Overarching Remedial Action Plan
Waterloo South Redevelopment Precinct
Waterloo 2017, NSW

Stockland Development Pty Ltd

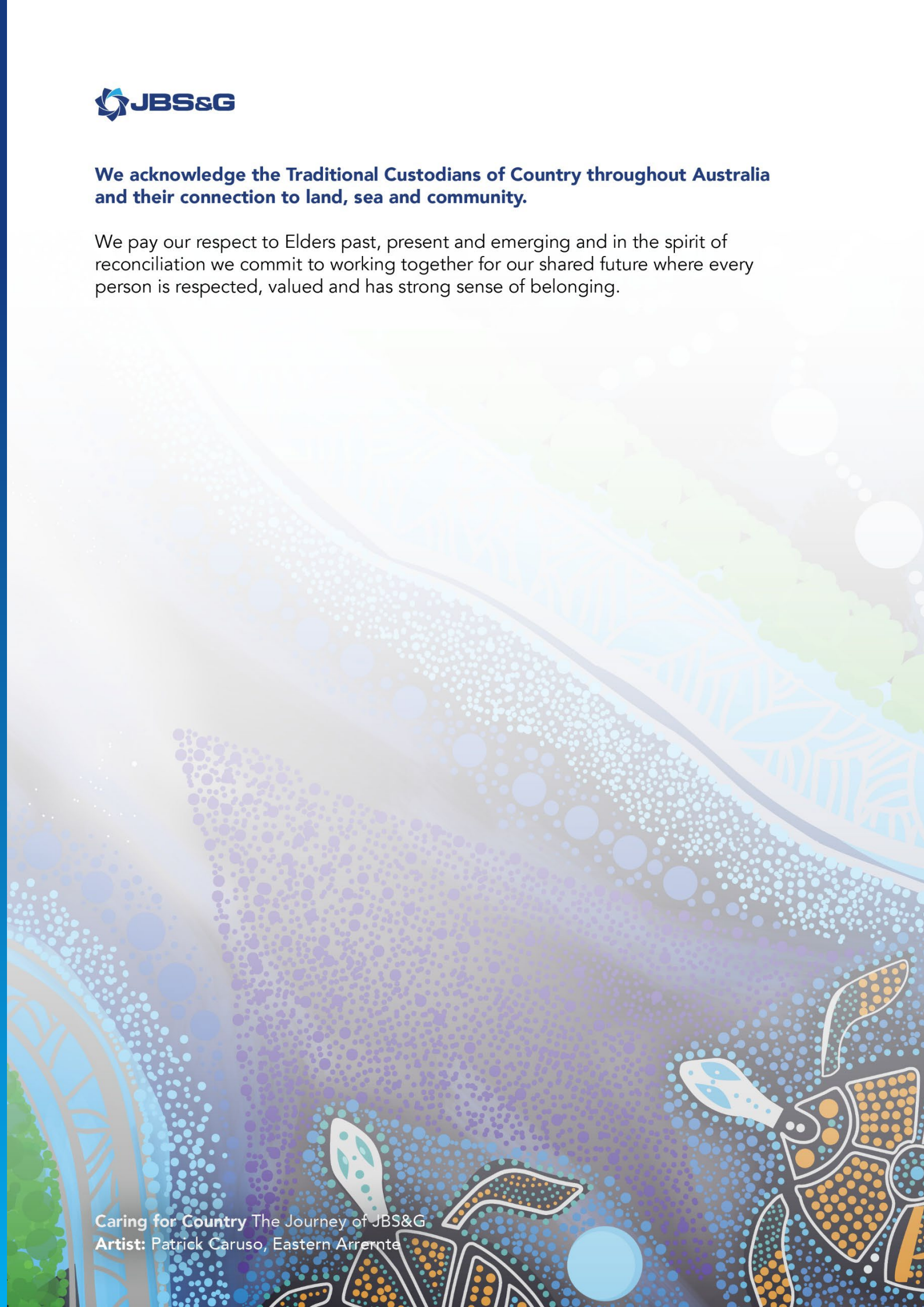
Report

68063 | 169953 (Rev 2)

27 March 2026

We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.



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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure
ASS	Acid Sulfate Soils
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CCP	Community Consultation Plan
CLM Act	Contaminated Land Management Act 1997
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DP	Deposited Plan
DSI	Detailed Site Investigation
DGI	Data Gap Investigation
EPA	NSW Environment Protection Authority
ESD	Ecologically Sustainable Development
ESL	Ecological Screening Level
ha	Hectare
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
LTEMP	Long Term Environmental Management Plan
LGA	Local Government Area
NEPC	National Environment Protection Council
OCPs	Organochlorine Pesticides
OEH	Office of Environment and Heritage
PACM	Potential Asbestos Containing Materials
PAHs	Polycyclic Aromatic Hydrocarbons
P/ASS	Potential / Actual Acid Sulfate Soils
PCB	Polychlorinated Biphenyls
POEO Act	Protection of the Environment Operations Act 1997
PSI	Preliminary Site Investigation
PFAS	Per- and Poly-fluoroalkyl Substances
PFOS	Perfluorooctanesulfonic acid
RAP	Remedial Action Plan
RWP	Remedial Works Plan
REMP	Remediation Environmental Management Plan
SAQP	Sampling Analysis and Quality Plan
SEPP	State Environmental Planning Policy
SPOCAS	Suspension Peroxide Oxidation Combined Acidity and Sulfur

SSDA	State Significant Development Application
TEQ	Toxicity Equivalent Quotient
TRH	Total Recoverable Hydrocarbons
UFP	Unexpected Finds Procedure
UPSS	Ungerdground Petroleum Storage System
UST	Underground Storage Tank
VENM	Virgin Excavated Natural Material

Executive Summary

JBS&G Australia Pty Ltd was engaged by Stockland Development Pty Limited (Stockland, the Client) to prepare an Overarching Remedial Action Plan (O-RAP) for the site proposed for redevelopment as the Waterloo Estate (South) Precinct (the site).

The site currently comprises a social housing estate with residential apartments, a childcare centre, and council road reserves. The proposed redevelopment will transform the area into a modern, mixed-use precinct, including residential apartments, basement car parking, retail and commercial spaces (including a childcare centre), potential education facility, public open spaces, community facilities, and an upgraded road network. Development will occur in stages over approximately 10–15 years, with each stage subject to separate Development Application (DA) or State Significant Development Application (SSDA) approvals.

The O-RAP provides a comprehensive remedial strategy to support the Concept SSDA, Ecologically Sustainable Development (ESD), waste minimisation objectives, and future stage-specific works. Stage-specific Remedial Works Plans (RWPs) will be prepared as design plans for each stage become available and submitted with subsequent detailed planning application, as required. The O-RAP establishes the overarching strategy, outlines additional required work, and provides a framework for remediation, validation, and contingency measures in individual RWPs. Each RWP will address site-specific remediation requirements necessary to render the land suitable for its intended use.

Fill material is impacted to varying degrees with heavy metals, hydrocarbons (PAH/TRH) and asbestos to varying degrees generally exceeding ecological criteria and to a lesser extent health criteria under a residential setting with minimal access to soil/recreation criteria. Impacts are generally constrained to surface fill (0.2–0.5 m).

Based on the assessment of remedial options, the preferred approach for managing impacted fill is on-site containment.

The proposed O-RAP actions are considered technically feasible, environmentally justifiable, and compliant with the Contaminated Sites Guidelines for the NSW Site Auditor Scheme (3rd Edition, EPA 2017) and relevant legislation. Implementation of these measures will make the site suitable for its intended uses, with contamination-related risks managed to protect human health and the environment.

1. Introduction

1.1 Background and Proposed Development

JBS&G Australia Pty Ltd was engaged by Stockland Development Pty Limited (Stockland, the Client) to prepare an Overarching Remedial Action Plan (O-RAP) for the site proposed to be developed as the Waterloo Estate (South) Precinct (the site). The site address, cadastre and area are shown in **Table 1.1** below. The site location and current layout are shown on **Figures 1** and **2A**, respectively.

The site currently consists of a social housing estate and associated amenities, including residential apartments over several buildings, a childcare centre, and council road reserves. The proposed redevelopment will transform the area into a modern, vibrant mixed-use precinct featuring residential apartments, basement car parking beneath select buildings, retail and commercial spaces (including a childcare centre), a potential education facility, public open spaces and community facilities including parklands, walkways, and cycleways, and a new or upgraded road network (**Figure 2B**). Once completed, the redevelopment is expected to deliver around 3,300 homes, with 50% allocated as social and affordable housing. Concept design plans are included in **Appendix A**.

The site is to be developed in stages over an extended period of approximately 10 to 15 years, with each stage subject to separate Development Application (DA) or State Significant Development Application (SSDA) approvals.

The purpose of this O-RAP is to provide a comprehensive remedial strategy to support the site's Concept SSDA, the project's Ecological Sustainable Development (ESD) and waste minimisation objectives, and to support future stage-specific works.

An O-RAP is considered the most appropriate approach for a large-scale, staged development of this nature. Stage-specific Remedial Works Plans (RWPs) will be prepared for each stage, detailing the specific remediation requirements as design plans become available and submitted with subsequent detailed planning application, as required.

The O-RAP has been prepared using information presented in the Data Gap Investigation (DGI) report by JBS&G (JBS&G 2025[1]). The information is considered adequate and reliable for the purpose of preparing this O-RAP, as evidenced by the issue of Interim Audit Advice (IAA) by NSW Environment Protection Authority (EPA) accredited Site Auditor Melissa Porter of Senversa (Senversa 2025[2]), certifying that sufficient information has been collected to inform the preparation of an O-RAP.

This O-RAP has been prepared in general accordance with guidelines made or approved by the NSW EPA and relevant Australian Standards.

1.2 Objectives

The objective of the O-RAP is to establish an overarching remediation strategy for the site. It outlines the need for additional work and provides a framework for remediation, validation, and contingency measures to be implemented in the individual RWPs to be prepared for each stage of the development.

A secondary objective of the O-RAP is to address Condition 11 of the Secretary's Environmental Assessment Requirements (SEARs) checklist, which requires that, in accordance with Chapter 4 of the *State Environmental Planning Policy (Resilience and Hazards) 2021*, soil and groundwater contamination be

[1] *Data Gap Investigation Waterloo South Redevelopment Precinct*, Waterloo, NSW, prepared by JBS&G Australia Pty Ltd. dated 26 June 2025, ref. 68063|166648 Rev 0 (JBS&G 2025)

[2] *Interim Audit Advice #2* Waterloo South Redevelopment Precinct, Waterloo NSW, *Review of Updated Data Gap Investigation*, prepared by Senversa Pty Ltd. dated 24 July 2025 (Senversa 2025)

assessed and quantified, and that the site be demonstrated to be suitable (or capable of being made suitable through remediation) for the proposed development.

The objective of each individual RWP is to address specific remediation requirements necessary to render the site (or part thereof) suitable for its intended land use.

1.3 Address, Ownership Cadastre and Area

The site address, cadastre and area are shown in **Table 1.1**. The site location and current layout are shown on **Figures 1** and **2A**, respectively.

Table 1.1 Site Address, Ownership, Cadastre and Area

Address and Ownership	Cadastre	Area (m^2)
209-219 Cope Street, Waterloo, 2017 (NSW LAHC[3])	Lot 1 DP 217386	10,355.13
238-246 George Street, Waterloo, 2017 (NSW LAHC)	Lot 1 DP 225159	9,595.34
229-231 Cope Street, Waterloo, 2017 (NSW LAHC)	Lot 3 DP 10721	346.71
6 John Street, Waterloo, 2017 (NSW LAHC)	Lot 1 DP 533762	1,930.92
97-109 Cooper Street, Waterloo, 2017 (NSW LAHC)	Lot A DP 105916	186.7
	Lot B DP 105916	187.8
	Lot C DP 105916	202.43
	Lot 14 DP 10721	366.91
224 – 154 George Street, Waterloo, 2017 (NSW LAHC)	Lot 2 DP 533678	6,212.98
232 Pitt Street, Waterloo, 2017 (NSW LAHC)	Lot 11 DP 635663	2,952.47
	Lot 10 DP 635663	767.62
74-76 Wellington Street, Waterloo, 2017 (NSW LAHC)	Lot 1 DP 224728	6,684.94
331-337 George Street, Waterloo, 2017 (NSW LAHC)	Lot 3 DP 533680	10,255.68
247-251 Cope Street, Waterloo, 2017 (NSW LAHC)	Lot 1 DP 533679	12,293.08
339-341 George Street, Waterloo, 2017 (NSW LAHC)	Lot 1 DP 77168	7,298.61
250 Pitt Street, Waterloo, 2017 (NSW LAHC)	Lot 313 DP 606576	12,843.57
No Formal Address (NSW LAHC)	3/217386	753.58
Cooper, Wellington, George, John, West, Reeve, Pitt Streets (Council)	-	17,238.34
	Site Area	**99,719 (9.97 ha)**

1.4 Scope of Works

The scope of works includes:

- Summarising the site contamination issues;
- Outline the need for additional work
- Identify the extent of remediation required for the site;
- Assess potential remediation options and select preferred options, as appropriate;

[3] NSW Land and Housing Corporation (LAHC)

- Outline the remediation methodology, including a validation plan to be implemented alongside the remediation activities;
- Establishing validation criteria for the validation works based on the proposed land uses;
- Presents a contingency plan for the remediation works;
- Defines the site management procedures to be applied during remedial works;
- Identifies the regulatory requirements relevant to the remediation works; and
- Outlines any necessary ongoing monitoring or management requirements.

2. Site Condition and Surrounding Environment

2.1 Site Identification

The urban setting of Waterloo is characterised as a high-density inner-city environment. Historically comprising industrial uses and low-density residential housing, the area has undergone significant gentrification and urban renewal in recent years, resulting in a mix of low to high-density residential developments, with retail and commercial uses generally concentrated along major arterial roads and around key transport hubs. More recently (circa 1960s), the site has been used for residential (social housing) land use with a childcare centre located east of West Street, South of Wellington Street.

The site location and surrounding area are shown on **Figure 1**. The current site layout is provided as **Figure 2A**, with the preliminary site layout shown on **Figure 2B/Figure 2C**. Site details are summarised in **Table 2.1** below.

Table 2.1: Summary of Site Details

Particulars	Details
Address and Cadastre	Refer to **Table 1.1** above.
Area (m^2)	99,719 (9.97 ha)
Approximate Relative Level (RL) m Australian Height Datum (AHD)	RL 17.7 to 42.1 m AHD.
Local Government Authority	The Council of the City of Sydney (Council).
County/Parish	Cumberland/Alexandria.
Approximate Site Geographic Coordinates (MGA 56)	-33.899009, 151.202203
Zoning	Sydney Local Environmental Plan 2012: • MU1 (Mixed Use); • RE1 (Public Recreation); • E1 (Local Centre Zone); • SP2 (Infrastructure)
Land Ownership	Refer to **Table 1.1** above.
Previous Land Uses	Mixed Land Use (historically including residential, commercial, and industrial uses, with more recent uses circa 1960s for social housing),
Current Land Uses	Residential (social housing and amenities), Childcare and Road Reserves.
Proposed Land Uses	Mixed Land Use (residential, retail/commercial, recreational, community uses, childcare/ potential education facility and road reserves).

2.2 Site Condition, Surrounding Land Use and Setting

The site condition, surrounding land uses, and setting are summarised in **Table 2.2** below.Error! Reference source not found.

Table 2.2: Summary of Site Condition, Surrounding Land Use and Setting

Particulars	Details
Site Condition	**Boundaries**: The site is bounded by Raglan and Wellington Streets to the north; Pitt and Gibson Streets to the east; McEvoy and Kellick Streets to the south; and Cope Street to the west. In addition to these boundary roads, public road reserves lie within the site, providing access to various properties via John, Cooper, George, West, Reeve, and Pitt Streets. **Structures**: The site is predominantly occupied by a social housing estate comprising low to high-density residential buildings, including villas, apartments, and terrace blocks. A limited number of buildings feature basement parking; however, the majority were constructed at grade. Notably, in the eastern portion of the site, buildings were constructed into a west-facing slope using retaining walls to establish current site levels/retain soil. Two electrical substations, located beyond the site boundary, are present in the southern portion of the site, along McEvoy Street, and the western portion of the site along Cope Street. **Building Materials**: Suspected asbestos-containing materials (ACM) and lead-based paint were observed in several buildings across the site. The ACM and lead-based paint were noted to be in a deteriorated state at some locations. **Landscaping**: Landscaped areas surround most buildings, particularly along street frontages, typically comprising lawn areas, garden beds (shrubs), and mature trees, some reaching up to 20 m in height. Mature trees are also located within the street reserves. Several on-grade parking areas exist within the site, consisting of asphalt-paved surfaces, concrete walkways, and small ancillary structures used for garbage storage. Vegetation appeared healthy, with no observable signs of stress, indicating that contamination has not adversely impacted plant health.
Surround Land Uses	The surrounding area includes a diverse mix of residential, retail/commercial, recreational, and industrial land uses (refer to **Figures 1** and **2A**). The locality has a long and complex commercial/industrial history, with past land uses including car dealerships, automotive repair workshops, metal plating operations, service stations, landfills, dry cleaners/laundromats, and wool scourers (washing facilities). In recent years, the area has undergone significant gentrification, particularly west of Cope Street (facing Botany Road) and south of McEvoy Street, where land parcels have been redeveloped for medium to high-density residential purposes. Upgradient of the site, most land to the north of Raglan and Wellington Streets, and east of George and Pitt Streets, is currently occupied by social or private residential developments. Although some potentially contaminating uses, such as former or existing car dealerships, automotive repair workshops, and the Lawrence Dry Cleaners, are located to the north and northeast of the site, these properties are considered unlikely sources of off-site contamination. This assessment is based on their distance from the site and/or their location cross- or down-gradient, relative to the site. Immediately west of the northern portion of the site lies the Waterloo Metro development site, which historically accommodated a dry cleaner and a service station. These properties are also considered cross or downgradient of the site and are therefore not considered to pose a contamination risk to the site. Additionally, they have recently been remediated for mixed-use development (residential/commercial).

Particulars	Details
Topography and Drainage	The site lies within the gently undulating regional topography of the Botany Sand formation, sloping mostly east to west/southwest. Elevations range from approximately 34 m AHD at Gibson Street (east) to 20 m AHD near Raglan and George Streets (northeast), and 16 m AHD at Cope and McEvoy Streets (southwest), with most of the change in elevation occurring in the eastern portion and the remainder relatively level. As shown on **Figure 2A**, the Potts Hill to Waterloo Pressure Tunnel traverses east-west within the central site extent. The tunnel was constructed between 1921 and 1935 by the Metropolitan Water, Sewerage and Drainage Board (now Sydney Water) at depths ranging from 46 to 118 m below ground surface (m bgs). The Waterloo Sydney metro development is also present immediately west of the site, and was constructed between 2019 and 2024, with tunnels present at a depth of approximately 25 m bgs. Similarly, it is understood that a Sydney Rail tunnel is present, running north to south at depth beneath George Street.
Geology and Soils	Reference to the online ESPADE 2.2 tool hosted by the NSW Department of Planning, Industry and Environment (DPIE 2025[4]) and the 1:100,000 scale Sydney Series Geological Survey of NSW Sheet 9130 (DMR 1983[5]) indicates that the site is present within the following geological and soil landscapes: • **Geology**: Quaternary (Holocene and Pleistocene) wind-blown, fine to medium-grained, well-sorted marine quartz sand (Botany Sand Beds (BSBs)). The BSBs are generally underlain by Hawkesbury Sandstone. • **Soils**: Deep Podzols and Podzols/Humus Podzol intergrade – comprising loose grey-brown loamy sand, bleached loose sand, grey-brown mottled sands, black and brown soft sandy organic/iron pan, and yellow massive sands; ○ **Limitations**: extreme wind erosion hazard, non-cohesive, highly permeable soil, very low soil fertility, localised flooding and permanently high water tables. Based on a review of previous investigations, the average depth of fill material across the site was reported to be approximately <1 m and was noted to comprise (predominately) sand, silty sand, and sandy clay/gravels, underlain by natural sand, clay and sandstone bedrock with shale lenses
Acid Sulfate Soils	Review of the Acid Sulfate Soil Risk Map for Botany Bay (DLWC 1997[6]) indicated that the site is located within an area of 'no known occurrence' of ASS materials. Previous investigations undertaken at the site (**Section 4**) did not identify the presence of Potential or Actual Acid Sulfate soils (P/ASS) at the site. On this basis, no further consideration is required.
Hydrology	The nearest surface water receptor is Sheas Creek (brackish water body), located approximately 800 m to the south/southwest of the site. Sheas Creek flows to Alexandra Canal, which flows into the Cooks River (marine),

[4] *eSPADE v2.2 Web Map*, NSW Department of Planning, Industry and Environment, accessed 13 March 2025, https://www.environment.nsw.gov.au/eSpade2Webapp#

[5] *Herbert C., 1983, Sydney 1:100 000 Geological Sheet 9130, 1st edition.* Geological Survey of New South Wales, Sydney.

[6] *Acid Sulfate Soil Risk Map – Botany Bay, Edition 2, 1997*. 1:25 000 Ref: 91 30S3. NSW DLWC

Particulars	Details
	approximately 1.3 km to the southwest, which ultimately discharges into Botany Bay (marine), located around 6 km from the site. Currently, impervious pavements cover more than 50% of the site, resulting in rainfall being largely managed by the existing stormwater infrastructure. Runoff is directed toward the road drainage network before entering the broader regional stormwater system. It is understood that regional stormwater is conveyed via underground infrastructure that ultimately discharges into Alexandra Canal. In the unsealed areas of the site, rainfall is expected to infiltrate the relatively permeable sandy fill soils. Any excess surface runoff from these areas is anticipated to enter the surrounding stormwater system, contributing to overall drainage toward Alexandra Canal.
Hydrogeology	Consistent with historical groundwater use in the Botany Sands Aquifer, numerous registered wells have been identified near the site. According to the Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024, the site is located within Area 2 of the Botany Sand Aquifer Embargo Area, designated due to known or suspected contamination from past industrial activity. Groundwater use in this zone is prohibited for domestic purposes, including drinking, garden irrigation, washing, bathing, and pool filling. Industrial users must test bore water at least annually and report results to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) and WaterNSW. Previous assessments (**Section 4**) identified shallow groundwater within the BSB aquifer and a deeper confined aquifer within the underlying sandstone bedrock. Shallow aquifer standing water levels (SWLs) ranged from 0.46 to 5.31 m bgs, with a generally inferred westward flow direction, based on shallow wells and CPT observations. In bedrock monitoring wells, SWLs ranged from 8.70 to 19.48 m bgs with groundwater flowing westward/southwest.
Meteorology	A review of average climatic data for the nearest relevant Bureau of Meteorology monitoring location (Observatory Hill[7], 4.7 km from site) indicates the site is located within the following meteorological setting: • Mean minimum temperatures vary from 8.1°C in July to 18.9°C in February. • Mean maximum temperatures vary from 16.4°C in July to 26.0°C in January. • The mean annual rainfall is approximately 1211.1 mm, with rainfall greater than 1 mm occurring on an average of 99.5 days per year. Monthly average rainfall varies from 68.1 mm in September to 133.1 mm in June, with the wettest periods occurring on average in February through to June.

[7] http://www.bom.gov.au/climate/averages/tables/cw_066062.shtml, Commonwealth of Australia, Bureau of Meteorology, accessed on 13 March 2025 (BOM 2025)

3. Site History Summary

A review of historical aerial imagery, as referenced in AECOM (2020[8]), indicates that by 1943, the site was bounded by Raglan and Wellington Streets to the north, George, Pitt, and Gibson Streets to the east, McEvoy Street to the south, and Cope Street to the west. At that time, the area supported a mix of residential, commercial, and industrial land uses, characterised by a high density of buildings and allotments.

The northern portion of the site was predominantly residential, while the central and southern portions featured a combination of residential and commercial/industrial buildings, including several large warehouse-type structures. Access to properties was provided by a public road network, including Raglan, Wellington, John, Cooper, George, West, Reeve, and Pitt Streets, which remains largely unchanged today.

Historical Civic Survey Maps identified various industrial operations on site, including shoe manufacturing, electroplating, wine cellars, merchant and manufacturing businesses, carpet cleaning, panel beating, general transport, fur processing, a bond store, a bakery, and multiple stables.

Between 1955 and 1965, substantial redevelopment occurred in the northern portion of the site, with the construction of large-scale residential buildings resembling the current site layout. Redevelopment of the central-eastern portion was evident by 1965, and by 1975, most of the central and southern site areas had undergone significant transformation, again reflecting the current configuration.

From 1975 to 2009, only minor structural changes were observed, including the addition of small ancillary buildings. However, the 2009 aerial photograph shows complete redevelopment of a central eastern warehouse along West Street, replaced by three separate buildings. Overall, the site's layout remained relatively consistent between 1986 and 2018.

[8] *Waterloo Geotech and Contamination Stud.* Prepared for NSW Land and Housing Corporation. Prepared by AECOM Australia Pty Ltd. Rev 05 dated 25 February 2020 (AECOM 2020)

4. Previous Investigations

The following section provides a summary of previous investigations. Historical sampling locations are presented in **Figure 3A**, soil observations are shown in **Figure 3B**, and exceedances of the site criteria adopted at the time of previous investigations are shown in **Figures 4A** (soil), **4B** (soil), **5A** (groundwater), and **5B** (groundwater).

Historical analytical summary tables are provided in **Appendix B**, with borelogs included in **Appendix C** where available.

4.1 AECOM Preliminary Site Investigation & Geotechnical Assessment Summary (AECOM 2020)

AECOM Australia Pty Ltd (AECOM) was engaged by the NSW LAHC to prepare a combined Geotechnical and Stage 1 Preliminary Site Investigation (PSI) report for the broader Waterloo Estate, for which the site is part. The primary objective was to identify geotechnical and contamination risks that could impact the site's suitability for the proposed mixed-use redevelopment, including commercial and residential uses. The assessment was limited to a desktop review; no intrusive investigations were conducted.

Geotechnical Findings

Based on a review of previous reports, not sighted by JBS&G, AECOM provided the following summary of encountered conditions:

- Subsurface lithology/geology included:
  - Sand and clay fill to <1 m bgs
  - Alluvial sand from 0.6 to 6.6 m bgs
  - Silty clay from 2.2 to 8.6 m bgs
  - Shale bedrock between 7.8 to 15.4 m bgs
  - Sandstone 2.2 to 22.5 m bgs
- Groundwater was encountered at depths of 2.1 to 3.1 m bgs, with inferred flow to the southwest.
- Acid Sulfate Soils: ASS/PASS properties were not encountered.

Preliminary Site Investigation Conclusions

- The site was reported to have a complex historical land use, with early light industrial activity prior to redevelopment as social housing in the 1960s.
- AECOM developed a CSM (**Table 4.1)** identifying key contamination sources, potential contaminants of concern (CoPC), exposure pathways, and receptors:

Table 4.1: PSI CSM (AECOM 2020)

Source	COPC	Pathway(s)	Receptor(s)
Light industrial and commercial infrastructure (on and adjacent to the site)	Asbestos Heavy metals TRH, BTEX, PAH and VOC	Direct contact during soil disturbance Inhalation of volatiles and windblown dust Leaching from soil and migration through groundwater	Current/Future site workers Current/Future site residents Sheas Creek and Alexandra Canal

Imported Fill	Asbestos Heavy metals TRH, BTEX, PAH, VOC, OCP/Organophosphorus Pesticides (OPP) and PCB	Direct contact during soil disturbance Inhalation of volatiles and windblown dust Leaching from soil and migration through groundwater	Current/Future site workers Current/Future site residents Sheas Creek and Alexandra Canal
Hazardous Building Material	Asbestos Lead	Direct contact during soil disturbance Inhalation of windblown dust Leaching from soil and migration through groundwater	Current/Future site workers Current/Future site residents Sheas Creek and Alexandra Canal
Electricity Substations[a]	PCBs and Asbestos	Direct contact during soil disturbance Inhalation of windblown dust	Current/Future site workers Current/Future site residents

[a] JBS&G notes that the sub-stations are not located on site

On the basis of the findings of the PSI report, AECOM recommended the preparation of the following:

- Stage 2 Contamination Assessment (i.e. Detailed Site Investigation (DSI)): To delineate the nature and extent of contamination in soil and groundwater.
- Construction Environmental Management Plan (CEMP): To manage environmental risks during redevelopment.
- Materials Management Plan (MMP): To facilitate appropriate reuse and/or disposal of materials.
- Acid Sulfate Soils Management Plan (ASSMP): If actual or potential ASS is encountered during works, appropriate management.

4.2 Preliminary Geotechnical Investigation (DP 2022a[9])

Douglas Partners Pty Ltd (DP) was engaged by LAHC to undertake a preliminary geotechnical investigation for the site. The scope included a desktop review and fieldwork to identify geotechnical constraints.

DP noted the site varies in elevation from 32 m AHD at Gibson Street to RL 16 m AHD at George Street. The western portion was noted to be generally flat, while benching up to 1.2 m was observed in the east. The site was noted to lie in proximity to key infrastructure, including the Sydney Metro City & Southwest Tunnel, T8 Airport & South Line, and the heritage-listed Potts Hill to Waterloo Pressure Tunnel.

DP reviewed several historical reports (not sighted by JBS&G) prepared by DP, summarised as follows:

- **Feb 1979**: 9 cored boreholes in the southeastern site encountered sandy clayey soils to 6.5 to 13.9 m bgs over shale and sandstone.
- **Sep 2003**: Two cone penetration tests (CPTs) at 180 to 182 Cope Street found sandy and clayey soils to 5 to 7 m bgs over weathered rock at 11 to 12 m bgs.

