	-	<1	10	11	-	7	<0.1	9	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB48		3.10	19/12/2005	317358.1	6256313.8		<5	-	<1	14	30	-	8	<0.1	19	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB49		0.50	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB49		2.00	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB50		0.20	19/12/2005	317408.3	6256245.2		<5	-	<1	11	12	-	9	<0.1	<2	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB50		1.40	19/12/2005	317408.3	6256245.2		<5	-	<1	9	10	-	6	<0.1	3	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB51		0.50	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB51		1.20	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB52		0.10	19/12/2005	317403.5	6256187.6		<5	-	<1	20	19	-	7	<0.1	20	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB52		0.50	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB54		0.20	19/12/2005	317389.9	6256125.4		6	-	<1	21	18	-	37	0.2	14	144	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB54		0.50	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB58		0.20	20/12/2005	317442.6	6256182.3		<5	-	<1	15	40	-	7	<0.1	42	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB58		0.60	20/12/2005	317442.6	6256182.3		6	-	<1	21	<5	-	14	<0.1	5	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB59		0.20	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB59		0.50	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB60		0.50	20/12/2005	317450.8	6256275.7		6	-	<1	16	32	-	41	<0.1	17	72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB60		1.00	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB61		0.20	20/12/2005	317489.3	6256267.3		<5	-	<1	19	<5	-	15	<0.1	2	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB61		2.90	20/12/2005	317489.3	6256267.3		<5	-	<1	9	12	-	9	<0.1	<2	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB62		0.20	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB62		1.30	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB63		0.50	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB63		1.40	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB64		0.20	20/12/2005	317484.1	6256177.5		7	-	<1	24	11	-	11	<0.1	<2	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB64		0.50	20/12/2005	317484.1	6256177.5		6	-	<1	19	14	-	12	<0.1	<2	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB68		0.50	20/12/2005	317275.5	6256556.9		<5	-	<1	27	19	-	108	<0.1	43	172	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB68		2.00	20/12/2005	317275.5	6256556.9		<5	-	<1	11	8	-	14	<0.1	7	73	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB69		0.20	20/12/2005	317270.9	6256526.4		<5	-	<1	4	109	-	<5	<0.1	43	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB69		2.00	20/12/2005	317270.9	6256526.4		<5	-	110	39	35	-	30	<0.1	61	151	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB70		3.00	21/12/2005	317320.6	6256268.2		<5	-	<1	8	<5	-	8	<0.1	2	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB71		1.00	21/12/2005	317244.7	6256495		5	-	<1	46	22	-	769	<0.1	54	279	<0.5	0.8	2.7	3.4	2.4	1.8	1.8	2.7	3.2	<0.5	8.3	<0.5	1.5	<0.5	42.2	5.1	8.5	4.38
ESB71		4.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB72		2.00	21/12/2005	317176.5	6256129.8		6	-	<1	11	11	-	10	<0.1	4	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB72		5.00	22/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB73		0.50	22/12/2005	317273.9	6256137.9		<5	-	<1	14	9	-	20	<0.1	4	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB73		4.00	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB74		1.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB74		4.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB75		3.00	22/12/2005	317308.8	6256329.5		<5	-	<1	16	13	-	14	<0.1	6	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB75		5.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESB76		5.00	22/12/2005	317284.2	6256298.5		-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	0.6
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	6	-	1	36	20	-	48	<0.1	114	193	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	6	-	1	37	28	-	42	<0.1	80	202	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A08	0.40	0.50	26/10/2007	317329.8945	6256328.501	ALLUVIUM	<5	-	<1	14	<5	-	12	<0.1	8	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A08	3.00	3.10	26/10/2007	317329.8945	6256328.501	CLAYEY SILT	<5	-	<1	7	14	-	<2	<0.1	9	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09	0.50	0.60	26/10/2007	317327.7978	6256313.824	SILTY CLAY	<5	-	<1	12	11	-	10	0.1	11	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A09	2.60	2.70	26/10/2007	317327.7978	6256313.824	CLAYEY SAND	<5	-	<1	6	<5	-	<2	<0.1	<5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09a	0.40	0.50	29/10/2007	317315.2177	6256321.097	FILL	5	-	<1	6	16	-	15	<0.1	18	24	2.4	2	35.8	46	50.7	52.1	27	11.2	40.7	<0.5	134	4.2	23.6	4.6	727.3	145	148	58.807
A09a	0.70	0.80	29/10/2007	317315.2177	6256321.097	ALLUVIUM	<5	-	<1	17	9	-	6	<0.1	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A10	0.15	0.25	25/10/2007	317308.1414	6256288.861	FILL	<5	-	<1	16	10	-	11	<0.1	12	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A10	3.00	3.10	25/10/2007	317308.1414	6256288.861	SILT	<5	-	<1	9	12	-	<2	<0.1	10	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A11	1.00	1.20	25/10/2007	317329.1083	6256286.764	CLAY	5	-	<1	21	10	-	3	<0.1	15	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A11	4.50	4.80	25/10/2007	317329.1083	6256286.764	SILTY CLAY	<5	-	<1	<2	<5	-	<2	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<5	-	<1	14	5	-	3	<0.1	15	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<5	-	<1	12	10	-	3	<0.1	18	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A12	2.00	2.20	29/10/2007	317286.9124	6256272.349	CLAYEY SILT	8	-	<1	15	<5	-	<2	<0.1	8	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	0.20	0.30	25/10/2007	317275.3806	6256292.006	FILL	<5	-	<1	6	<5	-	3	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	1.00	1.20	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A13	2.00	2.10	25/10/2007	317275.3806	6256292.006	SAND	<5	-	<1	2	<5	-	<2	<0.1	<5	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	0.40	0.50	26/10/2007	317302.1134	6256256.624	ALLUVIUM	<5	-	<1	16	6	-	4	<0.1	17	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	2.50	2.70	26/10/2007	317302.1134	6256256.624	SILTY CLAY	8	-	<1	18	20	-	2	<0.1	16	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<5	-	1	15	38	-	18	<0.1	56	91	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	1.5	<0.5	<0.5	<0.5
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<5	-	<1	12	32	-	15	<0.1	31	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B27	3.00	3.10	23/10/2007	317359.9034	6256134.951	CLAY	6	-	<1	22	22	-	8	<0.1	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B35	0.30	0.40	24/10/2007	317367.5039	6256183.83	FILL	10	-	1490	24	25	-	8	<0.1	270	78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B35	4.00	4.10	24/10/2007	317367.5039	6256183.83	SAND	<5	-	<1	10	99	-	80	0.3	<5	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	<5	-	<1	15	6	-	4	<0.1	14	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	<5	-	<1	14	8	-	4	<0.1	17	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	3	-	<0.1	-	10	-	2	0.05	17	7	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B36	4.70	4.80	23/10/2007	317389.126	6256178.719	CLAY	<5	-	<1	12	10	-	4	<0.1	13	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C31	0.10	0.30	22/10/2007	317394.016	6256161.919	CLAY	8	-	<1	11	<5	-	2	<0.1	15	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C31	4.00	4.10	22/10/2007	317394.016	6256161.919	CLAYEY SILT	<5	-	<1	7	6	-	<2	<0.1	11	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	0.10	0.20	22/10/2007	317383.278	6256145.371	FILL	<5	-	<1	5	5	-	4	<0.1	15	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C32	3.00	3.10	22/10/2007	317383.278	6256145.371	SILTY CLAY	6	-	<1	13	9	-	2	<0.1	14	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C38	0.20	0.30	23/10/2007	317407.747	6256186.389	FILL	<5	-	<1	11	17	-	20	<0.1	<5	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C38	2.00	2.10	23/10/2007	317407.747	6256186.389	CLAYEY SILT	-	-	-	6	-	-	<2	-	8	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	0.10	0.20	23/10/2007	317414.261	6256176.179	FILL	<5	-	<1	10	24	-	14	0.8	<5	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	<5	-	<1	14	7	-	3	<0.1	10	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	<5	-	<1	13	8	-	3	<0.1	10	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	0.30	0.40	22/10/2007	317433.625	6256174.594	CLAY	6	-	<1	20	8	-	4	<0.1	15	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	3.00	3.10	22/10/2007	317433.625	6256174.594	CLAY	5	-	<1	9	20	-	2	0.1	14	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	2.00	2.10	24/10/2007	317424.119	6256186.565	SILTY CLAY	<5	-	<1	8	14	-	<2	<0.1	16	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	6	-	<1	5	6	-	<2	<0.1	<5	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	<1	-	0.2	11	85	-	68	<0.05	2	43	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C46	0.40	0.60	24/10/2007	317424.119	6256186.565	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D06	0.30	0.40	26/10/2007	317290.153	6256336.375	FILL	6	-	<1	24	13	-	17	0.8	45	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	1.1	0.6	<0.5	<0.5
D06	2.00	2.10	26/10/2007	317290.153	6256336.375	SANDY SILT	7	-	<1	12	12	-	5	<0.1	22	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E15	3.90	4.10	26/10/2007	317190.162	6256248.355	ALLUVIUM	7	-	<1	14	13	-	<2	<0.1	13	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
E18	0.15	0.25	25/10/2007	317402.466	6256224.413	FILL	<5	-	<1	9	13	-	6	<0.1	9	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
E18	2.20	2.40	29/10/2007	317402.466	6256224.413	SILTY CLAY	13	-	<1	10	16	-	6	<0.1	18	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	12	-	<1	16	12	-	13	<0.1	32	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	12	-	<1	12	10	-	4	<0.1	16	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	15	-	0	14	10	-	8	<0.05	44	13	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F05	5.80	6.00	29/10/2007	317223.786	6256389.011	SAND	<5	-	<1	4	5	-	3	<0.1	<5	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<5	-	<1	4	<5	-	<2	<0.1	9	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	6	-	<1	4	<5	-	<2	<0.1	11	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
G01	4.60	4.80	26/10/2007	317263.078	6256445.231	SAND	21	-	<1	10	24	-	16	0.2	35	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	0.10	0.20	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	0.30	0.40	25/10/2007	317351.591	6256235.68	FILL	<5	-	<1	25	15	-	26	0.6	37	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
G17	4.50	4.80	25/10/2007	317351.591	6256235.68	SAND	<5	-	<1	7	6	-	<2	<0.1	10	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G19	2.00	2.10	23/10/2007	317481.332	6256207.866	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
G19	4.00	4.10	23/10/2007	317481.332	6256207.866	CLAYEY SILT	<5	-	<1	8	9	-	2	<0.1	6	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Chlorinated Hydrocarbons																PCB	Phenols									
							Hexachlorobutadiene	Hexachlorocyclopentadiene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2-dichlorobenzene	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4-trichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobenzene	Hexachloroethane	Pentachlorobenzene	2,4,6-trichlorophenol	2-chlorophenol	Pentachlorophenol	PCBs (Sum of total)	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol Total	Phenol
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil																		**15**				**130**	**1**								**25,000**	**240,000**
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																																	
0-1m																																	
1-2m																																	
2-4m																																	
>4m																																	
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																																	
	Depth (mbgl)			**Coordinate (Approx) MGA Z56**																														
Location	**From**	**To**	**Date**	**Easting**	**Northing**	**Original Lith Code**																											
BH07		0.50	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		0.40	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		1.00	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.20	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		1.75	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.50	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		0.50	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11			1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		1.25	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		1.50	1/01/1995	317279.5763	6256512.127		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	**0.1**
MB07		3.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	**1.7**
MB07		2.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	**0.1**
MB07		2.25	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.30	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB07		5.80	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		0.50	1/01/1995	317261.9	6256418.9		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.20	1/01/1995	317261.9	6256418.9		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB08		1.25	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB08		2.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.50	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.75	1/01/1995	317261.9	6256418.9		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB08		2.90	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		1.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB09		2.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.40	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.30	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		3.00	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		1.20	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		4.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		1.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		4.50	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		2.90	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		5.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.40	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.75	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB12		2.50	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		3.00	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB13		2.75	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		3.00	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		0.50	1/01/1995	317336.3847	6256113.092		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	**0.3**	<0.1	**0.2**	**0.2**	<0.2	<0.2	<0.3	**0.6**	**1**	**0.5**	**0.4**
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.25	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.30	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB14		1.40	1/01/1995	317336.3847	6256113.092		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14			1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		5.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		0.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		3.00	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		2.75	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		3.00	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		0.50	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.25	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		1.40	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		6.75	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.25	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB18		6.75	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.50	1/01/1995	317445.5782	6256102.807		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB18			1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB20		0.25	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.30	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB20		1.50	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.75	1/01/1995	317493.1	6256205.8		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB20		0.80	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	**0.3**	**0.2**	**0.7**	<0.1	**0.4**	**0.4**	<0.2	<0.2	<0.3	**1**	**2.8**	**0.8**	**0.5**
MB21		0.75	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		2.25	1/01/1995	317472	6256278.5		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0.1**	<0.1	**0.2**	-	**0.1**	**0.2**	<0.2	<0.2	<0.3	**0.4**	**0.8**	**0.3**	**0.2**
MB21		2.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB21		6.25	1/01/1995	317472	6256278.5		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.5	-	<0.1	**0.1**	<0.2	<0.2	<0.3	**0.2**	<0.3	**0.2**	**0.2**
MB21		6.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB22		0.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB22		3.75	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	<0.1
MB22			1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		2.00	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	**0.1**	<0.3	<0.2	**0.1**
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.25	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	**0.1**
MB22		5.25	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	**0.2**
MB22		5.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB22		4.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<1	<1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.3	<0.2	**0.1**
MB22		6.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 1	0.25	0.30	1/01/1995	317280	6256528		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.40	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2		0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB01		1.20	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB01		2.00	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB02		0.60	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB02		1.40	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB03		0.60	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB03		1.00	13/12/2005	317255	6256400.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB04		0.20	13/12/2005	317280.1	6256372.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		0.20	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		0.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		1.00	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		2.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB07		0.50	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB07		2.20	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB08		0.50	13/12/2005	317204	6256326.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		2.90	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		0.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		1.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB10		2.00	13/12/2005	317189.3	6256271.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB10		1.20	13/12/2005	317189.3	6256271.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB11		0.50	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB11		2.90	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB17		0.50	13/12/2005	317214.4	6256246		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB17		2.10	13/12/2005	317214.4	6256246		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB18		1.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB18		2.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB19		0.20	13/12/2005	317220.7	6256304.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB19		2.50	13/12/2005	317220.7	6256304.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB20		0.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB20		3.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB21		0.20	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB21		2.70	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

								Chlorinated Hydrocarbons														PCB	Phenols									
								Hexachlorobutadiene	Hexachlorocyclopentadiene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2-dichlorobenzene	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4-trichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobenzene	Hexachloroethane	Pentachlorobenzene	2,4,6-trichlorophenol	2-chlorophenol	Pentachlorophenol	PCBs (Sum of total)	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol Total	Phenol
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil																			**15**					**130**	**1**							**25,000**	**240,000**
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																																	
0-1m																																	
1-2m																																	
2-4m																																	
>4m																																	
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																																	
	Depth (mbgl)			**Coordinate (Approx) MGA Z56**																														
Location	**From**	**To**	**Date**	**Easting**	**Northing**	**Original Lith Code**																											
ESB23		0.20	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB23		1.70	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB25		0.70	15/12/2005	317245.2	6256243.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB25		1.00	15/12/2005	317245.2	6256243.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB27		1.00	15/12/2005	317241.4	6256211.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB27		3.50	15/12/2005	317241.4	6256211.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB32		0.50	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB32		1.40	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB33		0.20	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB33		0.50	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB34		0.50	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB34		2.20	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB35		1.00	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB35		4.40	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB36		0.80	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB36		5.00	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB37		0.50	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB37		3.00	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB38		2.00	15/12/2005	317328.1	6256308.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB39		0.10	15/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB39		1.60	16/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB42		0.20	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB42		0.50	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB45		0.50	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB45		1.30	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB46		0.20	19/12/2005	317347.9	6256238.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB46		0.50	19/12/2005	317347.9	6256238.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB47		0.20	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB47		1.40	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB48		0.50	19/12/2005	317358.1	6256313.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB48		3.10	19/12/2005	317358.1	6256313.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB49		0.50	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB49		2.00	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB50		0.20	19/12/2005	317408.3	6256245.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB50		1.40	19/12/2005	317408.3	6256245.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB51		0.50	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB51		1.20	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB52		0.10	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB52		0.50	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB54		0.20	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB54		0.50	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB58		0.20	20/12/2005	317442.6	6256182.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB58		0.60	20/12/2005	317442.6	6256182.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB59		0.20	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB59		0.50	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB60		0.50	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB60		1.00	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB61		0.20	20/12/2005	317489.3	6256267.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB61		2.90	20/12/2005	317489.3	6256267.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB62		0.20	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB62		1.30	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB63		0.50	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB63		1.40	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB64		0.20	20/12/2005	317484.1	6256177.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB64		0.50	20/12/2005	317484.1	6256177.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB68		0.50	20/12/2005	317275.5	6256556.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB68		2.00	20/12/2005	317275.5	6256556.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB69		0.20	20/12/2005	317270.9	6256526.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB69		2.00	20/12/2005	317270.9	6256526.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB70		3.00	21/12/2005	317320.6	6256268.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB71		1.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB71		4.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB72		2.00	21/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB72		5.00	22/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB73		0.50	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB73		4.00	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB74		1.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB74		4.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB75		3.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB75		5.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB76		5.00	22/12/2005	317284.2	6256298.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A08	0.40	0.50	26/10/2007	317329.8945	6256328.501	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A08	3.00	3.10	26/10/2007	317329.8945	6256328.501	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09	0.50	0.60	26/10/2007	317327.7978	6256313.824	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A09	2.60	2.70	26/10/2007	317327.7978	6256313.824	CLAYEY SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09a	0.40	0.50	29/10/2007	317315.2177	6256321.097	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A09a	0.70	0.80	29/10/2007	317315.2177	6256321.097	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A10	0.15	0.25	25/10/2007	317308.1414	6256288.861	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A10	3.00	3.10	25/10/2007	317308.1414	6256288.861	SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A11	1.00	1.20	25/10/2007	317329.1083	6256286.764	CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A11	4.50	4.80	25/10/2007	317329.1083	6256286.764	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A12	2.00	2.20	29/10/2007	317286.9124	6256272.349	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	0.20	0.30	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
A13	1.00	1.20	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	2.00	2.10	25/10/2007	317275.3806	6256292.006	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	0.40	0.50	26/10/2007	317302.1134	6256256.624	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	2.50	2.70	26/10/2007	317302.1134	6256256.624	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
B27	3.00	3.10	23/10/2007	317359.9034	6256134.951	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B35	0.30	0.40	24/10/2007	317367.5039	6256183.83	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
B35	4.00	4.10	24/10/2007	317367.5039	6256183.83	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-
B36	4.70	4.80	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C31	0.10	0.30	22/10/2007	317394.016	6256161.919	CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
C31	4.00	4.10	22/10/2007	317394.016	6256161.919	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	0.10	0.20	22/10/2007	317383.278	6256145.371	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
C32	3.00	3.10	22/10/2007	317383.278	6256145.371	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C38	0.20	0.30	23/10/2007	317407.747	6256186.389	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
C38	2.00	2.10	23/10/2007	317407.747	6256186.389	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	0.10	0.20	23/10/2007	317414.261	6256176.179	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	0.30	0.40	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	3.00	3.10	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	2.00	2.10	24/10/2007	317424.119	6256186.565	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.40	0.60	24/10/2007	317424.119	6256186.565	CLAY	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
D06	0.30	0.40	26/10/2007	317290.153	6256336.375	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
D06	2.00	2.10	26/10/2007	317290.153	6256336.375	SANDY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E15	3.90	4.10	26/10/2007	317190.162	6256248.355	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
E18	0.15	0.25	25/10/2007	317402.466	6256224.413	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
E18	2.20	2.40	29/10/2007	317402.466	6256224.413	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-
F05	5.80	6.00	29/10/2007	317223.786	6256389.011	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
G01	4.60	4.80	26/10/2007	317263.078	6256445.231	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	0.10	0.20	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
G17	0.30	0.40	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	4.50	4.80	25/10/2007	317351.591	6256235.68	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G19	2.00	2.10	23/10/2007	317481.332	6256207.866	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G19	4.00	4.10	23/10/2007	317481.332	6256207.866	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Organochlorine Pesticides																							
							4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis + trans)	Chlordane (cis)	Chlordane (trans)	d-BHC	DDE	DDT	DDD	Dieldrin	Endosulfan	Endosulfan II	Endosulfan sulphate	Endrin	Endrin ketone	Endosulfan I	Endrin aldehyde	g-BHC (Lindane)	Heptachlor epoxide	Heptachlor	Methoxychlor	Oxychlordane
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil									**45**		**530**					**3600**		**45**	**2000**			**100**						**50**	**2500**	
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																														
0-1m																														
1-2m																														
2-4m																														
>4m																														
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																														
	Depth (mbgl)			**Coordinate (Approx) MGA Z56**																										
Location	**From**	**To**	**Date**	**Easting**	**Northing**	**Original Lith Code**																								
BH07		0.50	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		0.40	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		1.00	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.20	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		1.75	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.50	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		0.50	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11			1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		1.25	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		1.50	1/01/1995	317279.5763	6256512.127		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB07		3.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB07		2.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.25	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.30	1/01/1995	317279.5763	6256512.127		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB07		5.80	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		0.50	1/01/1995	317261.9	6256418.9		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.20	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.25	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.30	1/01/1995	317261.9	6256418.9		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB08		1.50	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.75	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.80	1/01/1995	317261.9	6256418.9		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB08		2.90	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		1.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		2.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.40	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.30	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		3.00	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		1.20	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		4.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		1.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		4.50	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		2.90	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		5.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.40	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.75	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		2.50	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		3.00	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		2.75	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		3.00	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		0.50	1/01/1995	317336.3847	6256113.092		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.25	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.30	1/01/1995	317336.3847	6256113.092		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB14		1.40	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14			1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		5.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		0.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		3.00	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		2.75	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		3.00	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		0.50	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.25	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		1.40	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		6.75	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.25	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB18		6.75	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.50	1/01/1995	317445.5782	6256102.807		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB18			1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.25	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.30	1/01/1995	317493.1	6256205.8		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB20		1.50	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.75	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.80	1/01/1995	317493.1	6256205.8		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB21		0.50	1/01/1995	317472	6256278.5		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB21		0.75	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		2.25	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		2.30	1/01/1995	317472	6256278.5		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB21		6.25	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		6.30	1/01/1995	317472	6256278.5		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB22		0.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		3.75	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22			1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		2.00	1/01/1995	317354.6944	6256321.49		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.25	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB22		5.25	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		5.30	1/01/1995	317354.6944	6256321.49		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB22		4.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		6.50	1/01/1995	317354.6944	6256321.49		-	<0.01	<0.01	<0.01	<0.05	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 1	0.25	0.30	1/01/1995	317280	6256528		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.40	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2		0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB01		1.20	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB01		2.00	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB02		0.60	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB02		1.40	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB03		0.60	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB03		1.00	13/12/2005	317255	6256400.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB04		0.20	13/12/2005	317280.1	6256372.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		0.20	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		0.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		1.00	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		2.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB07		0.50	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB07		2.20	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB08		0.50	13/12/2005	317204	6256326.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		2.90	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		0.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		1.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB10		2.00	13/12/2005	317189.3	6256271.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB10		1.20	13/12/2005	317189.3	6256271.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB11		0.50	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB11		2.90	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB17		0.50	13/12/2005	317214.4	6256246		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB17		2.10	13/12/2005	317214.4	6256246		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB18		1.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB18		2.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB19		0.20	13/12/2005	317220.7	6256304.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB19		2.50	13/12/2005	317220.7	6256304.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB20		0.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB20		3.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB21		0.20	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB21		2.70	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Organochlorine Pesticides																							
							4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis + trans)	Chlordane (cis)	Chlordane (trans)	d-BHC	DDE	DDT	DDD	Dieldrin	Endosulfan	Endosulfan II	Endosulfan sulphate	Endrin	Endrin ketone	Endosulfan I	Endrin aldehyde	g-BHC (Lindane)	Heptachlor epoxide	Heptachlor	Methoxychlor	Oxychlordane
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil									**45**		**530**					**3600**		**45**	**2000**			**100**						**50**	**2500**	
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																														
0-1m																														
1-2m																														
2-4m																														
>4m																														
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																														
	Depth (mbgl)			**Coordinate (Approx) MGA Z56**																										
Location	**From**	**To**	**Date**	**Easting**	**Northing**	**Original Lith Code**																								
ESB23		0.20	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB23		1.70	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB25		0.70	15/12/2005	317245.2	6256243.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB25		1.00	15/12/2005	317245.2	6256243.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB27		1.00	15/12/2005	317241.4	6256211.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB27		3.50	15/12/2005	317241.4	6256211.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB32		0.50	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB32		1.40	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB33		0.20	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB33		0.50	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB34		0.50	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB34		2.20	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB35		1.00	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB35		4.40	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB36		0.80	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB36		5.00	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB37		0.50	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB37		3.00	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB38		2.00	15/12/2005	317328.1	6256308.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB39		0.10	15/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB39		1.60	16/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB42		0.20	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB42		0.50	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB45		0.50	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB45		1.30	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB46		0.20	19/12/2005	317347.9	6256238.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB46		0.50	19/12/2005	317347.9	6256238.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB47		0.20	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB47		1.40	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB48		0.50	19/12/2005	317358.1	6256313.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB48		3.10	19/12/2005	317358.1	6256313.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB49		0.50	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB49		2.00	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB50		0.20	19/12/2005	317408.3	6256245.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB50		1.40	19/12/2005	317408.3	6256245.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB51		0.50	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB51		1.20	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB52		0.10	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB52		0.50	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB54		0.20	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB54		0.50	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB58		0.20	20/12/2005	317442.6	6256182.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB58		0.60	20/12/2005	317442.6	6256182.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB59		0.20	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB59		0.50	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB60		0.50	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB60		1.00	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB61		0.20	20/12/2005	317489.3	6256267.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB61		2.90	20/12/2005	317489.3	6256267.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB62		0.20	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB62		1.30	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB63		0.50	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB63		1.40	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB64		0.20	20/12/2005	317484.1	6256177.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB64		0.50	20/12/2005	317484.1	6256177.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB68		0.50	20/12/2005	317275.5	6256556.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB68		2.00	20/12/2005	317275.5	6256556.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB69		0.20	20/12/2005	317270.9	6256526.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB69		2.00	20/12/2005	317270.9	6256526.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB70		3.00	21/12/2005	317320.6	6256268.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB71		1.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB71		4.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB72		2.00	21/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB72		5.00	22/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB73		0.50	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB73		4.00	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB74		1.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB74		4.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB75		3.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB75		5.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB76		5.00	22/12/2005	317284.2	6256298.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A08	0.40	0.50	26/10/2007	317329.8945	6256328.501	ALLUVIUM	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A08	3.00	3.10	26/10/2007	317329.8945	6256328.501	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09	0.50	0.60	26/10/2007	317327.7978	6256313.824	SILTY CLAY	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A09	2.60	2.70	26/10/2007	317327.7978	6256313.824	CLAYEY SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09a	0.40	0.50	29/10/2007	317315.2177	6256321.097	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A09a	0.70	0.80	29/10/2007	317315.2177	6256321.097	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A10	0.15	0.25	25/10/2007	317308.1414	6256288.861	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A10	3.00	3.10	25/10/2007	317308.1414	6256288.861	SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A11	1.00	1.20	25/10/2007	317329.1083	6256286.764	CLAY	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A11	4.50	4.80	25/10/2007	317329.1083	6256286.764	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A12	2.00	2.20	29/10/2007	317286.9124	6256272.349	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	0.20	0.30	25/10/2007	317275.3806	6256292.006	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
A13	1.00	1.20	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	2.00	2.10	25/10/2007	317275.3806	6256292.006	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	0.40	0.50	26/10/2007	317302.1134	6256256.624	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	2.50	2.70	26/10/2007	317302.1134	6256256.624	SILTY CLAY	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
B27	3.00	3.10	23/10/2007	317359.9034	6256134.951	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B35	0.30	0.40	24/10/2007	317367.5039	6256183.83	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
B35	4.00	4.10	24/10/2007	317367.5039	6256183.83	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	<0.05	<0.05	<0.2	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	<0.2	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.2	-
B36	4.70	4.80	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C31	0.10	0.30	22/10/2007	317394.016	6256161.919	CLAY	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
C31	4.00	4.10	22/10/2007	317394.016	6256161.919	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	0.10	0.20	22/10/2007	317383.278	6256145.371	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
C32	3.00	3.10	22/10/2007	317383.278	6256145.371	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C38	0.20	0.30	23/10/2007	317407.747	6256186.389	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
C38	2.00	2.10	23/10/2007	317407.747	6256186.389	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	0.10	0.20	23/10/2007	317414.261	6256176.179	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	0.30	0.40	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	3.00	3.10	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	2.00	2.10	24/10/2007	317424.119	6256186.565	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.40	0.60	24/10/2007	317424.119	6256186.565	CLAY	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
D06	0.30	0.40	26/10/2007	317290.153	6256336.375	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
D06	2.00	2.10	26/10/2007	317290.153	6256336.375	SANDY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E15	3.90	4.10	26/10/2007	317190.162	6256248.355	ALLUVIUM	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
E18	0.15	0.25	25/10/2007	317402.466	6256224.413	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
E18	2.20	2.40	29/10/2007	317402.466	6256224.413	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.2	-
F05	5.80	6.00	29/10/2007	317223.786	6256389.011	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
G01	4.60	4.80	26/10/2007	317263.078	6256445.231	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	0.10	0.20	25/10/2007	317351.591	6256235.68	FILL	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.2	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-
G17	0.30	0.40	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	4.50	4.80	25/10/2007	317351.591	6256235.68	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G19	2.00	2.10	23/10/2007	317481.332	6256207.866	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	<0.2	-
G19	4.00	4.10	23/10/2007	317481.332	6256207.866	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Organophosphorous Pesticides																													
							Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-S	Diazinon	Demeton-S-methyl	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenamiphos	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Monocrotophos	Mevinphos (Phosdrin)	Parathion	Pirimphos-ethyl	Prothiofos	Ronnel	Stirophos
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil												**2000**																								
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																																				
0-1m																																				
1-2m																																				
2-4m																																				
>4m																																				
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																																				
	Depth (mbgl)			**Coordinate (Approx) MGA Z56**																																
Location	**From**	**To**	**Date**	**Easting**	**Northing**	**Original Lith Code**																														
BH07		0.50	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		0.40	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07		1.00	1/01/1995	317282.8278	6256223.189		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.20	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		1.75	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08		0.50	1/01/1995	317292.0812	6256309.532		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		0.50	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11			1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11		1.25	1/01/1995	317213.9542	6256376.398		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		1.50	1/01/1995	317279.5763	6256512.127		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB07		3.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB07		2.50	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB07		2.25	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		2.30	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07		5.80	1/01/1995	317279.5763	6256512.127		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		0.50	1/01/1995	317261.9	6256418.9		<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	<0.1	<0.1
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.20	1/01/1995	317261.9	6256418.9		<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	<0.1	<0.1
MB08		1.25	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		2.30	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.50	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		1.75	1/01/1995	317261.9	6256418.9		<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	<0.1	<0.1
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08		2.90	1/01/1995	317261.9	6256418.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		1.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09		2.00	1/01/1995	317202.7	6256342.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.40	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.30	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		0.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		2.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		3.00	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		1.20	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10		4.50	1/01/1995	317216.9682	6256294.234		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		1.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		4.50	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		2.90	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11		5.75	1/01/1995	317188.0076	6256189.661		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.40	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		0.75	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		2.50	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12		3.00	1/01/1995	317247.7431	6256132.348		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		2.75	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13		3.00	1/01/1995	317236.6246	6256190.185		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		0.50	1/01/1995	317336.3847	6256113.092		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.25	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.30	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14		1.40	1/01/1995	317336.3847	6256113.092		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14			1/01/1995	317336.3847	6256113.092		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		5.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		0.75	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15		3.00	1/01/1995	317370.2558	6256151.79		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		2.75	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		3.00	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16		0.50	1/01/1995	317387.4552	6256155.197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.25	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		1.40	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17		6.75	1/01/1995	317436.5964	6256152.183		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.25	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB18		6.75	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18		0.50	1/01/1995	317445.5782	6256102.807		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB18			1/01/1995	317445.5782	6256102.807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB20		0.25	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.30	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		1.50	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20		0.75	1/01/1995	317493.1	6256205.8		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB20		0.80	1/01/1995	317493.1	6256205.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB21		0.75	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		2.25	1/01/1995	317472	6256278.5		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB21		2.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21		6.25	1/01/1995	317472	6256278.5		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB21		6.30	1/01/1995	317472	6256278.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		0.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		3.75	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22			1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		2.00	1/01/1995	317354.6944	6256321.49		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.25	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB22		5.25	1/01/1995	317354.6944	6256321.49		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB22		5.30	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		<0.1	<0.1	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
MB22		6.50	1/01/1995	317354.6944	6256321.49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 1	0.25	0.30	1/01/1995	317280	6256528		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2	0.10	0.40	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trench 2		0.20	1/01/1995	317195	6256336		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB01		1.20	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB01		2.00	13/12/2005	317239.8	6256452.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB02		0.60	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB02		1.40	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB03		0.60	13/12/2005	317259.3	6256448		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB03		1.00	13/12/2005	317255	6256400.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB04		0.20	13/12/2005	317280.1	6256372.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		0.20	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		0.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		1.00	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB06		2.50	13/12/2005	317220.7	6256385.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB07		0.50	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB07		2.20	13/12/2005	317211.6	6256356		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB08		0.50	13/12/2005	317204	6256326.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		2.90	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		0.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB09		1.20	13/12/2005	317196.2	6256298.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB10		2.00	13/12/2005	317189.3	6256271.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB10		1.20	13/12/2005	317189.3	6256271.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB11		0.50	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB11		2.90	13/12/2005	317183.6	6256246.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB17		0.50	13/12/2005	317214.4	6256246		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB17		2.10	13/12/2005	317214.4	6256246		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB18		1.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB18		2.00	13/12/2005	317217.6	6256276.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB19		0.20	13/12/2005	317220.7	6256304.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB19		2.50	13/12/2005	317220.7	6256304.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB20		0.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB20		3.20	13/12/2005	317229.3	6256336.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB21		0.20	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB21		2.70	15/12/2005	317256.4	6256338.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Organophosphorous Pesticides																													
							Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-S	Diazinon	Demeton-S-methyl	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenamiphos	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Monocrotophos	Mevinphos (Phosdrin)	Parathion	Pirimphos-ethyl	Prothiofos	Ronnel	Stirophos
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 B1 Table 1A(1) HIL D Soil												**2000**																								
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand																																				
0-1m																																				
1-2m																																				
2-4m																																				
>4m																																				
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine																																				
	Depth (mbgl)			**Coordinate (Approx) MGA Z56**																																
Location	**From**	**To**	**Date**	**Easting**	**Northing**	**Original Lith Code**																														
ESB23		0.20	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB23		1.70	15/12/2005	317248.9	6256278		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB25		0.70	15/12/2005	317245.2	6256243.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB25		1.00	15/12/2005	317245.2	6256243.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB27		1.00	15/12/2005	317241.4	6256211.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB27		3.50	15/12/2005	317241.4	6256211.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB32		0.50	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB32		1.40	15/12/2005	317274.3	6256275.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB33		0.20	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB33		0.50	15/12/2005	317277.7	6256305.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB34		0.50	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB34		2.20	15/12/2005	317279.3	6256340.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB35		1.00	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB35		4.40	15/12/2005	317296	6256313.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB36		0.80	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB36		5.00	15/12/2005	317291.7	6256295.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB37		0.50	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB37		3.00	15/12/2005	317308.7	6256302.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB38		2.00	15/12/2005	317328.1	6256308.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB39		0.10	15/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB39		1.60	16/12/2005	317306.9	6256274.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB42		0.20	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB42		0.50	19/12/2005	317289	6256133.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB45		0.50	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB45		1.30	19/12/2005	317344.1	6256205.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB46		0.20	19/12/2005	317347.9	6256238.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB46		0.50	19/12/2005	317347.9	6256238.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB47		0.20	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB47		1.40	19/12/2005	317351	6256270.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB48		0.50	19/12/2005	317358.1	6256313.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB48		3.10	19/12/2005	317358.1	6256313.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB49		0.50	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB49		2.00	19/12/2005	317410.5	6256280.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB50		0.20	19/12/2005	317408.3	6256245.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB50		1.40	19/12/2005	317408.3	6256245.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB51		0.50	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB51		1.20	19/12/2005	317405.3	6256217.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB52		0.10	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB52		0.50	19/12/2005	317403.5	6256187.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB54		0.20	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB54		0.50	19/12/2005	317389.9	6256125.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB58		0.20	20/12/2005	317442.6	6256182.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB58		0.60	20/12/2005	317442.6	6256182.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB59		0.20	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB59		0.50	20/12/2005	317449.2	6256241		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB60		0.50	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB60		1.00	20/12/2005	317450.8	6256275.7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB61		0.20	20/12/2005	317489.3	6256267.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB61		2.90	20/12/2005	317489.3	6256267.3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB62		0.20	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB62		1.30	20/12/2005	317487.8	6256238.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB63		0.50	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB63		1.40	20/12/2005	317486.3	6256207.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB64		0.20	20/12/2005	317484.1	6256177.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB64		0.50	20/12/2005	317484.1	6256177.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB68		0.50	20/12/2005	317275.5	6256556.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB68		2.00	20/12/2005	317275.5	6256556.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB69		0.20	20/12/2005	317270.9	6256526.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB69		2.00	20/12/2005	317270.9	6256526.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB70		3.00	21/12/2005	317320.6	6256268.2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB71		1.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB71		4.00	21/12/2005	317244.7	6256495		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB72		2.00	21/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB72		5.00	22/12/2005	317176.5	6256129.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB73		0.50	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB73		4.00	22/12/2005	317273.9	6256137.9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB74		1.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB74		4.00	22/12/2005	317442.1	6256214.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB75		3.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB75		5.00	22/12/2005	317308.8	6256329.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESB76		5.00	22/12/2005	317284.2	6256298.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A08	0.40	0.50	26/10/2007	317329.8945	6256328.501	ALLUVIUM	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A08	3.00	3.10	26/10/2007	317329.8945	6256328.501	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09	0.50	0.60	26/10/2007	317327.7978	6256313.824	SILTY CLAY	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A09	2.60	2.70	26/10/2007	317327.7978	6256313.824	CLAYEY SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A09a	0.40	0.50	29/10/2007	317315.2177	6256321.097	FILL	**0.31**	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A09a	0.70	0.80	29/10/2007	317315.2177	6256321.097	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A10	0.15	0.25	25/10/2007	317308.1414	6256288.861	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A10	3.00	3.10	25/10/2007	317308.1414	6256288.861	SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A11	1.00	1.20	25/10/2007	317329.1083	6256286.764	CLAY	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A11	4.50	4.80	25/10/2007	317329.1083	6256286.764	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A12	2.00	2.20	29/10/2007	317286.9124	6256272.349	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	0.20	0.30	25/10/2007	317275.3806	6256292.006	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
A13	1.00	1.20	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A13	2.00	2.10	25/10/2007	317275.3806	6256292.006	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	0.40	0.50	26/10/2007	317302.1134	6256256.624	ALLUVIUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A14	2.50	2.70	26/10/2007	317302.1134	6256256.624	SILTY CLAY	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
B27	3.00	3.10	23/10/2007	317359.9034	6256134.951	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B35	0.30	0.40	24/10/2007	317367.5039	6256183.83	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
B35	4.00	4.10	24/10/2007	317367.5039	6256183.83	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.05	-	-	-	<0.2	-	<0.2	<0.05	<0.05	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	<0.2	<0.2	-	-	-	<0.05	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	-	<0.5	-	-
B36	4.70	4.80	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C31	0.10	0.30	22/10/2007	317394.016	6256161.919	CLAY	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
C31	4.00	4.10	22/10/2007	317394.016	6256161.919	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	0.10	0.20	22/10/2007	317383.278	6256145.371	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
C32	3.00	3.10	22/10/2007	317383.278	6256145.371	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C38	0.20	0.30	23/10/2007	317407.747	6256186.389	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
C38	2.00	2.10	23/10/2007	317407.747	6256186.389	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	0.10	0.20	23/10/2007	317414.261	6256176.179	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	0.30	0.40	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40	3.00	3.10	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	2.00	2.10	24/10/2007	317424.119	6256186.565	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	0.40	0.60	24/10/2007	317424.119	6256186.565	CLAY	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
D06	0.30	0.40	26/10/2007	317290.153	6256336.375	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
D06	2.00	2.10	26/10/2007	317290.153	6256336.375	SANDY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E15	3.90	4.10	26/10/2007	317190.162	6256248.355	ALLUVIUM	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
E18	0.15	0.25	25/10/2007	317402.466	6256224.413	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
E18	2.20	2.40	29/10/2007	317402.466	6256224.413	SILTY CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	<0.5	-	-	-	-	<0.5	-	-	-	<0.5	-	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	-	-
F05	5.80	6.00	29/10/2007	317223.786	6256389.011	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
G01	4.60	4.80	26/10/2007	317263.078	6256445.231	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	0.10	0.20	25/10/2007	317351.591	6256235.68	FILL	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	<0.2	-	<0.2	<0.05	<0.05	-	-
G17	0.30	0.40	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G17	4.50	4.80	25/10/2007	317351.591	6256235.68	SAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G19	2.00	2.10	23/10/2007	317481.332	6256207.866	CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-
G19	4.00	4.10	23/10/2007	317481.332	6256207.866	CLAYEY SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Asbestos ID - Laboratory Analytical Data			
							Asbestos ID	Chrysotile	Crocidolite	Amosite
							Detect/Non-Detect (D = 1; ND = 0)			
NEPM 2013 B1 Table 1A(1) HIL D Soil										
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand										
0-1m										
1-2m										
2-4m										
>4m										
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine										
	Depth (mbgl)			Coordinate (Approx) MGA Z56						
Location	From	To	Date	Easting	Northing	Original Lith Code				
BH07		0.50	1/01/1995	317282.8278	6256223.189		-	-	-	-
BH07		0.40	1/01/1995	317282.8278	6256223.189		-	-	-	-
BH07		1.00	1/01/1995	317282.8278	6256223.189		-	-	-	-
BH08		0.20	1/01/1995	317292.0812	6256309.532		-	-	-	-
BH08		1.75	1/01/1995	317292.0812	6256309.532		-	-	-	-
BH08		0.50	1/01/1995	317292.0812	6256309.532		-	-	-	-
BH11		0.50	1/01/1995	317213.9542	6256376.398		-	-	-	-
BH11			1/01/1995	317213.9542	6256376.398		-	-	-	-
BH11		1.25	1/01/1995	317213.9542	6256376.398		-	-	-	-
MB07		1.50	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		3.50	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		2.50	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		2.00	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		2.25	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		2.30	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB07		5.80	1/01/1995	317279.5763	6256512.127		-	-	-	-
MB08		0.50	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.20	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.25	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.30	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		2.30	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.50	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.75	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		1.80	1/01/1995	317261.9	6256418.9		-	-	-	-
MB08		2.90	1/01/1995	317261.9	6256418.9		-	-	-	-
MB09		1.00	1/01/1995	317202.7	6256342.1		-	-	-	-
MB09		2.00	1/01/1995	317202.7	6256342.1		-	-	-	-
MB10		0.40	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB10		2.30	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB10		0.50	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB10		2.50	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB10		3.00	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB10		1.20	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB10		4.50	1/01/1995	317216.9682	6256294.234		-	-	-	-
MB11		1.75	1/01/1995	317188.0076	6256189.661		-	-	-	-
MB11		4.50	1/01/1995	317188.0076	6256189.661		-	-	-	-
MB11		2.90	1/01/1995	317188.0076	6256189.661		-	-	-	-
MB11		5.75	1/01/1995	317188.0076	6256189.661		-	-	-	-
MB12		0.40	1/01/1995	317247.7431	6256132.348		-	-	-	-
MB12		0.75	1/01/1995	317247.7431	6256132.348		-	-	-	-
MB12		2.50	1/01/1995	317247.7431	6256132.348		-	-	-	-
MB12		3.00	1/01/1995	317247.7431	6256132.348		-	-	-	-
MB13		2.75	1/01/1995	317236.6246	6256190.185		-	-	-	-
MB13		3.00	1/01/1995	317236.6246	6256190.185		-	-	-	-
MB14		0.50	1/01/1995	317336.3847	6256113.092		-	-	-	-
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-
MB14		1.25	1/01/1995	317336.3847	6256113.092		-	-	-	-
MB14		1.30	1/01/1995	317336.3847	6256113.092		-	-	-	-
MB14		1.40	1/01/1995	317336.3847	6256113.092		-	-	-	-
MB14		4.50	1/01/1995	317336.3847	6256113.092		-	-	-	-
MB14			1/01/1995	317336.3847	6256113.092		-	-	-	-
MB15		5.75	1/01/1995	317370.2558	6256151.79		-	-	-	-
MB15		0.75	1/01/1995	317370.2558	6256151.79		-	-	-	-
MB15		3.00	1/01/1995	317370.2558	6256151.79		-	-	-	-
MB16		2.75	1/01/1995	317387.4552	6256155.197		-	-	-	-
MB16		3.00	1/01/1995	317387.4552	6256155.197		-	-	-	-
MB16		0.50	1/01/1995	317387.4552	6256155.197		-	-	-	-
MB17		0.25	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB17		1.40	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB17		0.30	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB17		0.50	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB17		6.75	1/01/1995	317436.5964	6256152.183		-	-	-	-
MB18		0.25	1/01/1995	317445.5782	6256102.807		-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-
MB18		6.75	1/01/1995	317445.5782	6256102.807		-	-	-	-
MB18		0.30	1/01/1995	317445.5782	6256102.807		-	-	-	-
MB18		0.50	1/01/1995	317445.5782	6256102.807		-	-	-	-
MB18			1/01/1995	317445.5782	6256102.807		-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-
MB20		0.25	1/01/1995	317493.1	6256205.8		-	-	-	-
MB20		0.30	1/01/1995	317493.1	6256205.8		-	-	-	-
MB20		1.50	1/01/1995	317493.1	6256205.8		-	-	-	-
MB20		0.20	1/01/1995	317493.1	6256205.8		-	-	-	-
MB20		0.75	1/01/1995	317493.1	6256205.8		-	-	-	-
MB20		0.80	1/01/1995	317493.1	6256205.8		-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-
MB21		0.75	1/01/1995	317472	6256278.5		-	-	-	-
MB21		0.50	1/01/1995	317472	6256278.5		-	-	-	-
MB21		2.25	1/01/1995	317472	6256278.5		-	-	-	-
MB21		2.30	1/01/1995	317472	6256278.5		-	-	-	-
MB21		6.25	1/01/1995	317472	6256278.5		-	-	-	-
MB21		6.30	1/01/1995	317472	6256278.5		-	-	-	-
MB22		0.50	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		3.75	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22			1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		2.00	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		4.25	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		5.25	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		5.30	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		4.50	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		4.30	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB22		6.50	1/01/1995	317354.6944	6256321.49		-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-
MB23		0.30	1/01/1995	317380.3789	6256231.071		-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-
MB23		1.50	1/01/1995	317380.3789	6256231.071		-	-	-	-
Trench 1	0.25	0.30	1/01/1995	317280	6256528		-	-	-	-
Trench 2	0.10	0.20	1/01/1995	317195	6256336		-	-	-	-
Trench 2	0.10	0.40	1/01/1995	317195	6256336		-	-	-	-
Trench 2		0.20	1/01/1995	317195	6256336		-	-	-	-
ESB01		1.20	13/12/2005	317239.8	6256452.4		0		0	0
ESB01		2.00	13/12/2005	317239.8	6256452.4		-	-	-	-
ESB02		0.60	13/12/2005	317259.3	6256448		-	-	-	-
ESB02		1.40	13/12/2005	317259.3	6256448		0		0	0
ESB03		0.60	13/12/2005	317259.3	6256448		-	-	-	-
ESB03		1.00	13/12/2005	317255	6256400.4		0		0	0
ESB04		0.20	13/12/2005	317280.1	6256372.1		**1**	**1**	**1**	0
ESB06		0.20	13/12/2005	317220.7	6256385.3		-	-	-	-
ESB06		0.50	13/12/2005	317220.7	6256385.3		**1**	**1**	0	0
ESB06		1.00	13/12/2005	317220.7	6256385.3		**1**	**1**	0	0
ESB06		2.50	13/12/2005	317220.7	6256385.3		-	-	-	-
ESB07		0.50	13/12/2005	317211.6	6256356		-	-	-	-
ESB07		2.20	13/12/2005	317211.6	6256356		**1**	**1**	0	0
ESB08		0.50	13/12/2005	317204	6256326.2		-	-	-	-
ESB09		2.90	13/12/2005	317196.2	6256298.2		0		0	0
ESB09		0.20	13/12/2005	317196.2	6256298.2		-	-	-	-
ESB09		1.20	13/12/2005	317196.2	6256298.2		**1**	**1**	0	0
ESB10		2.00	13/12/2005	317189.3	6256271.7		-	-	-	-
ESB10		1.20	13/12/2005	317189.3	6256271.7		-	-	-	-
ESB11		0.50	13/12/2005	317183.6	6256246.3		-	-	-	-
ESB11		2.90	13/12/2005	317183.6	6256246.3		0		0	0
ESB17		0.50	13/12/2005	317214.4	6256246		**1**	**1**	0	0
ESB17		2.10	13/12/2005	317214.4	6256246		-	-	-	-
ESB18		1.00	13/12/2005	317217.6	6256276.1		-	-	-	-
ESB18		2.00	13/12/2005	317217.6	6256276.1		0		0	0
ESB19		0.20	13/12/2005	317220.7	6256304.9		-	-	-	-
ESB19		2.50	13/12/2005	317220.7	6256304.9		-	-	-	-
ESB20		0.20	13/12/2005	317229.3	6256336.7		-	-	-	-
ESB20		3.20	13/12/2005	317229.3	6256336.7		**1**	**1**	**1**	0
ESB21		0.20	15/12/2005	317256.4	6256338.7		-	-	-	-
ESB21		2.70	15/12/2005	317256.4	6256338.7		**1**	**1**	0	0