[9] *Report on Preliminary Geotechnical Investigation, Proposed Residential Redevelopment,* George Street, Waterloo NSW Prepared by Douglas Partners Pty Ltd. ref. 215694.00 R.001.DftA QRR-13 dated November 2022 (DP 2022a)

- **Mar 2013**: Seven boreholes for a proposed George Street cycleway identified fill over clay and shallow shale bedrock (1 to 2 m bgs) in the north. Bedrock was not encountered.
- **Sep 2015**: At 133 to 141 Botany Road (~40 m west of the site), CPTs showed fill to 2 m bgs, sandy soils to 8 m, then clay over shale at 9 to 11 m bgs. (not part of the site).
- **2020**: A contaminated sites strategy for the Waterloo Metro Quarter (adjacent NW of the site) reported variable fill over 4 to 6 m of sandy soils, underlain by clay/shale bedrock at 7 to 10 m bgs. PASS was identified beneath alluvial sands, and groundwater was observed at 3.3 to 3.7 m bgs. (not part of the site).

As part of their field program, DP drilled 12 boreholes (BH1 to BH12) using a combination of hand auger, solid flight auger, and wash-bore methods. Six boreholes were completed as monitoring wells:

- Shallow wells (BH2, BH4, BH12): Screened in natural sand/clay (BH2 and BH4) or fill and natural layers (BH12).
- Deep wells (BH1, BH7, BH10): Screened in bedrock.

Groundwater was measured between 1.5 to 3 m bgs (shallow) and 8 to 20 m bgs (deep), indicating two aquifers: a shallow aquifer in sand/perched over clay, and a deeper aquifer within bedrock (sandstone with shale lenses).

Given known PASS in the nearby Waterloo Metro Quarter, DP screened 11 samples from 7 boreholes for PASS. All results were below ASSMAC (1998[10]) action criteria, indicating no PASS presence at the site. However, DP recommended further characterisation in future investigations.

DP recommended:

- Tanking of basements, with drained options potentially feasible in some areas.
- Dewatering via spear point and sump-and-pump methods during construction.
- Specific guidance for excavation, shoring, and piling methods.

4.3 Sampling, Analysis and Quality Plan (DP 2022c[11])

DP was engaged by LAHC to prepare a Sampling and Analysis and Quality Plan (SAQP) for proposed intrusive field work. This document detailed the proposed sampling location, sampling methodology, assessment criteria and the quality controls to guide the intrusive investigations and support the DSI report proposed to be prepared for the site.

In addition, DP present a revised CSM based on the basis of the CSM presented by AECOM (2020), which is presented in **Table 4.2**

Table 4.2 DSI CSM (DP 2022c)

Source	COPC	Pathway(s)	Receptor(s)
Light industrial and commercial infrastructure (adjacent to the site)	Asbestos Heavy metals TRH, BTEX, PAH, VOC	Direct contact during soil disturbance Inhalation of wind-blown dust (in unsealed areas)	Current/Future on and off-site workers Current/Future on and off-site residents Sheas Creek and Alexandra Canal

[10] *Acid Sulfate Soil Manual 1998,* New South Wales Acid Sulfate Soil Management Advisory Committee, Published 26 August 1998 (ASSMAC 1998)

[11] *Sample and Analysis Quality Plan Waterloo South, Waterloo Housing Estate George Street, Waterloo*. Prepared for NSW land and Housing Corporation. Prepared by Douglas Partners Pty Ltd ref. 215694.01 dated December 2022 (DP 2022c)

Source	COPC	Pathway(s)	Receptor(s)
		Inhalation of volatiles that migrate through the vadose zone Leaching from soil and migration through groundwater and/or via stormwater	
Imported Fill	Asbestos Heavy metals TRH, BTEX, PAH, VOC, OCP/OPP, PCB	Direct contact during soil disturbance Inhalation of wind-blown dust (in unsealed areas) Inhalation of volatiles that migrate through the vadose zone Leaching from soil and migration through groundwater and/or via stormwater	Current/Future on and off-site workers Current/Future on and off-site residents Sheas Creek and Alexandra Canal
Hazardous Building Material	Asbestos Lead	Direct contact during disturbance Inhalation of windblown dust Direct contact (with lead) during soil disturbance activities Leaching from soil and migration through groundwater	Current/Future on-site workers Current/Future on-site residents Sheas Creek and Alexandra Canal
Electricity Substations[a]	PCBs and Asbestos	Direct contact during soil disturbance Inhalation of windblown dust (in unsealed areas) Leaching from soil and migration through groundwater and/or via stormwater	Current/Future on-site workers Current/Future on-site residents
Light industrial and commercial properties (outside the Estate)	Heavy Metals TRH, BTEX, PAH, VOC	Leaching from soil and migration through groundwater and/or via stormwater	Current/Future on-site workers Current/Future on-site residents

[a] JBS&G note that the sub-stations are not located on site

4.4 Pre-Demolition Detailed Site Investigation (DP 2022b[12])

DP was commissioned by LAHC to undertake a Pre-Demolition DSI for the site. The scope included a review of existing investigations, supplemented by an intrusive fieldwork program.

[12] *Report on Pre-Demolition Detailed Site Investigation (Contamination) Waterloo South, Waterloo Housing Estate, George Street, Waterloo.* Prepared for NSW Land and Housing Corporation by Douglas Partners Pty Ltd ref. 215694.01 dated December 2022 (DP 2022b)

The site history was consistent with that outlined in **Section 2**. The intrusive investigation involved advancing 55 boreholes (BH1 to BH55) on an approximate grid basis (with consideration to the tenanted nature of the site) and installing six groundwater monitoring wells (BH1/MW1, BH2/MW2, BH4/MW4, BH7/MW7, BH10/MW10, BH12/MW12).

Soil samples were analysed for COPC, including: 8 heavy metals, Total Recoverable Hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine Pesticides (OCPs), Organophosphorus Pesticides (OPPs), Polychlorinated Biphenyls (PCBs), Per- and Polyfluoroalkyl Substances (PFAS) and asbestos (presence/absence method only). Groundwater samples were analysed for: 8 heavy metals, TRH, BTEX, VOCs, PAHs, OCP, OPP, PCBs and PFAS.

DP reported:

- Fill materials were encountered up to 1.6 m bgs, consisting of sand, silty sand, and sandy clay.
- Alluvial sand observed to 1.6 m bgs.
- Sandy and silty clay identified between 0.6 and 12.85 m bgs.
- Bedrock (claystone/siltstone) found between 4.1 and 21 m bgs.
- Non-friable(bonded) ACM (refer to **Figure 3B**) was detected at:
    - BH13 (0–0.9 m)
    - BH30 (0–0.6 m)
    - BH28 (0.4–0.5 m)

Building and demolition rubble was observed in 22 of 55 boreholes.

Soil analyses exceeded the adopted NEPC (2013) Residential with Access to Soil (HIL-A) criteria adopted, as follows:

- Lead concentrations in 25 samples exceeded the human health criterion, with concentrations ranging between 340 and 1,300 mg/kg. Lead impacts were largely reported in surface soils (0-0.5 m bgs).
    - Lead was also reported to exceed the ecological criterion in a number of samples, with concentrations ranging between 1,100 and 1,300 mg/kg.
    - Subsequent Toxicity Characteristic Leaching Procedure (TCLP) data were obtained for the highest observed lead concentrations. No exceedances of the EPA (2014) TCLP1 threshold criterion of 5 mg/L were reported.
- Zinc exceeded the ecological criterion in 7 samples, with concentrations ranging from 520 to 1,200 mg/kg, generally confined to sand and clay fill materials within the top 0.5 m bgs.
- Total chromium exceeded the human health criterion in 2 samples, with reported concentrations of 140 and 470 mg/kg.
- Carcinogenic Benzo(a)pyrene (BaP) Toxicity Equivalent (TEQ) exceeded the human health criterion at 6 locations (3.9 to 49 mg/kg), while B(a)P exceeded the ecological criterion at 24 locations (0.72 to 34 mg/kg). Exceedances were largely within the top 0 to 0.15 m and were considered likely associated with the introduction of asphalt during sampling.
- TRH fraction F3 (>C16-C34) was observed to exceed the adopted ESL at 2 sample locations, with reported concentrations of 330 and 450 mg/kg.
- All other COPCs were below the adopted assessment criteria/laboratory limit of reporting (LOR).
- Limited leachate assessment (TCLP) was undertaken. Where leachate analysis was undertaken, fill was reported to contain low to moderate leachate properties via TCLP analysis.

DP indicated that most soils on the site would be classified as Restricted/Hazardous waste due to elevated lead concentrations. However, JBS&G note that, in line with the NSW *Waste Classification Guidelines* (EPA 2014), soils at many of these locations could be pre-classified as General Solid Waste (GSW), as they are resultant from current/former residential use.

The following summarises the findings of the groundwater assessment undertaken at the site. Analytical results were compared to a residential land use criteria:

- Groundwater samples were collected from three shallow wells (BH2/MW2, BH4/MW4, BH12/MW12) and two deep wells (BH7/MW7, BH10/MW10) (**Figure 3A**).
- Both shallow and deep groundwater exhibited conditions ranging from reducing to slightly oxidising (ORP: -142 to 179.2 mV), slightly to moderately acidic (pH 4.78 - 6.78), and fresh to slightly brackish (EC 213 - 981 µS/cm).
- Organic contaminants, including BTEX, PAHs, VOCs, phenols, OCP, OPP, and PCBs, were all below the adopted 95% Groundwater Investigation Levels (GIL) for Marine Water (ANZG 2018[13]).
- Nickel, zinc, and copper exceeded 95% GILs for Marine Water at many locations but were considered to be representative of regional background levels and thus not considered a risk requiring remediation.
- All TRH and benzene concentrations were below the adopted HSL, except for TRH-F2 at BH7/MW7, which initially exceeded the criterion (1,500 µg/L). However, post–silica gel cleanup, the concentration was 1,000 µg/L, with DP reporting that the elevated TRH was not likely petroleum-related.
- PFAS compounds were detected in all groundwater samples: Perfluorooctanesulfonic acid (PFOS) exceeded the ecological criterion of 0.00023 µg/L at all locations but remained below recreational criteria. PFAS levels were considered to be representative of urban background levels.

Groundwater exceedances are shown on **Figure 5A/5B**.

4.5 Data Gap Investigation (JBS&G 2025)

JBS&G was engaged by Stockland to undertake a Data Gap Investigation (DGI) to address broad-scale data gaps, inform potential remediation options, and support the development of an overarching O-RAP.

As part of this assessment, JBS&G conducted:

- A desktop review of historical information and previous investigations (as summarised in the sections above).
- Intrusive soil investigations, which included the advancement of 18 boreholes (JBH02–JBH07, JBH09, JBH11, JBH12, JBH14, JBH15, JBH17, JBH18, JBH20, JBH21, JBH25, JBH26, and JBH32) using a track-mounted drill rig equipped with push-tube and/or solid-flight auger attachments. Sample locations are shown on **Figure 3A.**

In addition, groundwater sampling was undertaken at ten locations (MW2, MW4, MW7, MW10, MW12, MW01, MW02, MW04, MW105, MW108, MW110, MW111, MW115, MW121, and MW124—installed by others) from across the site. Sample locations for this assessment are shown on **Figure 3A**.

Representative soil samples were analysed for a broad range of COPCs, including 8 heavy metals; PAHs; TRH/BTEX; VOCs; Asbestos (500 mL); OCPs/PCBs and PFAS (trace level). Additionally, samples were submitted for TCLP and Australian Soil Leaching Procedure (ASLP) analyses for heavy metals and PAHs. Select samples were also tested for suspension peroxide oxidation combined acidity and sulfur (sPOCAS) and

[13] *Australian and New Zealand Guidelines for Fresh and Marine Water Quality,* Australian and New Zealand Governments and Australian State and Territory Governments, Canberra ACT, Australia, August 2018 (ANZG 2018)

chromium reducible sulfur (SCr) to assess potential PASS (Potentially Acid- and Sulfate-Forming) conditions at the site.

Analytical data presented in DP (2022b) were also re-assessed against a mixture of residential with minimal soil access (HIL-B) and public open space (HIL-C), which is considered more appropriate given the proposed land use.

Subsurface lithology and geology encountered during the investigation were generally consistent with previous investigations (logs provided in **Appendix C**), with fill ranging from 0 to 1.4 m bgs.

Fill material at sample locations JBH02, JBH03, JBH05, JBH06, JBH09, JBH14, JBH20, and JBH32 contained B&D rubble, including brick, tile, glass, asphalt, concrete, plastic, and charcoal. PID field screening returned low readings, ranging from 1 to 8 ppm in fill and 1 to 18 ppm in natural soils. No notable odour or staining was observed.

The physical properties, inclusions, and depths of the fill were generally consistent with previous investigations. Elevated concentrations of heavy metals, PAHs, and asbestos (both bonded ACM and friable FA/AF) were detected within the fill, exceeding adopted ecological criteria and, to a lesser extent, human health criteria (HIL-B and HIL-C). These impacts were typically confined to the upper 0.2–0.5 m of fill and often associated with B&D rubble. Contaminant concentrations and distribution were broadly consistent with prior reports. Natural soils were free of impacts.

The ASS/PASS assessment findings aligned with previous investigations, with natural materials reported as non-PASS. Observations of asbestos/ACM and B&D rubble from earlier investigations are shown on **Figure 3B**, with soil exceedances illustrated in **Figures 4A** and **4B**.

Groundwater samples were submitted for submitted for analysis for a range of COPCs, including heavy metals, PAH (low level), TRH/VOCs, PFAS (ultra-trace), and physiochemical parameters including pH, EC, and Hardness.

Groundwater conditions were reported to be consistent with historical investigations, with minor exceedances of Perfluorooctanesulfonic acid (PFOS) and heavy metals consistent with urban background concentrations rather than site-specific sources. Groundwater exceedances are shown on **Figure 5A/5B**.

JBS&G (2025) made the following conclusions and recommendations following the completion of the assessment:

- The findings of the soil and groundwater investigation undertaken by JBS&G are consistent with previous assessments, and the CSM developed for the site; and
- The data has been deemed of acceptable quality for site characterisation, planning requirements, and the development of an O-RAP for the Concept SSDA. Stage-specific RWPs are required to be prepared for future detailed applications (when consent for physical works will be sought) to address data gaps beneath existing site structures, including buildings and road reserves.

4.6 Geotechnical Factual Report (Alliance 2025[14])

Alliance Geotechnical Pty Ltd (Alliance) were engaged by Stockland to undertake a geotechnical assessment for the proposed Waterloo South Redevelopment at Waterloo, NSW. The scope of works included desktop review of previous geotechnical reports (DP 2022) and undertaking of two separate intrusive geotechnical investigations.

The Stage 1 investigation included the advancement of 23 boreholes across the site, via the use of a either a Ute mounted or track mounted drilling rig. All boreholes were advanced using solid flight augers, with

[14] *Geotechnical Factual Report, Proposed Waterloo Estate South Redevelopment, Waterloo, NSW,* Prepared for Stockland Development Pty Ltd by Alliance Geotechnical Pty Ltd, ref. 18639-GR-1-1-Rev02, Dated 22 October 2025 (Alliance 2025)

diameters ranging from 90 to 150 mm in size. Of these 23 boreholes, seven were noted to be converted to piezometers.

The Stage 2 intrusive investigation included the advancement of nine boreholes across the site via the use of a either a Ute mounted or track mounted drilling rig. All boreholes were advanced using solid flight augers, with diameters ranging from 90 to 150 mm in size. Four of these boreholes were converted to piezometers.

Groundwater data loggers were installed to monitor groundwater levels across the site over a three-month period between 24 June and 09 October 2025, with the highest groundwater levels recorded ranging between 8.99 m AHD and 26.58 m AHD.

Sub-surface conditions encountered during the investigation(s) are summarised as follows:

- Concrete/Asphalt from 0.0 to 0.2 m bgs;
- Fill/Topsoil (Sand/silty sand/gravelly sand) from 0.0 to 2.7 m bgs;
- Aeolian/marine/residual soil (sand/clayey sand) from 0.25 to 9.8 m bgs;
- Residual Soils (clay/sandy clay/silty clay) from 0.4 to 16.0 m bgs;
- Extremely weathered materials (clay) from 4.0 to 16.3 m bgs;
- Sandstone/siltstone/shale bedrock (very low to low strength) from 4.3 to 26.87 m bgs;
- Sandstone/laminite bedrock (low to medium strength) from 7.1 to 27.0 m bgs; and
- Sandstone/shale bedrock (medium to high strength) from 10.7 to 25.81 m bgs.

Where anthropogenic inclusions where identified, they were generally consistent with those identified in JBS&G 2025. No asbestos or ACM was identified.

Groundwater levels and lithology encountered during this investigation were generally consistent with those previously reported, as noted in the sections above.

5. Data Gaps

Based on a review of previous investigations, the following data gaps have been identified:

- **Asbestos**

  Adequate screening for asbestos in fill is required where anthropogenic inclusions within the fill profile have been reported. Following this, a refinement of remedial extents will be undertaken.

  To date, 73 sample locations have been assessed across accessible areas of the site. Asbestos has been identified (visual and laboratory analysis) at 6 locations, representing less than 9% of all sampled locations. Accordingly, asbestos is not considered to be widespread or grossly distributed. Notwithstanding, as noted in previous investigations, there remains the potential for asbestos impacts to exceed those reported to date.

  In this context, and with reference to Table 1 of *Assessment, Remediation and Management of Asbestos – Contaminated Sites in Western Australia* (Western Australia Department of Health, 2009, as referenced in NEPC 2013), future asbestos assessment should be conducted as follows:

  - **"Possible"** – Sample density of 0.5 x EPA (2022): This applies to areas not currently occupied by site buildings and previously investigated, which identified only limited asbestos impacts as noted above. Fill material in these areas generally extends to less than 1 m, with minimal anthropogenic inclusions.
  - **"Suspect"** – Sample density of 1 x EPA (2022): This classification applies to current building footprints where no data is currently available. There remains a potential for asbestos or other hazardous materials to be present during the demolition of site structures, posing a risk of land contamination.
  - **"Unlikely" –** No sampling without indicators (visual assessment required). This applies to the existing roads given their established construction date and previous land-use (i.e. no demolition of previous structures). Notwithstanding, where opportunities exist during site development activities, discrete sampling may be undertaken to support the site suitability.

- **Building Footprints**

  No sampling or analysis has been conducted within the public road network at the site. Characterisation of fill material is required to refine remedial extents.

- **Road Reserves**

  No sampling or analysis has been conducted within the public road network at the site. Characterisation of fill material is required to refine remedial extents.

- **Fill Leachability**

  Although not a data gap, if fill material is relocated to support ESD and waste minimisation objectives to an environment with increased groundwater percolation through the site-based fill, additional leachability assessment and documentation will be required to support the proposed fill retention strategy.

The data gaps identified above will be addressed in the stage-specific RWP, including proposed sampling frequencies and appropriate analytical analyses, as part of a data gap Sampling, Analysis and Quality Plan (SAQP), or within supporting documentation prepared prior to finalisation of the RWP, once design details are confirmed

6. Conceptual Site Model

NEPC (2013[15]) identifies a CSM as a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments.

- NEPC (2013) identified the essential elements of a CSM as including:
- Known and potential sources of contamination and contaminants of concern, including the mechanism(s) of contamination.
- Potentially affected media (soil, groundwater, vapours etc.).
- Human and ecological receptors.
- Potential and complete exposure pathways; and
- Any potential preferential pathways.

Based on the available information and findings from previous investigations, the site CSM is presented in Table 6.1.

Table 6.1: Revised Conceptual Site Model

CSM Aspects	Summary of Available Information
Known and Potential Site Contamination Sources	**Fill Materials/Natural Material** Fill materials (imported and/or resultant from site activities) are present on site, impacted to varying degrees with heavy metals (notably lead), asbestos, TRH, and PAHs. The impacts appear to be associated with or co-mingled with B&D inclusions at some locations. Where impacts were reported, they were generally constrained to surface fill (0.2-0.5 m). The average depth of fill material across the site was reported to be approximately <1 m and was noted to comprise (predominantly) sand, silty sand, and sandy clay/gravels. Natural underlying soils (sand and, in turn, clay and bedrock) have generally been reported to be free of impacts. **Groundwater** Previous assessments identified shallow groundwater within the BSB aquifer and a deeper confined aquifer within the underlying sandstone bedrock. Shallow aquifer standing water levels (SWLs) ranged from 0.46 to 2.40 m bgs (13.0–29.6 m AHD), with a generally inferred westward flow direction. In bedrock monitoring wells, SWLs ranged from 8.70 to 19.48 m bgs (3.08 to 17.8 m AHD) with groundwater flowing westward/southwest. Groundwater was observed to be impacted with heavy metals and PFOS, potentially from historical commercial/industrial land-uses within the Waterloo locality (**Section 2.2**), however, JBS&G consider the reported concentrations to be representative of regional background concentrations, and not attributable to (historical or current) site sources or activities. **Data Gaps** A number of data gaps have been identified requiring further consideration (**Section 5**) to refine the remedial extent.
Potentially Affected Site Media	**Fill Materials/Natural Material**: Impacts in fill were generally reported to be constrained to the top 0.2-0.5 m and considered associated with either imported growing media or resultant from B&D

[15] *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended).* National Environment Protection Council (NEPC 2013)

CSM Aspects	Summary of Available Information
	hazardous building material inclusion (lead paint, asbestos) from site structures. As noted above, where impacts were encountered, they were generally exceedances of the adopted ecological criteria, and at relatively few locations the health criteria at the time of assessment. Natural underlying soils (sand and, in turn, clay and bedrock) have generally been reported to be free of impacts. **Groundwater**: Groundwater underlying the site has been found to have a range of heavy metals and PFOS above the adopted criteria, consistent with regional background levels. The site was not identified as contributing to reduced groundwater quality. **Data Gaps** As noted above, a number of data gaps have been identified requiring further consideration (**Section 5**) to refine the remedial extent.
Human and Ecological Receptors	The key receptors which would be exposed to potential impact on the site include both human and ecological receptors. The primary human receptors include future users of the site, including residents, retail/commercial users (incl. a childcare facility), on-site intrusive maintenance or construction workers. Off-site human receptors include off-site residents of the adjacent residential properties; off-site intrusive maintenance or construction workers; and commercial/industrial workers of the properties. Ecological receptors include off/on-site groundwater-dependent ecosystems. In addition, ecological receptors on-site include site flora. As noted in **Section 2.1**, vegetation appeared healthy, with no observable signs of stress, indicating that contamination has not adversely impacted plant health. The nearest surface water receptor is Sheas Creek (brackish water body), located approximately 800 m to the south/southwest of the site. Sheas Creek flows to Alexandra Canal, which flows into the Cooks River (marine), approximately 1.3 km to the southwest, which ultimately discharges into Botany Bay (marine), located around 6 km from the site. The site is located within Area 2 of the Botany Sand Aquifer Embargo Area, designated due to known or suspected contamination from past industrial activity.
Potential and Complete Exposure Pathways	The potential pathways of concern for fill/soil impact to pose a risk to future on-site occupiers and off-site receptors include: • Oral and dermal direct contact with impacted soils and groundwater. • Vapour intrusion into future site structures of hydrocarbons or VOCs. • Inhalation of airborne contaminants (including airborne asbestos fibres). • Vertical migration of leachable metals and PAHs from site fill material, albeit limited, given the reported leachability characteristics of site fill and groundwater analytical results. • Lateral groundwater migration off-site or vertical migration.
Preferential Pathways for Contamination Migration	For the purpose of this assessment, preferential pathways have been defined as natural and/or man-made pathways that result in the preferential migration of COPC as either solids, liquids, or gases. Man-made preferential pathways are present within the site as associated with current/future underground infrastructure or service trenches adjacent to the site's boundary or potentially traversing the site to adjacent properties. Potential remains for vertical migration of COPCs associated with fill materials to groundwater.
Potential for Offsite Migration	The COPC identified during previous investigations are present in solid form (e.g. heavy metals, bonded asbestos, PAHs). As such, there is currently considered to

CSM Aspects	Summary of Available Information
	be minimal potential for contamination migration by wind-blown dust and surface water movement.

7. Regulatory and Planning Requirements

The following planning requirements for the proposed remedial works are presented.

Environment Planning and Assessment Act 1979/Resilience and Hazards SEPP 2021

The proposed remedial works are planned to be carried out in conjunction with other approved development under the *Environmental Planning and Assessment Act 1997*. On this basis, the remediation works are being undertaken as Category 1 Remediation Works as per the meaning provided in State Environment Planning Policy Resilience and Hazard 2021 (SEPP R&H 2021).

For Early Works considered low risk, an assessment of potential triggers and relevant planning instruments will be undertaken in accordance with SEPP R&H (2021). Where appropriate and permitted, the works may proceed as Category 2 remedial works, with the consent authority notified accordingly.

This O-RAP has also been prepared in accordance with Chapter 4 of the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP), to assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.

Environment Planning and Assessment Regulation 2021 – Schedule 3 Designated Development

The proposed remediation works do not constitute designated development.

It is not anticipated that the proposed remediation works will incorporate any on-site treatment of soil. However, in the event that soil is required to be pre-treated prior to off-site disposal, an assessment of potential triggers for the works to be designated development as presented in Schedule 3 – Clause 20, will be required to be completed.

Protection of the Environment Operations Act 1997

All potential discharges from the site during remediation works will be required to be maintained below applicable assessment criteria/threshold guidelines during the remediation works. This would apply to potential emissions in air, water and discharges to groundwater. Levels of discharges are typically assessed at a site boundary.

The proposed remediation/validation activities are not required to be licensed under the Protection of the *Environment Operation Act (1997)*. As individual stages are understood to be less than 3 ha and are not anticipated to store greater than 30,000 m^3 of contaminated fill and hence do not trigger the licensing requirements.

In the event an Environment Protection Licence (EPL) is required to be obtained, then this will be undertaken prior to commencement of remediation works.

Water Management Act 2000

Should dewatering be required, a dewatering and potentially a re-injection approval will be required from the NSW Department of Primary Industry - Water (DPI-Water) for any dewatering proposed with the site remediation works. The approval will need to be obtained prior to the undertaking of any groundwater dewatering and treatment. At this stage, short-term dewatering is likely as concept plans include subsurface basements.

City of Sydney (2012) Development Control Plan and Contaminated Land Policy (2025)

The Council DCP provides a number of environmental and site management provisions required to be employed during remediation works. These will need to be adopted as minimum standards for the environmental management of remediation works and requirements of ongoing environmental management plans.

In addition to the DCP, the City of Sydney's "Contaminated Land Policy" published in December 2025 provides an updated framework for managing contamination issues through planning and development processes which may be considered. This policy aligns with NSW state policy including the State Environmental Planning Policy (Resilience and Hazards) 2021.

Protection of the Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transport. The proposed works will not require to be licensed. Section 48 of the Reg. requires that wastes be stored in an environmentally safe manner. It also stipulates that vehicles used to transport waste must be covered when loaded. This regulation also details additional tracking requirements for vehicles carrying Special (Asbestos) waste.

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

It is noted that no waste will be received at the site and only Virgin excavated natural material (VENM), excavated natural material (ENM) or materials covered by an NSW EPA exemption will be imported to the site.

Where fill is moved between stages, this is not considered waste as it has not left the site.

Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019

The removal of petroleum infrastructure (if encountered) will be undertaken in accordance with SafeWork NSW requirements, and a validation report will be provided in accordance with the provisions of the Protection of the Environment Operations (UPSS) Regulation 2019. The validation process in this RAP meets the requirements of the regulation and associated EPA guidance.

In addition, all removal works will be required to be undertaken in accordance with relevant Australian standards, regulations and codes of practice, including Australian Standard AS 4976-2008: The removal and disposal of underground petroleum storage tanks, and AS 1940-2004: Storage and handling of flammable and combustible liquids), as amended.

Waste Classification Guidelines (EPA 2014)

All wastes generated and proposed to be disposed of off-site shall be assessed, classified and managed in accordance with this guideline. Where wastes require immobilisation prior to off-site disposal (to reduce the waste classification), an immobilisation approval shall be sought in accordance with Part 2 of this guideline. Immobilisations are only anticipated to be required with unexpected finds.

NSW Aquifer Interference Policy (NSW Office of Water 2012)

Groundwater underlying the site will potentially be classified as an aquifer as per the policy. The policy does not apply to the site development as the extent of works proposed to be undertaken within the saturated portion of the site will not contaminate groundwater (as assessed by comparison to applicable standards and guidelines) and will not cause an unacceptable loss of storage or cause structural damage to the aquifer.

Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997

Completion of the works presented in this RAP will not result in a 'Duty to Report' as defined in the guidelines. Consistent with the scope of works, no works will be permitted within the site that will potentially cause levels of site constituents to be present at points of exposure and/or the site boundary that will cause any NSW EPA published or endorsed criteria to be exceeded.

Work Health and Safety Act 2011 No 10 and Work Health and Safety Regulation 2011

The information and data provided in this O-RAP should be considered by the Principal/Remediation Contractor in preparation of their health and safety plans for the remedial works.

Voluntary Planning Agreement

A Voluntary Planning Agreement (VPA 2023[16]) exists for the site, entered into between The Council of the City of Sydney (the City), the Minister administering the Environmental Planning and Assessment Act (the Minister), and New South Wales Land and Housing Corporation (the Developer). Remedial works must be carried out in accordance with the requirements of this agreement. Specifically with regard to remediation for transfer land (i.e. land forming part of the public benefits that is to be either or transferred to council), the following is required:

The Developer must ensure that Transfer Land:

- Is remediated to a level required for the Transfer Land to be suitable for the purposes of the Public Benefits and in accordance with any Remediation Action Plan approved in connection with the Development Consent; and
- Includes delivery of whatever is necessary for proper street functions in relation to Roads and Road Reserves and to accommodate the Phasing of the Development.;

The VPA also stipulates that "*A long-term Environmental Management Plan will not be required on transfer of the Transfer Land*".