Table 5 - Soil Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

							Asbestos ID - Laboratory Analytical Data			
							Asbestos ID	Chrysotile	Crocidolite	Amosite
							Detect/Non-Detect (D = 1; ND = 0)			
NEPM 2013 B1 Table 1A(1) HIL D Soil										
NEPM 2013 B1 Table 1A(3) Soil HSL D for Vapour Intrusion, Sand										
0-1m										
1-2m										
2-4m										
>4m										
NEPM 2013 B1 Table 1B(7) Management Limits, Comm/Indust, Fine										
	Depth (mbgl)			Coordinate (Approx) MGA Z56						
Location	From	To	Date	Easting	Northing	Original Lith Code				
ESB23		0.20	15/12/2005	317248.9	6256278		-	-	-	-
ESB23		1.70	15/12/2005	317248.9	6256278		0		0	0
ESB25		0.70	15/12/2005	317245.2	6256243.3		-	-	-	-
ESB25		1.00	15/12/2005	317245.2	6256243.3		0		0	0
ESB27		1.00	15/12/2005	317241.4	6256211.1		1	1	0	0
ESB27		3.50	15/12/2005	317241.4	6256211.1		-	-	-	-
ESB32		0.50	15/12/2005	317274.3	6256275.6		0		0	0
ESB32		1.40	15/12/2005	317274.3	6256275.6		-	-	-	-
ESB33		0.20	15/12/2005	317277.7	6256305.3		-	-	-	-
ESB33		0.50	15/12/2005	317277.7	6256305.3		-	-	-	-
ESB34		0.50	15/12/2005	317279.3	6256340.3		-	-	-	-
ESB34		2.20	15/12/2005	317279.3	6256340.3		1	1	0	0
ESB35		1.00	15/12/2005	317296	6256313.9		-	-	-	-
ESB35		4.40	15/12/2005	317296	6256313.9		-	-	-	-
ESB36		0.80	15/12/2005	317291.7	6256295.1		-	-	-	-
ESB36		5.00	15/12/2005	317291.7	6256295.1		-	-	-	-
ESB37		0.50	15/12/2005	317308.7	6256302.7		0		0	0
ESB37		3.00	15/12/2005	317308.7	6256302.7		-	-	-	-
ESB38		2.00	15/12/2005	317328.1	6256308.1		-	-	-	-
ESB39		0.10	15/12/2005	317306.9	6256274.7		0		0	0
ESB39		1.60	16/12/2005	317306.9	6256274.7		-	-	-	-
ESB42		0.20	19/12/2005	317289	6256133.8		0		0	0
ESB42		0.50	19/12/2005	317289	6256133.8		-	-	-	-
ESB45		0.50	19/12/2005	317344.1	6256205.7		0		0	0
ESB45		1.30	19/12/2005	317344.1	6256205.7		-	-	-	-
ESB46		0.20	19/12/2005	317347.9	6256238.6		1	1	0	0
ESB46		0.50	19/12/2005	317347.9	6256238.6		-	-	-	-
ESB47		0.20	19/12/2005	317351	6256270.1		0		0	0
ESB47		1.40	19/12/2005	317351	6256270.1		-	-	-	-
ESB48		0.50	19/12/2005	317358.1	6256313.8		-	-	-	-
ESB48		3.10	19/12/2005	317358.1	6256313.8		1	1	0	0
ESB49		0.50	19/12/2005	317410.5	6256280.3		1	1	0	0
ESB49		2.00	19/12/2005	317410.5	6256280.3		-	-	-	-
ESB50		0.20	19/12/2005	317408.3	6256245.2		0		0	0
ESB50		1.40	19/12/2005	317408.3	6256245.2		-	-	-	-
ESB51		0.50	19/12/2005	317405.3	6256217.1		0		0	0
ESB51		1.20	19/12/2005	317405.3	6256217.1		-	-	-	-
ESB52		0.10	19/12/2005	317403.5	6256187.6		-	-	-	-
ESB52		0.50	19/12/2005	317403.5	6256187.6		1	1	0	0
ESB54		0.20	19/12/2005	317389.9	6256125.4		1	1	1	1
ESB54		0.50	19/12/2005	317389.9	6256125.4		-	-	-	-
ESB58		0.20	20/12/2005	317442.6	6256182.3		0		0	0
ESB58		0.60	20/12/2005	317442.6	6256182.3		-	-	-	-
ESB59		0.20	20/12/2005	317449.2	6256241		-	-	-	-
ESB59		0.50	20/12/2005	317449.2	6256241		0		0	0
ESB60		0.50	20/12/2005	317450.8	6256275.7		1	1	0	1
ESB60		1.00	20/12/2005	317450.8	6256275.7		-	-	-	-
ESB61		0.20	20/12/2005	317489.3	6256267.3		1	1	0	0
ESB61		2.90	20/12/2005	317489.3	6256267.3		-	-	-	-
ESB62		0.20	20/12/2005	317487.8	6256238.9		1	1	0	0
ESB62		1.30	20/12/2005	317487.8	6256238.9		-	-	-	-
ESB63		0.50	20/12/2005	317486.3	6256207.2		-	-	-	-
ESB63		1.40	20/12/2005	317486.3	6256207.2		-	-	-	-
ESB64		0.20	20/12/2005	317484.1	6256177.5		-	-	-	-
ESB64		0.50	20/12/2005	317484.1	6256177.5		-	-	-	-
ESB68		0.50	20/12/2005	317275.5	6256556.9		-	-	-	-
ESB68		2.00	20/12/2005	317275.5	6256556.9		-	-	-	-
ESB69		0.20	20/12/2005	317270.9	6256526.4		0		0	0
ESB69		2.00	20/12/2005	317270.9	6256526.4		-	-	-	-
ESB70		3.00	21/12/2005	317320.6	6256268.2		-	-	-	-
ESB71		1.00	21/12/2005	317244.7	6256495		-	-	-	-
ESB71		4.00	21/12/2005	317244.7	6256495		-	-	-	-
ESB72		2.00	21/12/2005	317176.5	6256129.8		-	-	-	-
ESB72		5.00	22/12/2005	317176.5	6256129.8		-	-	-	-
ESB73		0.50	22/12/2005	317273.9	6256137.9		1	1	0	0
ESB73		4.00	22/12/2005	317273.9	6256137.9		-	-	-	-
ESB74		1.00	22/12/2005	317442.1	6256214.6		-	-	-	-
ESB74		4.00	22/12/2005	317442.1	6256214.6		-	-	-	-
ESB75		3.00	22/12/2005	317308.8	6256329.5		-	-	-	-
ESB75		5.00	22/12/2005	317308.8	6256329.5		-	-	-	-
ESB76		5.00	22/12/2005	317284.2	6256298.5		-	-	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	-	-	-	-
A07	0.80	1.00	26/10/2007	317315.2177	6256336.364	FILL	-	-	-	-
A08	0.40	0.50	26/10/2007	317329.8945	6256328.501	ALLUVIUM	-	-	-	-
A08	3.00	3.10	26/10/2007	317329.8945	6256328.501	CLAYEY SILT	-	-	-	-
A09	0.50	0.60	26/10/2007	317327.7978	6256313.824	SILTY CLAY	-	-	-	-
A09	2.60	2.70	26/10/2007	317327.7978	6256313.824	CLAYEY SAND	-	-	-	-
A09a	0.40	0.50	29/10/2007	317315.2177	6256321.097	FILL	-	-	-	-
A09a	0.70	0.80	29/10/2007	317315.2177	6256321.097	ALLUVIUM	-	-	-	-
A10	0.15	0.25	25/10/2007	317308.1414	6256288.861	FILL	-	-	-	-
A10	3.00	3.10	25/10/2007	317308.1414	6256288.861	SILT	-	-	-	-
A11	1.00	1.20	25/10/2007	317329.1083	6256286.764	CLAY	-	-	-	-
A11	4.50	4.80	25/10/2007	317329.1083	6256286.764	SILTY CLAY	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	-	-	-	-
A12	0.20	0.40	25/10/2007	317286.9124	6256272.349	FILL	-	-	-	-
A12	2.00	2.20	29/10/2007	317286.9124	6256272.349	CLAYEY SILT	-	-	-	-
A13	0.20	0.30	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-
A13	1.00	1.20	25/10/2007	317275.3806	6256292.006	FILL	-	-	-	-
A13	2.00	2.10	25/10/2007	317275.3806	6256292.006	SAND	-	-	-	-
A14	0.40	0.50	26/10/2007	317302.1134	6256256.624	ALLUVIUM	-	-	-	-
A14	2.50	2.70	26/10/2007	317302.1134	6256256.624	SILTY CLAY	-	-	-	-
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	1	1	0	0
B27	0.20	0.40	23/10/2007	317359.9034	6256134.951	FILL	1	1	1	1
B27	3.00	3.10	23/10/2007	317359.9034	6256134.951	CLAY	-	-	-	-
B35	0.30	0.40	24/10/2007	317367.5039	6256183.83	FILL	1	1	0	0
B35	4.00	4.10	24/10/2007	317367.5039	6256183.83	SAND	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-
B36	0.60	0.70	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-
B36	4.70	4.80	23/10/2007	317389.126	6256178.719	CLAY	-	-	-	-
C31	0.10	0.30	22/10/2007	317394.016	6256161.919	CLAY	0	0	0	0
C31	4.00	4.10	22/10/2007	317394.016	6256161.919	CLAYEY SILT	-	-	-	-
C32	0.10	0.20	22/10/2007	317383.278	6256145.371	FILL	1	1	0	1
C32	3.00	3.10	22/10/2007	317383.278	6256145.371	SILTY CLAY	-	-	-	-
C38	0.20	0.30	23/10/2007	317407.747	6256186.389	FILL	1	1	0	0
C38	2.00	2.10	23/10/2007	317407.747	6256186.389	CLAYEY SILT	-	-	-	-
C39	0.10	0.20	23/10/2007	317414.261	6256176.179	FILL	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-
C39	1.00	1.10	23/10/2007	317414.261	6256176.179	CLAY	-	-	-	-
C40	0.30	0.40	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-
C40	3.00	3.10	22/10/2007	317433.625	6256174.594	CLAY	-	-	-	-
C46	2.00	2.10	24/10/2007	317424.119	6256186.565	SILTY CLAY	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-
C46	0.20	0.40	24/10/2007	317424.119	6256186.565	ASPHALT	-	-	-	-
C46	0.40	0.60	24/10/2007	317424.119	6256186.565	CLAY	-	-	-	-
D06	0.30	0.40	26/10/2007	317290.153	6256336.375	FILL	-	-	-	-
D06	2.00	2.10	26/10/2007	317290.153	6256336.375	SANDY SILT	-	-	-	-
E15	3.90	4.10	26/10/2007	317190.162	6256248.355	ALLUVIUM	-	-	-	-
E18	0.15	0.25	25/10/2007	317402.466	6256224.413	FILL	-	-	-	-
E18	2.20	2.40	29/10/2007	317402.466	6256224.413	SILTY CLAY	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	-	-	-	-
F05	1.80	2.00	29/10/2007	317223.786	6256389.011	FILL	-	-	-	-
F05	5.80	6.00	29/10/2007	317223.786	6256389.011	SAND	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	-	-	-	-
G01	1.20	1.30	26/10/2007	317263.078	6256445.231	ALLUVIUM	-	-	-	-
G01	4.60	4.80	26/10/2007	317263.078	6256445.231	SAND	-	-	-	-
G17	0.10	0.20	25/10/2007	317351.591	6256235.68	FILL	1	1	0	0
G17	0.30	0.40	25/10/2007	317351.591	6256235.68	FILL	-	-	-	-
G17	4.50	4.80	25/10/2007	317351.591	6256235.68	SAND	-	-	-	-
G19	2.00	2.10	23/10/2007	317481.332	6256207.866	CLAY	-	-	-	-
G19	4.00	4.10	23/10/2007	317481.332	6256207.866	CLAYEY SILT	-	-	-	-