[16] Planning Agreement for Waterloo Estate (South) Council of the City of Sydney (Council) and Minister administering the Environmental Planning and Assessment Act 1979 and NSW Land and Housing Corporation (NSW LAHC), Reference: X088049 | VPA 2020/14, Dated: February 2023 (VPA 2023)

8. Remedial Options

8.1 Remediation Goal

The goal for the remediation and/or management of identified environmental impact at the site is to:

- Remove unacceptable risks posed to human populations living at/working on/visiting the site from fill material;
- Eliminate the potential for site development activities to result in the generation of additional media impacts, resulting in unacceptable risks to human and ecological receptors;
- Conduct remediation works in a manner consistent with principles of ESD and achieve Stockland's sustainability objectives; and
- Ensure the site can be made suitable for the proposed development.

8.2 Guidance Framework

The RAP has been prepared with reference to the following NSW EPA-made or approved guidelines:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999, Amendment No.1 2013, National Environment Protection Council* (NEPC 2013).
- *Sampling Design Guidelines Part 1 – Application: Contaminated Land Guidelines.* NSW EPA August 2022 (EPA 2022).
- *Consultants Reporting on Contaminated Land, Contaminated Land Guidelines.* NSW EPA 2020, April 2020, updated 5 May 2020 (EPA 2020).
- *Contaminated Sites: Guidelines for NSW Site Auditor Scheme, 3rd edition*. NSW EPA October 2017 (EPA 2017).
- *Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia. Government of Western Australia Department of Health 2021 (DoH 2021).*

In addition, consideration is also required to guidelines made or endorsed by the EPA under the *Protection of the Environment Operations (POEO) Act 1997* and associated regulations, including:

- *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*. UPSS 2019.
- *Waste Classification Guidelines Part1 to Part 4*. NSW EPA 2014 (EPA 2014a/b/c/d).

Other guidance that has also been considered in relation to site conditions includes:

- *Work Health and Safety Act 2011*, *Work Health and Safety Regulation 2017*.
- *Code of Practice: How to Safely Remove Asbestos*. Safe Work Australia, July 2020 (SWA 2020a).
- *Code of Practice: How to Manage and Control Asbestos in the Workplace*. Safe Work Australia, July 2020 (SWA 2020b).
- *PFAS National Environmental Management Plan 3.0.* National Chemicals Working Group of Heads of EPA Australia and New Zealand (NEMP 3.0).
- *Contaminated Sites: Guidelines on Duty to Report Contamination under the Contaminated Land Management Act 1997 (as amended 2015).* NSW EPA 2015 (EPA 2015).
- *Contamination Assessment of Service Station Sites.* EPA 2023 (EPA 2023).

- *Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination*. NSW Department of Environment and Conservation 2007 (DEC 2007)
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018.*

8.3 Remedial Extent

Fill material has been found to be impacted by heavy metals, PAHs, TRH, and asbestos, generally exceeding ecological criteria and, to a lesser extent, human health criteria. Several data gaps remain, with assessment indicating the potential for fill material within these portions of the site to exhibit similar physical characteristics, anthropogenic inclusions, and chemical properties.

Accordingly, the remedial extents shown in **Figure 6** are classified as follows:

- **Impacted (red):** Fill exceeding the adopted health criteria pursuant to NEPC (2013) under a HIL-B/HIL-C criteria requiring remediation/management;
    - Note: JBS&G notes that a childcare centre (and potentially an education facility) may be incorporated into the site as part of future redevelopment works. Although the precise location has not yet been determined, any stage-specific RWP that includes the proposed childcare centre (or potential education facility) should consider more appropriate land-use criteria (e.g., HIL-A)
- **Data Gaps (orange):** Fill requiring assessment to address data gaps (**Section 5**).

Refinement of the remedial extent will be undertaken once the data gaps are addressed, a statistical assessment of the data set is completed, and the design plans and final land uses are confirmed.

Areas shaded green on **Figure 6** are below the adopted health and ecological criteria and do not contain any anthropogenic inclusions within the fill profile.

8.4 Remedial Option Assessment

The preferred hierarchy of options for remediation (clean up) and/or management adopted by NSW EPA has been established within the NEPC (2013) Assessment of Site Contamination Policy Framework as follows:

- On-site treatment of the material so that the contaminant is either destroyed or the associated risk is reduced to an acceptable level; and
- Off-site treatment of excavated material 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; or

If the above options are not practicable:

- Consolidation and isolation of the material on-site by containment with a properly designed barrier; and
- Removal of contaminated material to an approved site or facility, followed, where necessary, by replacement with appropriate material; or
- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

In addition, when deciding which option to choose, consideration is also required to be given to the sustainability (environmental, economic and social) aspects of each option to ensure an appropriate balance between the benefits and effects of undertaking remedial/management options. In cases where there is not readily available, or economically feasible method is available for remediation, it may be possible to adopt appropriate regulatory controls or develop other forms of remediation. Consideration of each of the approaches (EPA 2017), is presented in **Table 8.1** below.

Should further impacted material (i.e., impacts not previously identified in historical investigations) be identified, these will be managed under the unexpected finds protocol, and the remedial options screening matrix in **Table 8.1** will be reviewed. Notwithstanding, it is anticipated that any impacts will be relatively isolated and could be appropriately managed through controlled excavation and off-site disposal (i.e., **Option 4** in **Table 8.1**).

Table 8.1: Soil Remedial Options Screening Matrix

Remedial Option	Applicability	Assessment
1. On-site treatment so that the contaminants are either destroyed or the associated hazards are reduced to an acceptable level.	**Heavy Metals** Metals cannot be destroyed; however, several microencapsulation treatment technologies (e.g. cement stabilisation) are available to reduce the mobility of the identified inorganic contaminants	**Metals** Not a viable option. As metals cannot be destroyed, this option is not considered feasible. Microencapsulation is also not considered necessary given the absence of groundwater impacts.
	PAHs PAHs detected in site soils are generally limited to heavier, non-volatile constituents, which can be remediated through thermal processes. However, such methods require significant investment in specialised plant and equipment, as well as high energy inputs. Similarly, for heavy metals, various microencapsulation technologies (e.g. cement stabilisation) are available to reduce the mobility of the identified inorganic contaminants.	**PAHs** Not a viable option. Not considered a viable option. While remediation methods are available for organic contaminants, these are generally limited to energy-intensive thermal treatment processes, which are not consistent with ESD objectives or the Council Development Control Plan (DCP).
	Asbestos Although asbestos cannot be treated or destroyed, bonded ACM fragments can be removed from fill where soil conditions are suitable. Mechanical or manual extraction of ACM from fill is labour-intensive but aligns better with ESD principles by reducing the need for landfill disposal and the import of replacement material. If the material contains particularly high ACM content, clay, or other anthropogenic materials, or if achieving validation proves difficult, the alternative options listed below should be considered.	**Asbestos** Potentially viable for bonded ACM, but not suitable for friable asbestos, as asbestos cannot be destroyed.
	Hydrocarbons If hydrocarbon impacts are identified, on-site treatment via bioremediation may be a viable approach. Bioremediation relies on microorganisms to break down contaminants into less toxic or non-toxic forms. NSW EPA guidance requires that bioremediation systems prevent pollutant emissions from being released to the atmosphere. Consequently, the lateral extent of bioremediation activities must be controlled to allow effective capture of air emissions. Biopile treatment is considered the most suitable method, given the contaminant types, site area, excavation volumes, and the need to retain hydrocarbon constituents. Biopiles are constructed as heaped stockpiles of contaminated soil with an internal network of screened piping. Air is extracted through these pipes using vacuum pumps or passive flow devices, with extracted air treated or filtered to remove volatile constituents. Fresh air is drawn in through the exposed surface of the stockpile. High contaminant concentrations, such as phase-separated hydrocarbons, can be toxic to microorganisms, limiting the effectiveness of bioremediation in those areas. Landfarming could be another potential remediation option; however, due to the proximity of residential receptors, this approach is not considered suitable.	**Hydrocarbons** Potential viable option for volatile hydrocarbons. This method is suitable for sandy soils and petroleum-based contaminants where gross hydrocarbon impacts are absent. It is not appropriate for heavier hydrocarbons. The method may also be limited where large volumes of hydrocarbon-impacted material are present, due to site area constraints and the need to control potential environmental emissions. Implementation requires consideration of time, as bioremediation may take up to six months to achieve the desired treatment
	Aesthetic Impacts Fill materials containing B&D waste present an aesthetic issue and cannot be retained on-site in its current state. Removal of B&D rubble is time and resource-intensive but may be feasible depending on the volume of impacted material. The process typically involves tilling the soil to remove oversized debris that affects site aesthetics. The effectiveness of this method depends on several factors, including the volume of impacted soils, concentration of anthropogenic inclusions, soil type (sand, silt, or clay), and moisture content (e.g., wet or sticky clays).	**Aesthetic Impacts** This option may be viable if the material is not co-mingled with other contaminants. Considering the project's ESD objectives, it is the preferred approach, provided it can be completed efficiently and without excessive use of resources or energy
2. Off-site treatment so that the contaminants are either destroyed or the associated hazards are reduced to an acceptable level, after which the soil is returned to the site	**Heavy Metals, PAHs, TRH, Asbestos and Aesthetics** There are no licensed facilities near the site capable of performing this type of treatment, and, as noted in Option 1, some of the contaminants cannot be destroyed	**Heavy Metals, PAHs, TRH, Asbestos and Aesthetics** Not a Suitable Option
3. On-site in situ management of the soil by physical separation, and ongoing management.	**Heavy Metals, PAHs, Asbestos and Aesthetics** Based on the assessment to date, the fill materials have been found to be free of constituents: • That could pose a potential groundwater risk, as indicated by the absence of significant site-related groundwater impacts; and • That could pose a potential inhalation risk, as demonstrated by the assessment of landfill gases and vapours. Accordingly, the impacted fill materials are considered suitable for retention on-site in areas where human and ecological exposures can be effectively managed. As noted in **Section 5**, if fill material is relocated to support ESD and waste minimisation objectives in an environment with increased groundwater percolation through the site-based fill, additional leachability assessment will be required to support the proposed fill retention strategy.	**Heavy Metals, PAHs, Asbestos and Aesthetics** The Preferred Option. This is the preferred option for managing impacted fill materials. Retaining the materials reduces waste generation and resource use during site remediation, aligning with the project's ESD objectives. Significant areas of on-site pavement provide suitable containment for the retained materials. This option ranks highest with respect to ESD principles due to the low waste volumes and minimal energy requirements. However, practical implications, including the need for an ongoing site management plan, should be considered prior to implementation
	Hydrocarbons Soils impacted by petroleum hydrocarbons may generate petroleum vapours under anoxic conditions. Therefore, containment measures for these soils must include controls for potential vapour emissions.	**Hydrocarbons** Potential option, but not the preferred option.

Remedial Option	Applicability	Assessment
	Additionally, petroleum-impacted soils may be leachable, necessitating containment that prevents surface water infiltration.	This is not the preferred option for managing petroleum hydrocarbon impacts because: • Retaining materials on-site, which may continue to release pollutants, is inconsistent with the DCP objective of minimising environmental impacts from the development; and • It ranks lower in the remedial hierarchy compared with Options 1 and 4.
4. Excavation and off-site removal of the impacted material.	**Heavy Metals, PAHs, TRH, Asbestos and Aesthetics** Currently, there are licensed waste facilities in the Sydney Metropolitan region capable of accepting the identified contaminants in the fill materials.	**Heavy Metals, PAHs, TRH, Asbestos and Aesthetics** This is a potential, but not preferred, option. It may be applicable for small quantities of petroleum-impacted material or for contaminants that cannot be destroyed if on-site containment is not feasible. The environmental impacts of transporting materials, generating waste, and sourcing replacement material are generally inconsistent with the site's ESD objectives; however, these impacts would be reduced if only small quantities are disposed of off-site. For heavily impacted materials, limited bioremediation should be considered to reduce gross hydrocarbon levels, enabling disposal as a lower-classified waste.

8.5 Preferred Remedial Approach

Based on the assessment of potential remedial options presented in **Table 8.1**, the preferred approach for managing impacted fill materials is on-site containment. In developing the stage-specific RWPs for the site, on-site containment must demonstrate:

- Exclusion of potential direct human contact with the materials by considering exposure times and pathways that could pose unacceptable risks;
- Prevention of contact with site flora that may be susceptible to potential phytotoxicity; and
- Consistency with historical fill characteristics, ensuring that contained materials do not generate vapours or gases (posing inhalation risks) or contain leachable constituents at levels that could impact groundwater.

For petroleum hydrocarbon-impacted materials (if encountered), the preferred approach is source removal followed by on-site bioremediation, using methods that reduce hydrocarbon concentrations while preventing uncontrolled atmospheric release. Where space, time, or environmental constraints limit bioremediation, off-site disposal is the preferred alternative. For heavily impacted soils, limited bioremediation may be applied to reduce gross contamination levels, facilitating disposal as a lower-classified waste.

There is a potential that localised areas of impacted fill material may be identified, which pose a potential vapour/leaching risk. Constituents which are potentially mobile in the environment shall be considered to pose a potential leaching risk. Constituents which are volatile (i.e. petroleum hydrocarbons) shall be considered to pose a potential vapour risk. Based on the anticipated/potential small volumes of these materials, the preferred options shall be:

1. Environmental characterisation to determine suitability for on-site treatment (generally restricted to soils impacted by volatile hydrocarbons); or
2. Off-site disposal.

Some work stages may generate surplus soils relative to individual stage requirements, but not surplus to overall site needs. Where possible, these soils should be relocated to another stage rather than disposed off-site. When off-site disposal is necessary, preference should be given to materials with a lower waste classification or potential for reuse, in accordance with Council's DCP objectives and Stockland's ESD and waste minimisation goals.

This may include excavating less-impacted material for off-site disposal, with the excavation reinstated using environmentally impacted material already on-site, subject to development approval for excavation and stockpiling activities. All soil movements between stages must be managed via the materials tracking system described in **Section 9.8**.

9. Proposed Remedial Scope

As outlined in **Sections 4** to **6**, only isolated areas of impact requiring remediation have been identified to date, as shown on **Figure 6**. Several data gaps remain to be addressed, and a statistical assessment of the dataset, largely to address ecological exceedances, will also be undertaken to refine the remedial extents.

This O-RAP sets out the overarching remediation approach for the site. The remediation and management measures described in this plan will be reviewed and updated in the relevant stage-specific RWPs as further information becomes available.

9.1 Data Gaps

As outlined in **Section 5**, characterisation data has not been collected in several areas of the site due to existing building footprints and active road reserves. In addition, screening for asbestos is required where anthropogenic inclusions have been observed within the fill profile, as the potential for asbestos impacts may be greater than reported to date.

Stage-specific RWPs will be required to document the sampling and analysis requirements for these areas. Characterisation should be undertaken following demolition works, if practicable, and prior to the commencement of earthworks where possible. This will enable the timely implementation of remedial measures if conditions encountered during remediation warrant such actions.

Where materials are consistent with the bulk of fill already characterised at the site, additional assessment will focus on potential risks such as leaching to groundwater and/or volatilisation/inhalation. Where materials are inconsistent with the conditions identified in the CSM, they will be assessed in accordance with the Unexpected Finds Protocol (UFP), which will be incorporated into each stage-specific RWP.

9.2 Stage-Specific Remedial Works Plan Preparation

Following confirmation of the stage extent, proposed land use, and design plans, a stage-specific RWP must be prepared.

At a minimum, the stage-specific RWP should achieve the following, consistent with Table 2.5 of EPA (2020):

- Specify stage-specific site boundaries, provide a site history summary, and summarise current site conditions and the surrounding environment.
- Define objectives and summarise the proposed scope of remediation, including identification of data gaps as applicable;
- Confirm validation methods and adopted remediation criteria based on the strategy outlined in this O-RAP, including rationale for selected criteria and any site-specific criteria developed through risk assessments.
- Summarise all analytical data and results relevant to the stage-specific RWP.
- Prepare a stage-specific Conceptual Site Model (CSM).
- Refine areas requiring remediation following completion of the data gap assessment.
- Confirm the remedial strategy based on the assessment of remedial options (**Sections 8.4** and **8.5**).
- Develop an UFP as applicable to the stage-specific site boundary.
- Prepare a Remedial Environmental Management Plan (REMP) (refer to **Section 12**).
- Prepare a Work Health and Safety Plan (WHSP) (refer to **Section 13**).
- Prepare a Community Consultation Plan (CCP) (refer to **Section 14**).

- Define reporting requirements, including, where relevant, provisions for LTEMP following remediation or management works.
- Outline waste management strategies, including waste classification, handling, tracking, and disposal, with statements confirming disposal via appropriately licensed facilities or reuse under an order/exemption, and inclusion of disposal dockets.

9.3 Site Establishment

For each stage of remediation works, the boundary will be defined and secured as appropriate to ensure that all safety and environmental controls are implemented, including necessary contractor briefings and inductions for the remediation workforce. A summary of the controls is provided in **Sections 12** and **13**.

9.4 Asbestos-Impacted Fill

Based on the available site characterisation information (**Section 4**), fill materials at isolated locations are to be considered potentially impacted with asbestos and are provisionally classified as asbestos-impacted soils.

Under *How to Manage and Control Asbestos in the Workplace Code of Practice* (Safe Work NSW, 2022a), asbestos-contaminated soil requiring management for potential exposure is defined as:

- Soil containing visible asbestos, as determined by a competent person; or
- Soil containing asbestos fibres above trace levels, with trace defined as below the analytical detection limit, based on analysis in accordance with *AS 4964:2004 Method for the Qualitative Identification of Asbestos in Bulk Samples*.

Environmental, health, and safety management of asbestos-impacted materials must follow the requirements for asbestos-related works in the How to Safely Remove Asbestos - *Code of Practice* (Safe Work NSW, 2022b), including:

- Preparation of an asbestos register;
- Development of an asbestos removal and/or management control plan; and
- Implementation of safe handling, storage, and disposal procedures.

Where targeted sampling and analysis, combined with inspection by a competent person, confirm that specific fill materials do not meet the definition of “asbestos contaminated soil,” the full asbestos management requirements will not apply. The extent of asbestos-impacted fill within each stage may be further delineated through additional investigations to identify and manage asbestos “hotspots.”

For the purposes of remediation works, a competent person is defined as an individual who:

- Holds a tertiary qualification in an environmental discipline;
- Has demonstrated experience in contaminated site assessment; and
- Has successfully completed a SafeWork NSW-approved Asbestos Removal Supervisor course.

9.5 Site Capping Requirements

9.5.1 Developable and Recreational Areas (excluding road reserves)

The principle of the on-site management approach is to retain impacted materials in situ, provide physical separation between impacted fill and potential receptors (e.g. site users and vegetation) through the use of capping or cover by buildings and pavement, and implement a LTEMP to ensure the integrity of the capping/cover is maintained. As no significant volatile contamination has been identified to date, vapour intrusion controls are not required.

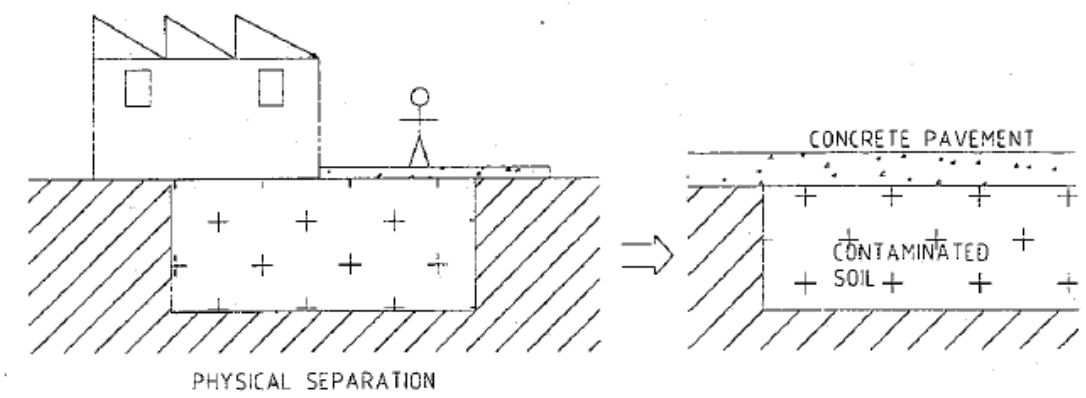
The requirements for physical separation are based on ANZECC (1999[17]), as discussed in NEPC (2013). Considering the primary COPCs in the impacted fill, containment by physical cover in conjunction with appropriate control measures is considered suitable. Based on fill physical properties, analytical results (**Appendix A**), and the findings of JBS&G (2025), contaminants are generally within Groups 1, 2, and 10 as listed in Table 1 (ANZECC, 1999). For these groups, vapour inhalation is not a primary exposure pathway. Accordingly, a 'cap and contain' strategy consistent with ANZECC (1999), supported by suitable control measures, is considered appropriate for managing health risk.

Further, based on fill physical properties, analytical results (**Appendix A**), and the findings of JBS&G (2025), water exclusion and isolation using bottom lining, as described in Table 2 (ANZECC, 1999), is not considered necessary. That being said, if fill material is relocated to support ESD and waste minimisation objectives to an environment with increased groundwater percolation through the site-based fill, additional leachability assessment will be required to support the proposed fill retention strategy.

The minimum requirements for physical separation include:

- A permanent pavement comprising concrete, asphalt or pavers underlain by a concrete blinding slab; or
- A soil cover of sufficient thickness to prevent penetration by future site users, with a minimum of 0.5 m of soil in areas of exposed soil (e.g. landscaped beds).

A schematic of these requirements is shown below:



Source: ANZECC (1999)

Given the specific development plans understood at the time of this O-RAP preparation, being very conceptual only, the following capping and cover measures are to be implemented:

- **Building footprints:** The concrete floor slab will act as the physical barrier. Where an engineered, non-penetrative slab is installed and it's removal would require development consent, a marker layer is not required. In all other cases, a marker layer shall be installed over potentially contaminated material to delineate the extent of retained fill prior to placement of the pavement.
- **Permanent Paved Areas (outside building footprints):** A marker layer shall be installed above potentially contaminated material, followed by validated sub-grade material protective of ecological and human health (as applicable), and finished with permanent pavement (e.g. concrete, asphalt, pavers).
- **Landscaped Areas:** A marker layer shall be installed at a minimum depth of 0.5 m below final finished levels in areas for shallow planting (grasses and shrubs), or 1.5 m below final finished levels in areas intended for tree planting, with environmentally suitable materials, protective of ecological and human health, placed above the marker layer the final levels.

[17] *Guidelines for the Assessment of On-Site Containment of Contaminated Soil*, September 1999, ANZECC (ANZECC 1999)

- **Underground Service Trenches:** Where service trenches are required, infrastructure shall be installed above a marker layer, with suitable backfill materials, protective of ecological and human health (as applicable), to mitigate potential human and/or ecological exposure.

Where required, the marker layer shall consist of orange geofabric. As noted above, the material placed above the marker layer, extending to the final finished ground level, must be environmentally suitable for human and/or ecological exposure (as applicable). Capping materials will generally comprise growing media, but may also include:

- Validated site-derived material suitable for reuse in accordance with **Section 10.2** requirements,
- Imported VENM, or
- Material certified under an NSW EPA exemption/order.

Where materials are proposed for beneficial reuse under an NSW EPA exemption/order (i.e. imported fill), additional assessment will be required to confirm land use suitability. Sampling density and COPC analysis will depend on the volume, material type, and source, and will be subject to Site Auditor endorsement and acceptance, as well as compliance with the facility's Environmental Protection License (EPL).

9.5.2 Road Reserves

The following capping and cover requirements apply to existing road reserves within the site:

- **Existing Road Reserves -** must be maintained or reinstated following upgrades, extensions, or augmentation. A marker layer is not required, as none exists in the broader area. Where new services are installed, backfill must comprise validated, environmentally suitable material.
- **New Landscaped Areas -** the following is required:
    - Shallow planting (grasses/shrubs): minimum 0.5 m of suitable material below finished site levels.
    - Tree planting: minimum 1.5 m of suitable material below finished site levels. Backfill material must be validated as environmentally suitable for human and/or ecological.

Soil-based capping materials will generally comprise growing media, but may also include:

- Validated site-derived material suitable for reuse in accordance with **Section 10.2** requirements,
- Imported VENM, or
- Material certified under an NSW EPA exemption/order.

Where materials are proposed for beneficial reuse under an NSW EPA exemption (i.e. imported fill), additional assessment will be required to confirm land use suitability. Sampling density and COPC analysis will depend on the volume, material type, and source, and will be subject to Site Auditor endorsement and acceptance, as well as compliance with the facility's EPL.

9.6 Off-Site Removal of Impacted Material

Where contaminated fill/soil is not suitable for on-site management/retention, is surplus to construction requirements and/or if more appropriate to be remediated via excavation and off-site disposal, materials are proposed to be remediated by off-site removal and disposal. Materials shall be classified in accordance with EPA (2014) *Waste Classification Guidelines* or an appropriate exemption as created under the *Protection of the Environment Operations (Waste) Regulation 2014*.

9.7 On-Site Treatment of Petroleum Hydrocarbon Impacted Soil

Although only ecological exceedances are currently present, if additional hydrocarbon impacts are identified, petroleum hydrocarbon–impacted fill/soil will, where feasible, be treated on-site. Treatment will be undertaken through bioremediation in "biopiles". Bioremediation will be stimulated by enhancing oxygen levels in the soils to promote aerobic decomposition of petroleum hydrocarbons. Biopiles will be designed and managed to achieve remediation outcomes while preventing environmental emissions.

Biopiles will be constructed and operated in accordance with the following general specifications:

- Maximum height of 2 m;
- Incorporation of screened/slotted piping (e.g. agricultural line or similar) throughout the pile at approximately 0.5 m spacing, with slotted sections fully covered by soil;
- Air drawn through the slotted piping, inducing airflow into the biopile and directing potentially odorous emissions to a common discharge point; and
- Air emissions filtered through a granular activated carbon (GAC) unit prior to release to the atmosphere.

Additional operational controls will be implemented as required:

- Covering of biopiles if significant odorous emissions are observed;
- Periodic watering to maintain suitable soil moisture levels;
- Sizing of the GAC filter based on pile dimensions and monitoring of discharge quality; and
- Replacement or supplementation of filter media if odorous emissions persist.

9.7.1 Petroleum Infrastructure and Impacted Soil

There is no known petroleum infrastructure on-site; however, the following outlines a strategy for managing any such infrastructure and associated soils should they be encountered during demolition activities or earthworks.

If present, historical petroleum infrastructure will be removed. This may include:

- Underground storage tanks (USTs);
- Remote fill points;
- Vent points and associated venting lines;
- Fuel dispensers;
- Fuel pipework; and
- Tank anchors.

Bedding sand associated with this infrastructure will also be removed and stockpiled, as required, for validation assessment. Stockpiling will be managed to minimise potential environmental emissions, in accordance with the requirements of the REMP outlined in **Section 12**.

Following removal of the infrastructure and bedding sand, soils at the lateral (wall) and vertical (base) extents of the excavation will be inspected by the Field Scientist for aesthetic indicators of petroleum hydrocarbon impacts. Such indicators may include odour, visible staining, or discolouration. Where aesthetically impacted soils are identified, the Field Scientist will direct their excavation and stockpiling. Stockpiling of these soils will be undertaken in a manner that minimises potential environmental emissions, consistent with the requirements of the REMP (**Section 12**).

9.8 Materials Movement / Tracking

All materials will be environmentally assessed before relocation, with specific attention to the potential classification of asbestos-contaminated soil. Movement of materials will be managed in accordance with a Material Tracking Plan (MTP), which will be incorporated into each stage-specific RWP.

The MTP will be prepared prior to any relocation of material within the site, including transfers between development areas and/or stages. It will address material characteristics and tracking (e.g. quantity, movement, and locations) and will define:

- Responsibilities for implementation;
- Procedures for documenting material, including review of existing data and/or collection of new data to ensure sufficient characterisation to support decision-making and meet validation data quality objectives (DQOs);
- Requirements for recording material source, quantity, and final destination (lateral and vertical extent); and
- The required level of precision for data collection and reporting.

The MTP should also include a spreadsheet for imported and exported material, which can be provided to the environmental consultant/auditor for review prior to commencement of remediation works. The spreadsheet should include as a minimum:

Material import tracking

- Material Source information
- Classification
- Classification document reference
- Quantity imported
- Dates imported
- Placement location on site
- Visual inspection details post arrival on site
- Details of any samples collected

Material export tracking

- Stockpile/source ID
- Date disposed
- Classification Quantity
- Landfill Docket/receipt no.
- IWTS no./ Or consignment Number
- Waste classification report reference

The environmental, health, and safety requirements for fill handling at the source location, as defined in the stage-specific RWPs, will also apply at the relocation area within the site. These requirements will include, at a minimum:

- Stockpile management provisions;
- Material movement planning aligned with project staging and timeframes; and

- Separation of contaminated fill, environmentally suitable fill, and natural soils.

10. Proposed Validation Methodology

A Validation Sampling and Analytical Quality Plan (SAQP) will be developed, either as a standalone document or as part of each RWP prepared for each stage of the site. In general, validation will be required to address the following elements of the remedial works:

- Installation of capping materials where required;
- Verification of uncapped or accessible site soils, including imported fill and growing media;
- Characterisation of site areas not previously subject to sampling and analysis; and
- Removal of petroleum infrastructure if encountered.

Each of these elements is discussed in the following sections.