Table 6 - Summary of Groundwater Analytical Results
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Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					BTEX						TPH					TRH fractions (NEPM 2014)	
					Benzene	Ethylbenzene	Toluene	Xylene Total	Xylene (m & p)	Xylene (o)	+C10 - C36 (Sum of total)	C6 - C9	C10 - C14	C15 - C28	C29-C36	C6-C10 less BTEX (estimated as C6-C9 less BTEX)	>C10-C16less Naphthalene (estimated as C10-C14 less Naphthalene)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																	
2-4m					**5000**	**NL**	**NL**	**NL**								**6000**	**NL**
4-8m					**5000**	**NL**	**NL**	**NL**								**6000**	**NL**
>8m					**5000**	**NL**	**NL**	**NL**								**7000**	**NL**
ANZG 2018 95% Marine Water					**700**	**80**	**180**			**75**							
Well	**Location**	**Date**	**Approximate MGA 56 Coordinates Easting**	**Northing**													
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	<100,000	**96000000**	**370,000,000**	**6,900,000**	**See TPH NEPM v1999 for likely exceedances**	
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	<10,000	**17000000**	**35,000,000**	**1,000,000**	**See TPH NEPM v1999 for likely exceedances**	
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	<100,000	**68000000**	**280,000,000**	**8,500,000**	**See TPH NEPM v1999 for likely exceedances**	
-	Excavation Water	27/10/2008	317291.7	6256295.1	**23,000**	<20,000	<20,000	-	<40,000	<20,000	-	<200,000	**82000000**	**340,000,000**	**9,300,000**	**See TPH NEPM v1999 for likely exceedances**	
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-		<10	**250**	**1,400**	<100	**See TPH NEPM v1999 for likely exceedances**	
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-		<10	**470**	**1,800**	<100	**See TPH NEPM v1999 for likely exceedances**	
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-		<10	**180**	**1,100**	<100	**See TPH NEPM v1999 for likely exceedances**	
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-		<10	**180**	**1,000**	<100	**See TPH NEPM v1999 for likely exceedances**	
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-		<10	**150**	**1,100**	<100	**See TPH NEPM v1999 for likely exceedances**	
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-		<10	**180**	**1,200**	<100	**See TPH NEPM v1999 for likely exceedances**	
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-		<10	<50	**280**	<100		
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-		<10	<50	**190**	<100		
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-		<10	**69**	**230**	<100		
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-		<10	<50	<100	<100		
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-		<10	<50	**150**	<100		
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-		<10	<50	<100	<100		
MWA07	A07	6/11/2007	317315.2177	6256336.364	<1	<2	<2	-	<2	<2	-	<20	<50	<100	<50		
MWA09	A09	6/11/2007	317327.7978	6256313.824	<1	<2	<2	-	<2	<2	-	<20	<50	<100	<50		
MWA14	A14	6/11/2007	317302.1134	6256256.624	<1	<2	<2	-	<2	<2	-	<20	**100**	**1300**	**180**	**See TPH NEPM v1999 for likely exceedances**	
MWB35	B35	6/11/2007	317367.5039	6256183.83	<1	<2	<2	-	<2	<2	-	<20	<50	<100	<50		
MWC46	C46	7/11/2007	317424.119	6256186.565	<1	<2	<2	-	<2	<2	-	<20	<50	<100	<50		
MWF05	F05	6/11/2007	317223.786	6256389.011	<1	<2	<2	-	<2	<2	-	<20	<50	<100	<50		
EMW02	ESB70	13/11/2007	317320.6	6256268.2	<1	<2	<2	-	<2	<2	-	<20	<50	**400**	**100**		
EMW01	ESB36	13/11/2007	317291.7	6256295.1	**1**	<2	<2	-	<2	<2	-	**20**	**25,900**	**81,200**	**2450**	**See TPH NEPM v1999 for likely exceedances**	
EMW01	ESB36	12/01/2006	317291.7	6256295.1	**1**	**5**	<20	**9**	**9**	<20	**1,752,000**	**160**	**182,000**	**1,360,000**	**10,000**	**See TPH NEPM v1999 for likely exceedances**	
EMW02	ESB70	12/01/2006	317320.6	6256268.2	<10	<20	<20	-	<20	<20	**24,410**	<20	**610**	**13,800**	**10,000**	**See TPH NEPM v1999 for likely exceedances**	
EMW03	ESB71	12/01/2006	317244.7	6256495	<10	<20	<20	-	<20	<20	-	<20	<50	<100	<50		
EMW06	ESB74	11/01/2006	317442.1	6256214.6	<10	<20	<20	-	<20	<20	-	<20	<50	<100	<50		
MB07	MB07	1/12/1995	317279.5763	6256512.127	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB08	MB08	1/12/1995	317261.9	6256418.9	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB08	MB08	16/06/2000	317261.9	6256418.9	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB08	MB08	1/07/2001	317261.9	6256418.9	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB08	MB08	20/12/2001	317261.9	6256418.9	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB08	MB08	13/02/2003	317261.9	6256418.9	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
MB08	MB08	12/01/2006	317261.9	6256418.9	<10	<20	<20	-	<20	<20	-	<20	<50	<100	<50		
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-		
MB08-2	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	<20	<40	<200	<200		
MB09	MB09	1/12/1995	317202.7	6256342.1	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB09	MB09	16/06/2000	317202.7	6256342.1	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB09	MB09	1/07/2001	317202.7	6256342.1	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB09	MB09	20/12/2001	317202.7	6256342.1	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB09	MB09	13/02/2003	317202.7	6256342.1	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
MB09	MB09	13/11/2007	317202.7	6256342.1	<1	<2	<2	-	<2	<2	-	<20	<50	**500**	**160**		
MB09	MB09	13/11/2007	317202.7	6256342.1	<1	<2	<2	-	<2	<2	-	<20	<50	**800**	**200**		
MB09	MB09	12/01/2006	317202.7	6256342.1	<10	<20	<20	-	<20	<20	-	<20	<50	<100	<50		
MB10	MB10	1/12/1995	317216.9682	6256294.234	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB11	MB11	1/12/1995	317188.0076	6256189.661	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB12	MB12	1/12/1995	317247.7431	6256132.348	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB12	MB12	8/03/2000	317247.7431	6256132.348	<1000	<2000	**13,000**	-	<4000	-	-	<20	<50	<100	<50		
MB13	MB13	1/12/1995	317236.6246	6256190.185	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB14	MB14	1/12/1995	317336.3847	6256113.092	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB14	MB14	8/03/2000	317336.3847	6256113.092	<1000	<2000	**15,000**	-	<4000	-	-	<20	<50	<100	<50		
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB14	MB14	13/02/2003	317336.3847	6256113.092	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
MB15	MB15	1/12/1995	317370.2558	6256151.79	<10	<20	<10	<20	<20	-	-	<20	**190**	<200	<200		
MB16	MB16	1/12/1995	317387.4552	6256155.197	<10	<20	<10	<20	<20	-	-	**130**	**100**	<200	<200		
MB17	MB17	1/12/1995	317436.5964	6256152.183	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	<20	<50	<100	<50		
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	<20	<40	<200	<200		
MB18	MB18	1/12/1995	317445.5782	6256102.807	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB20	MB20	1/12/1995	317493.1	6256205.8	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB20	MB20	16/06/2000	317493.1	6256205.8	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB20	MB20	1/07/2001	317493.1	6256205.8	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB20	MB20	20/12/2001	317493.1	6256205.8	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB20	MB20	13/02/2003	317493.1	6256205.8	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
MB20	MB20	12/01/2006	317493.1	6256205.8	<10	<20	<20	-	<20	<20	**90**	<20	**90**	<100	<50		
MB21	MB21	1/12/1995	317472	6256278.5	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB21	MB21	16/06/2000	317472	6256278.5	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB21	MB21	1/07/2001	317472	6256278.5	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB21	MB21	20/12/2001	317472	6256278.5	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB21	MB21	13/02/2003	317472	6256278.5	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
MB21	MB21	12/01/2006	317472	6256278.5	<10	<20	<20	-	<20	<20	-	<20	<50	<100	<50		
MB21	MB21	13/11/2007	317472	6256278.5	<1	<2	<2	-	<2	<2	-	<20	<50	<100	<50		
MB22	MB22	1/12/1995	317354.6944	6256321.49	<10	<20	<10	<20	<20	-	-	<20	<40	<200	<200		
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	<20	<20	<100	<100		
MB22	MB22	13/02/2003	317354.6944	6256321.49	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
MB23	MB23	1/12/1995	317380.3789	6256231.071	<10	<20	<10	<20	<20	-	-	<20	**110**	**300**	<200		
MB24-1	MB24	1/12/1995			-	-	-	-	-	-	-	-	-	-	-		
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	<1	<2	<2	-	<2	<2	-	**30**	<50	<100	<50		
SW1	SW01	13/02/2003	316995	6256665.9	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		
SW2	SW02	13/02/2003	317368.6	6256330.5	<5	<1	<1	-	<2	<1	-	<20	<20	<100	<100		

Table 6 - Summary of Groundwater Analytical Results 23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					Metals											
					Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Magnesium	Mercury	Nickel	Phosphorus	Potassium	Zinc
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																
2-4m																
4-8m																
>8m																
ANZG 2018 95% Marine Water					**0.013/0.024**		**0.0055**	**0.027/0.0044**	**0.0013**	**0.0044**		**0.0001**	**0.007**			**0.008**
			Approximate MGA 56 Coordinates													
Well	**Location**	**Date**	**Easting**	**Northing**												
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	27/10/2008	317291.7	6256295.1	**1.4**	-	<0.1	<1	<1	<1	-	<0.5	**1.8**	-	-	**9**
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-
MWA07	A07	6/11/2007	317315.2177	6256336.364	<0.001	-	<0.0001	<0.001	<0.001	<0.001	**9**	<0.0001	<0.001	-	**7**	<0.005
MWA09	A09	6/11/2007	317327.7978	6256313.824	**0.001**	-	**0.0001**	<0.001	<0.001	<0.001	**9**	**0.0001**	<0.001	-	**8**	<0.005
MWA14	A14	6/11/2007	317302.1134	6256256.624	<0.001	-	<0.0001	<0.001	<0.001	<0.001	**6**	**0.0001**	**0.001**	-	**3**	**0.014**
MWB35	B35	6/11/2007	317367.5039	6256183.83	<0.001	-	**0.0022**	<0.001	<0.001	<0.001	**11**	<0.0001	**0.006**	-	**6**	**0.057**
MWC46	C46	7/11/2007	317424.119	6256186.565	**0.001**	-	<0.0001	<0.001	<0.001	<0.001	<1	<0.0001	<0.001	-	<1	**0.005**
MWF05	F05	6/11/2007	317223.786	6256389.011	**0.005**	-	<0.0001	<0.001	<0.001	<0.001	**4**	<0.0001	**0.001**	-	**14**	<0.005
EMW02	ESB70	13/11/2007	317320.6	6256268.2	**0.003**	-	<0.0001	<0.001	<0.001	<0.001	**17**	<0.0001	<0.001	-	**10**	<0.001
EMW01	ESB36	13/11/2007	317291.7	6256295.1	**0.004**	-	<0.0001	<0.001	<0.001	<0.001	**32**	<0.0001	<0.001	-	**13**	**0.007**
EMW01	ESB36	12/01/2006	317291.7	6256295.1	**0.002**	-	<0.001	<0.001	**0.002**	<0.001	-	<0.0001	**0.001**	-	-	**0.094**
EMW02	ESB70	12/01/2006	317320.6	6256268.2	**0.003**	-	<0.001	<0.001	<0.001	<0.001	-	<0.0001	**0.002**	-	-	**0.022**
EMW03	ESB71	12/01/2006	317244.7	6256495	**0.009**	-	<0.001	<0.001	**0.001**	<0.001	-	<0.0001	**0.001**	-	-	**0.009**
EMW06	ESB74	11/01/2006	317442.1	6256214.6	<0.001	-	<0.001	<0.001	**0.004**	<0.001	-	<0.0001	**0.004**	-	-	**0.249**
MB07	MB07	1/12/1995	317279.5763	6256512.127	<0.01	<0.3	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**1.1**	-	<0.01
MB08	MB08	1/12/1995	317261.9	6256418.9	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	**0.01**
MB08	MB08	16/06/2000	317261.9	6256418.9	**0.022**	-	<0.001	**0.005**	**1,000,000**	**1,000,000**	-	-	-	-	-	**1,000,000**
MB08	MB08	1/07/2001	317261.9	6256418.9	**0.022**	-	<0.001	**0.005**	-	**0.005**	-	-	-	-	-	**0.076**
MB08	MB08	20/12/2001	317261.9	6256418.9	**0.002**	-	**0.0001**	<0.001	**1,000,000**	<0.001	-	-	-	-	-	**1,000,000**
MB08	MB08	13/02/2003	317261.9	6256418.9	**0.005**	-	<0.001	**0.001**	**0.001**	**0.001**	-	-	**0.001**	-	-	**0.034**
MB08	MB08	12/01/2006	317261.9	6256418.9	**0.002**	-	<0.001	<0.001	**0.003**	<0.001	-	<0.0001	<0.001	-	-	**0.01**
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08-2	MB08	1/12/1995	317261.9	6256418.9	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.1	-	-	<0.05
MB09	MB09	1/12/1995	317202.7	6256342.1	<0.01	<0.4	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	<0.01
MB09	MB09	16/06/2000	317202.7	6256342.1	<0.5	-	<0.001	**0.005**	**1,000,000**	**1,000,000**	-	-	-	-	-	**1,000,000**
MB09	MB09	1/07/2001	317202.7	6256342.1	<0.005	-	<0.001	**0.005**	-	**0.01**	-	-	-	-	-	**0.093**
MB09	MB09	20/12/2001	317202.7	6256342.1	**0.012**	-	**0.0001**	**0.001**	**1,000,000**	**0.001**	-	-	-	-	-	**1,000,000**
MB09	MB09	13/02/2003	317202.7	6256342.1	**0.003**	-	<0.001	<0.001	**0.005**	<0.001	-	-	**0.008**	-	-	**0.033**
MB09	MB09	13/11/2007	317202.7	6256342.1	<0.001	-	**0.0002**	<0.001	**0.001**	<0.001	**14**	<0.0001	**0.007**	-	**20**	**0.01**
MB09	MB09	13/11/2007	317202.7	6256342.1	**0.001**	-	**0.0002**	<0.001	**0.001**	<0.001	**11**	<0.0001	**0.007**	-	**17**	**0.008**
MB09	MB09	12/01/2006	317202.7	6256342.1	<0.001	-	<0.001	<0.001	**0.002**	<0.001	-	<0.0001	**0.006**	-	-	**0.016**
MB10	MB10	1/12/1995	317216.9682	6256294.234	<0.01	<0.02	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**0.6**	-	<0.01
MB11	MB11	1/12/1995	317188.0076	6256189.661	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	**0.01**
MB12	MB12	1/12/1995	317247.7431	6256132.348	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**0.7**	-	<0.01
MB12	MB12	8/03/2000	317247.7431	6256132.348	<0.01	-	<0.001	<0.001	<0.001	<0.001	-	<0.0001	**0.002**	-	-	**0.009**
MB13	MB13	1/12/1995	317236.6246	6256190.185	<0.01	<0.2	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**0.2**	-	<0.01
MB14	MB14	1/12/1995	317336.3847	6256113.092	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**1.6**	-	**0.04**
MB14	MB14	8/03/2000	317336.3847	6256113.092	<0.01	-	<0.001	<0.001	<0.001	<0.001	-	<0.0001	**0.002**	-	-	**0.015**
MB14	MB14	16/06/2000	317336.3847	6256113.092	<0.5	-	<0.001	**0.005**	**1,000,000**	**0.004**	-	-	-	-	-	**1,000,000**
MB14	MB14	1/07/2001	317336.3847	6256113.092	<0.005	-	<0.001	**0.005**	-	**0.005**	-	-	-	-	-	**0.036**
MB14	MB14	20/12/2001	317336.3847	6256113.092	**0.017**	-	**0.0005**	**0.002**	**1,000,000**	<0.001	-	-	-	-	-	**1,000,000**
MB14	MB14	13/02/2003	317336.3847	6256113.092	**0.002**	-	<0.001	**0.001**	**0.009**	**0.001**	-	-	**0.005**	-	-	**0.037**
MB15	MB15	1/12/1995	317370.2558	6256151.79	<0.01	**0.3**	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	<0.01
MB16	MB16	1/12/1995	317387.4552	6256155.197	<0.01	**0.3**	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	**0.01**
MB17	MB17	1/12/1995	317436.5964	6256152.183	<0.01	**0.1**	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**0.1**	-	**0.05**
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	<0.01	**0.3**	**0.05**	<0.01	<0.01	<0.01	-	<0.0001	<0.01	-	-	<0.01
MB18	MB18	1/12/1995	317445.5782	6256102.807	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	**0.02**
MB20	MB20	1/12/1995	317493.1	6256205.8	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**1.4**	-	**0.02**
MB20	MB20	16/06/2000	317493.1	6256205.8	<0.5	-	<0.001	**0.003**	**1,000,000**	**0.002**	-	-	-	-	-	**1,000,000**
MB20	MB20	1/07/2001	317493.1	6256205.8	<0.005	-	<0.001	**0.003**	-	**0.004**	-	-	-	-	-	**0.107**
MB20	MB20	20/12/2001	317493.1	6256205.8	**0.009**	-	<0.01	**0.001**	**1,000,000**	<0.001	-	-	-	-	-	**1,000,000**
MB20	MB20	13/02/2003	317493.1	6256205.8	**0.004**	-	<0.001	**0.001**	**0.002**	<0.001	-	-	**0.003**	-	-	**0.065**
MB20	MB20	12/01/2006	317493.1	6256205.8	<0.002	-	<0.001	<0.001	**0.002**	<0.001	-	<0.0001	**0.006**	-	-	**0.027**
MB21	MB21	1/12/1995	317472	6256278.5	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	<0.1	-	**0.04**
MB21	MB21	16/06/2000	317472	6256278.5	<0.5	-	<0.001	**0.003**	**1,000,000**	**0.002**	-	-	-	-	-	**1,000,000**
MB21	MB21	1/07/2001	317472	6256278.5	<0.005	-	<0.001	**0.003**	-	**0.005**	-	-	-	-	-	**0.068**
MB21	MB21	20/12/2001	317472	6256278.5	**0.003**	-	**0.0001**	**0.001**	**1,000,000**	**0.002**	-	-	-	-	-	**1,000,000**
MB21	MB21	13/02/2003	317472	6256278.5	<0.001	-	<0.001	<0.001	<0.001	**0.001**	-	-	**0.002**	-	-	**0.038**
MB21	MB21	12/01/2006	317472	6256278.5	<0.001	-	<0.001	<0.001	**0.002**	<0.001	-	-	**0.003**	-	-	**0.031**
MB21	MB21	13/11/2007	317472	6256278.5	<0.001	-	<0.0001	<0.001	<0.001	<0.001	**16**	<0.0001	**0.003**	-	**18**	**0.017**
MB22	MB22	1/12/1995	317354.6944	6256321.49	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**0.1**	-	**0.02**
MB22	MB22	16/06/2000	317354.6944	6256321.49	<0.5	-	<0.001	**0.004**	**1,000,000**	**1,000,000**	-	-	-	-	-	**1,000,000**
MB22	MB22	1/07/2001	317354.6944	6256321.49	<0.005	-	<0.001	**0.004**	-	**0.005**	-	-	-	-	-	**0.048**
MB22	MB22	20/12/2001	317354.6944	6256321.49	<0.001	-	<0.01	<0.001	**1,000,000**	**0.003**	-	-	-	-	-	**1,000,000**
MB22	MB22	13/02/2003	317354.6944	6256321.49	**0.002**	-	<0.001	<0.001	**0.005**	**0.006**	-	-	**0.002**	-	-	**0.029**
MB23	MB23	1/12/1995	317380.3789	6256231.071	<0.01	<0.1	<0.005	<0.01	<0.01	<0.01	-	<0.0001	<0.01	**0.1**	-	**0.04**
MB24-1	MB24	1/12/1995			-	-	-	-	-	-	-	-	-	-	-	-
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	<0.001	-	<0.0001	<0.001	<0.001	<0.001	**13**	<0.0001	<0.001	-	**8**	<0.001
SW1	SW01	13/02/2003	316995	6256665.9	**0.004**	-	<0.001	<0.001	**0.005**	<0.001	-	-	**0.001**	-	-	**0.034**
SW2	SW02	13/02/2003	317368.6	6256330.5	**0.004**	-	<0.001	<0.001	**0.011**	<0.001	-	-	**0.001**	-	-	**0.042**