10.1 Capping Arrangement Verification

Capping installation shall be verified by survey, completed by a registered surveyor and/or use of design plans, and shall document the following:

- The lateral extent and upper depth/elevation of known environmentally impacted material within each stage
- The lateral extent, type, and thickness of capping material within each stage; and
- Confirmation (via photographs or equivalent records) of the installation of the underlying marker layer as well as the capping layer, where required.

It is noted that site preparation and service installation activities may be undertaken by different contractors during development works. Accordingly, validation of capping installation may be completed progressively, in stages, as works are carried out.

10.2 Accessible Soil, Imported Fill and Growing Media

10.2.1 Site Fill Material

For areas of proposed accessible fill, sampling and analysis, and/or a statistical assessment of existing data (both analytical and aesthetic), will be undertaken to demonstrate the suitability of the material for:

- Human contact under the proposed land use scenario pursuant to NEPC (2013); and
- Use as growing media, consistent with ecological concentrations in NEPC (2013) for the proposed land use.

Where a valid data set can be generated based on a consideration of the location of soils on the site and the potential exposure scenarios, the following statistical criteria will apply:

- The 95 % UCL average concentrations shall be below the soil criteria;
- The standard deviation of the generated data set shall be below 50 % of the soil criteria; and
- The maximum concentration shall be below 250 % of the soil criteria.

When assessing potential human exposure, it will be assumed that direct contact with soils may occur to a depth of 2 m below the finished ground surface. This depth is also considered appropriate for validating fill material in deep planting areas and is substantially deeper than the proposed capping thickness.

Where site soils are validated against the final criteria to a depth of at least 2 m below the finished ground surface, no physical marker layer will be required, and these areas will not be subject to ongoing management under a LTEMP.

For the assessment of fill for ecological consideration, ANZECC (1999), as referenced in NEPC (2013), provides the following guidance:

- A minimum of 0.2 m of topsoil and uncompacted soil is required to support grass cover by providing root support and water storage; and
- A minimum of 0.7 m of topsoil and uncompacted soil is required to support trees and shrubs.

In addition to this guidance, validation of growing media depths must be supported by written advice from the Project Horticulturist confirming the adequacy of soil depths for the intended landscaping outcomes.

10.2.2 Materials Import of Fill

In accordance with current EPA policy, only material that does not represent an environmental or health risk at the receiving site may be considered for resource recovery. Imported materials will only be accepted to the site if they meet the restrictions placed on these materials and meet the definition of:

- VENM as defined in the Protection of the Environment Operations Act (1997) Schedule 1.
- Excavated Natural Material (ENM) as defined in the EPA Order/Exemption; or
- Recycle materials as per an EPA Order/Exemption.

All materials imported onto the site are required to be accompanied by appropriate documentation that has been verified by the appointed site environmental consultant.

Where materials are proposed for beneficial reuse under an NSW EPA exemption/order (i.e. imported fill), additional assessment will be required to confirm land use suitability. Sampling density and COPC analysis will depend on the volume, material type, and source, and will be subject to Site Auditor endorsement and acceptance, as well as compliance with the facility's Environmental Protection License (EPL).

10.2.3 Petroleum Infrastructure

If petroleum infrastructure is encountered, it must be removed. Any petroleum hydrocarbon–impacted soils identified during removal must be remediated. Validation of both the infrastructure removal and remediation of impacted material shall be carried out in accordance with the NSW EPA (2023) *Contamination Assessment of Service Station Sites* guideline and the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*.

Petroleum infrastructure removal is expected to occur after demolition works but before the commencement of bulk earthworks in the surrounding area, if such infrastructure is present.

Groundwater assessment requirements outlined in NSW EPA (2023) do not apply where the area is confirmed to be free of petroleum hydrocarbon–impacted soils.

11. Contingency Plan

There is a possibility that previously unidentified hazards may be present at the site. These hazards are expected to be detectable through visual or olfactory observation, and may include, but are not limited to:

- Large-scale buried friable asbestos waste (e.g., lagging);
- Construction or demolition waste (visible);
- Hydrocarbon-impacted materials (visible or odorous);
- Drums or underground storage tanks (USTs) (visible); and
- Excessive ash, slag, or oily/contaminated soils or fill materials that are visually inconsistent with the majority of fill materials.

To protect the workforce and the surrounding community, any identified substances, whether listed above or otherwise unexpected and potentially hazardous, must be managed in accordance with the "unexpected finds" protocol outlined in each stage-specific RWP.

The sampling strategy for any unexpected find shall be developed by a suitably qualified environmental consultant. The primary objective of the strategy is to determine the nature of the substance, including whether it is hazardous and, if so, whether its concentration poses an unacceptable risk to human health or the environment. Sampling and analysis must also align with the overall validation requirements for the site.

11.1 Additional Impacted Fill/Soil Material

Where additional characterisation identifies fill/soil impact, remediation or management will be required in accordance with this O-RAP as outlined below:

- Where impacted material cannot be capped and retained onsite, it must be excavated and disposed of off-site as per **Section 9.6**. The excavations must then be validated as outlined in **Section 10.2**.
- Where impacted material is to be retained on site, containment must be completed and validated as detailed in **Section 10.2** following consultation with the Site Auditor.

11.2 Emissions / Pollution

Due to the nature of the activities and type of contaminants identified within the site, there is a potential for complaints to be received from members of the public and/or occupants of surrounding properties relating to environmental emissions associated with remedial works, including:

- Odour emissions arising from the handling of malodorous soil;
- Noise and vibration arising from remedial excavations or other works required for remediation (i.e. piling); and/or
- Dust emissions arising from remedial excavation, material handling and placement.

Monitoring of potential environmental emissions from the site shall be undertaken during the remedial works as detailed in **Section 8** and appropriate actions taken to further control emissions following receipt of a complaint. The procedures will be specific to remedial works and not to construction works. The procedures shall contain provisions for contingency actions where excessive emissions occur; however, it is anticipated that one or more of the following actions will be considered:

- Increased application of odour screening/masking chemicals on odorous materials;
- Disturbance of soils during meteorologically favourable periods only; and/or

- Covering of impacted soils; and/or
- Implementation of alternate construction methods.

11.3 Prevention of Cross Contamination

As noted above, potential remains for remedial works to be undertaken in a staged manner. As such, to prevent recontamination of a validated area from un-remediated areas due to machinery, stockpiling and/or personnel movement, the following should be implemented:

- Establish Physical Barriers
    - Use plastic sheeting, geofabric or similar (I.e. cover fill not being remediated), and controlled access zones to separate validated and un-remediated areas.
        - Alternative, fill can be capped with natural soils, however, this would just increase the volume of fill requiring disposal to landfill (i.e. not recommended but a viable option).
    - If bonded ACM fragments are identified on the site's ground surface, these should be removed from the site's ground surface to a facility lawfully able to receive the material.
    - Clearly mark boundaries with signage indicating "Validated Area – No Unauthorised Entry."
- Control Personnel Movement
    - Designate specific entry/exit points for personnel and equipment.
- Decontaminate Equipment and Tools
    - Clean machinery, tools, and materials before bringing them into the validated area.
    - Establish designated cleaning stations near entry points.
- Monitor and Inspect Regularly
    - Conduct routine inspections of barriers, personnel compliance, and cleaning stations. JBS&G to confirm the validated surface is free of foreign inclusion prior to VENM export.
- Implement a Communication Plan
    - Ensure all personnel understand and adhere to contamination control measures.
    - Provide ongoing training on cross-contamination risks and mitigation procedures.

11.4 Capping Arrangement Modification

Where the development consent identifies flora of significance, and the capping arrangements in nominated in **Section 10.1** are unable to be installed, in consultation with the project horticulturist, mesh geogrid (such as an extruded plastic geogrid) shall be installed up as close to the root ball without impacting on the health of the tree. The mesh geogrid will need to be carefully hand cut and shaped around the item, and pinned down/fastened to the ground appropriately (i.e. using soil 'U' nails or another robust method).

Following application of the extruded mesh, a minimum of 0.1 of validated material (as per **Section 10.2.2**) is required to be placed. Validation of the capping arrangement is required as per **Section 10.1**.

In addition, should capping arrangements in areas be unable to be implemented due to heritage, geotechnical or other site constraints, then any modifications to the capping arrangements will be done in consultation with the Site Auditor and the future landowner prior to implementation.

12. Remediation Environmental Management Plan

A summary of potential environmental issues associated with the remediation works is provided in Table 12.1A Remediation Environmental Management Plan (REMP) must be prepared as a separate document for each remediation stage to manage the identified potential environmental emissions relevant to that stage. As noted in **Section 9.8**, the provisions of the REMP must also apply to any location where impacted material from the remediation works is relocated.

Table 12.1: Review of Potential Environmental Issues

Media / Emissions	Potential Impacts
Air Quality	Generation of particulates from earthmoving activities. Generation of asbestos fibres by storage/handling of fill materials impacted with asbestos fibres. Malodorous emissions from petroleum hydrocarbon-contaminated materials, or hydrocarbon-impacted unexpected finds. Particle emissions from plant and vehicle emissions.
Surface Water Quality	Sediment-laden surface water is discharged from the site and enters the local stormwater system with discharge to Alexandra Canal. Contaminated soil entering the stormwater system. A spill or release of a hazardous substance (i.e. remnant petroleum products as held in USTs).
Noise and Vibration	Excessive noise or vibration generated by plant and equipment and impacting on nearby commercial areas / residences.
Traffic / Access	Where significant off-site disposal of materials is required, there will potentially be significant numbers of heavy vehicle movements on the local road network.
Protection of adjoining structures	Excavation works will potentially occur adjoining the site boundaries and associated structures.

13. Work Health and Safety

A detailed Work Health and Safety Plan (WHSP) must be developed prior to the commencement of remediation works. The objectives of the WHSP are to:

- Minimise risks arising from remediation activities through the application of standard procedures;
- Ensure all personnel receive appropriate training, equipment, and support to safely carry out their duties; and
- Protect other site workers and the general public from potential hazards.

These objectives will be achieved through:

- Clear assignment of responsibilities;
- Comprehensive hazard identification and risk assessment;
- Establishment of personal protection standards, mandatory safety procedures, and safe work practices;
- Ongoing monitoring of hazards and implementation of corrective actions; and
- Provisions for contingencies that may arise during site operations.

The WHSP must comply with the requirements of the *Work Health and Safety Act 2011* (Cth), the *Work Health and Safety Regulation 2017* (NSW), and relevant Codes of Practice, including but not limited to:

- Managing Risks of Hazardous Chemicals in the Workplace (Safe Work Australia, 2021);
- How to Safely Remove Asbestos (SafeWork NSW, 2022); and
- Managing Risks of Soil Contamination in the Workplace (Safe Work Australia, 2023).

In addition to general chemical exposure assessments, the WHSP must address the specific contaminants identified in in-situ materials on site, including:

- Polycyclic Aromatic Hydrocarbons (PAHs) potentially present in fill materials;
- Heavy metals, including arsenic, cadmium, chromium, copper, lead, nickel, mercury, and zinc;
- Total Petroleum Hydrocarbons (TPH); and
- Asbestos.

As a precaution, the WHSP must require revision in the event of any unexpected discovery of contaminated material during remediation activities.

When handling contaminated materials, all measures must prevent exposure via ingestion, inhalation, or dermal absorption. The WHSP must detail:

- Required personal protective equipment (PPE);
- Decontamination procedures; and
- Controls to manage the risks associated with chemical contaminants on site.

Given the potential for asbestos-contaminated soils, the WHSP must include measures consistent with SafeWork NSW requirements for asbestos management, including:

- Safe handling and disposal procedures;
- Requirements for a comprehensive asbestos air monitoring program during site works; and

- Procedures for protecting workers and the surrounding community from airborne asbestos fibres.

14. Community Consultation

Given the social and potential environmental sensitivities of the site, a Community Consultation and Communication Plan must be developed to inform all stakeholders, including neighbouring property occupiers and contractors working in remediated areas, about the proposed remediation works, prior to the commencement of remediation works occurring or as required by any future consent conditions. This plan should be integrated with any existing community consultation and communication strategies.

15. Conclusions and Recommendations

15.1 Conclusions

Overall, and subject to the limitations in **Section 16**, the proposed actions outlined in this O-RAP are considered to comply with the requirements of the Contaminated Sites Guidelines for the NSW Site Auditor Scheme (3rd Edition) (EPA 2017). The proposed measures are technically feasible, environmentally justifiable, and consistent with relevant legislation, policies, and NSW EPA-endorsed guidelines.

Subject to the successful implementation of the measures described in this O-RAP and the recommendations below, it is concluded that the site can be made suitable for its intended uses. Contamination-related risks can be managed in a manner that adequately protects human health and the environment.

15.2 Recommendations

It is recommended that the processes outlined in this O-RAP be implemented and that the following documentation be developed and implemented in addition to Stage-specific RWPs to ensure the risks and impacts during remediation works are controlled in an appropriate manner:

- Remediation Environmental Management Plan (REMP): To document monitoring and management measures required to control environmental impacts of the works and to ensure validation protocols are met.
- Work Health and Safety Plan (WHSP): To detail procedures for managing risks to the health and safety of the remediation workforce.

Both the REMP and WHSP must account for the potential occurrence, handling, and storage of asbestos-contaminated soils on the site.

Upon completion of works on the Site, or within specific areas/stages, validation reports and LTEMPs for any residual impacted materials retained in situ must be submitted by the Remediation Consultant to the Site Auditor, where required under the development consent. This will allow certification that the site, or the relevant portions thereof, are suitable for the proposed uses, subject to implementation of the relevant ongoing LTEMP.

16. Limitations

This report has been prepared for use by the client who has commissioned the works, and JBS&G also extend reliance to the Department (i.e. government entities) in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

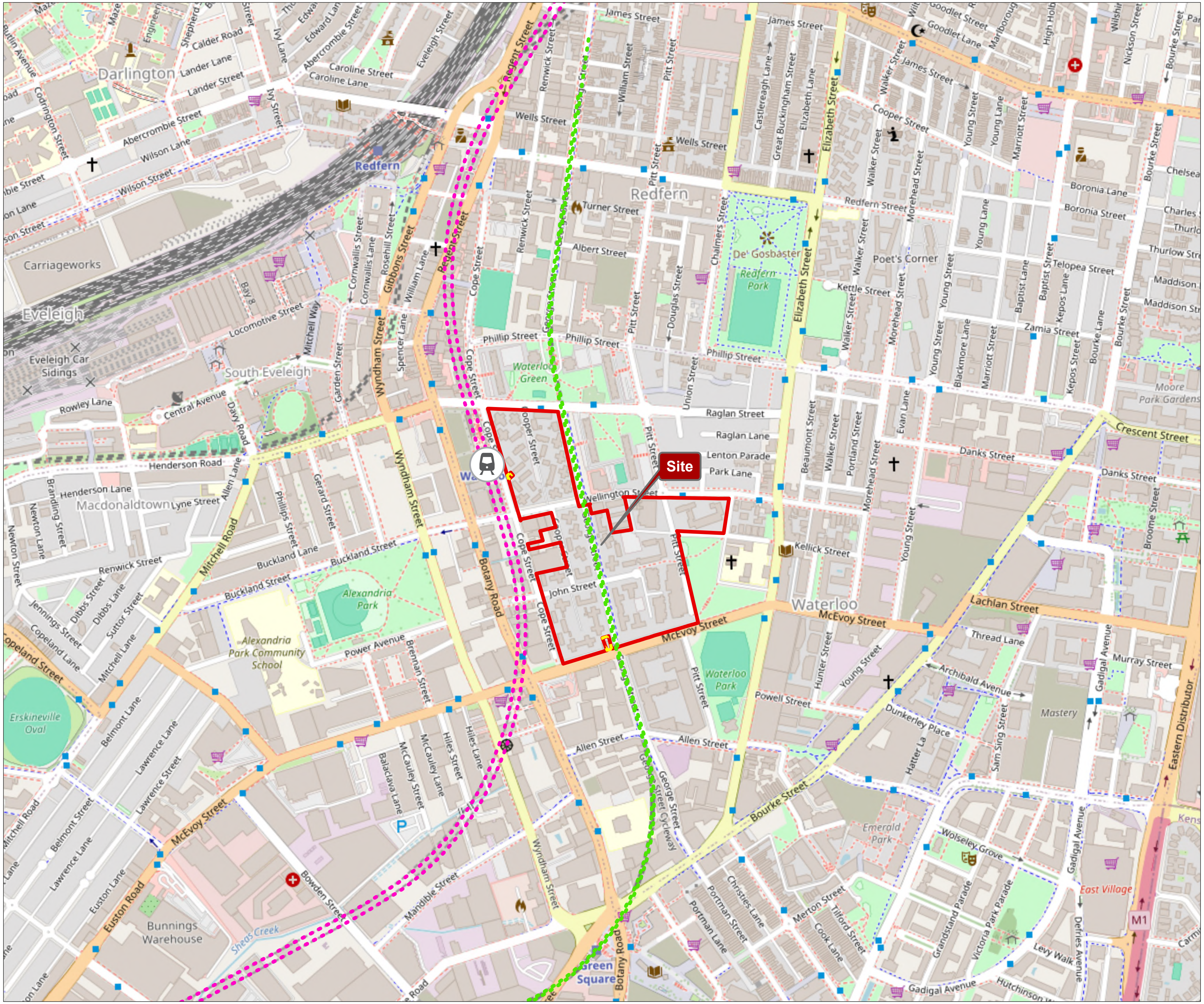
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the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

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

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

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

Figures



Legend

- Approximate Site Boundary
- Electrical Substation
- Railway Line
- Waterloo Metro Line
- Waterloo Metro Station

JBS&G

Job No: 68063	
Client: Stockland	
Version: R02 Rev A	Date 31/07/2025
Drawn By: TS	Checked By: DS
Scale 1:10,000	

0 100 200

metres

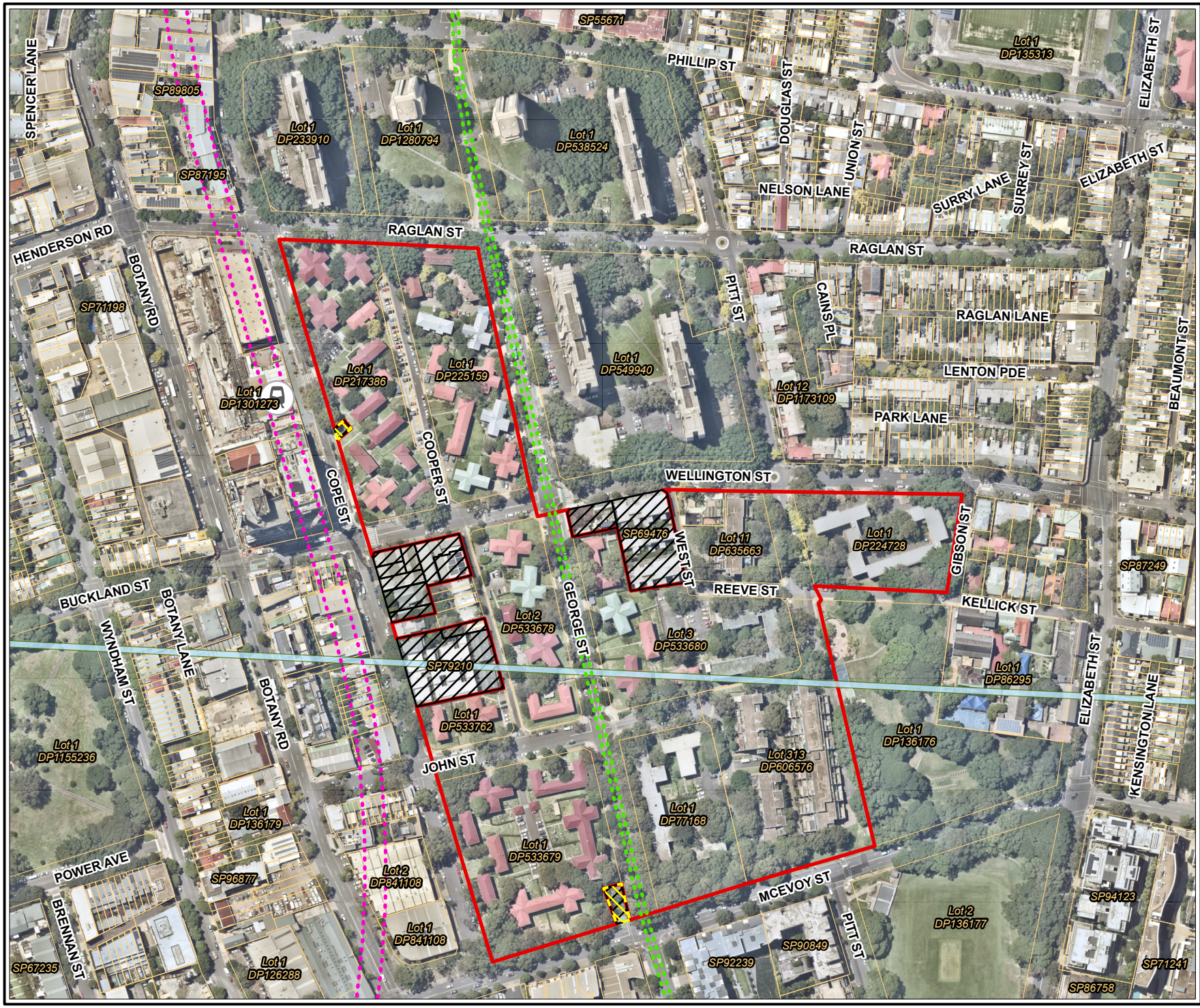
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate, Waterloo, NSW

SITE LOCATION

FIGURE 1

File Name: 68063_WaterlooEstateSouthCLM_R02RevA



Legend

- Approximate Site Boundary
- NSW Cadastre
- Electrical Substation
- Private Properties
- Potts Hill to Waterloo Pressure Tunnel and Shafts
- Railway Line
- Waterloo Metro Line
- Waterloo Metro Station

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A	Date 31/07/2025
Drawn By: TS	Checked By: DS

Scale 1:3,500

0 50 100

metres

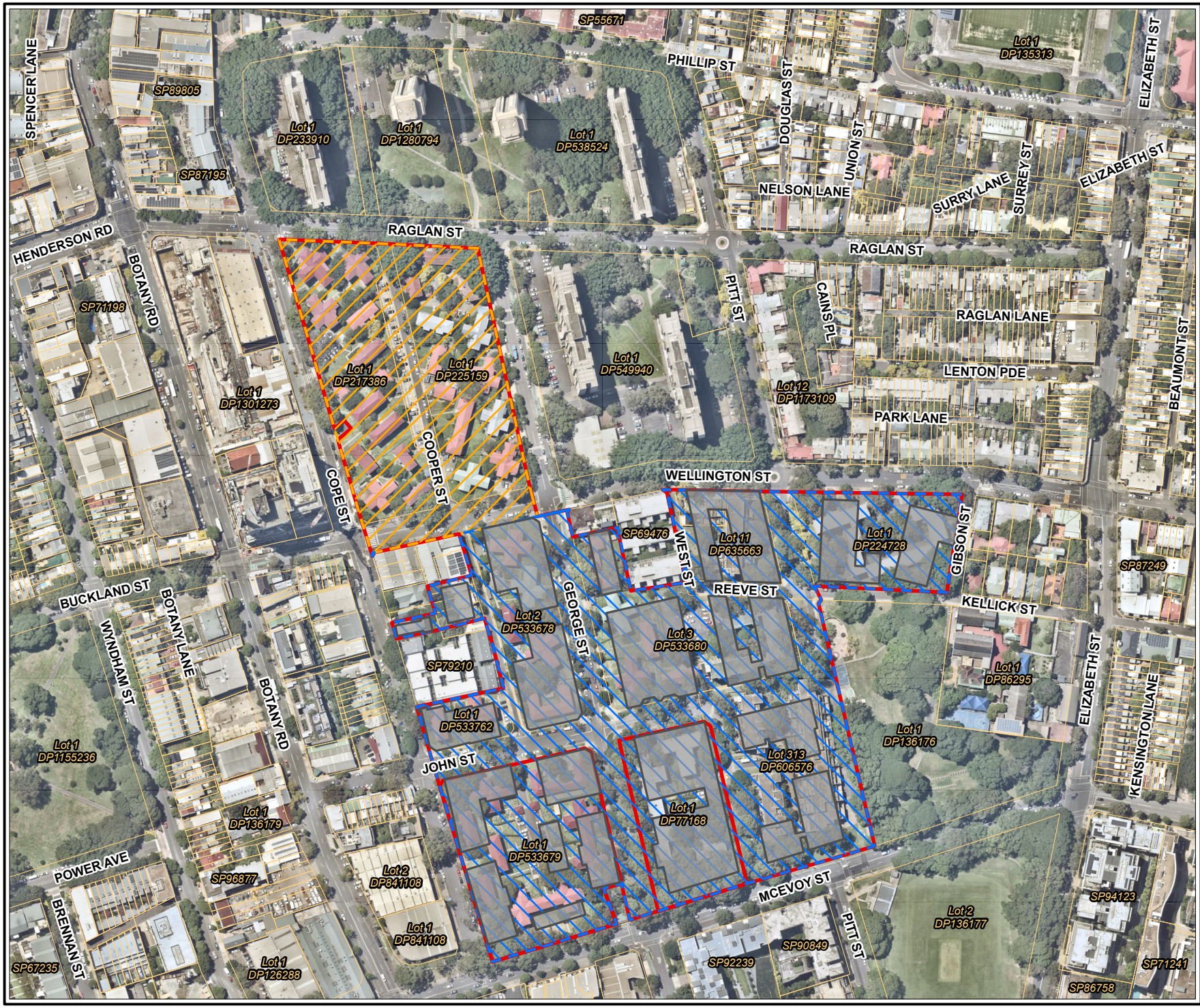
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

CURRENT SITE LAYOUT

FIGURE 2A

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



Legend

- Approximate Site Boundary
- NSW Cadastre
- Public Open Space
- Residential Development
- Building Footprint

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A	Date 27/03/2026
Drawn By: TS	Checked By: DS

Scale 1:3,500

0 50 100

metres

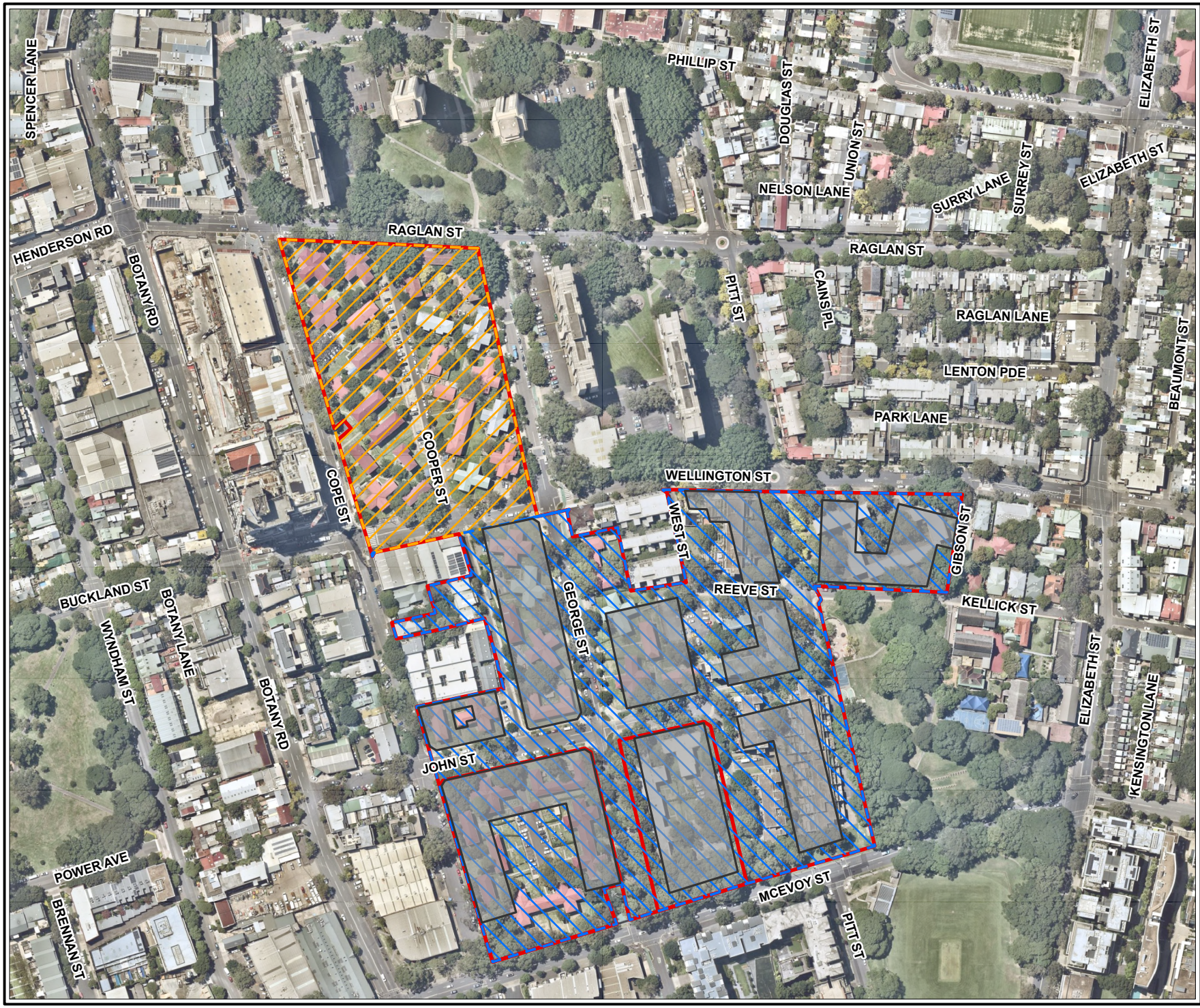
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