Table 6 - Summary of Groundwater Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					PAH																	
					Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)&(k)fluoranthene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene	Carcinogenic PAH as B(a)P TEQ
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																						
2-4m																			**NL**				
4-8m																			**NL**				
>8m																			**NL**				
ANZG 2018 95% Marine Water							**0.0004**		**0.0002**							**0.0014**			**0.07**		**0.002**		
			Approximate MGA 56 Coordinates																				
Well	**Location**	**Date**	**Easting**	**Northing**																			
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	Excavation Water	27/10/2008	317291.7	6256295.1	**86,000**	**26,000**	**17,000**	<10,000	<10,000	<20,000	-	<10,000	-	<10,000	-	**18,000**	**230,000**	<10,000	**150,000**	-	**350,000**	**22,000**	**0**
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MWA07	A07	6/11/2007	317315.2177	6256336.364	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MWA09	A09	6/11/2007	317327.7978	6256313.824	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MWA14	A14	6/11/2007	317302.1134	6256256.624	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MWB35	B35	6/11/2007	317367.5039	6256183.83	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MWC46	C46	7/11/2007	317424.119	6256186.565	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MWF05	F05	6/11/2007	317223.786	6256389.011	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
EMW02	ESB70	13/11/2007	317320.6	6256268.2	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
EMW01	ESB36	13/11/2007	317291.7	6256295.1	**8**	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	**3**	**33.2**	<1	**94.9**	-	**51.9**	**4.5**	**0**
EMW01	ESB36	12/01/2006	317291.7	6256295.1	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	**1140**	**2910**	**1770**	<10	**0**
EMW02	ESB70	12/01/2006	317320.6	6256268.2	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	**1.5**	<1	<1	**0**
EMW03	ESB71	12/01/2006	317244.7	6256495	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	
EMW06	ESB74	11/01/2006	317442.1	6256214.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	
MB07	MB07	1/12/1995	317279.5763	6256512.127	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB08	MB08	1/12/1995	317261.9	6256418.9	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB08	MB08	16/06/2000	317261.9	6256418.9	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB08	MB08	1/07/2001	317261.9	6256418.9	-	<1	<1	<1	<1	<2	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB08	MB08	20/12/2001	317261.9	6256418.9	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB08	MB08	13/02/2003	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB08	MB08	12/01/2006	317261.9	6256418.9	<1	<1	<1	<1	<500	-	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB08-2	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB09	MB09	1/12/1995	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB09	MB09	16/06/2000	317202.7	6256342.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB09	MB09	1/07/2001	317202.7	6256342.1	-	<1	<1	<1	<1	<2	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB09	MB09	20/12/2001	317202.7	6256342.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB09	MB09	13/02/2003	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB09	MB09	13/11/2007	317202.7	6256342.1	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MB09	MB09	13/11/2007	317202.7	6256342.1	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MB09	MB09	12/01/2006	317202.7	6256342.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	
MB10	MB10	1/12/1995	317216.9682	6256294.234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB11	MB11	1/12/1995	317188.0076	6256189.661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB12	MB12	1/12/1995	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB12	MB12	8/03/2000	317247.7431	6256132.348	-	<2000	<2000	<2000	<2000	<2000	-	<2000	-	<2000	-	<2000	<2000	<2000	<2000	<2000	<2000	<2000	
MB13	MB13	1/12/1995	317236.6246	6256190.185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB14	MB14	1/12/1995	317336.3847	6256113.092	<1	<1	**1**	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	**2**	**1**	<1	**0**
MB14	MB14	8/03/2000	317336.3847	6256113.092	-	<2000	<2000	<2000	<2000	<2000	-	<2000	-	<2000	-	<2000	<2000	<2000	<2000	<2000	<2000	<2000	
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	<1	<1	<1	<1	<2	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB15	MB15	1/12/1995	317370.2558	6256151.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**	-	-	**0**
MB16	MB16	1/12/1995	317387.4552	6256155.197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB17	MB17	1/12/1995	317436.5964	6256152.183	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	**1**	<1	**0**
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB18	MB18	1/12/1995	317445.5782	6256102.807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB20	MB20	1/12/1995	317493.1	6256205.8	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	**1**	<1	**2**	**3**	<1	<1	<1
MB20	MB20	16/06/2000	317493.1	6256205.8	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB20	MB20	1/07/2001	317493.1	6256205.8	-	<1	<1	<1	<1	<2	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB20	MB20	20/12/2001	317493.1	6256205.8	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB20	MB20	13/02/2003	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB20	MB20	12/01/2006	317493.1	6256205.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	
MB21	MB21	1/12/1995	317472	6256278.5	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB21	MB21	16/06/2000	317472	6256278.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB21	MB21	1/07/2001	317472	6256278.5	-	<1	<1	<1	<1	<2	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB21	MB21	20/12/2001	317472	6256278.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB21	MB21	13/02/2003	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB21	MB21	12/01/2006	317472	6256278.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	<1	<1	
MB21	MB21	13/11/2007	317472	6256278.5	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
MB22	MB22	1/12/1995	317354.6944	6256321.49	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	<1	<1	<1	<1	<2	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB22	MB22	13/02/2003	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MB23	MB23	1/12/1995	317380.3789	6256231.071	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	
MB24-1	MB24	1/12/1995			<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	<1	<1	<1	<1	<0.5	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	
SW1	SW01	13/02/2003	316995	6256665.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW2	SW02	13/02/2003	317368.6	6256330.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 6 - Summary of Groundwater Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					PCB	Phenols																
					PCBs (Sum of total)	2,3,4,6-tetrachlorophenol	2,3,4-Trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,5- Dichlorophenol	2-methylphenol	2-nitrophenol	3,5-Dichlorophenol	3-Methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-chlorophenol	4-methylphenol	4-nitrophenol	Phenol	Phenolics
					µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																						
2-4m																						
4-8m																						
>8m																						
ANZG 2018 95% Marine Water						**10**		**120**		**0.045**								**0.22**			**320**	
			Approximate MGA 56 Coordinates																			
Well	**Location**	**Date**	**Easting**	**Northing**																		
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	27/10/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA07	A07	6/11/2007	317315.2177	6256336.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA09	A09	6/11/2007	317327.7978	6256313.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA14	A14	6/11/2007	317302.1134	6256256.624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWB35	B35	6/11/2007	317367.5039	6256183.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWC46	C46	7/11/2007	317424.119	6256186.565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWF05	F05	6/11/2007	317223.786	6256389.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	13/11/2007	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	13/11/2007	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	12/01/2006	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	12/01/2006	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW03	ESB71	12/01/2006	317244.7	6256495	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW06	ESB74	11/01/2006	317442.1	6256214.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07	MB07	1/12/1995	317279.5763	6256512.127	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB08	MB08	1/12/1995	317261.9	6256418.9	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB08	MB08	16/06/2000	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**40**	-
MB08	MB08	1/07/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10
MB08	MB08	20/12/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB08	MB08	13/02/2003	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	12/01/2006	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-2	MB08	1/12/1995	317261.9	6256418.9	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB09	MB09	1/12/1995	317202.7	6256342.1	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB09	MB09	16/06/2000	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB09	MB09	1/07/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10
MB09	MB09	20/12/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB09	MB09	13/02/2003	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	12/01/2006	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10	MB10	1/12/1995	317216.9682	6256294.234	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB11	MB11	1/12/1995	317188.0076	6256189.661	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB12	MB12	1/12/1995	317247.7431	6256132.348	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB12	MB12	8/03/2000	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	-
MB13	MB13	1/12/1995	317236.6246	6256190.185	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB14	MB14	1/12/1995	317336.3847	6256113.092	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB14	MB14	8/03/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	-
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15	MB15	1/12/1995	317370.2558	6256151.79	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB16	MB16	1/12/1995	317387.4552	6256155.197	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB17	MB17	1/12/1995	317436.5964	6256152.183	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB18	MB18	1/12/1995	317445.5782	6256102.807	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	**20**	-
MB20	MB20	1/12/1995	317493.1	6256205.8	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB20	MB20	16/06/2000	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**10**	-
MB20	MB20	1/07/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10
MB20	MB20	20/12/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB20	MB20	13/02/2003	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	12/01/2006	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/12/1995	317472	6256278.5	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	**40**	-
MB21	MB21	16/06/2000	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB21	MB21	1/07/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10
MB21	MB21	20/12/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**180**	-
MB21	MB21	13/02/2003	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	12/01/2006	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/11/2007	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/12/1995	317354.6944	6256321.49	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	<10	-
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-
MB22	MB22	13/02/2003	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23	MB23	1/12/1995	317380.3789	6256231.071	<10	<100	<0.05	<20	<10	<0.3	<0.02	-	<100	<0.1	-	<300	<20	<0.01	-	<300	**200**	-
MB24-1	MB24	1/12/1995			-	-	-	<10	<10	<0.01	-	<10	<10	-	<10	<10	-	-	<0.01	-	<10	-
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	SW01	13/02/2003	316995	6256665.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW2	SW02	13/02/2003	317368.6	6256330.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 - Summary of Groundwater Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					Halogenated Hydrocarbons																				
					1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	2-chloronaphthalene	2-methylnaphthalene	1,2-dichlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	1,2,3,5-Tetrachlorobenzene	1,2,4-trichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobenzene	Hexachloroethane	Pentachlorobenzene	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,6-dichlorophenol	2-chlorophenol	2,3,6-Trichlorophenol	Pentachlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																									
2-4m																									
4-8m																									
>8m																									
ANZG 2018 95% Marine Water						**3**			**160**				**20**	**8**	**260**	**60**	**0.05**	**290**			**3**		**340**		**3.6**
Well	**Location**	**Date**	**Approximate MGA 56 Coordinates Easting**	**Northing**																					
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	27/10/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA07	A07	6/11/2007	317315.2177	6256336.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA09	A09	6/11/2007	317327.7978	6256313.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA14	A14	6/11/2007	317302.1134	6256256.624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWB35	B35	6/11/2007	317367.5039	6256183.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWC46	C46	7/11/2007	317424.119	6256186.565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWF05	F05	6/11/2007	317223.786	6256389.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	13/11/2007	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	13/11/2007	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	12/01/2006	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	12/01/2006	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW03	ESB71	12/01/2006	317244.7	6256495	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW06	ESB74	11/01/2006	317442.1	6256214.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07	MB07	1/12/1995	317279.5763	6256512.127	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB08	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	<60	<20	<10	<0.04	<200
MB08	MB08	16/06/2000	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	1/07/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	20/12/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	13/02/2003	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	12/01/2006	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-1	MB08	1/12/1995	317261.9	6256418.9	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-
MB08-2	MB08	1/12/1995	317261.9	6256418.9	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	-	<60	<20	<10	<0.04	<200
MB09	MB09	1/12/1995	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB09	MB09	16/06/2000	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/07/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	20/12/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/02/2003	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	12/01/2006	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10	MB10	1/12/1995	317216.9682	6256294.234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB11	MB11	1/12/1995	317188.0076	6256189.661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB12	MB12	1/12/1995	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB12	MB12	8/03/2000	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13	MB13	1/12/1995	317236.6246	6256190.185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB14	MB14	1/12/1995	317336.3847	6256113.092	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB14	MB14	8/03/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15	MB15	1/12/1995	317370.2558	6256151.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB16	MB16	1/12/1995	317387.4552	6256155.197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB17	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<60	<20	<10	<0.04	<200
MB18	MB18	1/12/1995	317445.5782	6256102.807	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB20	MB20	1/12/1995	317493.1	6256205.8	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB20	MB20	16/06/2000	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	1/07/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	20/12/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	13/02/2003	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	12/01/2006	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/12/1995	317472	6256278.5	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB21	MB21	16/06/2000	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/07/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	20/12/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/02/2003	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	12/01/2006	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/11/2007	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/12/1995	317354.6944	6256321.49	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	13/02/2003	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23	MB23	1/12/1995	317380.3789	6256231.071	<1	<1	-	-	<1	<1	<1	<0.001	<1	<1	<1	<1	<10	<1	<1	-	<60	<20	<10	<0.04	<200
MB24-1	MB24	1/12/1995			-	-	<10	<10	<10	<10	<10	-	<10	-	<10	<10	<10	<10	-	<10	<10	-	<10	-	<10
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	SW01	13/02/2003	316995	6256665.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW2	SW02	13/02/2003	317368.6	6256330.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 - Summary of Groundwater Analytical Results
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Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					Inorganics										Field	
					Alkalinity (Bicarbonate)	Chloride	Kjeldahl Nitrogen Total	Nitrate (as N)	Sulphate	Redox	Sodium	calcite	TOC	Alkalinity (Carbonate)	Alkalinity (total)	Dissolved Oxygen
					mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																
2-4m																
4-8m																
>8m																
ANZG 2018 95% Marine Water																
			Approximate MGA 56 Coordinates													
Well	**Location**	**Date**	**Easting**	**Northing**												
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	27/10/2008	317291.7	6256295.1	-	-	-	-	-	**-91**	-	-	-	-	-	**1250**
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-
MWA07	A07	6/11/2007	317315.2177	6256336.364	**120**	**5**	-	-	**38**	**102**	**28**	**22**	-	<1	**120**	**3180**
MWA09	A09	6/11/2007	317327.7978	6256313.824	**93**	**18.7**	-	-	**123**	**87**	**50**	**34**	-	<1	**93**	**2620**
MWA14	A14	6/11/2007	317302.1134	6256256.624	**27**	**16.2**	-	-	**101**	**104**	**50**	**4**	-	<1	**27**	**1410**
MWB35	B35	6/11/2007	317367.5039	6256183.83	**39**	**11.3**	-	-	**114**	**95**	**15**	**38**	-	<1	**39**	**1410**
MWC46	C46	7/11/2007	317424.119	6256186.565	**17**	**41**	-	-	**96**	**118**	**82**	<1	-	<1	**17**	**2660**
MWF05	F05	6/11/2007	317223.786	6256389.011	**191**	**114**	-	-	**147**	**27**	**231**	**2**	-	<1	**191**	**1830**
EMW02	ESB70	13/11/2007	317320.6	6256268.2	**133**	**7.2**	-	-	**15**	**-50**	**23**	**8**	-	<1	**133**	**1070**
EMW01	ESB36	13/11/2007	317291.7	6256295.1	**544**	**22.8**	-	-	**2**	**-84**	**189**	**16**	-	<1	**544**	**2380**
EMW01	ESB36	12/01/2006	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	12/01/2006	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-
EMW03	ESB71	12/01/2006	317244.7	6256495	-	-	-	-	-	-	-	-	-	-	-	-
EMW06	ESB74	11/01/2006	317442.1	6256214.6	-	-	-	-	-	-	-	-	-	-	-	-
MB07	MB07	1/12/1995	317279.5763	6256512.127	-	-	**2**	<0.5	-	-	-	-	**54**	-	-	-
MB08	MB08	1/12/1995	317261.9	6256418.9	-	-	**5**	<0.5	-	-	-	-	**35**	-	-	-
MB08	MB08	16/06/2000	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	1/07/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	20/12/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	13/02/2003	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	12/01/2006	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB08-2	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/12/1995	317202.7	6256342.1	-	-	**2**	<0.5	-	-	-	-	**46**	-	-	-
MB09	MB09	16/06/2000	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/07/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	20/12/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/02/2003	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	**206**	**512**	-	-	**568**	**67**	**716**	**4**	-	<1	**206**	**1090**
MB09	MB09	13/11/2007	317202.7	6256342.1	**205**	**451**	-	-	**487**	**67**	**629**	**4**	-	<1	**205**	**1090**
MB09	MB09	12/01/2006	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-
MB10	MB10	1/12/1995	317216.9682	6256294.234	-	-	**5**	**4.2**	-	-	-	-	**15**	-	-	-
MB11	MB11	1/12/1995	317188.0076	6256189.661	-	-	**10**	**3.5**	-	-	-	-	**94**	-	-	-
MB12	MB12	1/12/1995	317247.7431	6256132.348	-	-	**1**	**1**	-	-	-	-	**4**	-	-	-
MB12	MB12	8/03/2000	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-
MB13	MB13	1/12/1995	317236.6246	6256190.185	-	-	<1	<0.5	-	-	-	-	**22**	-	-	-
MB14	MB14	1/12/1995	317336.3847	6256113.092	-	-	**4**	<0.5	-	-	-	-	**42**	-	-	-
MB14	MB14	8/03/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-
MB15	MB15	1/12/1995	317370.2558	6256151.79	-	-	**1**	<0.5	-	-	-	-	**11**	-	-	-
MB16	MB16	1/12/1995	317387.4552	6256155.197	-	-	**1**	<0.5	-	-	-	-	**7**	-	-	-
MB17	MB17	1/12/1995	317436.5964	6256152.183	-	-	**4**	**0.6**	-	-	-	-	**29**	-	-	-
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-
MB18	MB18	1/12/1995	317445.5782	6256102.807	-	-	<1	<0.5	-	-	-	-	**27**	-	-	-
MB20	MB20	1/12/1995	317493.1	6256205.8	-	-	**1**	<0.5	-	-	-	-	**6**	-	-	-
MB20	MB20	16/06/2000	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	1/07/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	20/12/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	13/02/2003	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	12/01/2006	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/12/1995	317472	6256278.5	-	-	**2**	<0.5	-	-	-	-	**4**	-	-	-
MB21	MB21	16/06/2000	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/07/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	20/12/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/02/2003	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	12/01/2006	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/11/2007	317472	6256278.5	**7**	**628**	-	-	**410**	**274**	**570**	**5**	-	<1	**7**	**1330**
MB22	MB22	1/12/1995	317354.6944	6256321.49	-	-	<1	**0.8**	-	-	-	-	**4**	-	-	-
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	13/02/2003	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-
MB23	MB23	1/12/1995	317380.3789	6256231.071	-	-	**1**	**3**	-	-	-	-	**4**	-	-	-
MB24-1	MB24	1/12/1995			-	-	-	-	-	-	-	-	-	-	-	-
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	**24**	**75.6**	-	-	**86**	**194**	**65**	**7**	-	<1	**24**	**1040**
SW1	SW01	13/02/2003	316995	6256665.9	-	-	-	-	-	-	-	-	-	-	-	-
SW2	SW02	13/02/2003	317368.6	6256330.5	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 - Summary of Groundwater Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