INDICATIVE SITE LAYOUT

FIGURE 2B

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



Legend

- Approximate Site Boundary
- Public Open Space
- Residential Development
- Proposed Basement Extents

JBS&G

Job No: 68063	
Client: Stockland	
Version: R02 Rev A	Date 27/03/2026
Drawn By: TS	Checked By: DS

Scale 1:3,500

0 50 100

metres

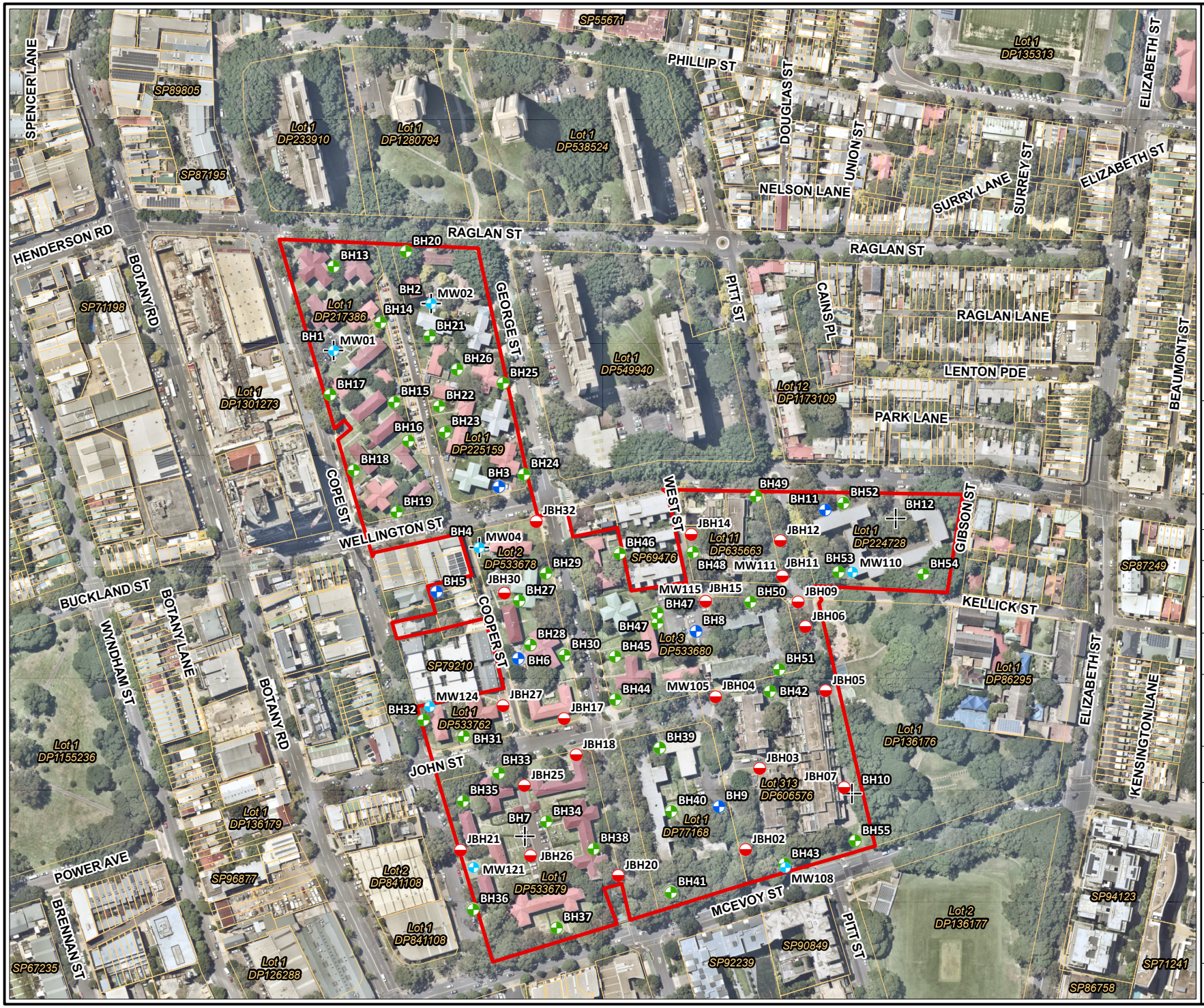
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

PROPOSED BASEMENT EXTENTS

FIGURE 2C

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



Legend

- Approximate Site Boundary
- NSW Cadastre

Historical Sample Locations

- Geotechnical / Environmental Borehole (with well), (DP, 2022)
- Geotechnical / Environmental Borehole, (DP, 2022)
- Environmental Borehole (Hand Auger), (DP, 2022)
- Geotechnical Borehole (with well), (Alliance, 2025)
- Borehole (JBS&G, 2025)

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A	Date 31/07/2025
Drawn By: TS	Checked By: DS

Scale 1:3,500

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

HISTORICAL SAMPLES LOCATIONS

FIGURE 3A

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)

Legend

- Approximate Site Boundary
- NSW Cadastre

Historical Sample Locations

- Geotechnical / Environmental Borehole (with well), (DP, 2022)
- Geotechnical / Environmental Borehole, (DP, 2022)
- Environmental Borehole (Hand Auger), (DP, 2022)
- Geotechnical Borehole (with well), (Alliance, 2025)
- Borehole (JBS&G, 2025)

Soil Observations

- Asbestos/ACM
- B&D Waste

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A	Date 31/07/2025
Drawn By: TS	Checked By: DS

Scale 1:3,500

0 50 100

metres

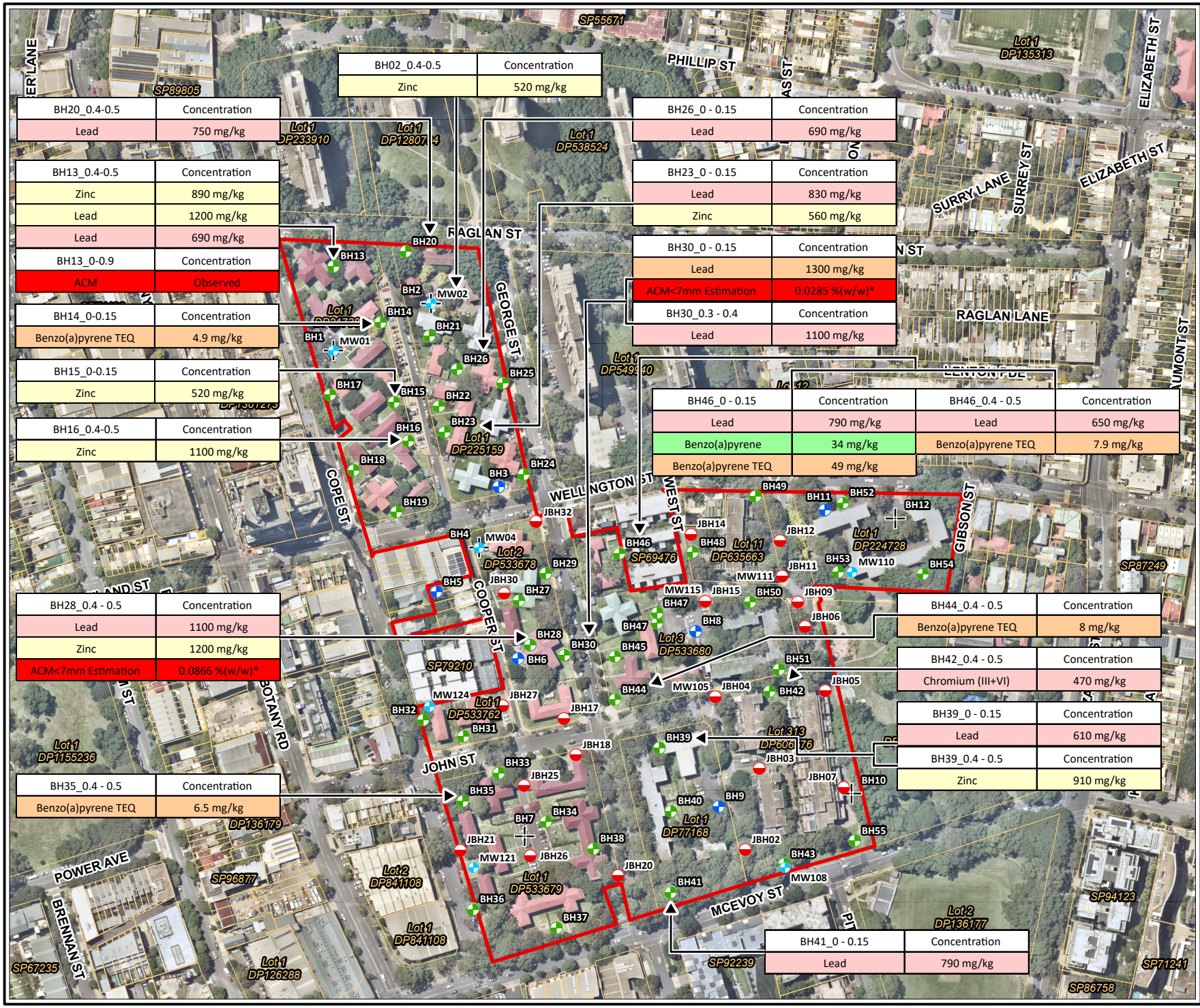
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

SOIL OBSERVATIONS

FIGURE 3B

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



Legend

- Approximate Site Boundary
- NSW Cadastre

Historical Sample Locations

- Geotechnical / Environmental Borehole (with well), (DP, 2022)
- Geotechnical / Environmental Borehole, (DP, 2022)
- Environmental Borehole (Hand Auger), (DP, 2022)
- Geotechnical Borehole (with well), (Alliance, 2025)
- Borehole (JBS&G, 2025)

Criteria
NEPM 2013 Table 1A(1) HILs Rec C Soil
Site Specific EIL - Urban Residential and Public Open Space
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space
NEPM 2013 Table 1A(1) HILs Res B Soil
Asbestos/ACM present

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A | Date 31/07/2025

Drawn By: TS | Checked By: DS

Scale 1:3,500

0 50 100

metres

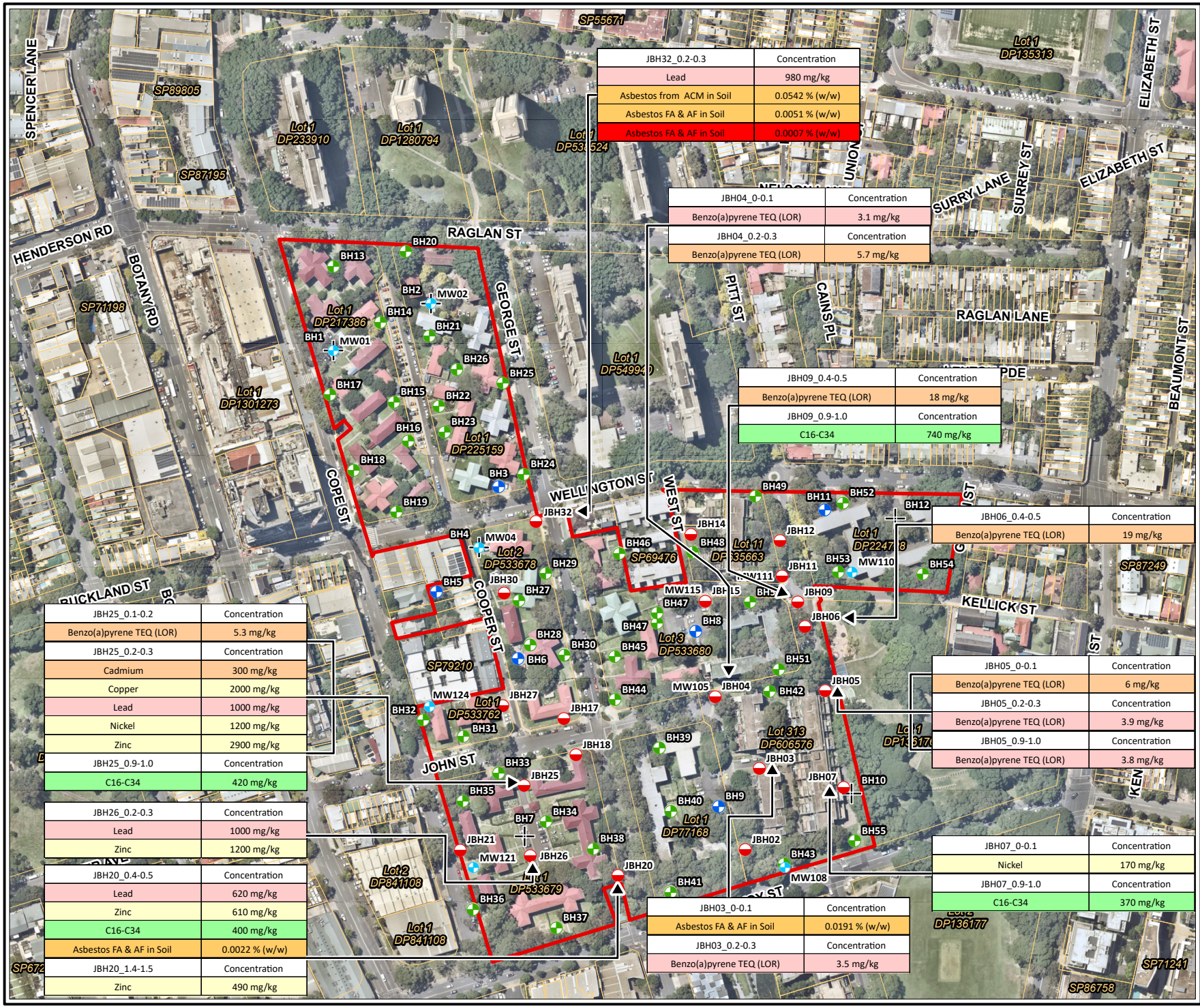
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

HISTORICAL SOIL EXCEEDANCES

FIGURE 4A

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



JBH32_0.2-0.3	Concentration
Lead	980 mg/kg
Asbestos from ACM in Soil	0.0542 % (w/w)
Asbestos FA & AF in Soil	0.0051 % (w/w)
Asbestos FA & AF in Soil	0.0007 % (w/w)

JBH04_0-0.1	Concentration
Benzo(a)pyrene TEQ (LOR)	3.1 mg/kg
JBH04_0.2-0.3	Concentration
Benzo(a)pyrene TEQ (LOR)	5.7 mg/kg

JBH09_0.4-0.5	Concentration
Benzo(a)pyrene TEQ (LOR)	18 mg/kg
JBH09_0.9-1.0	Concentration
C16-C34	740 mg/kg

JBH06_0.4-0.5	Concentration
Benzo(a)pyrene TEQ (LOR)	19 mg/kg

JBH25_0.1-0.2	Concentration
Benzo(a)pyrene TEQ (LOR)	5.3 mg/kg
JBH25_0.2-0.3	Concentration
Cadmium	300 mg/kg
Copper	2000 mg/kg
Lead	1000 mg/kg
Nickel	1200 mg/kg
Zinc	2900 mg/kg
JBH25_0.9-1.0	Concentration
C16-C34	420 mg/kg

JBH05_0-0.1	Concentration
Benzo(a)pyrene TEQ (LOR)	6 mg/kg
JBH05_0.2-0.3	Concentration
Benzo(a)pyrene TEQ (LOR)	3.9 mg/kg
JBH05_0.9-1.0	Concentration
Benzo(a)pyrene TEQ (LOR)	3.8 mg/kg

JBH26_0.2-0.3	Concentration
Lead	1000 mg/kg
Zinc	1200 mg/kg

JBH20_0.4-0.5	Concentration
Lead	620 mg/kg
Zinc	610 mg/kg
C16-C34	400 mg/kg
Asbestos FA & AF in Soil	0.0022 % (w/w)
JBH20_1.4-1.5	Concentration
Zinc	490 mg/kg

JBH03_0-0.1	Concentration
Asbestos FA & AF in Soil	0.0191 % (w/w)
JBH03_0.2-0.3	Concentration
Benzo(a)pyrene TEQ (LOR)	3.5 mg/kg

JBH07_0-0.1	Concentration
Nickel	170 mg/kg
JBH07_0.9-1.0	Concentration
C16-C34	370 mg/kg

Legend

- Approximate Site Boundary
- NSW Cadastre

Historical Sample Locations

- Geotechnical / Environmental Borehole (with well), (DP, 2022)
- Geotechnical / Environmental Borehole, (DP, 2022)
- Environmental Borehole (Hand Auger), (DP, 2022)
- Geotechnical Borehole (with well), (Alliance, 2025)
- Borehole (JBS&G, 2025)

Criteria	
	NEPM 2013 Table 1A(1) HILs Rec C Soil
	NEPM 2013 Table 1A(1) HILs Res B Soil
	Site Specific EIL - Urban Residential and Public Open Space
	NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil
	NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil
	Asbestos/ACM present

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A | Date 31/07/2025

Drawn By: TS | Checked By: DS

Scale 1:3,500

0 50 100

metres

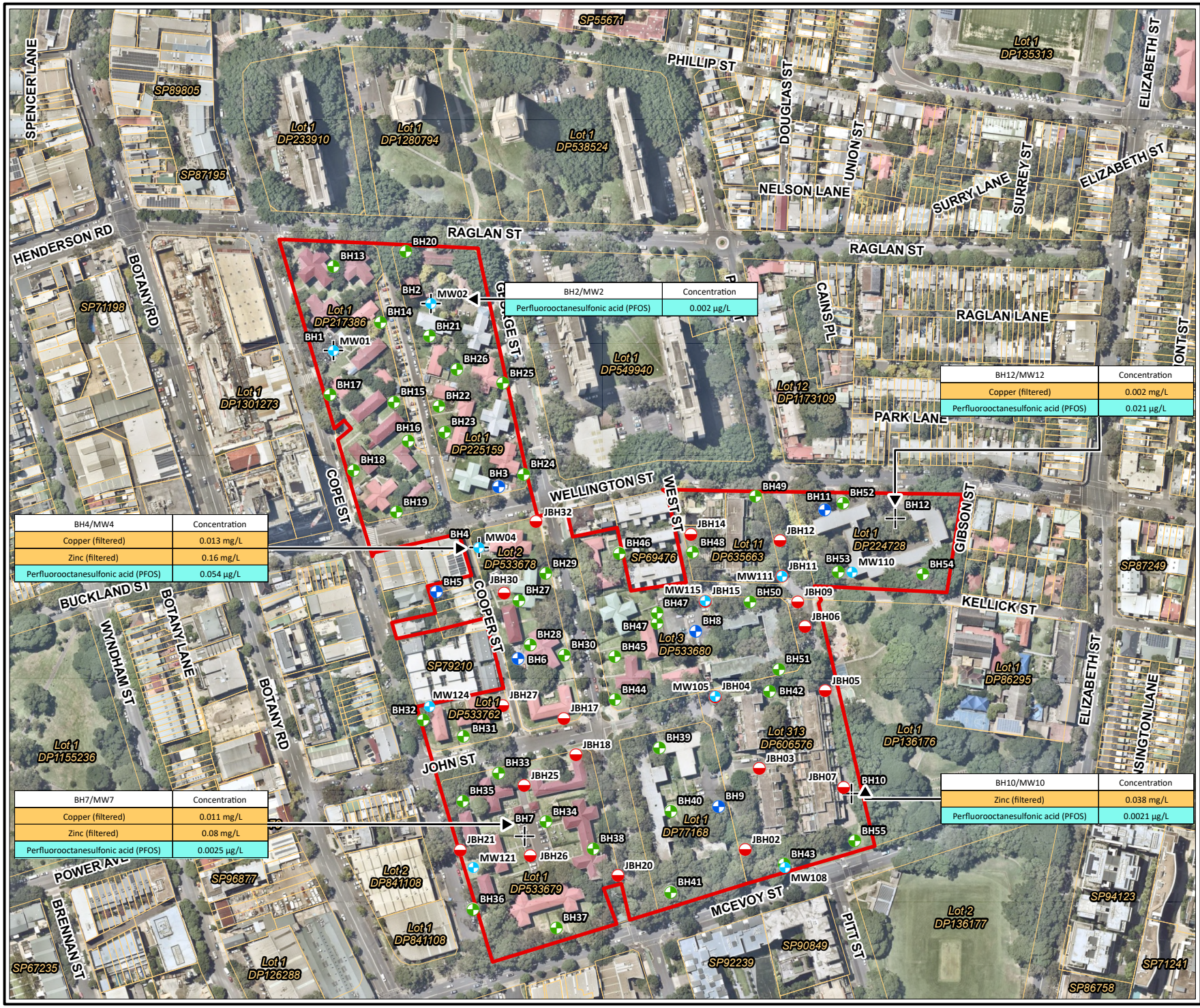
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate,
Waterloo, NSW

HISTORICAL SOIL EXCEEDANCES

FIGURE 4B

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



BH2/MW2	Concentration
Perfluorooctanesulfonic acid (PFOS)	0.002 µg/L

BH12/MW12	Concentration
Copper (filtered)	0.002 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.021 µg/L

BH4/MW4	Concentration
Copper (filtered)	0.013 mg/L
Zinc (filtered)	0.16 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.054 µg/L

BH7/MW7	Concentration
Copper (filtered)	0.011 mg/L
Zinc (filtered)	0.08 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.0025 µg/L

BH10/MW10	Concentration
Zinc (filtered)	0.038 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.0021 µg/L

Legend

- Approximate Site Boundary
- NSW Cadastre

Historical Sample Locations

- Geotechnical / Environmental Borehole (with well), (DP, 2022)
- Geotechnical / Environmental Borehole, (DP, 2022)
- Environmental Borehole (Hand Auger), (DP, 2022)
- Geotechnical Borehole (with well), (Alliance, 2025)
- Borehole (JBS&G, 2025)

Criteria	
	ANZG (2018) Marine water 95% toxicant DGVs
	PFAS NEMP 3.0 (2025) Interim marine 95% species protection
	PFAS NEMP 3.0 (2025) Interim marine 99% species protection

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A	Date 31/07/2025
Drawn By: TS	Checked By: DS

Scale 1:3,500

0 50 100

metres

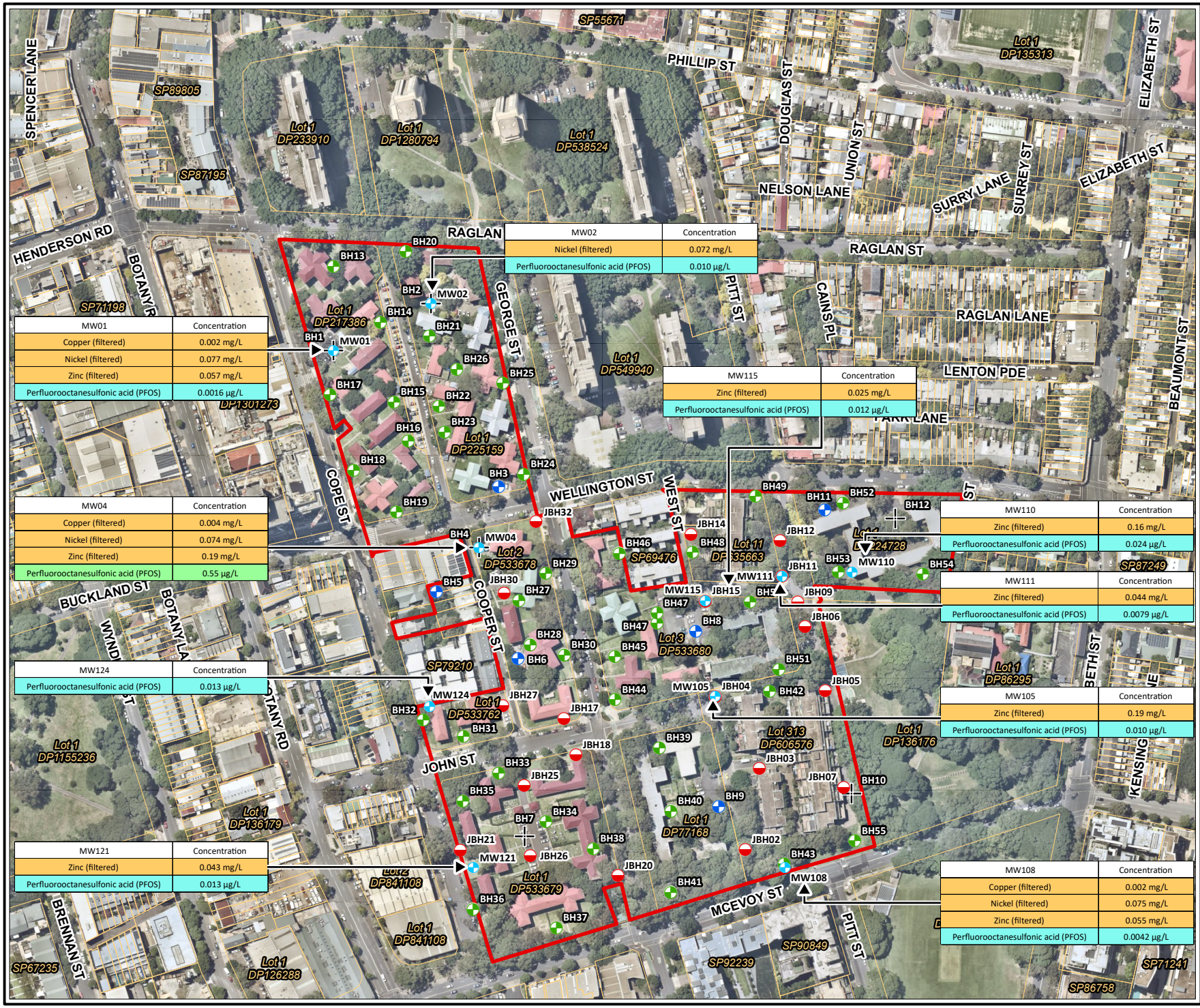
Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate, Waterloo, NSW

HISTORICAL GROUNDWATER EXCEEDANCES

FIGURE 5A

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)



MW02	Concentration
Nickel (filtered)	0.072 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.010 µg/L

MW01	Concentration
Copper (filtered)	0.002 mg/L
Nickel (filtered)	0.077 mg/L
Zinc (filtered)	0.057 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.0016 µg/L

MW115	Concentration
Zinc (filtered)	0.025 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.012 µg/L

MW04	Concentration
Copper (filtered)	0.004 mg/L
Nickel (filtered)	0.074 mg/L
Zinc (filtered)	0.19 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.55 µg/L

MW110	Concentration
Zinc (filtered)	0.16 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.024 µg/L

MW111	Concentration
Zinc (filtered)	0.044 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.0079 µg/L

MW124	Concentration
Perfluorooctanesulfonic acid (PFOS)	0.013 µg/L

MW105	Concentration
Zinc (filtered)	0.19 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.010 µg/L

MW121	Concentration
Zinc (filtered)	0.043 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.013 µg/L

MW108	Concentration
Copper (filtered)	0.002 mg/L
Nickel (filtered)	0.075 mg/L
Zinc (filtered)	0.055 mg/L
Perfluorooctanesulfonic acid (PFOS)	0.0042 µg/L

Legend

- Approximate Site Boundary
- NSW Cadastre

Historical Sample Locations

- Geotechnical / Environmental Borehole (with well), (DP, 2022)
- Geotechnical / Environmental Borehole, (DP, 2022)
- Environmental Borehole (Hand Auger), (DP, 2022)
- Geotechnical Borehole (with well), (Alliance, 2025)
- Borehole (JBS&G, 2025)

Criteria	
	ANZG (2018) Marine water 95% toxicant DGVs
	PFAS NEMP 3.0 (2025) Interim marine 95% species protection
	PFAS NEMP 3.0 (2025) Interim marine 99% species protection

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A | Date 31/07/2025

Drawn By: TS | Checked By: DS

Scale 1:3,500

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

Waterloo Estate, Waterloo, NSW

HISTORICAL GROUNDWATER EXCEEDANCES

FIGURE 5B

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)

Legend

- Approximate Site Boundary
- NSW Cadastre
- Infrastructure

Remdial Extent Areas

- Impacted: Fill Exceeding the Adopted Heath Criteria
- Data Gaps
- No Impacts Identified