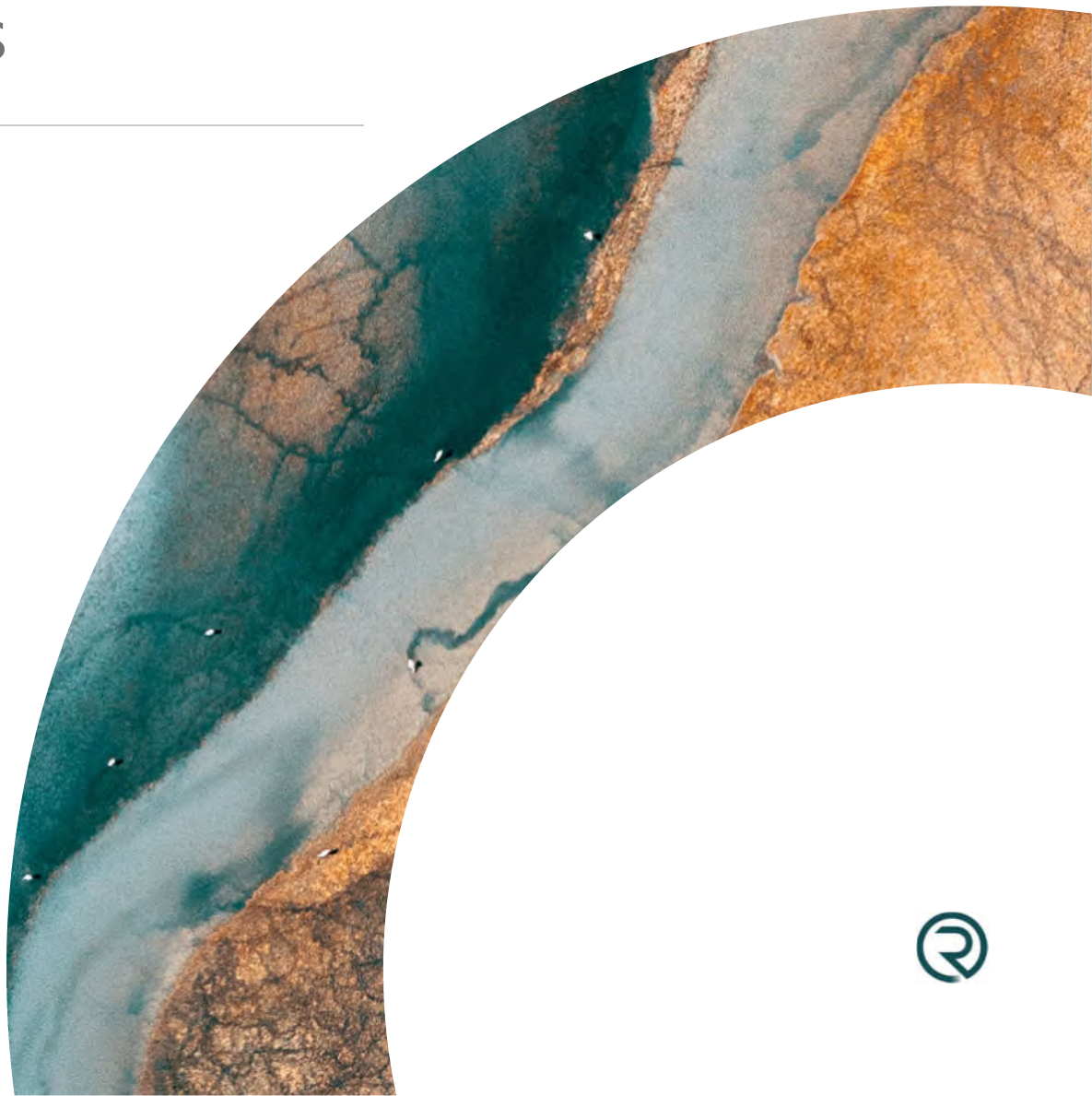
					Organochlorine Pesticides																				
					4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis + trans)	d-BHC	DDE	DDT	DDD	Dieldrin	Endosulfan	Endosulfan II	Endosulfan sulphate	Endrin	Endosulfan I	Endrin aldehyde	g-BHC (Lindane)	Heptachlor epoxide	Heptachlor	Methoxychlor	Oxychlordane
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																									
2-4m																									
4-8m																									
>8m																									
ANZG 2018 95% Marine Water									0.001			4E-04			0.005			0.004			0.007		0.0004		
			Approximate MGA 56 Coordinates																						
Well	**Location**	**Date**	**Easting**	**Northing**																					
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	27/10/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA07	A07	6/11/2007	317315.2177	6256336.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA09	A09	6/11/2007	317327.7978	6256313.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA14	A14	6/11/2007	317302.1134	6256256.624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWB35	B35	6/11/2007	317367.5039	6256183.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWC46	C46	7/11/2007	317424.119	6256186.565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWF05	F05	6/11/2007	317223.786	6256389.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	13/11/2007	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	13/11/2007	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	12/01/2006	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	12/01/2006	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW03	ESB71	12/01/2006	317244.7	6256495	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW06	ESB74	11/01/2006	317442.1	6256214.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07	MB07	1/12/1995	317279.5763	6256512.127	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB08	MB08	1/12/1995	317261.9	6256418.9	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB08	MB08	16/06/2000	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	1/07/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	20/12/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	13/02/2003	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	12/01/2006	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-2	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/12/1995	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	16/06/2000	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/07/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	20/12/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/02/2003	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	12/01/2006	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10	MB10	1/12/1995	317216.9682	6256294.234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11	MB11	1/12/1995	317188.0076	6256189.661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12	MB12	1/12/1995	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12	MB12	8/03/2000	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13	MB13	1/12/1995	317236.6246	6256190.185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	1/12/1995	317336.3847	6256113.092	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB14	MB14	8/03/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15	MB15	1/12/1995	317370.2558	6256151.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16	MB16	1/12/1995	317387.4552	6256155.197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18	MB18	1/12/1995	317445.5782	6256102.807	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB20	MB20	1/12/1995	317493.1	6256205.8	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB20	MB20	16/06/2000	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	1/07/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	20/12/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	13/02/2003	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	12/01/2006	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/12/1995	317472	6256278.5	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB21	MB21	16/06/2000	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/07/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	20/12/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/02/2003	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	12/01/2006	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/11/2007	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/12/1995	317354.6944	6256321.49	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	13/02/2003	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23	MB23	1/12/1995	317380.3789	6256231.071	-	<10	<10	<10	<50	-	<0.01	<10	<10	<10	<10	-	-	<10	-	-	<10	<10	<10	<10	<0.01
MB24-1	MB24	1/12/1995			<10	<10	-	<10	-	<10	-	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	-	-
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	SW01	13/02/2003	316995	6256665.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW2	SW02	13/02/2003	317368.6	6256330.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 - Summary of Groundwater Analytical Results
23156
Billbergia Pty Ltd
1 Grand Avenue Camellia NSW
Remedial Action Plan

					Organophosphorous Pesticides																					
					Azinophos methyl	Bolstar (Sulprofos)	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Phorate	Prothiofos	Ronnel	Stirophos
					µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NEPM 2013 B1 Table 1A(4) GW HSL D Vapour Intrusion, Sand																									
2-4m																									
4-8m																									
>8m																									
ANZG 2018 95% Marine Water							0.009				0.01					0.001									
			Approximate MGA 56 Coordinates																						
Well	**Location**	**Date**	**Easting**	**Northing**																					
-	Excavation Water	3/12/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	18/11/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Excavation Water	27/10/2008	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	9/02/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	27/05/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA101	A101	11/08/2009	317294	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	9/02/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	27/05/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA102	A102	11/08/2009	317286	317286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	9/02/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	27/05/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA103	A103	11/08/2009	317309	6256299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	9/02/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	27/05/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA104	A104	11/08/2009	317302	6256311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA07	A07	6/11/2007	317315.2177	6256336.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA09	A09	6/11/2007	317327.7978	6256313.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWA14	A14	6/11/2007	317302.1134	6256256.624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWB35	B35	6/11/2007	317367.5039	6256183.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWC46	C46	7/11/2007	317424.119	6256186.565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWF05	F05	6/11/2007	317223.786	6256389.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	13/11/2007	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	13/11/2007	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW01	ESB36	12/01/2006	317291.7	6256295.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW02	ESB70	12/01/2006	317320.6	6256268.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW03	ESB71	12/01/2006	317244.7	6256495	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMW06	ESB74	11/01/2006	317442.1	6256214.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB07	MB07	1/12/1995	317279.5763	6256512.127	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB08	MB08	1/12/1995	317261.9	6256418.9	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB08	MB08	16/06/2000	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	1/07/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	20/12/2001	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	13/02/2003	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08	MB08	12/01/2006	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-1	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB08-2	MB08	1/12/1995	317261.9	6256418.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/12/1995	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	16/06/2000	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	1/07/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	20/12/2001	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/02/2003	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	13/11/2007	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB09	MB09	12/01/2006	317202.7	6256342.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB10	MB10	1/12/1995	317216.9682	6256294.234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB11	MB11	1/12/1995	317188.0076	6256189.661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12	MB12	1/12/1995	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB12	MB12	8/03/2000	317247.7431	6256132.348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB13	MB13	1/12/1995	317236.6246	6256190.185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	1/12/1995	317336.3847	6256113.092	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB14	MB14	8/03/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	16/06/2000	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	1/07/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	20/12/2001	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB14	MB14	13/02/2003	317336.3847	6256113.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB15	MB15	1/12/1995	317370.2558	6256151.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB16	MB16	1/12/1995	317387.4552	6256155.197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17	MB17	8/03/2000	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB17-2	MB17	1/12/1995	317436.5964	6256152.183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB18	MB18	1/12/1995	317445.5782	6256102.807	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB20	MB20	1/12/1995	317493.1	6256205.8	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB20	MB20	16/06/2000	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	1/07/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	20/12/2001	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	13/02/2003	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB20	MB20	12/01/2006	317493.1	6256205.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/12/1995	317472	6256278.5	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB21	MB21	16/06/2000	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	1/07/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	20/12/2001	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/02/2003	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	12/01/2006	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB21	MB21	13/11/2007	317472	6256278.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/12/1995	317354.6944	6256321.49	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB22	MB22	16/06/2000	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	1/07/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	20/12/2001	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB22	MB22	13/02/2003	317354.6944	6256321.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MB23	MB23	1/12/1995	317380.3789	6256231.071	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.01	<10	<10	<10	<10	<10	<10
MB24-1	MB24	1/12/1995			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MWWC	MWWC	13/11/2007	317369.9937	6256306.748	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	SW01	13/02/2003	316995	6256665.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW2	SW02	13/02/2003	317368.6	6256330.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

C

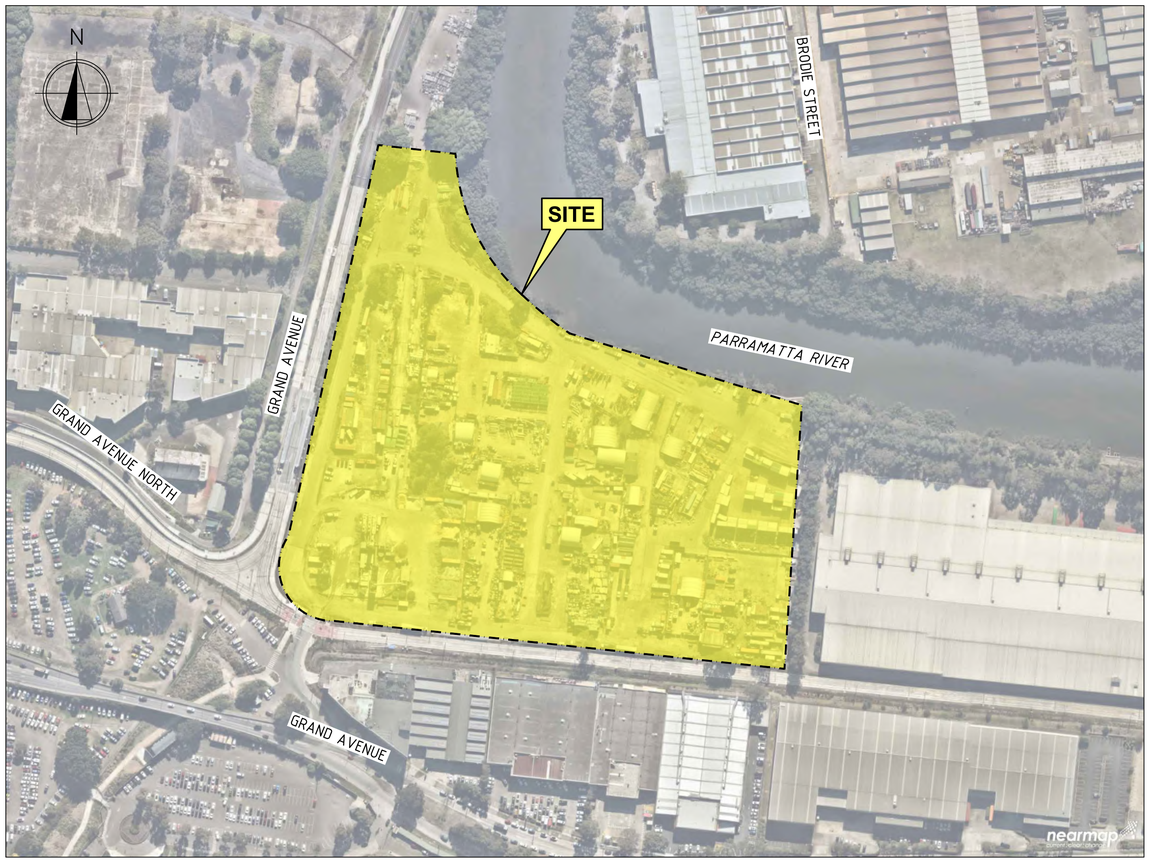
Proposed Development Plans



1 GRAND AVENUE, CAMELLIA, SYDNEY 2142

INDUSTRIAL DEVELOPMENT

DEVELOPMENT APPLICATION ISSUE



LOCALITY PLAN

SCALE 1:2000

SOURCE: NEARMAP

DRAWING INDEX	
DRAWING No.	DESCRIPTION
DRG-CI-0100	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
DRG-CI-0120	EARTHWORKS DEPTH RANGE PLAN
DRG-CI-0200	SITEWORKS PLAN AND GROUND FLOOR DRAINAGE
DRG-CI-0220	TYPICAL SECTIONS
DRG-CI-0300	MUSIC MODEL CATCHMENT PLAN
DRG-CI-0340	DRAINAGE DETAILS
DRG-CI-0700	EROSION AND SEDIMENT CONTROL PLAN
DRG-CI-0710	EROSION AND SEDIMENT CONTROL DETAILS

0 20 40 60 80 100 120m

SCALE 1:2000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
D	21.10.2024	ISSUED FOR APPROVAL	AM
C	16.04.2024	ISSUED FOR APPROVAL	AM
B	15.09.2023	ISSUED FOR APPROVAL	AM
A	25.08.2023	ISSUED FOR INFORMATION	AM