JBS&G

Job No: 68063

Client: Stockland

Version: R02 Rev A	Date 28/08/2025
Drawn By: JL	Checked By: DS

Scale 1:3,500

0 50 100

metres

Coord. Sys. GDA 1994 MGA Zone 56

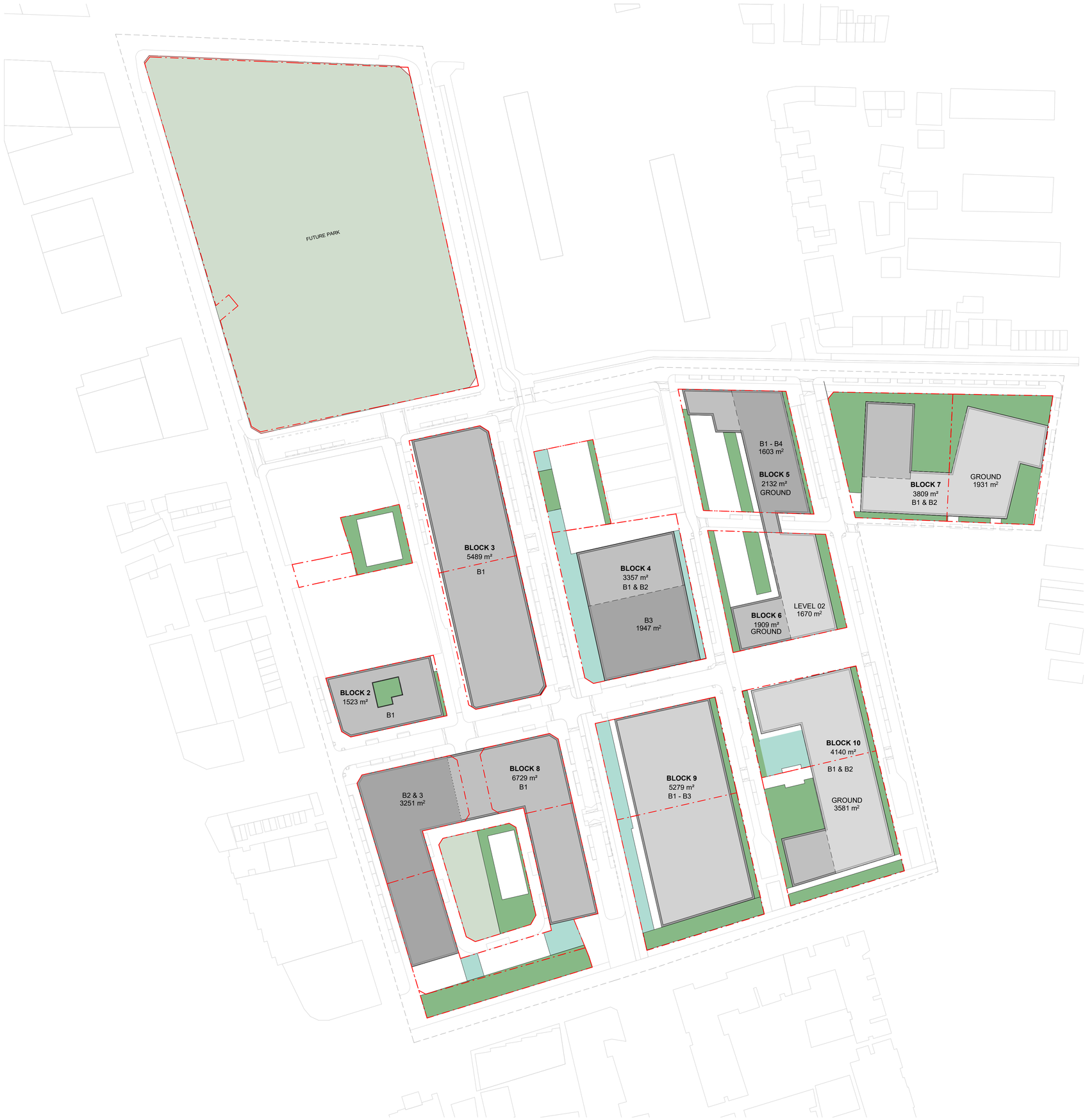
Waterloo Estate,
Waterloo, NSW

REMEDIAL EXTENTS

FIGURE 6

File Name: 68063_WaterlooEstateSouthCLM_R02RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 20/01/2025)

Appendix A Concept Design Plans



TYPICAL LEVEL EXTENT
LOWER LEVEL EXTENT
UPPER LEVEL EXTENT

BASEMENT (PARKING) GBA		
BLOCK 2		
Basement 01	1523 m²	
	TOTAL	1523 m²
BLOCK 3		
Basement 01	5489 m²	
	TOTAL	5489 m²
BLOCK 4		
Basement 01	3357 m²	
Basement 02	3357 m²	
Basement 03	1947 m²	
	TOTAL	8661 m²
BLOCK 5		
Ground	2131 m²	
Basement 01	1603 m²	
Basement 02	1603 m²	
Basement 03	1603 m²	
Basement 04	1603 m²	
	TOTAL	8543 m²
BLOCK 6		
Ground	1909 m²	
Level 02	1670 m²	
	TOTAL	3579 m²
BLOCK 7		
Ground	1931 m²	
Basement 01	3830 m²	
Basement 02	3830 m²	
	TOTAL	9591 m²
BLOCK 8		
Basement 01	6729 m²	
Basement 02	3251 m²	
Basement 03	3251 m²	
	TOTAL	13231 m²
BLOCK 9		
Basement 01	5279 m²	
Basement 02	5279 m²	
Basement 03	5279 m²	
	TOTAL	15837 m²
BLOCK 10		
Ground	3581 m²	
Basement 01	4140 m²	
Basement 02	4140 m²	
	TOTAL	11861 m²

PARKING SCHEDULE	
TENURE	PARKING NUMBER
BLOCK 2	
SOCIAL	19
TOTAL: 19	
BLOCK 3	
AFFORDABLE (INNOVATION)	81
TOTAL: 81	
BLOCK 4	
SOCIAL	20
MARKET	123
COMMUNITY	9
TOTAL: 152	
BLOCK 5	
SOCIAL	7
MARKET	113
TOTAL: 120	
BLOCK 6	
SOCIAL	47
TOTAL: 47	
BLOCK 7	
AFFORDABLE	86
MARKET	155
TOTAL: 241	
BLOCK 8	
AFFORDABLE	30
SOCIAL	49
MARKET	176
TOTAL: 255	
BLOCK 9	
SOCIAL	35
MARKET	195
CHILDCARE	8
RETAIL	60
TOTAL: 298	
BLOCK 10	
SOCIAL	38
MARKET	187
TOTAL: 225	

KEY

- PARK
- PLANTING ON STRUCTURE
- 50% DEEP SOIL
- 100 % DEEP SOIL
- LOT BOUNDARY
- PRECINCT BOUNDARY

NOT FOR CONSTRUCTION

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	19.09.2025	FOR INFORMATION	EW	LL
2	03.10.2025	FOR INFORMATION	JT	LL
3	10.10.2025	FOR INFORMATION	JT	LL
4	11.11.2025	FOR INFORMATION	JT	LL
5	28.11.2025	FOR INFORMATION	YL	JT
6	09.01.2026	FOR INFORMATION	JL	JT
7	22.01.2026	FOR INFORMATION	JL	JT
8	23.01.2026	FOR INFORMATION	JL	JT
9	03.02.2026	FOR INFORMATION	JL	JT
10	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN -
BASEMENT EXTENT

0 10 20 50m
1:1000 @A1

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	Chk.	Job No.
LL	JT	7085
Drawing No.		Revision
PR-AR-09B1		/ A

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Surry Hills NSW 2010

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NON - RESIDENTIAL AREA SCHEDULE

BLOCK 2		
GROUND LEVEL	VPA	435m²
	Community	99m²
	Non-Res / Retail	177m²
LEVEL 02	VPA	435m²
	Non-Res / Retail	177m²
LEVEL 03	VPA	435m²
LEVEL 04	VPA	435m²
	TOTAL	2193m²
BLOCK 3		
GROUND LEVEL	Non-Res / Retail	2552m²
	TOTAL	2552m²
BLOCK 4		
GROUND LEVEL	Non-Res / Retail	770m²
	Community	1736m²
	TOTAL	2506m²
BLOCK 8		
GROUND LEVEL	VPA	432m²
	Non-Res / Retail	1659m²
	Community	350m²
LEVEL 02	VPA	432m²
	TOTAL	2873m²
BLOCK 9		
GROUND LEVEL	Supermarket	2000m²
	Non-Res / Retail	634m²
LEVEL 02	Non-Res / Retail	443m²
	Community (Childcare)	600m²
	TOTAL	3677m²
BLOCK 10		
GROUND LEVEL	Non-Res / Retail	513m²
LEVEL 02	Non-Res / Retail	776m²
LEVEL 03	Non-Res / Retail	215m²
	TOTAL	1504m²

GRAND TOTAL 15,305m²

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	03.10.2025	FOR INFORMATION	JT	LL
2	28.11.2025	FOR INFORMATION	YL	JT
3	09.01.2026	FOR INFORMATION	JL	JT
4	22.01.2026	FOR INFORMATION	JL	JT
5	23.01.2026	FOR INFORMATION	JL	JT
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7	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

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Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN -
LEVEL 01 - UPPER

0 10 20 50m
1:1000 @A1

KEY

- MARKET
- AFFORDABLE
- SOCIAL
- PLANTING ON STRUCTURE
- PARK
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON RESIDENTIAL
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY
- CARPARK ENTRY
- LOADING
- RETAIL PARKING

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	**Chk.**	**Job No.**
LL	JT	7085
Drawing No.		**Revision**
PR-AR-0901-1		/ A

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NON - RESIDENTIAL AREA SCHEDULE

BLOCK 2		
GROUND LEVEL	VPA	435m²
	Community	99m²
	Non-Res / Retail	177m²
LEVEL 02	VPA	435m²
	Non-Res / Retail	177m²
LEVEL 03	VPA	435m²
LEVEL 04	VPA	435m²
	TOTAL	2193m²
BLOCK 3		
GROUND LEVEL	Non-Res / Retail	2552m²
	TOTAL	2552m²
BLOCK 4		
GROUND LEVEL	Non-Res / Retail	770m²
	Community	1736m²
	TOTAL	2506m²
BLOCK 8		
GROUND LEVEL	VPA	432m²
	Non-Res / Retail	1659m²
	Community	350m²
LEVEL 02	VPA	432m²
	TOTAL	2873m²
BLOCK 9		
GROUND LEVEL	Supermarket	2000m²
	Non-Res / Retail	634m²
LEVEL 02	Non-Res / Retail	443m²
	Community (Childcare)	600m²
	TOTAL	3677m²
BLOCK 10		
GROUND LEVEL	Non-Res / Retail	513m²
LEVEL 02	Non-Res / Retail	776m²
LEVEL 03	Non-Res / Retail	215m²
	TOTAL	1504m²

GRAND TOTAL 15,305m²

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	03.10.2025	FOR INFORMATION	JT	LL
2	11.11.2025	FOR INFORMATION	JT	LL
3	28.11.2025	FOR INFORMATION	YL	JT
4	09.01.2026	FOR INFORMATION	JL	JT
5	22.01.2026	FOR INFORMATION	JL	JT
6	23.01.2026	FOR INFORMATION	JL	JT
7	03.02.2026	FOR INFORMATION	JL	JT
8	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

KEY

- MARKET
- AFFORDABLE
- SOCIAL
- PLANTING ON STRUCTURE
- PARK
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON RESIDENTIAL
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY
- CARPARK ENTRY
- LOADING
- RETAIL PARKING

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN - LEVEL 01 - GROUND FLOOR ACTIVATION

0 10 20 50m
1:1000 @A1

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	Chk.	Job No.
LL	JT	7085
Drawing No.		Revision
PR-AR-0901-2		/ A

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NON - RESIDENTIAL AREA SCHEDULE		
BLOCK 2		
GROUND LEVEL	VPA	435m²
	Community	99m²
	Non-Res / Retail	177m²
LEVEL 02	VPA	435m²
	Non-Res / Retail	177m²
LEVEL 03	VPA	435m²
LEVEL 04	VPA	435m²
	TOTAL	2193m²
BLOCK 3		
GROUND LEVEL	Non-Res / Retail	2552m²
	TOTAL	2552m²
BLOCK 4		
GROUND LEVEL	Non-Res / Retail	770m²
	Community	1736m²
	TOTAL	2506m²
BLOCK 8		
GROUND LEVEL	VPA	432m²
	Non-Res / Retail	1659m²
	Community	350m²
LEVEL 02	VPA	432m²
	TOTAL	2873m²
BLOCK 9		
GROUND LEVEL	Supermarket	2000m²
	Non-Res / Retail	634m²
LEVEL 02	Non-Res / Retail	443m²
	Community (Childcare)	600m²
	TOTAL	3677m²
BLOCK 10		
GROUND LEVEL	Non-Res / Retail	513m²
LEVEL 02	Non-Res / Retail	776m²
LEVEL 03	Non-Res / Retail	215m²
	TOTAL	1504m²
GRAND TOTAL		15,305m²

PARKING SCHEDULE	
TENURE	PARKING NUMBER
BLOCK 2	
SOCIAL	19
TOTAL: 19	
BLOCK 3	
AFFORDABLE (INNOVATION)	81
TOTAL: 81	
BLOCK 4	
SOCIAL	20
MARKET	123
COMMUNITY	9
TOTAL: 152	
BLOCK 5	
SOCIAL	7
MARKET	113
TOTAL: 120	
BLOCK 6	
SOCIAL	47
TOTAL: 47	
BLOCK 7	
AFFORDABLE	86
MARKET	155
TOTAL: 241	
BLOCK 8	
AFFORDABLE	30
SOCIAL	49
MARKET	176
TOTAL: 255	
BLOCK 9	
SOCIAL	35
MARKET	195
CHILDCARE	8
RETAIL	60
TOTAL: 298	
BLOCK 10	
SOCIAL	38
MARKET	187
TOTAL: 225	

KEY

- MARKET
- AFFORDABLE
- SOCIAL
- PLANTING ON STRUCTURE
- PARK
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON RESIDENTIAL
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY
- CARPARK ENTRY
- LOADING
- RETAIL PARKING

NOT FOR CONSTRUCTION

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	03.10.2025	FOR INFORMATION	JT	LL
2	11.11.2025	FOR INFORMATION	JT	LL
3	28.11.2025	FOR INFORMATION	YL	JT
4	15.12.2025	FOR INFORMATION	JL	JT
5	09.01.2026	FOR INFORMATION	JL	JT
6	22.01.2026	FOR INFORMATION	JL	JT
7	23.01.2026	FOR INFORMATION	JL	JT
8	03.02.2026	FOR INFORMATION	JL	JT
9	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN - LEVEL 01

0 10 20 50m

1:1000 @A1

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	Chk.	Job No.
LL	JT	7085
Drawing No.		Revision
PR-AR-0901		/ A

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FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	10.10.2025	FOR INFORMATION	JT	LL
2	11.11.2025	FOR INFORMATION	JT	LL
3	28.11.2025	FOR INFORMATION	YL	JT
4	09.01.2026	FOR INFORMATION	JL	JT
5	22.01.2026	FOR INFORMATION	JL	JT
6	23.01.2026	FOR INFORMATION	JL	JT
7	03.02.2026	FOR INFORMATION	JL	JT
8	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

RAGLAN STREET
FUTURE PARK
WELLINGTON STREET
COPE STREET
COOPER STREET
GEORGE STREET
WEST STREET
PITT STREET
MEAD STREET
JOHN STREET
THROUGHLINK
MCEVOY STREET
BOTANY ROAD
WATERLOO PARK
WATERLOO OVAL
MIXED USE
CHILDCARE
2B B1
3A B1
3B B1
2D B1
4B B1
4C B1
5A B1
5A B2
6A B2
4C B2
6A B1
7B B1
7A B1
10B B1
10A B1
9B B1
9A B1
8B B1
8C B1
8D B1
8A B3
8A B1
8A B2

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN -
LEVEL 02 PODIUM LEVEL

0 10 20 50m
1:1000 @A1

KEY

- MARKET
- AFFORDABLE
- SOCIAL
- PARK
- PLANTING ON STRUCTURE
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON - RESIDENTIAL
- EDUCATION
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	**Chk.**	**Job No.**
LL	JT	7085
Drawing No.		**Revision**
PR-AR-0902		/ A

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FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	15.10.2025	FOR INFORMATION	JT	LL
2	11.11.2025	FOR INFORMATION	JT	LL
3	28.11.2025	FOR INFORMATION	YL	JT
4	09.01.2026	FOR INFORMATION	JL	JT
5	22.01.2026	FOR INFORMATION	JL	JT
6	23.01.2026	FOR INFORMATION	JL	JT
7	03.02.2026	FOR INFORMATION	JL	JT
8	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

RAGLAN STREET
FUTURE PARK
WELLINGTON STREET
BOTANY ROAD
COPE STREET
COOPER STREET
GEORGE STREET
WEST STREET
PITT STREET
JOHN STREET
MEAD STREET
MCEVOY STREET
WATERLOO PARK
WATERLOO OVAL
2B B1
2D B1
3A B1
3B B1
4B B1
4C B1
4C B2
5A B1
5A B2
6A B2
6A B1
7B B1
7A B1
9B B1
10B B1
8B B1
8C B1
8D B1
8A B3
8A B1
8A B2
9A B1
10A B1

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN -
LEVEL 06 PODIUM LEVEL

0 10 20 50m
1:1000 @A1

KEY

- MARKET
- AFFORDABLE
- SOCIAL
- PARK
- PLANTING ON STRUCTURE
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON - RESIDENTIAL
- EDUCATION
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	**Chk.**	**Job No.**
LL	JT	7085
Drawing No.		**Revision**
PR-AR-0906		/ A

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Surry Hills NSW 2010

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NOT FOR CONSTRUCTION

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	15.10.2025	FOR INFORMATION	JT	LL
2	11.11.2025	FOR INFORMATION	JT	LL
3	28.11.2025	FOR INFORMATION	YL	JT
4	09.01.2026	FOR INFORMATION	JL	JT
5	22.01.2026	FOR INFORMATION	JL	JT
6	23.01.2026	FOR INFORMATION	JL	JT
7	03.02.2026	FOR INFORMATION	JL	JT
8	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

RAGLAN STREET
FUTURE PARK
WELLINGTON STREET
BOTANY ROAD
COPE STREET
COOPER STREET
GEORGE STREET
WEST STREET
PITT STREET
JOHN STREET
MEAD STREET
MCEVOY STREET
WATERLOO PARK
WATERLOO OVAL
2B B1
2D B1
3A B1
3B B1
4B B1
4C B1
4C B2
5A B1
5A B2
6A B1
6A B2
7B B1
7A B1
9B B1
10B B1
8B B1
8C B1
8D B1
8A B1
8A B3
8A B2
9A B1
10A B1

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN -
LEVEL 10 TOWER LEVEL

0 10 20 50m
1:1000 @A1

KEY

- MARKET
- AFFORDABLE
- SOCIAL
- PARK
- PLANTING ON STRUCTURE
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON - RESIDENTIAL
- EDUCATION
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	Chk.	Job No.
LL	JT	7085
Drawing No.		Revision
PR-AR-0910		/ A

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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	15.10.2025	FOR INFORMATION	JT	LL
2	11.11.2025	FOR INFORMATION	JT	LL
3	28.11.2025	FOR INFORMATION	YL	JT
4	09.01.2026	FOR INFORMATION	JL	JT
5	22.01.2026	FOR INFORMATION	JL	JT
6	23.01.2026	FOR INFORMATION	JL	JT
7	03.02.2026	FOR INFORMATION	JL	JT
8	06.02.2026	FOR INFORMATION	JL	JT
A	23.03.2026	FOR SUBMISSION	JL	JT

RAGLAN STREET
FUTURE PARK
WELLINGTON STREET
COPE STREET
COOPER STREET
GEORGE STREET
WEST STREET
PITT STREET
JOHN STREET
MEAD STREET
MCEVOY STREET
BOTANY ROAD
WATERLOO PARK
WATERLOO OVAL
2B B1
2D B1
3A B1
3B B1
4B B1
4C B1
4C B2
5A B1
5A B2
6A B1
6A B2
7A B1
7B B1
8A B1
8A B2
8A B3
8B B1
8C B1
8D B1
9A B1
9B B1
10A B1
10B B1

KEY
- MARKET
- AFFORDABLE
- SOCIAL
- PARK
- PLANTING ON STRUCTURE
- 50% DEEP SOIL
- 100 % DEEP SOIL
- VPA
- COMMUNITY
- NON - RESIDENTIAL
- EDUCATION
- CARPARK / LOADING
- SERVICES
- ALLOTMENTS OUTSIDE OF PROJECT SCOPE
- LOT BOUNDARY
- PRECINCT BOUNDARY

NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

Stockland

Project

WATERLOO SOUTH

WATERLOO, SYDNEY
GADI COUNTRY

Drawing Name

PRECINCT SITE PLAN -
LEVEL 29 TOWER LEVEL

0 10 20 50m
1:1000 @A1

Date	Scale	Sheet Size
23.03.2026	1 : 1000	A1
Drawn	Chk.	Job No.
LL	JT	7085
Drawing No.		Revision
PR-AR-0929		/ A

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Appendix B Analytical Summary Tables

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)						
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	20	50	100	100	50	20	50
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																				
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	300	17,000	600	80	1,200	30,000												
NEPM 2013 Table 1A(1) HILs Res B Soil	500	150	500	30,000	1,200	120	1,200	60,000												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																			50 | 90 | 150 | 290	280
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space	100		410	180	1,100		110	460												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																300	2,800		180	120
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil														700	1,000	2,500	10,000			
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																				
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																				
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																				
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																				

Field ID	Date	Lab Report Number	Material Type																		
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<2	<0.4	10	25	47	0.1	6.9	89	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<2	<0.4	7.1	18	66	<0.1	6	70	<20	<20	51	<50	51	<20	<50	<100	<100	<100	<20	<50
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	2	<0.4	5	20	100	0.1	<5	93	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	98	69	167	<20	<50	140	<100	140	<20	<50
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	2.5	<0.4	6.9	21	120	0.3	<5	130	<20	<20	120	60	180	<20	<50	160	<100	160	<20	<50
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	7.1	<0.4	12	51	120	0.3	8.3	150	<20	<20	100	87	187	<20	<50	160	<100	160	<20	<50
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	3.4	<0.4	7.9	29	110	0.4	<5	95	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	2.5	<0.4	21	23	100	0.1	17	160	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	4.1	<0.4	7.6	21	150	0.2	<5	100	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	<2	<0.4	42	77	<5	<0.1	170	76	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	2.3	<0.4	5.4	22	110	0.3	<5	95	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)						
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	20	50	100	100	50	20	50
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																				
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	300	17,000	600	80	1,200	30,000												
NEPM 2013 Table 1A(1) HILs Res B Soil	500	150	500	30,000	1,200	120	1,200	60,000												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																			50 | 90 | 150 | 290	280
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space	100		410	180	1,100		110	460												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																300	2,800		180	120
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil														700	1,000	2,500	10,000			
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																				
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																				
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																				
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																				

Field ID	Date	Lab Report Number	Material Type																			
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	270	140	410	<20	<50	370	<100	370	<20	<50
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	3.1	<0.4	11	24	140	0.1	8.7	150	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	4.1	<0.4	5.7	31	140	0.1	<5	110	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	2.3	<0.4	5.4	5.4	29	<0.1	<5	29	<20	<20	560	320	880	<20	<50	740	<100	740	<20	<50
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	3	<0.4	8.5	17	33	<0.1	11	64	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	2.2	<0.4	17	13	33	<0.1	14	51	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	2.1	<0.4	<5	9.7	46	<0.1	<5	69	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	4	<0.4	5	19	150	0.1	<5	140	<20	<20	60	<50	60	<20	<50	<100	<100	<100	<20	<50
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	<20	<20	82	84	166	<20	54	180	<100	234	<20	54
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	7.2	<0.4	7.8	21	21	<0.1	<5	6.2	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	<2	<0.4	13	82	<5	<0.1	37	36	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	<2	<0.4	16	100	11	<0.1	56	67	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							
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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	20	50	100	100	50	20	50
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																				
NEPM 2013 Table 1A(1) HILs Rec C Soil	300	90	300	17,000	600	80	1,200	30,000												
NEPM 2013 Table 1A(1) HILs Res B Soil	500	150	500	30,000	1,200	120	1,200	60,000												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																			50 | 90 | 150 | 290	280
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space	100		410	180	1,100		110	460												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																300	2,800		180	120
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil														700	1,000	2,500	10,000			
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																				
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																				
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																				
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																				

Field ID	Date	Lab Report Number	Material Type																			
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	<2	<0.4	<5	<5	<5	<0.1	<5	11	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<2	<0.4	5.8	52	160	0.1	<5	260	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	6.7	0.8	11	73	620	1.3	13	610	<20	<20	270	180	450	<20	52	400	<100	452	<20	52
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	4	0.5	10	49	350	0.5	10	360	<25	<50	<100	110	110	<25	<50	130	<100	130	<25	<50
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	<4	0.4	8	45	310	0.5	7	300	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	5.9	0.5	9.2	54	420	0.6	9.2	400	<20	<20	77	140	217	<20	<50	180	<100	180	<20	<50
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	2.2	0.5	5	20	280	0.4	5.4	490	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	3.1	<0.4	11	<5	29	<0.1	<5	75	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	2.2	<0.4	110	33	6.2	<0.1	110	68	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	23	300	150	2,000	1,000	1	1,200	2,900	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	<20	<20	250	200	450	<20	<50	420	<100	420	<20	<50
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	10	1.2	22	80	1,000	1	21	1,200	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	5.1	0.6	10	44	500	0.2	5.5	300	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	6.4	0.6	9.8	44	640	0.3	<5	370	<20	<20	64	54	118	<20	<50	100	<100	100	<20	<50
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	14	0.6	9	55	910	0.3	5	430	<25	<50	<100	<100	<50	<25	<50	110	<100	110	<25	<50
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	17	0.8	10	56	980	0.3	<5	460	<20	<20	94	83	177	<20	<50	180	<100	180	<20	<50
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	<20	<20	60	<50	60	<20	<50	<100	<100	<100	<20	<50
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	<2	<0.4	<5	<5	16	<0.1	<5	5.2	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	BTEXN							PAH																							
	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene_VOC	PAHs (Sum of positives)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.2	0.3	0.5	50	0.1	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.5	0.2	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																													
NEPM 2013 Table 1A(1) HILs Rec C Soil														3	3	3													
NEPM 2013 Table 1A(1) HILs Res B Soil														4	4	4													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand	0.7 | 1 | 2 | 3	480				110 | 310	5																			5		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space							170																				170		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	50	85	70			105																							
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space													20																
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																													
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																													
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																													
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																													
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																													

Field ID	Date	Lab Report Number	Material Type																												
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.6	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	0.9	1.6	1.3	0.9	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	1.2	0.6	1.4	1.1	0.8	<0.5	-	<0.5	0.7	1.1	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	1
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	3	2.3	3.5	3.2	3	0.9	-	0.7	1.9	2.3	<0.5	1.9	<0.5	0.8	<0.5	0.9	2.4
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	2.7	2.1	3.1	2.9	2.6	0.9	-	<0.5	1	2.2	<0.5	1.4	<0.5	<0.5	<0.5	0.9	2.3
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	1.3	<0.5	3.5	3.9	5.7	5.4	5.2	2.9	-	1.2	3.5	8.9	<0.5	9.1	1.5	1.6	0.6	11	11
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	2.7	4	6	6	6	2.3	-	4.4	3	2.5	0.8	0.7	<0.5	3.5	<0.5	0.6	1.4
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	3.4	2.7	3.9	3.6	3.4	0.9	-	0.7	1.3	2.9	<0.5	2.9	<0.5	0.6	<0.5	2.1	3.4
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	0.9	1.1	1.9	1.7	1.4	0.9	-	0.8	0.8	0.9	<0.5	1.7	<0.5	0.6	<0.5	0.7	1.7
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	0.6	2.4	2.4	3.8	3.5	3.3	2.3	-	1.9	2.3	2.4	<0.5	4.5	<0.5	1.2	<0.5	2.1	4.5
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.7	0.8	1.6	1.3	1	<0.5	-	0.5	0.7	0.8	<0.5	1.3	<0.5	<0.5	<0.5	0.9	1.6
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	1.2	1	1.8	1.6	1.3	0.6	-	0.8	0.8	1	<0.5	1.7	<0.5	0.5	<0.5	1	2.2
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	1.3	1.5	9.6	13	19	19	19	6.6	-	12	11	9.3	2.5	11	<0.5	7.9	<0.5	2.6	17
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	BTEXN							PAH																				
	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene_VOC	PAHs (Sum of positives)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.2	0.3	0.5	50	0.1	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.5	0.2	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																												
NEPM 2013 Table 1A(1) HILs Rec C Soil														3	3	3												
NEPM 2013 Table 1A(1) HILs Res B Soil														4	4	4												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand	0.7 | 1 | 2 | 3	480				110 | 310	5																		5		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space							170																			170		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	50	85	70			105																						
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space													20															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																												
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																												
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																												
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																												
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																												

Field ID	Date	Lab Report Number	Material Type																											
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	0.6	0.9
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	0.8	1.4	11	12	18	18	18	8	-	7.9	11	9.4	2.1	20	<0.5	6.2	<0.5	4.2	22
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.5
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	BTEXN							PAH																				
	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene_VOC	PAHs (Sum of positives)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.2	0.3	0.5	50	0.1	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.5	0.2	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																												
NEPM 2013 Table 1A(1) HILs Rec C Soil														3	3	3												
NEPM 2013 Table 1A(1) HILs Res B Soil														4	4	4												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand	0.7 | 1 | 2 | 3	480				110 | 310	5																		5		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space							170																			170		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil	50	85	70			105																						
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space													20															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																												
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																												
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																												
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																												
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																												

Field ID	Date	Lab Report Number	Material Type																										
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.6	0.6	1.3	1	0.7	<0.5	-	0.5	0.6	0.6	<0.5	1.2	<0.5	<0.5	<0.5	0.8	1.1
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.7	0.6	1.3	1	0.7	<0.5	-	<0.5	0.5	0.6	<0.5	1.3	<0.5	<0.5	<0.5	0.9	1.2
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	0.9	1.3	2.1	1.9	1.6	0.7	-	<0.5	0.9	1.5	<0.5	2	<0.5	0.6	<0.5	<0.5	2.1
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	<0.2	<0.5	<1	<1	<2	<1	<1	16,000	<0.1	0.2	0.4	1.2	1.6	2.2	2.2	2.2	-	2.1	0.7	-	1.2	0.2	2.7	0.1	0.9	<0.1	1.8	2.7
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	1.5	1.3	2.2	1.9	1.6	<0.5	-	<0.5	1	1.3	<0.5	0.9	<0.5	<0.5	<0.5	0.7	1.2
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<0.5	0.8	0.9	3.5	3.4	5.3	5.3	5.3	2.3	-	2.4	3.5	3.2	0.7	5.7	<0.5	2	<0.5	3.3	6.1
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	0.5	0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	0.7
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	0.8	0.9	1.7	1.5	1.2	0.8	-	0.8	1	1	<0.5	2.2	<0.5	0.5	<0.5	1.2	1.9
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	4.4	1.5	2.9	2.7	2.4	1.3	-	1.2	1.9	3.3	<0.5	4.5	<0.5	1.3	<0.5	3.2	5
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	<0.2	<0.5	<1	<1	<2	<1	<1	19,000	<0.1	0.2	0.2	1.1	2.0	2.7	2.7	2.7	-	2.6	1.2	-	1.2	0.2	3.4	0.1	1.4	<0.1	1.7	3.2
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<0.5	<0.5	<0.5	0.8	1.2	2.1	1.9	1.6	1	-	1.1	1.3	2.7	<0.5	3.6	<0.5	1	<0.5	1.9	3.7
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

														Organochlorine Pesticides															
														4,4-DDE	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Aldrin	Dieldrin	Aldrin + Dieldrin	Chlordane	Chlordane (cis)	Chlordane (trans)	DDT	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Mirex	Toxaphene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.5
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																																						
NEPM 2013 Table 1A(1) HILs Rec C Soil												10	70														400				20			10		10	400	20	30
NEPM 2013 Table 1A(1) HILs Res B Soil												10	90														600				20			10		15	500	20	30
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																																						
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space														180																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																						
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																																						
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																																						
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																																						
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																																						
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																																						
Field ID	**Date**	**Lab Report Number**	**Material Type**																																			
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.64	0.69	7.6	-	-	<0.05	<0.05	<0.05	0.06	0.09	<0.05	<0.05	<0.05	<0.05	2.9	4.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<10
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

										Organochlorine Pesticides																		
				4,4-DDE	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Aldrin	Dieldrin	Aldrin + Dieldrin	Chlordane	Chlordane (cis)	Chlordane (trans)	DDT	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Mirex	Toxaphene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.5
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																												
NEPM 2013 Table 1A(1) HILs Rec C Soil											10	70					400				20			10		10	400	20	30
NEPM 2013 Table 1A(1) HILs Res B Soil											10	90					600				20			10		15	500	20	30
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																													
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space															180														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																													
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																													
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																													
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																													
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																													
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																													
Field ID	**Date**	**Lab Report Number**	**Material Type**																										
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<10
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<10

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

														Organochlorine Pesticides														
	4,4-DDE	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Aldrin	Dieldrin	Aldrin + Dieldrin	Chlordane	Chlordane (cis)	Chlordane (trans)	DDT	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Mirex	Toxaphene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.5
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																										
NEPM 2013 Table 1A(1) HILs Rec C Soil								10	70					400				20			10		10	400	20	30
NEPM 2013 Table 1A(1) HILs Res B Soil								10	90					600				20			10		15	500	20	30
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																										
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space												180														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																										
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																										
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																										
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																										
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																										
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																										

Field ID	Date	Lab Report Number	Material Type																									
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	0.12	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	<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	<0.1	-
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	<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	<0.1	-
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

												Chlorinated Alkanes															Chlorinated Alkenes										Solvents
		1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	Vinyl Chloride	1,1-dichloroethene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Acetone
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																													
NEPM 2013 Table 1A(1) HILs Rec C Soil																													
NEPM 2013 Table 1A(1) HILs Res B Soil																													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																													
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																													
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																													
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																													
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																													
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																													
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																													
Field ID	**Date**	**Lab Report Number**	**Material Type**																												
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

												Chlorinated Alkanes															Chlorinated Alkenes										Solvents
												1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	Vinyl Chloride	1,1-dichloroethene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Acetone
												mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																													
NEPM 2013 Table 1A(1) HILs Rec C Soil																													
NEPM 2013 Table 1A(1) HILs Res B Soil																													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																													
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																													
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																													
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																													
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																													
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																													
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																													
Field ID	**Date**	**Lab Report Number**	**Material Type**																												
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

				Chlorinated Alkanes																Chlorinated Alkenes										Solvents
				1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	Vinyl Chloride	1,1-dichloroethene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Acetone
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																														
NEPM 2013 Table 1A(1) HILs Rec C Soil																														
NEPM 2013 Table 1A(1) HILs Res B Soil																														
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																														
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																														
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																														
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																														
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																														
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																														
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																														
Field ID	**Date**	**Lab Report Number**	**Material Type**																											
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Polychlorinated Biphenyls								PFAS																
	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.005	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	0.01
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																									
NEPM 2013 Table 1A(1) HILs Rec C Soil								1																	
NEPM 2013 Table 1A(1) HILs Res B Soil								1																	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																									
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																									
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																									
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																									
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																									
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access													20												
PFAS NEMP 3.0 (2025) HIL C - Public Open Space													10												

Field ID	Date	Lab Report Number	Material Type																								
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Polychlorinated Biphenyls								PFAS																
	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.005	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	0.01
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																									
NEPM 2013 Table 1A(1) HILs Rec C Soil								1																	
NEPM 2013 Table 1A(1) HILs Res B Soil								1																	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																									
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																									
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																									
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																									
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																									
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access													20												
PFAS NEMP 3.0 (2025) HIL C - Public Open Space													10												

Field ID	Date	Lab Report Number	Material Type																								
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	<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	<0.01
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Polychlorinated Biphenyls								PFAS																
	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.005	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	0.01
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																									
NEPM 2013 Table 1A(1) HILs Rec C Soil								1																	
NEPM 2013 Table 1A(1) HILs Res B Soil								1																	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																									
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																									
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																									
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																									
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																									
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access													20												
PFAS NEMP 3.0 (2025) HIL C - Public Open Space													10												

Field ID	Date	Lab Report Number	Material Type																								
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<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	<0.01
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	<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	<0.01
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	-	-	-	-	-	-	-	-	<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	<0.01
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	<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	<0.01
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.01
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	PFAS																	
	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTSA)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTSA)	1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2 FTSA)	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of WA DWER PFAS (n=10) *	Sum of PFAS	Perfluorononanesulfonic acid ion
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.01	0.05	0.005
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																		
NEPM 2013 Table 1A(1) HILs Rec C Soil																		
NEPM 2013 Table 1A(1) HILs Res B Soil																		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																		
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																		
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access					2		2						2					
PFAS NEMP 3.0 (2025) HIL C - Public Open Space					1		1						1					
Field ID	**Date**	**Lab Report Number**	**Material Type**																	
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	PFAS																	
	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTSA)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTSA)	1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2 FTSA)	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of WA DWER PFAS (n=10) *	Sum of PFAS	Perfluorononanesulfonic acid ion
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.01	0.05	0.005
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																		
NEPM 2013 Table 1A(1) HILs Rec C Soil																		
NEPM 2013 Table 1A(1) HILs Res B Soil																		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																		
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																		
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access					2		2						2					
PFAS NEMP 3.0 (2025) HIL C - Public Open Space					1		1						1					
Field ID	**Date**	**Lab Report Number**	**Material Type**																
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

								PFAS												
		N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTSA)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTSA)	1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2 FTSA)	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of WA DWER PFAS (n=10) *	Sum of PFAS	Perfluorononanesulfonic acid ion
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.01	0.05	0.005
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																			
NEPM 2013 Table 1A(1) HILs Rec C Soil																			
NEPM 2013 Table 1A(1) HILs Res B Soil																			
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																			
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																			
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																			
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																			
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access					2		2							2					
PFAS NEMP 3.0 (2025) HIL C - Public Open Space					1		1							1					

Field ID	Date	Lab Report Number	Material Type																	
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
202503200A_02	20 Mar 2025	376261	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202503200C_02	20 Mar 2025	1200931	Fill - Silty Sand	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	MAH						Miscellaneous Hydrocarbons						Chlorinated Benzenes				Trihalomethanes				Organic Sulfur Compounds	Ionic Balance		
	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Styrene	Total MAH	Bromobenzene	Isopropylbenzene	1,2-dibromoethane	Bromomethane	Dibromomethane	Iodomethane	4-Methyl-2-pentanone	Methyl Ethyl Ketone	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Carbon disulfide	CEC	Conductivity (1:5 aqueous extract)	pH (aqueous extract)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MEQ/100G	US/CM	pH Units
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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																								
NEPM 2013 Table 1A(1) HILs Rec C Soil																								
NEPM 2013 Table 1A(1) HILs Res B Soil																								
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																								
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																								
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																								
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																								
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																								
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																								
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																								

Field ID	Date	Lab Report Number	Material Type																							
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	<10	8.1
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	78	8.6
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	MAH						Miscellaneous Hydrocarbons						Chlorinated Benzenes				Trihalomethanes				Organic Sulfur Compounds	Ionic Balance		
	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Styrene	Total MAH	Bromobenzene	Isopropylbenzene	1,2-dibromoethane	Bromomethane	Dibromomethane	Iodomethane	4-Methyl-2-pentanone	Methyl Ethyl Ketone	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Carbon disulfide	CEC	Conductivity (1:5 aqueous extract)	pH (aqueous extract)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MEQ/100G	US/CM	pH Units
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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																								
NEPM 2013 Table 1A(1) HILs Rec C Soil																								
NEPM 2013 Table 1A(1) HILs Res B Soil																								
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																								
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																								
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																								
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																								
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																								
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																								
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																								

Field ID	Date	Lab Report Number	Material Type																							
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	39	9.5
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

				MAH						Miscellaneous Hydrocarbons						Chlorinated Benzenes				Trihalomethanes				Organic Sulfur Compounds	Ionic Balance		
				1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Styrene	Total MAH	Bromobenzene	Isopropylbenzene	1,2-dibromoethane	Bromomethane	Dibromomethane	Iodomethane	4-Methyl-2-pentanone	Methyl Ethyl Ketone	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Carbon disulfide	CEC	Conductivity (1:5 aqueous extract)	pH (aqueous extract)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MEQ/100G	US/CM	pH Units
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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																											
NEPM 2013 Table 1A(1) HILs Rec C Soil																											
NEPM 2013 Table 1A(1) HILs Res B Soil																											
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CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																											
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																											
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil																											
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil																											
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																											
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																											
Field ID	**Date**	**Lab Report Number**	**Material Type**																								
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	17	5.5
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A - Soil Analytical Summary Table
Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Asbestos - Eurofins										Asbestos - Envirolab				Other			
	Approximate Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in Soil	Mass FA	Mass Asbestos in FA	Mass AF	Mass asbestos in AF	Mass Asbestos in FA & AF	Asbestos FA & AF in Soil	Asbestos ID in Soil	Total Asbestos	Asbestos (ACM >7mm) Estimation	Asbestos in soil (<2mm AF/FA) (%w/w)	Fraction Organic Carbon*	Moisture Content (dried @ 103°C)	Analysed Material	Extraneous Material
	g	g	g	% (w/w)	g	g	g	g	g	% (w/w)	g/kg	g/kg	% (w/w)	% (w/w)	% W/W	%	%	%
EQL															0.01	1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																		
NEPM 2013 Table 1A(1) HILs Rec C Soil																		
NEPM 2013 Table 1A(1) HILs Res B Soil																		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil				0.02						0.001			0.02	0.001				
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil				0.04						0.001			0.04	0.001				
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																		
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																		

Field ID	Date	Lab Report Number	Material Type																	
JBH02_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	558	0	0	0	0	0	0	0	0	0	-	-	-	-	-	10	-	-
JBH02_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	672	0	0	0	0	0	0	0	0	0	-	-	-	-	-	3.7	-	-
JBH03_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	380	0	0	0	0.1812	0.0725	0	0	0.0725	0.0191	-	-	-	-	-	4.2	-	-
JBH03_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	621	0	0	0	0	0	0	0	0	0	-	-	-	-	-	2.8	-	-
JBH03_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-
JBH04_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-
JBH04_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	-
JBH04_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	-
JBH04_0.9-1.0	20 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
JBH05_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	534	0	0	0	0	0	0	0	0	0	-	-	-	-	-	6.7	-	-
JBH05_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	714	0	0	0	0	0	0	0	0	0	-	-	-	-	-	5.8	-	-
JBH05_0.4-0.5	19 Mar 2025	1200931	Fill - Sand	748	0	0	0	0	0	0	0	0	0	-	-	-	-	-	6.5	-	-
JBH05_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	729	0	0	0	0	0	0	0	0	0	-	-	-	-	-	6.7	-	-
JBH05_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	-
JBH06_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	668	0	0	0	0	0	0	0	0	0	-	-	-	-	-	6.1	-	-
JBH06_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	727	0	0	0	0	0	0	0	0	0	-	-	-	-	-	5.6	-	-
JBH06_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	847	0	0	0	0	0	0	0	0	0	-	-	-	-	-	6.5	-	-
JBH06_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	-
JBH06_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	-	-
JBH06_1.9-2.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	-
JBH06_8.4-8.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	4.5	-	-
JBH07_0-0.1	19 Mar 2025	1200931	Fill - Gravelly Silty Sand	410	0	0	0	0	0	0	0	0	0	-	-	-	-	-	4.2	-	-
JBH07_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

				Asbestos - Eurofins										Asbestos - Envirolab				Other			
				Approximate Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in Soil	Mass FA	Mass Asbestos in FA	Mass AF	Mass asbestos in AF	Mass Asbestos in FA & AF	Asbestos FA & AF in Soil	Asbestos ID in Soil	Total Asbestos	Asbestos (ACM >7mm) Estimation	Asbestos in soil (<2mm AF/FA) (%w/w)	Fraction Organic Carbon*	Moisture Content (dried @ 103°C)	Analysed Material	Extraneous Material
				g	g	g	% (w/w)	g	g	g	g	g	% (w/w)	g/kg	g/kg	% (w/w)	% (w/w)	% W/W	%	%	%
EQL																		0.01	1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																					
NEPM 2013 Table 1A(1) HILs Rec C Soil																					
NEPM 2013 Table 1A(1) HILs Res B Soil																					
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																					
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																					
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																					
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil							0.02						0.001			0.02	0.001				
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil							0.04						0.001			0.04	0.001				
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																					
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																					
Field ID	**Date**	**Lab Report Number**	**Material Type**																		
JBH07_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	-	-
JBH07_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	-
JBH07_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5	-	-
JBH09_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	348	0	0	0	0	0	0	0	0	0	-	-	-	-	-	6.9	-	-
JBH09_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	612	0	0	0	0	0	0	0	0	0	-	-	-	-	-	3	-	-
JBH09_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	793	0	0	0	0	0	0	0	0	0	-	-	-	-	-	4.5	-	-
JBH09_0.9-1.0	19 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-
JBH09_1.4-1.5	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	-
JBH11_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	-
JBH11_0.9-1.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	-
JBH12_0-0.1	19 Mar 2025	1200931	Fill - Silty Sand	648	0	0	0	0	0	0	0	0	0	-	-	-	-	-	7.5	-	-
JBH12_0.2-0.3	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	-
JBH12_0.4-0.5	19 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	-	-
JBH12_2.9-3.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-
JBH12_4.9-5.0	19 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	-	-
JBH12_5.9-6.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	100	<0.1
JBH12_6.9-7.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	100	<0.1
JBH12_7.9-8.0	19 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	13	100	<0.1
JBH14_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	796	0	0	0	0	0	0	0	0	0	-	-	-	-	-	5.7	-	-
JBH14_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	727	0	0	0	0	0	0	0	0	0	-	-	-	-	-	7.4	-	-
JBH14_0.4-0.5	20 Mar 2025	1200931	Fill - Sand	697	0	0	0	0	0	0	0	0	0	-	-	-	-	-	8.1	-	-
JBH14_0.9-1.0	20 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	-	-
JBH14_2.9-3.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	100	<0.1
JBH14_4.9-5.0	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	32	100	<0.1
JBH14_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	100	<0.1
JBH14_6.9-7.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	13	82	18
JBH15_0-0.1	20 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-
JBH15_0.2-0.3	20 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	-	-
JBH15_1.4-1.5	20 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	-	-

TABLE A - Soil Analytical Summary Table

Project Number: 68063 Project Name: Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Asbestos - Eurofins										Asbestos - Envirolab				Other			
	Approximate Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in Soil	Mass FA	Mass Asbestos in FA	Mass AF	Mass asbestos in AF	Mass Asbestos in FA & AF	Asbestos FA & AF in Soil	Asbestos ID in Soil	Total Asbestos	Asbestos (ACM >7mm) Estimation	Asbestos in soil (<2mm AF/FA) (%w/w)	Fraction Organic Carbon*	Moisture Content (dried @ 103°C)	Analysed Material	Extraneous Material
	g	g	g	% (w/w)	g	g	g	g	g	% (w/w)	g/kg	g/kg	% (w/w)	% (w/w)	% W/W	%	%	%
EQL															0.01	1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																		
NEPM 2013 Table 1A(1) HILs Rec C Soil																		
NEPM 2013 Table 1A(1) HILs Res B Soil																		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																		
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 7 Rec C Soil HSL for Asbestos in Soil				0.02						0.001			0.02	0.001				
NEPM 2013 Table 7 Res B Soil HSL for Asbestos in Soil				0.04						0.001			0.04	0.001				
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																		
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																		
Field ID	**Date**	**Lab Report Number**	**Material Type**															
JBH17_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
JBH17_0.4-0.5	18 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5	-	-
JBH17_0.9-1.0	18 Mar 2025	1200931	Natural - Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-
JBH18_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-
JBH18_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	-
JBH18_0.9-1.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	-	-
JBH18_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	-
JBH20_0-0.1	18 Mar 2025	1200931	Fill - Sandy Silt	483	0	0	0	0	0	0	0	0	0	-	-	-	-	-	12	-	-
JBH20_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Silt	594	0	0	0	0	0	0	0	0	0	-	-	-	-	-	9	-	-
JBH20_0.4-0.5	18 Mar 2025	1200931	Fill - Sandy Silt	569	0	0	0	0	0	0	0	0	0	-	-	-	-	-	24	-	-
20250318QA-01	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	0	<0.1	<0.01	0.0022	-	-	-	-
20250318QA-01 - [TRIPLICATE]	18 Mar 2025	376261	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20250318QC_01	18 Mar 2025	1200931	Fill - Sandy Silt	465	0	0	0	-	0	0	0	0	0	-	-	-	-	-	7.9	-	-
JBH20_1.4-1.5	18 Mar 2025	1200931	Fill - Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-
JBH20_2.9-3.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-
JBH20_4.9-5.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	100	<0.1
JBH20_5.9-6.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	100	<0.1
JBH20_6.9-7.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	100	<0.1
JBH20_7.9-8.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	27	100	<0.1
JBH20_8.9-9.0	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	26	100	<0.1
JBH21_0-0.1	18 Mar 2025	1200931	Fill - Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	-
JBH21_0.4-0.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-
JBH21_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	100	<0.1
JBH21_5.9-6.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.8	100	<0.1
JBH21_8.2-8.3	18 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	3.5	-	-
JBH25_0-0.1	18 Mar 2025	1200931	Fill - Gravel	405	0	0	0	0	0	0	0	0	0	-	-	-	-	-	7.1	-	-
JBH25_0.1-0.2	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-
JBH25_0.2-0.3	18 Mar 2025	1200931	Fill - Gravelly Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-
JBH25_0.9-1.0	18 Mar 2025	1200931	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.5	-	-
JBH25_1.4-1.5	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-
JBH26_0-0.1	18 Mar 2025	1200931	Fill - Sandy Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-
JBH26_0.2-0.3	18 Mar 2025	1200931	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	-	-
JBH26_1.9-2.0	18 Mar 2025	1200931	Natural - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
JBH32_0-0.1	20 Mar 2025	1200931	Fill - Silty Sand	437	0	0	0	0	0	0	0	0	0	-	-	-	-	-	17	-	-
JBH32_0.2-0.3	20 Mar 2025	1200931	Fill - Silty Sand	750	4.0657	0.4066	0.0542	0.0269	0.0054	0	0	0.0054	0.0007	-	-	-	-	-	12	-	-
20250320QA_02	20 Mar 2025	376261	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	0	<0.1	<0.01	0.0002	-	-	-	-
20250320QC_02	20 Mar 2025	1200931	Fill - Silty Sand	503	0	0	0	0.129	0.0258	0	0	0.0258	0.0051	-	-	-	-	-	10	-	-
JBH32_0.4-0.5	20 Mar 2025	1200931	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-
JBH32_0.9-1.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	100	<0.1
JBH32_1.9-2.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	100	<0.1
JBH32_2.9-3.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	100	<0.1
JBH32_4.9-5.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	100	<0.1
JBH32_5.9-6.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	100	<0.1
JBH32_7.9-8.0	20 Mar 2025	1200931	Natural - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	14	100	<0.1

TABLE B - Historical Soil Analytical Summary Table (DP 2022)
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

					Metals & Metalloids								TPHs (NEPC 1999)							TRHs (NEPC 2013)				
					Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10 - C36 Fraction (sum)	C6 - C10 Fraction	Total Xylenes	C10-C16	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)	F3 (>C16 - C34 Fraction)	F4 (>C34 - C40 Fraction)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					4	0.4	1	1	1	0.1	1	1	25	50	100	100	50	25	1	50	25	50	100	100
NEPM 2013 Table 1A(1) HILs Rec C Soil					300	90	300	17,000	600	80	1,200	30,000												
NEPM 2013 Table 1A(1) HILs Res B Soil					500	150	500	30,000	1,200	120	1,200	60,000												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																					45 | 70 | 110 | 200	110 | 240 | 440		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space					100		410	180	1,100		110	460												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																					180	120		
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				1,000	700	1,000	2,500	10,000
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																								
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																								
Sample Code	**Date**	**Lab Report Number**	**Matrix Type**																					
BH1_0.4 - 0.5	10 Oct 2022	DP2022	Fill - Sand		6	<0.4	9	31	230	0.6	5	300	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH2_0.4 - 0.5	12 Oct 2022	DP2022	Fill - Silty Sand		10	0.5	15	51	260	1.4	8	520	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH4_0.1 - 0.2	11 Oct 2022	DP2022	Fill - Sandy Gravel		<4	<0.4	5	69	84	<0.1	3	110	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH6_0.1 - 0.2	14 Oct 2022	DP2022	Fill - Sand		<4	<0.4	14	43	36	<0.1	7	68	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH9_0.4 - 0.5	13 Oct 2022	DP2022	Fill - Sand		<4	<0.4	9	30	400	0.1	5	430	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH13_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	6	29	140	0.2	4	150	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH13_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		7	1	12	76	690	0.8	7	770	-	-	-	-	-	<25	<1	<50	<25	<50	150	<100
BH13_QC_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		5	0.8	9	100	1,200	0.7	9	890	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	10	100	220	1	5	64	-	-	-	-	-	<25	<1	<50	<25	<50	200	<100
BD06_0	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	6	120	210	0.7	6	75	-	-	-	-	-	<25	<1	<50	<25	<50	170	<100
BH14_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	7	22	100	0.2	3	120	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH15_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		4	0.8	22	56	470	0.5	8	520	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH16_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	0.4	28	36	220	0.3	4	270	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH16_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand		5	1	31	120	440	1.1	6	1,100	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand		<4	<0.4	7	26	180	0.3	4	220	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH17_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	3	10	68	0.1	2	69	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH18_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		6	0.5	93	49	340	0.2	5	240	-	-	-	-	-	<25	<1	<50	<25	<50	120	<100
BH19_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	0.6	11	52	250	0.1	8	210	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH19_0.4 - 0.5	30 Sep 2022	DP2022	Fill- Sand		<4	<0.4	8	11	83	0.2	3	81	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH20_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		6	0.4	8	34	220	0.2	5	230	-	-	-	-	-	<25	<1	<50	<25	<50	130	<100
BH20_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		4	0.6	12	46	750	0.4	5	320	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	9	51	220	0.2	6	230	-	-	-	-	-	<25	<1	<50	<25	<50	120	<100
BH21_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	0.5	9	60	260	0.3	6	240	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		4	<0.4	8	25	380	0.3	4	270	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH22_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sandy Clay		4	<0.4	7	24	350	0.3	4	250	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH23_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		7	0.9	12	69	830	0.4	8	560	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH24_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	9	48	220	0.4	5	200	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH24_0.5-0.6	30 Sep 2022	DP2022	Fill - Sandy Clay		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0-0.15	30 Sep 2022	DP2022	Fill - Sand		<4	0.7	7	53	590	0.2	7	360	<25	<50	270	<100	270	-	<1	-	-	-	-	-
BH25_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	3	15	200	<0.1	3	120	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		4	0.8	9	58	690	0.5	5	390	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH26_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	3	17	110	0.2	1	160	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH26_QC_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	4	23	90	0.3	2	290	-	-	-	-	-	-	-	-	-	-	-	-
BH27_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		7	0.8	11	82	450	0.3	20	420	-	-	-	-	-	<25	<1	<50	<25	<50	100	<100
BH28_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	0.5	8	50	310	0.2	5	220	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH28_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		5	2	15	72	1,100	0.5	6	1,200	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH29_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand		<4	<0.4	6	28	180	<0.1	4	130	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH30_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		4	0.7	7	53	1,300	1.2	3	330	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH30_0.3 - 0.4	30 Sep 2022	DP2022	Fill - Sand		5	<0.4	4	37	1,100	0.9	3	83	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH31_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	0.6	6	35	280	0.2	4	240	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH31_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		5	0.7	6	40	440	0.2	3	460	-	-	-	-	-	-	-	-	-	-	-	-
BH32_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	7	38	150	0.1	5	110	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH32_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	5	19	180	0.2	3	160	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH33_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand		<4	<0.4	8	28	84	<0.1	7	110	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BD01_0	30 Sep 2022	DP2022	Fill - Sand		5	<0.4	13	33	97	<0.1	10	120	-	-	-	-	-	<25	<1	<50	<25	<50	130	<100

TABLE B - Historical Soil Analytical Summary Table (DP 2022)
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

				Metals & Metalloids								TPHs (NEPC 1999)							TRHs (NEPC 2013)				
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10 - C36 Fraction (sum)	C6 - C10 Fraction	Total Xylenes	C10-C16	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)	F3 (>C16 - C34 Fraction)	F4 (>C34 - C40 Fraction)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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				4	0.4	1	1	1	0.1	1	1	25	50	100	100	50	25	1	50	25	50	100	100
NEPM 2013 Table 1A(1) HILs Rec C Soil				300	90	300	17,000	600	80	1,200	30,000												
NEPM 2013 Table 1A(1) HILs Res B Soil				500	150	500	30,000	1,200	120	1,200	60,000												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																				45 | 70 | 110 | 200	110 | 240 | 440		
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space				100		410	180	1,100		110	460												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																				180	120		
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space																							
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			1,000	700	1,000	2,500	10,000
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																							
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																							
BH34_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	2	10	60	390	0.5	21	440	-	-	-	-	-	<25	<1	<50	<25	<50	150	<100
BH34_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	0.5	7	51	170	0.2	5	160	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH35_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	0.7	8	45	460	0.4	5	300	-	-	-	-	-	<25	<1	<50	<25	<50	220	<100
BH36_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	4	15	180	<0.1	2	120	-	-	-	-	-	<25	<1	<50	<25	<50	130	<100
BH36_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Sand	<4	<0.4	2	6	98	<0.1	<1	79	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH37_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<4	<0.4	6	17	84	<0.1	4	80	-	-	-	-	-	-	-	-	-	-	-	-
BH37_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	3	12	230	0.2	2	130	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH38_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<4	<0.4	9	34	96	<0.1	6	82	-	-	-	-	-	<25	<1	<50	<25	<50	100	<100
BH38_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	9	45	120	<0.1	6	83	-	-	-	-	-	-	-	-	-	-	-	-
BH38_0.4-0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38_0.9 - 1	30 Sep 2022	DP2022	Fill -Sand	<4	<0.4	5	52	280	0.6	5	260	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH39_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	8	0.9	100	130	610	0.9	12	390	-	-	-	-	-	<25	<1	<50	<25	<50	210	<100
BH39_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	5	1	33	200	480	0.5	13	910	-	-	-	-	-	-	-	-	-	-	-	-
BH40_0-0.15	30 Sep 2022	DP2022	Fill -Sand	4	<0.4	25	38	150	0.3	8	170	<25	<50	<100	<100	<50	-	<1	-	-	-	-	-
BH40_0.4-0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	5	0.9	140	72	790	1.3	9	330	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH42_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<4	<0.4	8	16	39	0.1	5	72	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH42_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	<4	<0.4	470	37	70	0.4	51	130	-	-	-	-	-	-	-	-	-	-	-	-
BH43_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<4	<0.4	6	22	120	0.4	4	92	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH43_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	7	<0.4	6	31	150	0.4	5	110	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH44_0 - 0.1	30 Sep 2022	DP2022	Fill - Silty Sand	<4	<0.4	10	35	69	<0.1	5	140	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH44_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	8	25	240	0.2	3	160	-	-	-	-	-	<25	<1	<50	<25	<50	330	<100
BH45_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<4	<0.4	12	40	210	0.1	5	170	-	-	-	-	-	-	-	-	-	-	-	-
BH45_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	2	6	560	0.2	<1	37	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH46_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<4	0.5	12	44	430	<0.1	5	300	-	-	-	-	-	<25	<1	<50	<25	<50	170	<100
BD3/20220929_0	30 Sep 2022	DP2022	Fill - Silty Sand	<4	0.5	11	50	790	0.3	5	410	-	-	-	-	-	<25	<1	<50	<25	<50	1,200	240
BH46_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	8	0.7	18	67	650	0.3	10	450	-	-	-	-	-	<25	<1	<50	<25	<50	300	<100
BH47_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<4	0.6	18	54	180	0.1	5	180	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH47_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	22	28	150	0.1	2	220	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH48_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<4	<0.4	5	17	82	<0.1	2	180	-	-	-	-	-	<25	<1	<50	<25	<50	260	120
BH48_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Sand	10	<0.4	5	10	79	<0.1	2	89	-	-	-	-	-	<25	<1	<50	<25	<50	160	<100
BH48_1-1.1	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH49_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<4	<0.4	6	8	41	<0.1	4	30	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH49_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Clay	4	<0.4	6	12	550	<0.1	2	38	-	-	-	-	-	-	-	-	-	-	-	-
BH49_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Clay	<4	<0.4	5	12	100	<0.1	3	59	-	-	-	-	-	-	-	-	-	-	-	-
BH50_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	6	18	240	0.2	2	280	-	-	-	-	-	<25	<1	<50	<25	<50	190	<100
BH50_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	<1	2	50	<0.1	<1	17	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH51_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	7	22	110	0.2	4	120	-	-	-	-	-	<25	<1	<50	<25	<50	160	<100
BH52_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	5	<0.4	13	42	88	<0.1	4	120	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH52_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	7	200	110	<0.1	6	200	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH53_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	11	24	28	<0.1	10	78	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH53_0.4 - 0.5	30 Sep 2022	DP2022	Natural - Sand	<4	<0.4	14	11	26	<0.1	11	47	-	-	-	-	-	-	-	-	-	-	-	-
BH54_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	7	27	110	0.1	4	140	-	-	-	-	-	<25	<1	100	<25	100	450	210
BH54_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	4	7	50	<0.1	3	44	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100
BH55_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	10	26	82	0.2	4	75	-	-	-	-	-	<25	<1	<50	<25	<50	160	<100
BH55_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<4	<0.4	3	12	40	0.2	1	88	-	-	-	-	-	<25	<1	<50	<25	<50	<100	<100