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PROJECT

1 GRAND AVENUE
CAMELLIA, SYDNEY, 2142

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
JL	AM	SH	

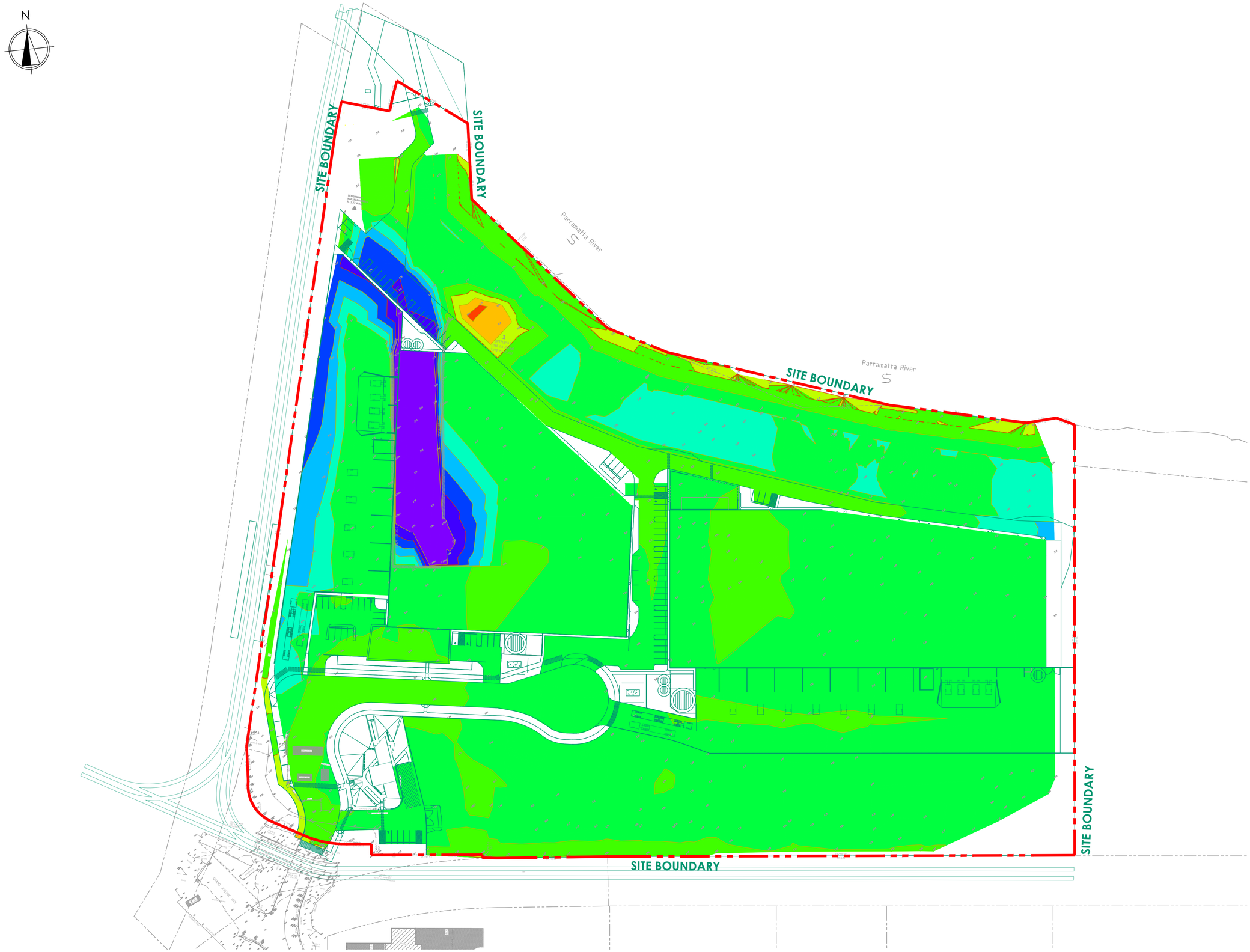
DATUM	GRID	SCALE
AHD	MGA	AS SHOWN AT A1 SIZE

TITLE: COVER SHEET, LOCALITY PLAN AND DRAWING INDEX

PROJECT No.	DRAWING No.	REV.
S23153	DRG-CI-0100	D

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LEGEND

- WORK EXTENT
- EXISTING SURVEY FEATURES
- 15.5 EXISTING CONTOURS
- ARCHITECTURAL

Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m^2)	Volume (m^3)
1		-2.000	-1.500	0.0	0.0
2		-1.500	-1.000	22.9	0.7
3		-1.000	-0.500	216.9	64.3
4		-0.500	0.000	834.8	188.6
5		0.000	0.500	10264.5	22779.1
6		0.500	1.000	30494.6	10473.2
7		1.000	1.500	4273.1	2842.4
8		1.500	2.000	1512.0	1941.3
9		2.000	2.500	1236.9	1243.4
10		2.500	3.000	429.3	813.2
11		3.000	3.500	1466.3	335.4

TOTAL CUT	253.80 cu.m
TOTAL FILL	47183.19 cu.m
TOTAL BALANCE	46929.39 cu.m

NOTES:

1. NO BOXING ALLOWANCE FOR PAVEMENT TYPES.
2. NO BOXING ALLOWANCE FOR LANDSCAPING.
3. LANDSCAPING TO BE GRADED TO MATCH INTO EXISTING LEVEL ALONG BOUNDARY TOWARDS PARRAMATTA RIVER.
4. NO ALLOWANCE FOR STRIPPING

0 7.5 15 22.5 30 37.5 45m
SCALE 1:750 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
D	21.10.2024	ISSUED FOR APPROVAL	AM
C	18.10.2024	ISSUED FOR APPROVAL	AM
B	14.10.2024	ISSUED FOR INFORMATION	AM
A	16.04.2024	ISSUED FOR INFORMATION	AM

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PROJECT: 1 GRAND AVENUE
CAMELLIA, SYDNEY, 2142

STATUS: ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
JL	AM	SH	

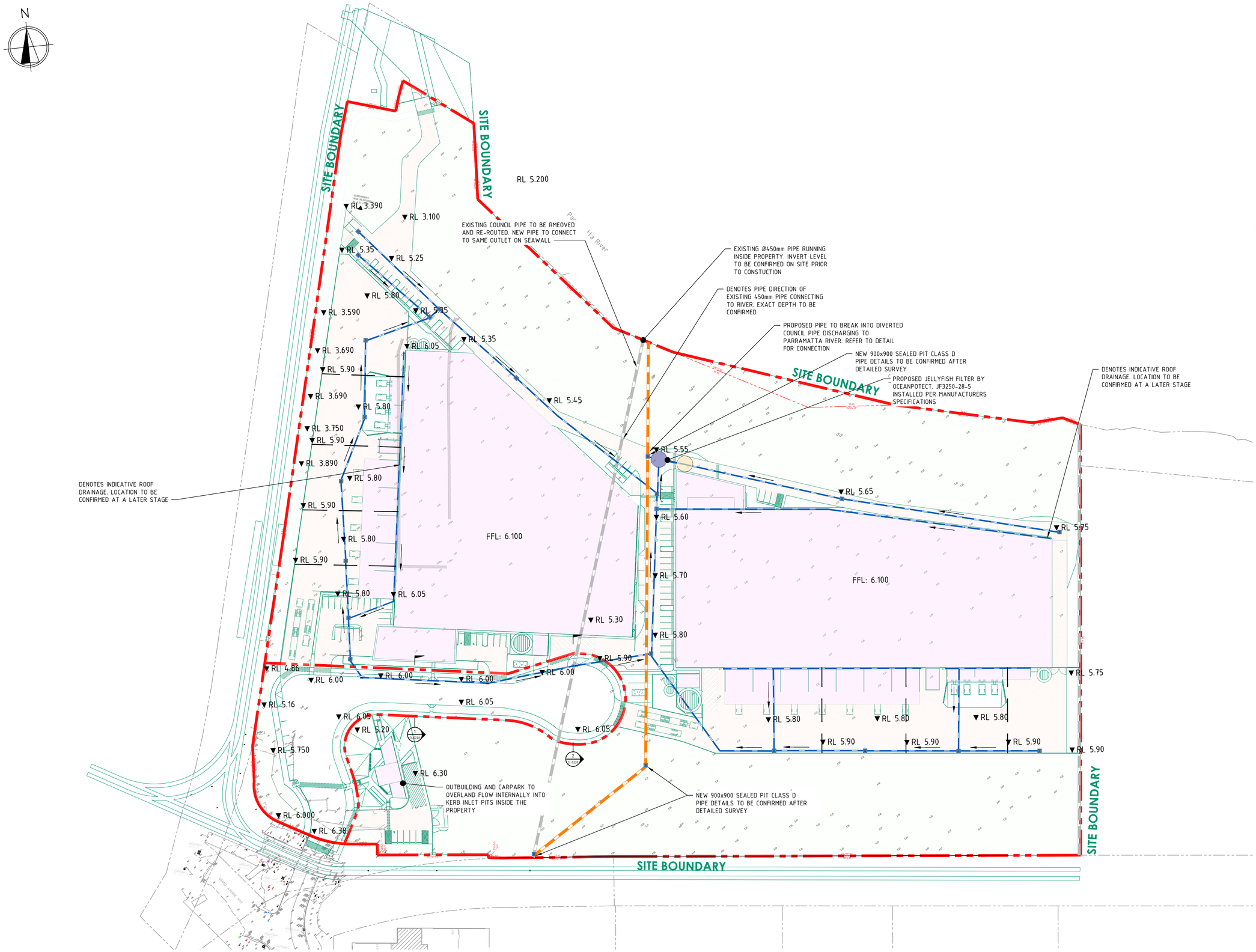
DATUM	GRID	SCALE	
AHD	MGA	1:750	AT A1 SIZE

TITLE: EARTHWORKS DEPTH RANGE PLAN

PROJECT No.	DRAWING No.	REV.
S23153	DRG-CI-0120	D

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LEGEND

- SITE BOUNDARY
- PROPOSED GRATED INLET PIT
- 225uPVC 0.5% — PROPOSED STORMWATER PIPE WITH SIZE AND FALL TAG
- EXISTING STORMWATER PIPE
- ARCHITECTURAL LINE WORK
- PROPOSED PAVEMENT CREST
- 3% — PROPOSED FALL IN PAVEMENT SURFACE
- ▼RL = REDUCED LEVEL SPOT HEIGHT
- FFL = FINISHED FLOOR LEVEL RL

NOTES

1. OCEAN PROTECT OCEANGUARD OR EQUIVALENT PRODUCT TO BE INSTALLED TO ALL GRATED INLET PITS.
2. LOCATION OF DOWNPIPES FROM ROOF WATER CONNECTION TO BE DOCUMENTED AS PART OF FUTURE C/C STAGE. IT IS ASSUMED THAT ALL ROOFWATER DOWNPIPES CONNECT TO THE RAINWATER TANK.
3. ALL ACCESS DRIVEWAY TO BE INSTALLED WITH 300mm x 300mm GRATED TRENCH DRAINS UNDER ACCESS GATE

0 7.5 15 22.5 30 37.5 45m
SCALE 1:750 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
E	21.10.2024	ISSUED FOR APPROVAL	AM
D	18.10.2024	ISSUED FOR APPROVAL	AM
C	12.04.2024	ISSUED FOR APPROVAL	AM
B	15.09.2023	ISSUED FOR APPROVAL	AM
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PROJECT: 1 GRAND AVENUE
CAMELLIA, SYDNEY, 2142

STATUS: ISSUED FOR APPROVAL
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DRAWN	DESIGNED	CHECKED	APPROVED
JL	AM	SH	

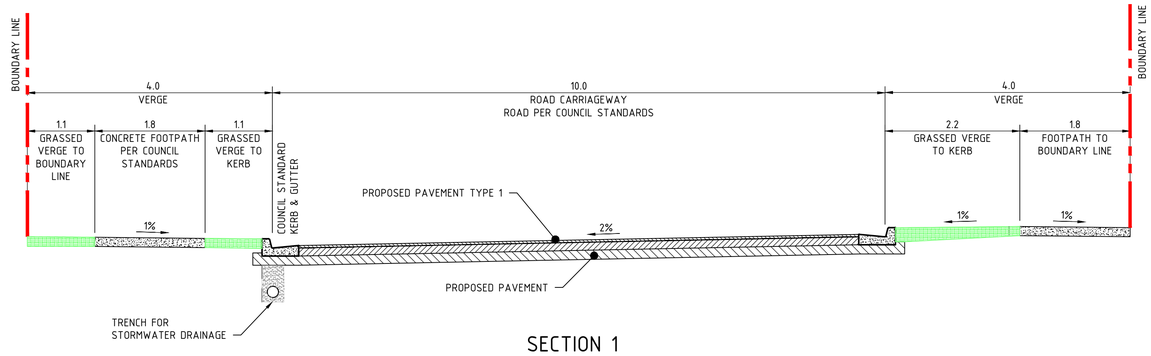
DATUM	GRID	SCALE	
AHD	MGA	1:750	AT A1 SIZE

TITLE: SITEWORKS PLAN AND GROUND FLOOR DRAINAGE

PROJECT No. S23153 | DRAWING No. DRG-CI-0200 | REV. D

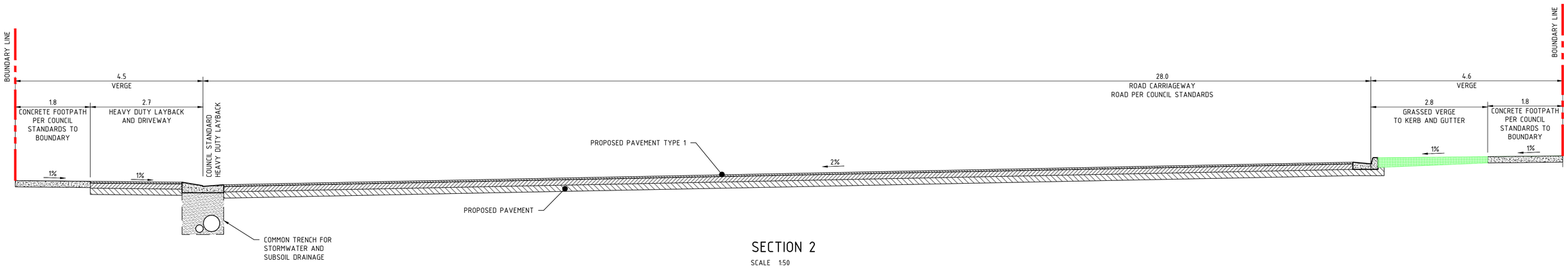
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SECTION 1

SCALE 1:50



SECTION 2

SCALE 1:50

0 0.5 1.0 1.5 2.0 2.5 3.0m
SCALE 1:50 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
C	21.10.2024	ISSUED FOR APPROVAL	AM
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PROJECT

1 GRAND AVENUE
CAMELLIA, SYDNEY, 2142

STATUS: SUBDIVISION WORKS CERTIFICATE

DRAWN	DESIGNED	CHECKED	APPROVED
JL	AM	SH	

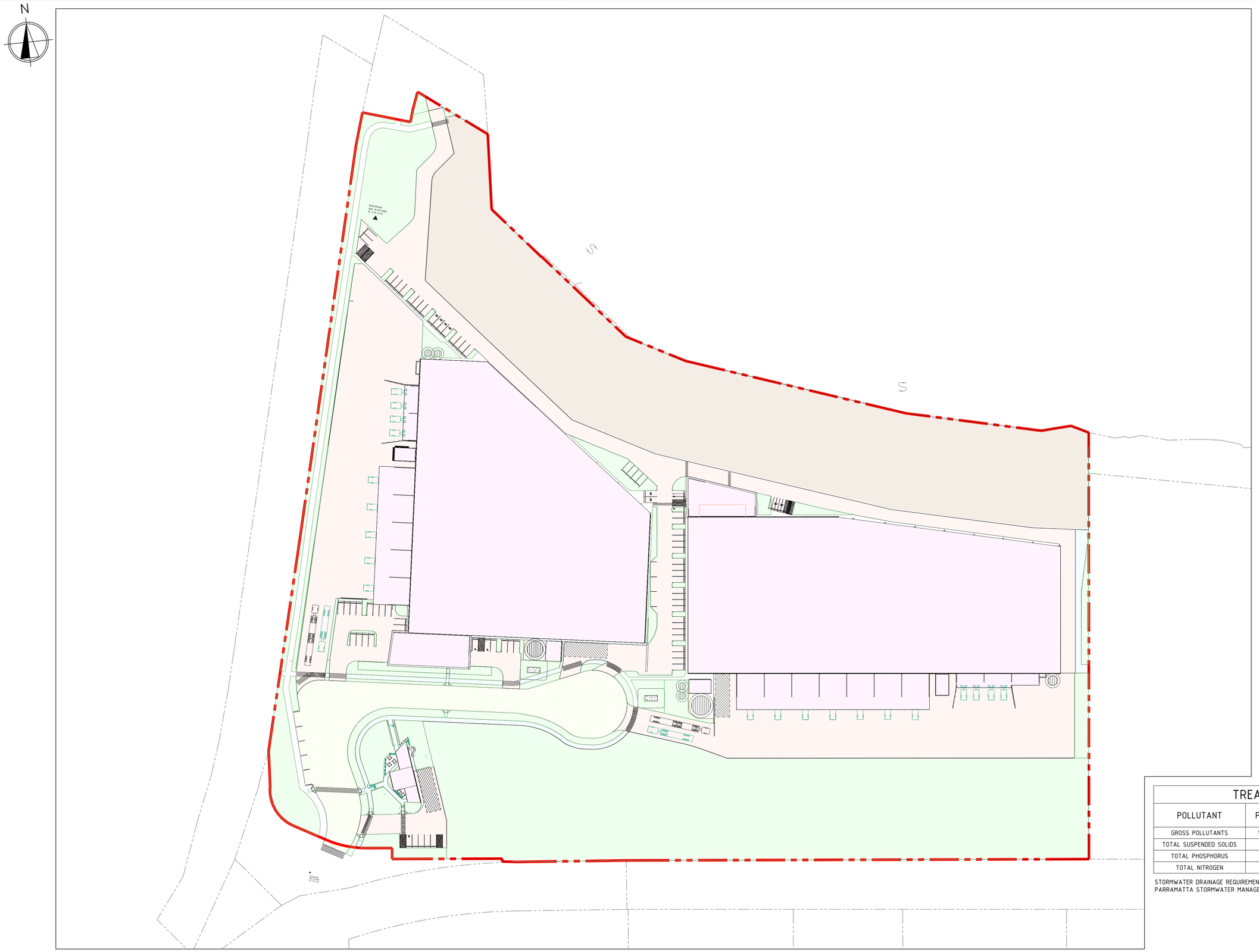
DATUM	GRID	SCALE	
AHD	MGA	AS SHOWN	AT A1 SIZE

TITLE: TYPICAL SECTIONS

PROJECT No.	DRAWING No.	REV.
S23153	DRG-CI-0220	C

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LEGEND

- SITE BOUNDARY
- SEALED ROAD 2557m²
- LANDSCAPE BYPASSING 8402m²
- ROOF CATCHMENT 21630m²
- PAVED HARDSTAND CATCHMENT 15925m²
- LANDSCAPE CATCHMENT 18077m²

TOTAL SITE AREA 70709 m²

WATER QUALITY

TREATMENT NODES:

- SITE TO BE INSTALLED WITH 1 OCEANSAVE GPT BY OCEAN PROTECT
- ALL EXTERNAL PITS TO BE INSTALLED WITH OCEANGUARD INLET FILTERS
- SITE TO BE INSTALLED WITH JELLYFISH FILTER-JF3250-28-5

TREATMENT STANDARDS

POLLUTANT	POST	REDUCTION (%)	COUNCIL REQUIREMENTS (%)
GROSS POLLUTANTS	51.6	100	90
TOTAL SUSPENDED SOLIDS	900	89.2	85
TOTAL PHOSPHORUS	7.06	66.8	60
TOTAL NITROGEN	90.9	47.4	45

STORMWATER DRAINAGE REQUIREMENTS HAVE BEEN CALCULATED IN ACCORDANCE WITH CITY OF PARRAMATTA STORMWATER MANAGEMENT PLAN

0 7.5 15 22.5 30 37.5 45m
SCALE 1:750 AT A1 SIZE

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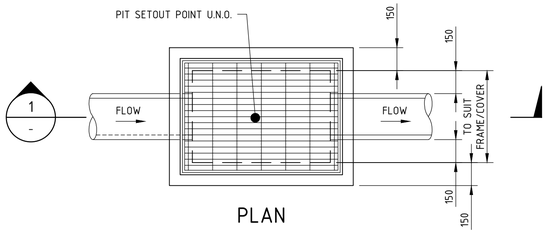
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AHD	MGA	1:750 AT A1 SIZE

TITLE: MUSIC MODEL CATCHMENT PLAN

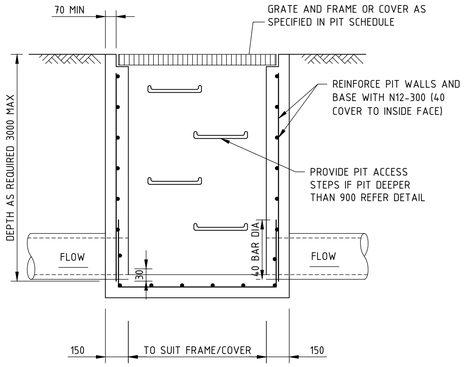
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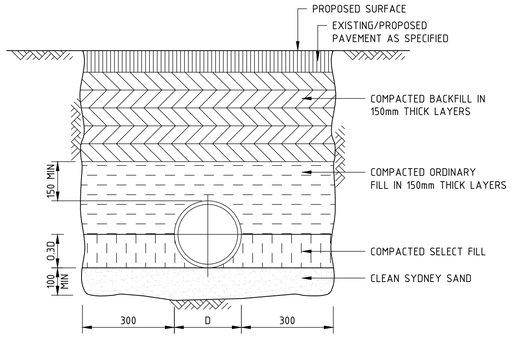
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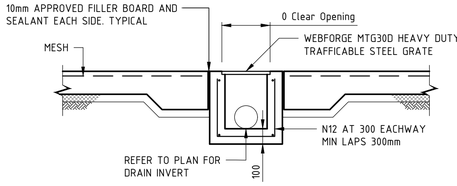
PLAN



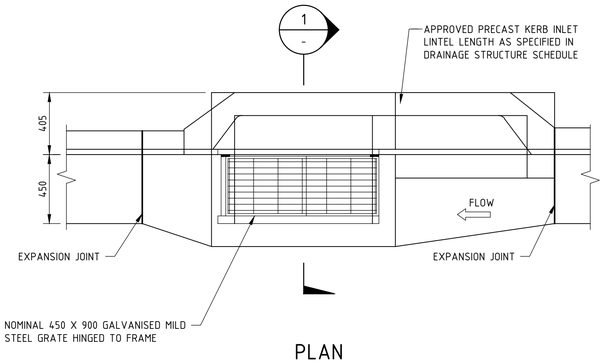
SECTION 1
SCALE 1:20



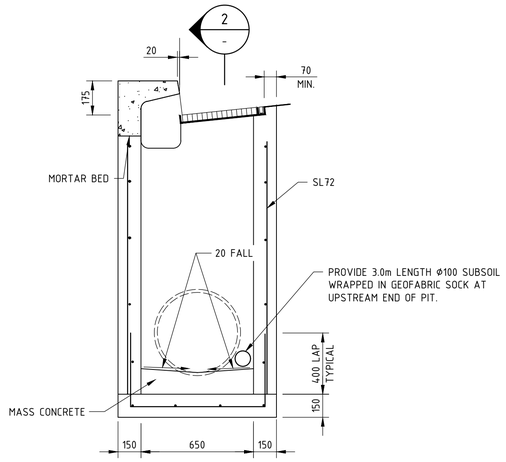
TYPICAL PIPE BEDDING DETAILS
N.T.S.



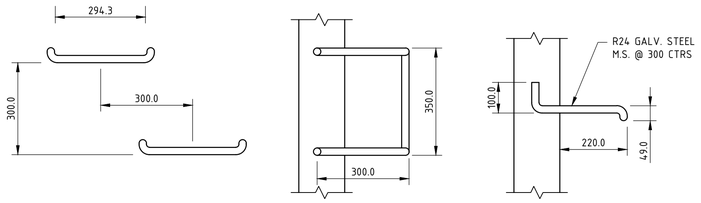
GRATED TRENCH DETAIL
SCALE : N.T.S



PLAN

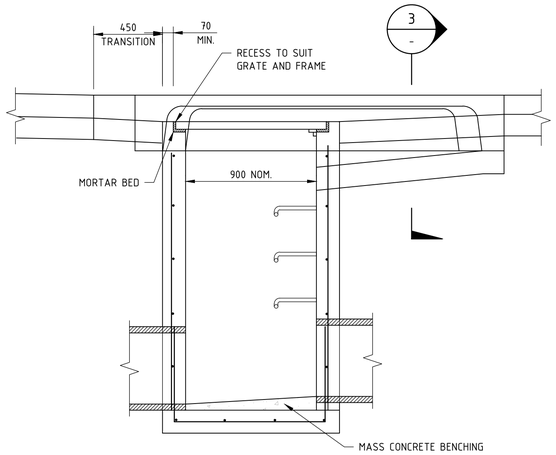


SECTION 1
SCALE 1:20

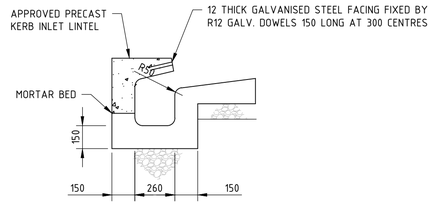


ELEVATION PLAN SECTION

TYPICAL STEP IRON DETAILS
SCALE 1:10



SECTION 2
SCALE 1:20



SECTION 3
SCALE 1:20

KERB INLET PIT TYPE "A" (PIPE SIZES ≤ 450 Φ)
PROVIDE STEP IRONS FOR ALL PITS FOR PITS >1200 DEEP

0 0.1 0.2 0.3 0.4 0.5 0.6m
SCALE 1:10 AT A1 SIZE

0 0.2 0.4 0.6 0.8 1.0 1.2m
SCALE 1:20 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
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CAMELLIA, SYDNEY, 2142

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JL	AM	SH	

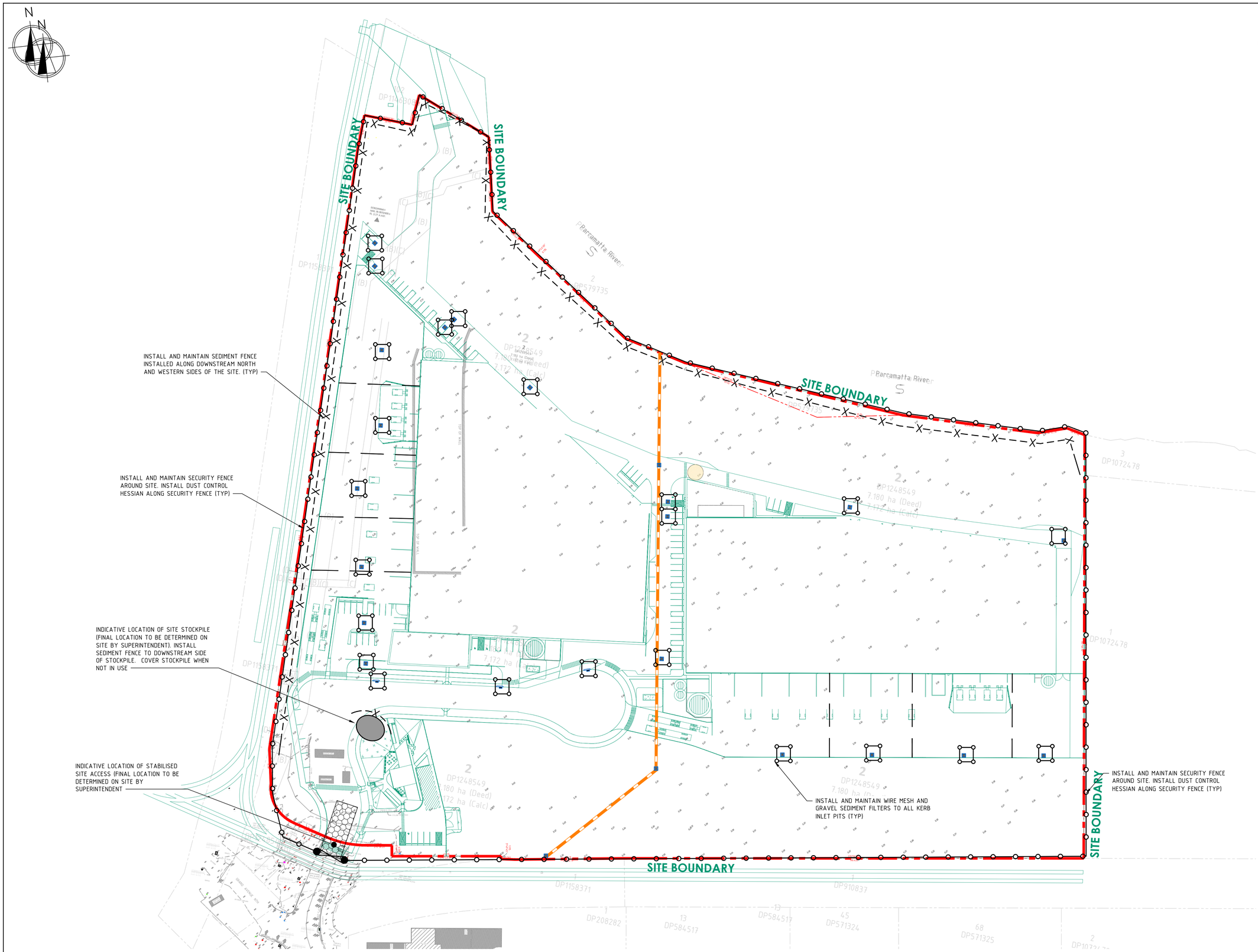
DATUM	GRID	SCALE	
AHD	MGA	AS SHOWN	AT A1 SIZE

TITLE: DRAINAGE DETAILS

PROJECT No. S23153 | DRAWING No. DRG-CI-0340 | REV. D

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LEGEND

- SITE BOUNDARY
- EXISTING CONTOURS (96.00)
- PROPOSED STORMWATER DRAINAGE PIT WITH GEOTEXTILE INLET FILTER
- STABILISED SITE ACCESS
- SEDIMENT FENCE
- SECURITY FENCE
- 4M WIDE SECURITY FENCE
- SUGGESTED TEMPORARY STOCKPILE LOCATION
- GROUND FLOOR ARCHITECTURAL
- MESH & GRAVEL INLET FILTER

EXISTING SERVICES

THE SERVICE LOCATIONS SHOWN HAVE BEEN OBTAINED BY SUPPLIED SURVEY AND SHOULD BE USED AS INDICATIVE ONLY- ALL SERVICE LOCATIONS SHOULD BE CONFIRMED BEFORE UNDERTAKING ANY WORKS IN THE AREA.

NOTES

1. CONTRACTOR TO PROVIDE 'SANDBAG SEDIMENT TRAP' TO ALL PAVED / ROAD AREAS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'.
2. CONTRACTOR TO PROVIDE 'GEOTEXTILE INLET FILTER TRAPS' TO ALL STORMWATER DRAINAGE INLETS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'.
3. INSTALL AND MAINTAIN SANDBAG FILTERS ACROSS ALL PAVEMENT INTERFACES.

0 7.5 15 22.5 30 37.5 45m
SCALE 1:750 AT A1 SIZE

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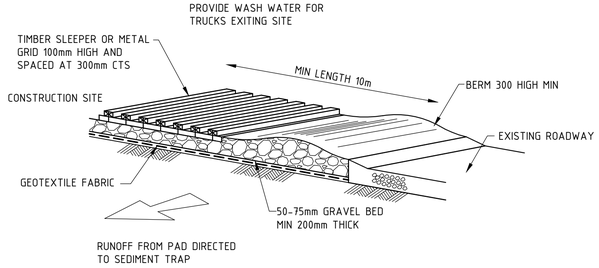
DATUM	GRID	SCALE
AHD	MGA	1:750 AT A1 SIZE

TITLE: EROSION AND SEDIMENT CONTROL PLAN

PROJECT No.	DRAWING No.	REV.
S23153	DRG-CI-0700	D

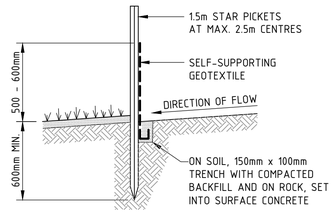
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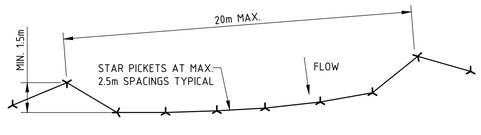


TEMPORARY CONSTRUCTION VEHICLE EXIT

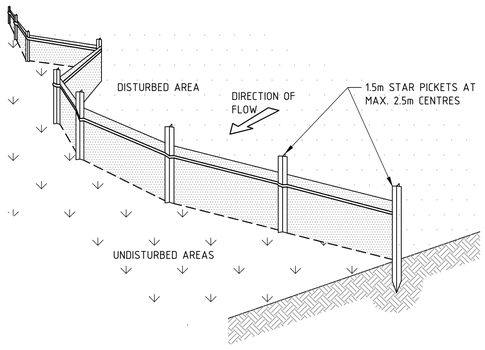
NTS



SECTION DETAIL



PLAN

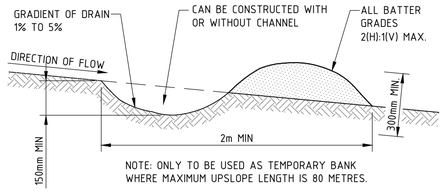


SEDIMENT FENCE CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE

SCALE N.T.S

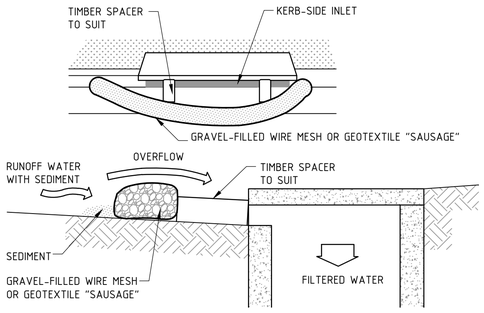


TEMPORARY CUT OFF DRAIN CONSTRUCTION NOTES:

1. BUILD WITH GRADIENTS BETWEEN 1% AND 5%.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS-SECTIONS, NOT "V" SHAPED.
5. ENSURE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

TEMPORARY CATCH DRAIN

SCALE N.T.S

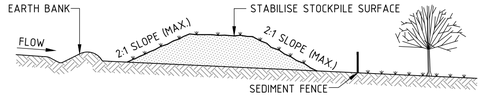


MESH & GRAVEL INLET FILTER CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY CAN FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH & GRAVEL INLET FILTER

SCALE N.T.S

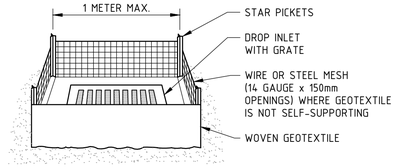


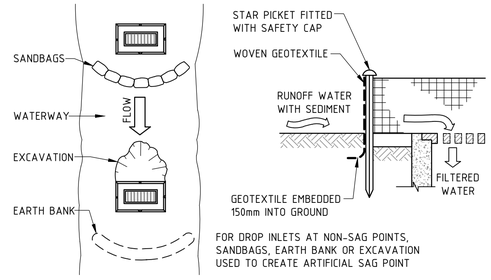
STOCKPILE CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.

STOCKPILES

SCALE N.T.S





GEOTEXTILE INLET FILTER CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. PICKET SPACING TO BE A MAXIMUM 1.0m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILES UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER

SCALE N.T.S

REV	DATE	DESCRIPTION	RVD
C	21.10.2024	ISSUED FOR APPROVAL	AM
B	15.09.2023	ISSUED FOR APPROVAL	AM
A	25.08.2023	ISSUED FOR INFORMATION	AM

REVISIONS

REVISIONS

CLIENT: Billbergia creating communities

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PROJECT: 1 GRAND AVENUE
CAMELLIA, SYDNEY, 2142

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
JL	AM	SH	

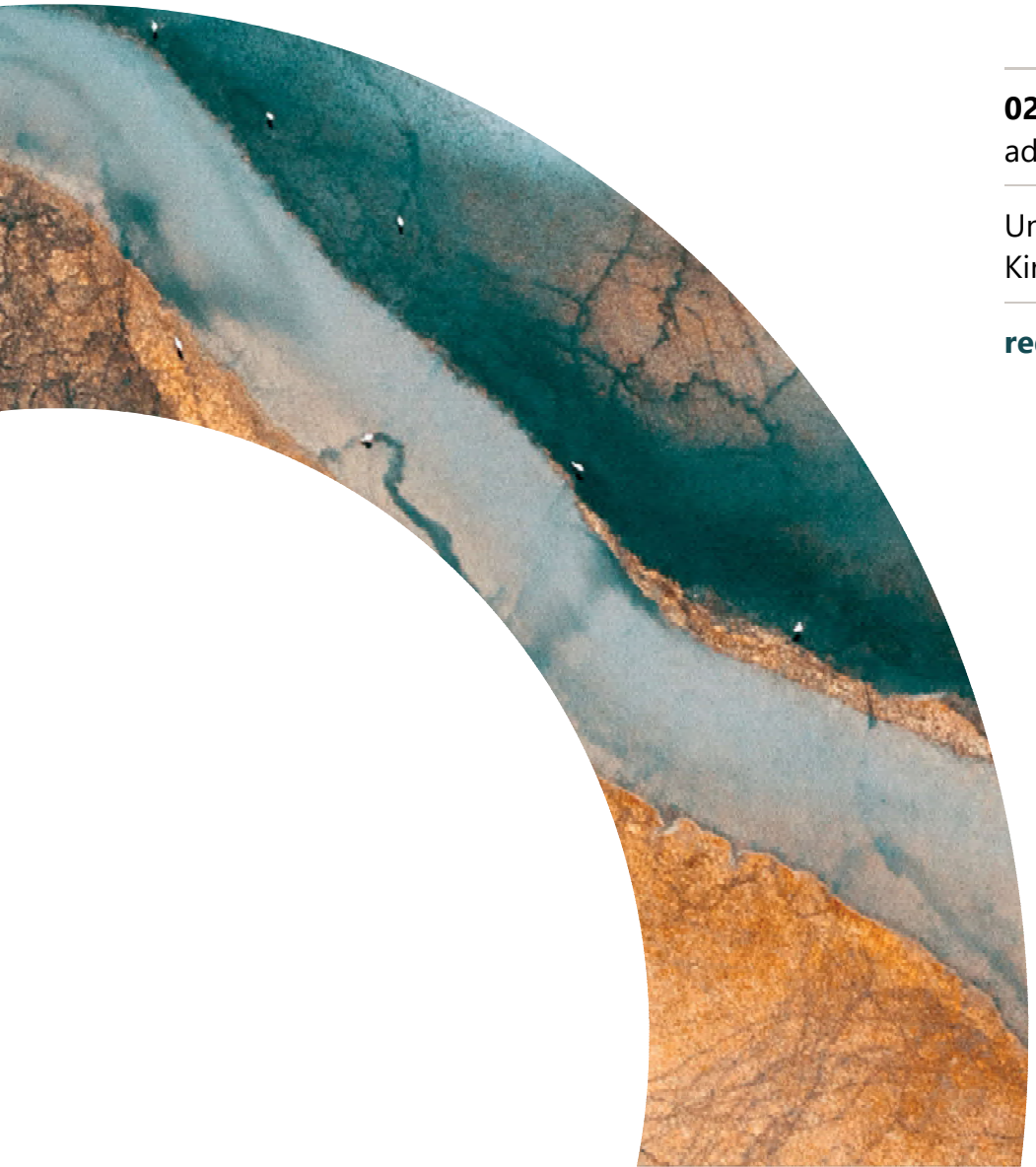
DATUM	GRID	SCALE		
AHD	MGA	AS SHOWN	AT	A1 SIZE

TITLE: EROSION AND SEDIMENT CONTROL DETAILS

PROJECT No.	DRAWING No.	REV.
S23153	DRG-CI-0710	C

P:\BGE\SYD\S23153 1 GRAND AVENUE CAMELLIA\100 DRAW\100.2 CIVIL\AUTOCAD\S23153-DRG-CI-0710.DWG
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