TABLE B - Historical Soil Analytical Summary Table (DP 2022)
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

				BTEXN					PAH					Organochlorine Pesticides										
				Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Benzo(a)pyrene	Benzo(a)pyrene TEQ	Naphthalene	Total PAHs	Aldrin + Dieldrin	Chlordane	DDT	DDE	DDD	Endosulfan (Total)	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	total OC Pesticides
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.2	0.5	1	1	2	0.05	0.5	0.1	50	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil										3			10	70					20	10	10	400	
NEPM 2013 Table 1A(1) HILs Res B Soil										4			10	90					20	10	15	500	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand				0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55					3											
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space											170				180								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil				50	85	70																	
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space									20														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																							
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																							
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																							
Sample Code	**Date**	**Lab Report Number**	**Matrix Type**																				
BH1_0.4 - 0.5	10 Oct 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,500	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH2_0.4 - 0.5	12 Oct 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	2,400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH4_0.1 - 0.2	11 Oct 2022	DP2022	Fill - Sandy Gravel	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH6_0.1 - 0.2	14 Oct 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH9_0.4 - 0.5	13 Oct 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.4	<0.5	<0.1	4,500	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH13_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.4	0.5	<0.1	4,400	-	-	-	-	-	-	-	-	-	-	-
BH13_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.2	1.8	<0.1	11,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH13_QC_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	1.1	1.7	<0.1	11,000	-	-	-	-	-	-	-	-	-	-	-
BH14_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	3.6	4.9	0.1	23,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BD06_0	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	3.2	4.5	0.1	21,000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	-
BH14_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,600	-	-	-	-	-	-	-	-	-	-	-
BH15_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.1	1.7	<0.1	11,000	<0.1	<0.1	<0.1	<0.1	< 0..1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH16_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.4	0.5	<0.1	4,100	<0.1	<0.1	<0.1	<0.1	< 0..1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH16_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH17_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.56	0.8	<0.1	6,300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH17_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.1	<0.5	<0.1	888	-	-	-	-	-	-	-	-	-	-	-
BH18_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.8	2.6	<0.1	15,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH19_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	< 00..5	<0.1	1,900	-	-	-	-	-	-	-	-	-	-	-
BH19_0.4 - 0.5	30 Sep 2022	DP2022	Fill- Sand	<0.2	<0.5	<1	-	-	<0.05	<0.5	<0.1	<5.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH20_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.4	2..1	<0.1	15,000	0.1	<0.1	< 00..1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH20_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	< 00..1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH21_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.6	2.2	0.1	13,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH21_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.33	< 0..55	<0.1	3,100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH22_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sandy Clay	<0.2	<0.5	<1	-	-	0.544	0.7	<0.1	5,600	-	-	-	-	-	-	-	-	-	-	-
BH23_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.22	1.7	<0.1	12,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH24_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.664	0.9	<0.1	6,400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH24_0.5-0.6	30 Sep 2022	DP2022	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0-0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	<1	<2	2.9	-	-	38,000	-	-	-	-	-	<0.1	-	-	-	-	0.3
BH25_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH26_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.72	1.1	<0.1	7,400	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.1	<0.5	<0.1	640	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH26_QC_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.4	0.6	<0.1	4,100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH28_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.5	0.6	<0.1	4,300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH28_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1	1.5	<0.1	9,800	-	-	-	-	-	-	-	-	-	-	-
BH29_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH30_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.98	1.4	0.1	10,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH30_0.3 - 0.4	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,800	-	-	-	-	-	-	-	-	-	-	-
BH31_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH31_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH32_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	2,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH32_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.1	<0.5	<0.1	1,200	-	-	-	-	-	-	-	-	-	-	-
BH33_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,400	<0.1	<0.1	<0.1	<0.1	<0.1	< 0..1	<0.1	<0.1	<0.1	<0.1	-
BD01_0	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	2,400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	-

TABLE B - Historical Soil Analytical Summary Table (DP 2022)
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

				BTEXN					PAH					Organochlorine Pesticides										
				Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Benzo(a)pyrene	Benzo(a)pyrene TEQ	Naphthalene	Total PAHs	Aldrin + Dieldrin	Chlordane	DDT	DDE	DDD	Endosulfan (Total)	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	total OC Pesticides
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.2	0.5	1	1	2	0.05	0.5	0.1	50	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Rec C Soil										3			10	70					20	10	10	400	
NEPM 2013 Table 1A(1) HILs Res B Soil										4			10	90					20	10	15	500	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand				0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55					3											
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space											170				180								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil				50	85	70																	
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space									20														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																							
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access																							
PFAS NEMP 3.0 (2025) HIL C - Public Open Space																							
BH34_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.5	2.1	<0.1	16,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH34_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	0.79	1	<0.1	8,300	-	-	-	-	-	-	-	-	-	-	-
BH35_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.73	1	<0.1	77,700	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH35_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	4.5	6.5	1.2	770,000	-	-	-	-	-	-	-	-	-	-	-
BH36_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,900	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH36_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,400	-	-	-	-	-	-	-	-	-	-	-
BH37_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH37_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,700	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH38_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,600	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH38_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38_0.4-0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38_0.9 - 1	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.886	1.2	<0.1	7,700	-	-	-	-	-	-	-	-	-	-	-
BH39_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.52	0.7	<0.1	5,500	<0.1	<0.1	<0.1	< 0..1	< 0..1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH39_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH40_0-0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	<1	<2	0.09	-	-	520	-	-	-	-	-	<0.1	-	-	-	-	<0.1
BH40_0.4-0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.4	0.5	<0.1	3,400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH42_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,500	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH42_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH43_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.4	<0.5	<0.1	3,800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH43_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	3,000	-	-	-	-	-	-	-	-	-	-	-
BH44_0 - 0.1	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,600	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH44_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	5.5	8	0.7	89,000	-	-	-	-	-	-	-	-	-	-	-
BH45_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH45_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	3,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH46_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	2.7	3.9	0.2	30,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BD3/20220929_0	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	34	49	0.9	400,000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	-
BH46_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	5.4	7.9	0.2	68,000	-	-	-	-	-	-	-	-	-	-	-
BH47_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.5	0.7	<0.1	5,100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH47_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.59	0.8	<0.1	5,600	-	-	-	-	-	-	-	-	-	-	-
BH48_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.4	<0.5	<0.1	3,400	<0.1	<0.1	<0.1	<0.1	<0.1	< 0..1	<0.1	<0.1	<0.1	<0.1	-
BH48_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	1.7	2.5	<0.1	17,000	-	-	-	-	-	-	-	-	-	-	-
BH48_1-1.1	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH49_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH49_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Clay	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH49_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Clay	-	-	-	-	-	0.06	<0.5	<0.1	300	-	-	-	-	-	-	-	-	-	-	-
BH50_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.64	0.9	<0.1	12,000	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH50_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	<0.05	<0.5	<0.1	<50	-	-	-	-	-	-	-	-	-	-	-
BH51_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.2	1.7	<0.1	14,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH52_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.2	<0.5	<0.1	1,200	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH52_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.09	<0.5	<0.1	300	-	-	-	-	-	-	-	-	-	-	-
BH53_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.066	<0.5	<0.1	300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH53_0.4 - 0.5	30 Sep 2022	DP2022	Natural - Sand	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH54_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.44	0.5	<0.1	3,600	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH54_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.4	0.6	<0.1	4,000	-	-	-	-	-	-	-	-	-	-	-
BH55_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	0.3	<0.5	<0.1	2,800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
BH55_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.2	<0.5	<1	-	-	1.8	2.6	< 0..1	15,000	-	-	-	-	-	-	-	-	-	-	-

TABLE B - Historical Soil Analytical Summary Table (DP 2022)
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

				Organophosphorus Pesticides	Polychlorinated Biphenyls	Phenols	PFAS					Asbestos		Other	
				Chlorpyrifos	Total PCB	Phenol	Perfluorooctanoic acid (PFOA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Per- and Polyfluoroalkyl Substances (PFAS)	Total Asbestos	ACM<7mm Estimation %(w/w)*	DDT + DDD + DDE - Calc	FA and AF Estimation % (w/w)*
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	g/kg	% (w/w)	mg/kg	%
EQL				0.1	0.1	5	0.0001	0.0001	0.0001	0.0001	0.0001			0.1	
NEPM 2013 Table 1A(1) HILs Rec C Soil				250		40,000									
NEPM 2013 Table 1A(1) HILs Res B Soil				340		45,000									
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand															
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil															
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil															
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access							20	2	2	2					
PFAS NEMP 3.0 (2025) HIL C - Public Open Space							10	1	1	1					
Sample Code	**Date**	**Lab Report Number**	**Matrix Type**												
BH1_0.4 - 0.5	10 Oct 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH2_0.4 - 0.5	12 Oct 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH4_0.1 - 0.2	11 Oct 2022	DP2022	Fill - Sandy Gravel	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH6_0.1 - 0.2	14 Oct 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH9_0.4 - 0.5	13 Oct 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH13_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	<0.0001	<0.0001	0.0045	0.0045	0.0045	-	-	<0.1	-
BH13_QC_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BD06_0	30 Sep 2022	DP2022	Fill - Sand	NT	NT	NT	-	-	-	-	-	-	-	NT	-
BH14_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH16_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH16_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH17_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH17_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	<0.0001	<0.0001	0.0004	0.0004	0.0004	-	-	-	-
BH18_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH19_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.4 - 0.5	30 Sep 2022	DP2022	Fill- Sand	<0.1	<0.1	<5	0.0001	<0.0001	0.0004	0.0004	0.0005	-	-	<0.1	-
BH20_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	0.0003	<0.0001	0.0039	0.0039	0.0048	-	-	<0.1	-
BH20_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH21_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH21_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	0.0002	<0.0001	0.0014	0.0014	0.0016	-	-	<0.1	-
BH22_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH24_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH24_0.5-0.6	30 Sep 2022	DP2022	Fill - Sandy Clay	-	-	-	0.0002	<0.0001	0.0012	0.012	0.0015	-	-	-	-
BH25_0-0.15	30 Sep 2022	DP2022	Fill - Sand	-	<0.1	<5	-	-	-	-	-	-	-	-	-
BH25_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH26_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	<0.0001	<0.0001	0.0004	0.0004	0.0004	-	-	<0.1	-
BH26_QC_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH27_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	0.0002	<0.0001	0.0014	0.0014	0.0018	-	-	<0.1	-
BH28_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	<0.1	NT	<0.1	NT
BH28_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	0.1189	0.0866	-	NT
BH29_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH30_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	<0.1	0.0285	<0.1	NT
BH30_0.3 - 0.4	30 Sep 2022	DP2022	Fill - Sand	-	-	-	0.0002	<0.0001	0.0007	0.0007	0.0009	<0.1	NT	-	NT
BH31_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH31_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH32_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH32_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	0.0002	<0.0001	0.0012	0.0012	0.0017	-	-	-	-
BH33_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BD01_0	30 Sep 2022	DP2022	Fill - Sand	NT	NT	NT	-	-	-	-	-	-	-	NT	-

TABLE B - Historical Soil Analytical Summary Table (DP 2022)
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

				Organophosphorus Pesticides	Polychlorinated Biphenyls	Phenols	PFAS					Asbestos		Other	
				Chlorpyrifos	Total PCB	Phenol	Perfluorooctanoic acid (PFOA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Per- and Polyfluoroalkyl Substances (PFAS)	Total Asbestos	ACM<7mm Estimation %(w/w)*	DDT + DDD + DDE - Calc	FA and AF Estimation % (w/w)*
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	g/kg	% (w/w)	mg/kg	%
EQL				0.1	0.1	5	0.0001	0.0001	0.0001	0.0001	0.0001			0.1	
NEPM 2013 Table 1A(1) HILs Rec C Soil				250		40,000									
NEPM 2013 Table 1A(1) HILs Res B Soil				340		45,000									
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand															
NEPM 2013 Table 1B(1-5) Site Specifc EIL - Urban Residential and Public Open Space															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil															
CRC Care B(a)P Guidance ESL for Urban Res/Public Open Space															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil															
PFAS NEMP 3.0 (2025) HIL B - Residential with Minimal Soil Access							20	2	2	2					
PFAS NEMP 3.0 (2025) HIL C - Public Open Space							10	1	1	1					
BH34_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<55	0.0003	<0.0001	0.0016	0.0016	0.0025	-	-	<0.1	-
BH34_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH35_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	0.0007	<0.0001	0.0028	0.0028	0.0053	-	-	<0.1	-
BH35_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH36_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH36_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Sand	-	-	-	<0.0001	<0.0001	0.0005	0.0005	0.0005	-	-	-	-
BH37_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH37_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH38_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH38_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH38_0.4-0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	<0.0001	<0.0001	0.0005	0.0005	0.0005	-	-	-	-
BH38_0.9 - 1	30 Sep 2022	DP2022	Fill -Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH39_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH39_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH40_0-0.15	30 Sep 2022	DP2022	Fill -Sand	-	<0.1	<5	-	-	-	-	-	-	-	-	-
BH40_0.4-0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	0.0002	<0.0001	0.001	0.001	0.0013	-	-	-	-
BH41_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.1	<0.1	<5	0.0004	<0.0001	0.0053	0.0053	0.0066	-	-	<0.1	-
BH42_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.1	<0.1	<5	0.0004	<0.0001	0.0027	0.0027	0.0034	-	-	<0.1	-
BH42_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH43_0 - 0.15	30 Sep 2022	DP2022	Fill -Sand	<0.1	0.2	<5	-	-	-	-	-	-	-	<0.1	-
BH43_0.4 - 0.5	30 Sep 2022	DP2022	Fill -Sand	-	-	-	0.0001	<0.0001	0.0007	0.0007	0.0008	-	-	-	-
BH44_0 - 0.1	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	0.0002	<0.0001	0.0018	0.0018	0.0021	-	-	<0.1	-
BH44_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH45_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH45_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH46_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	0.0002	<0.0001	0.0021	0.0021	0.0025	-	-	<0.1	-
BD3/20220929_0	30 Sep 2022	DP2022	Fill - Silty Sand	NT	NT	NT	-	-	-	-	-	-	-	NT	-
BH46_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH47_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH47_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH48_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH48_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH48_1-1.1	30 Sep 2022	DP2022	Fill - Sand	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
BH49_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH49_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Silty Clay	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH49_QC_0 - 0.15	30 Sep 2022	DP2022	Fill - Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-
BH50_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	<0.0001	<0.0001	0.0014	0.0014	0.0014	-	-	0.2	-
BH50_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	-	-	-	-	-	-	-	-	-
BH51_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH52_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH52_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	<0.0001	<0.0001	0.0008	0.0008	0.0008	-	-	-	-
BH53_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH53_0.4 - 0.5	30 Sep 2022	DP2022	Natural - Sand	<0.1	-	-	-	-	-	-	-	-	-	<0.1	-
BH54_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH54_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	<0.0001	<0.0001	0.0004	0.0004	0.0004	-	-	-	-
BH55_0 - 0.15	30 Sep 2022	DP2022	Fill - Sand	<0.1	<0.1	<5	-	-	-	-	-	-	-	<0.1	-
BH55_0.4 - 0.5	30 Sep 2022	DP2022	Fill - Sand	-	-	-	<0.0001	<0.0001	0.0005	0.0005	0.0005	-	-	-	-

TABLE C1 - SPOCAS and SCr Analytical Summary Table
Project Number: 68063 Project Name: Waterloo Redevelopment Precinct , Stockland

				Acid Sulfate Soils													
				KCl Extractable Sulfur	Liming Rate	Net Acidity (acidity units)	Net Acidity (sulfur units)	Peroxide Oxidisable Sulfur	pH (KCl)	Sulfur in Peroxide	Titratable Actual Acidity	Titratable Peroxide Acidity	Titratable Sulfidic Acidity	pH (Ox)	Chromium Reducible Sulfur	Chromium Reducible Sulphur	HCl Extractable Sulfur Correction Factor
				%	kg CaCO3/t	mol H+/t	%S	%	pH Unit	%	mol H+/t	mole H+/t	mole H+/t	pH Unit	%S	mol H+/t	FACTOR
EQL				0.005	1	10	0.02	0.005	0.1	0.005	2	2	2	0.1	0.005	3	1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)								0.03				18	18		0.03		
Field ID	**Date**	**Lab Report Number**	**Matrix Type**														
JBH12_5.9-6.0	19 Mar 2025	1200931	Sandy Clay	<0.005	4	54	0.09	0.01	4.5	0.01	40	20	<2	4.9	-	-	2
JBH12_5.9-6.0	19 Mar 2025	1207450	Sandy Clay	0.010	-	-	-	-	4.4	-	49	-	-	-	<0.005	<3	2.0
JBH12_6.9-7.0	19 Mar 2025	1200931	Sandy Clay	0.01	3	36	0.06	<0.005	4.7	0.01	36	9	<2	5.4	-	-	2
JBH12_7.9-8.0	19 Mar 2025	1200931	Sandy Clay	<0.005	4	50	0.08	<0.005	4.6	<0.005	50	32	<2	5	-	-	2
JBH12_7.9-8.0	19 Mar 2025	1207450	Sandy Clay	<0.005	-	-	-	-	4.5	-	49	-	-	-	<0.005	<3	2.0
JBH14_3.9-4.0	19 Mar 2025	1207450	Clayey Sand	-	-	-	-	-	4.7	-	27	-	-	-	<0.005	<3	2.0
JBH14_3.9-4.0	20 Mar 2025	1200931	Clayey Sand	0.02	3	43	0.07	0.005	4.6	0.02	40	22	<2	5	-	-	2
JBH14_4.9-5.0	20 Mar 2025	1200931	Clayey Sand	0.01	2	32	0.05	<0.005	4.7	0.02	32	15	<2	5.1	-	-	2
JBH14_5.9-6.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	4.5	-	45	-	-	-	<0.005	<3	2.0
JBH14_5.9-6.0	20 Mar 2025	1200931	Sandy Clay	0.01	3	43	0.07	<0.005	4.7	0.01	43	28	<2	5.3	-	-	2
JBH14_6.9-7.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Sandy Clay	<0.005	3	39	0.06	0.008	4.6	0.01	34	35	<2	4.5	-	-	2
JBH20_4.9-5.0	18 Mar 2025	1200931	Sandy Clay	0.02	5	68	0.11	<0.005	4.4	0.02	65	52	<2	4.7	-	-	2
JBH20_4.9-5.0	19 Mar 2025	1207450	Sandy Clay	0.020	-	-	-	-	4.4	-	63	-	-	-	<0.005	<3	2.0
JBH20_5.9-6.0	18 Mar 2025	1200931	Sandy Clay	0.01	5	66	0.11	<0.005	4.5	0.01	66	51	<2	5	-	-	2
JBH20_6.9-7.0	18 Mar 2025	1200931	Sandy Clay	0.01	6	74	0.12	0.005	4.5	0.02	71	60	<2	5.1	-	-	2
JBH20_6.9-7.0	19 Mar 2025	1207450	Sandy Clay	0.010	-	-	-	-	4.4	-	70	-	-	-	<0.005	<3	2.0
JBH20_7.9-8.0	18 Mar 2025	1200931	Sandy Clay	0.01	3	46	0.07	<0.005	4.6	0.01	46	33	<2	5.3	-	-	2
JBH20_8.9-9.0	18 Mar 2025	1200931	Sandy Clay	0.01	4	56	0.09	<0.005	4.5	0.01	56	42	<2	5	-	-	2
JBH20_8.9-9.0	19 Mar 2025	1207450	Sandy Clay	0.010	-	-	-	-	4.4	-	61	-	-	-	<0.005	<3	2.0
JBH21_4.9-5.0	18 Mar 2025	1200931	Sand	<0.005	1	<10	0.02	<0.005	5.5	<0.005	9	<2	<2	6	-	-	2
JBH21_5.9-6.0	18 Mar 2025	1200931	Sand	<0.005	1	<10	<0.02	<0.005	5.6	<0.005	9	<2	<2	5.9	-	-	2
JBH32_1.4-1.5	19 Mar 2025	1207450	Sandy Clay	0.010	-	-	-	-	4.3	-	66	-	-	-	0.007	4.5	2.0
JBH32_1.4-1.5	20 Mar 2025	1200931	Sandy Clay	0.02	6	86	0.14	0.005	4.4	0.02	79	72	<2	4.5	-	-	2
JBH32_1.9-2.0	19 Mar 2025	1207450	Sandy Clay	0.020	-	-	-	-	4.3	-	67	-	-	-	<0.005	<3	2.0
JBH32_1.9-2.0	20 Mar 2025	1200931	Sandy Clay	0.02	6	78	0.12	0.007	4.3	0.03	66	57	<2	4.6	-	-	2
JBH32_2.9-3.0	20 Mar 2025	1200931	Sandy Clay	0.01	4	54	0.09	0.006	4.5	0.02	46	35	<2	4.7	-	-	2
JBH32_4.9-5.0	19 Mar 2025	1207450	Sandy Clay	0.010	-	-	-	-	4.3	-	76	-	-	-	<0.005	<3	2.0
JBH32_4.9-5.0	20 Mar 2025	1200931	Sandy Clay	0.01	6	84	0.13	<0.005	4.4	0.01	82	70	<2	5	-	-	2
JBH32_5.9-6.0	20 Mar 2025	1200931	Sandy Clay	0.01	5	64	0.1	<0.005	4.5	0.02	61	52	<2	5	-	-	2
JBH32_7.9-8.0	20 Mar 2025	1200931	Sandy Clay	<0.005	1	15	0.02	<0.005	5.2	<0.005	15	<2	<2	6	-	-	2

TABLE C1 - SPOCAS and SCr Analytical Summary Table
Project Number: 68063 Project Name: Waterloo Redevelopment Precinct , Stockland

				Acid Sulfate Soils - Other																	
				Acid Reacted Calcium	Acid Reacted Magnesium	Acidity - Acid Reacted Calcium	Acidity - Acid Reacted Magnesium	Acidity - Peroxide Oxidisable Sulfur	ANC Fineness Factor	Calcium in Peroxide	HCl Extractable Sulfur	KCl Extractable Calcium	KCl Extractable Magnesium	Magnesium in Peroxide	Net Acid soluble sulfur	Net Acid Soluble Sulfur (in acid units)	Net Acid Soluble Sulfur (in sulfur units)	sulfidic - Acid Reacted Magnesium	sulfidic - Titratable Actual Acidity	sulfidic - Titratable Peroxide Acidity
				%	% Mg	mol H+/t	mol H+/t	mol H+/t	FACTOR	%	%S	%	%	%	%S	mol H+/t	%S	%S	%S	%S
EQL				0.005	0.005	0.005	0.005	2		0.005	0.005	0.005	0.005	0.005	0.005	2	0.005	0.005	0.003	0.02
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)																				
Field ID	**Date**	**Lab Report Number**	**Matrix Type**																	
JBH12_5.9-6.0	19 Mar 2025	1200931	Sandy Clay	0.012	<0.005	6.1	<0.005	6.1	1.5	0.03	0.01	0.02	0.02	0.02	-	8.1	0.013	<0.005	0.06	0.03
JBH12_5.9-6.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.010	-	-	-	<0.005	<2	<0.005	-	0.080	-
JBH12_6.9-7.0	19 Mar 2025	1200931	Sandy Clay	<0.005	0.02	<0.005	16	<2	1.5	0.02	-	0.03	0.01	0.03	-	-	-	0.026	0.06	<0.02
JBH12_7.9-8.0	19 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.01	-	0.01	0.01	0.02	-	-	-	<0.005	0.08	0.05
JBH12_7.9-8.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	<0.005	-	-	-	0.005	2.2	<0.005	-	0.080	-
JBH14_3.9-4.0	19 Mar 2025	1207450	Clayey Sand	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	0.040	-
JBH14_3.9-4.0	20 Mar 2025	1200931	Clayey Sand	0.007	<0.005	3.4	<0.005	3.3	1.5	0.07	-	0.06	0.02	0.02	-	-	-	<0.005	0.06	0.04
JBH14_4.9-5.0	20 Mar 2025	1200931	Clayey Sand	0.006	<0.005	3.2	<0.005	<2	1.5	0.07	-	0.06	0.01	0.02	-	-	-	<0.005	0.05	0.02
JBH14_5.9-6.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	0.070	-
JBH14_5.9-6.0	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.02	-	0.02	0.02	0.03	-	-	-	<0.005	0.07	0.04
JBH14_6.9-7.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	5.1	1.5	0.03	-	0.02	0.03	0.03	-	-	-	<0.005	0.06	0.06
JBH20_4.9-5.0	18 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.04	0.02	0.04	0.01	0.01	-	2.9	0.005	<0.005	0.1	0.08
JBH20_4.9-5.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.020	-	-	-	0.007	3.2	0.005	-	0.10	-
JBH20_5.9-6.0	18 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.03	-	0.03	0.02	0.02	-	-	-	<0.005	0.11	0.08
JBH20_6.9-7.0	18 Mar 2025	1200931	Sandy Clay	<0.005	0.009	<0.005	7.2	3.4	1.5	0.02	-	0.01	0.03	0.04	-	-	-	0.012	0.11	0.1
JBH20_6.9-7.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.010	-	-	-	0.006	3.0	0.005	-	0.11	-
JBH20_7.9-8.0	18 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.01	-	0.01	0.04	0.05	-	-	-	<0.005	0.07	0.05
JBH20_8.9-9.0	18 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.03	-	0.03	0.03	0.04	-	-	-	<0.005	0.09	0.07
JBH20_8.9-9.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.010	-	-	-	0.005	2.3	<0.005	-	0.10	-
JBH21_4.9-5.0	18 Mar 2025	1200931	Sand	<0.005	0.009	<0.005	7.3	<2	1.5	0.01	-	0.01	<0.005	0.01	-	-	-	0.012	0.02	<0.02
JBH21_5.9-6.0	18 Mar 2025	1200931	Sand	<0.005	0.006	<0.005	5.2	<2	1.5	0.02	-	0.02	<0.005	0.01	-	-	-	0.008	0.01	<0.02
JBH32_1.4-1.5	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.020	-	-	-	0.008	3.9	0.006	-	0.11	-
JBH32_1.4-1.5	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	3.3	1.5	0.04	0.02	0.04	0.01	0.01	-	3.5	0.006	<0.005	0.13	0.12
JBH32_1.9-2.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.020	-	-	-	0.007	3.4	0.006	-	0.11	-
JBH32_1.9-2.0	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	4.6	1.5	0.02	0.03	0.02	0.01	0.01	-	7	0.011	<0.005	0.11	0.09
JBH32_2.9-3.0	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	4	1.5	0.03	0.02	0.02	0.01	0.02	-	3.4	0.005	<0.005	0.07	0.06
JBH32_4.9-5.0	19 Mar 2025	1207450	Sandy Clay	-	-	-	-	-	1.5	-	0.010	-	-	-	<0.005	<2	<0.005	-	0.12	-
JBH32_4.9-5.0	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.01	0.01	0.01	0.01	0.02	-	<2	<0.005	<0.005	0.13	0.11
JBH32_5.9-6.0	20 Mar 2025	1200931	Sandy Clay	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.01	0.02	0.01	0.02	0.02	-	3.1	0.005	<0.005	0.1	0.08
JBH32_7.9-8.0	20 Mar 2025	1200931	Sandy Clay	0.005	0.009	2.7	7.4	<2	1.5	0.03	-	0.03	0.05	0.06	-	-	-	0.012	0.02	<0.02

TABLE C1 - SPOCAS and SCr Analytical Summary Table

Project Number: 68063 Project Name: Waterloo Redevelopment Precinct , Stockland

				NA				Particle Size		Other		
				CRS Suite - Liming Rate - NASSG (Including ANC)	CRS Suite - Net Acidity - NASSG (Including ANC)	Fraction Organic Carbon*	s-CRS Suite - Net Acidity - NASSG (Including ANC)	<2mm Fraction	>2mm Fraction	Moisture Content (dried @ 103°C)	Analysed Material	Extraneous Material
				KG CACO3/T	MOL H+/T	% W/W	% S	%	%	%	%	%
EQL				1	10	0.01	0.02	0.005	0.005	1	0.1	0.1
ASSMAC (1998) Action Criteria (Coarse >1000 tonnes disturbed)												
Field ID	**Date**	**Lab Report Number**	**Matrix Type**									
JBH12_5.9-6.0	19 Mar 2025	1200931	Sandy Clay	-	-	-	-	37	<0.005	8.5	100	<0.1
JBH12_5.9-6.0	19 Mar 2025	1207450	Sandy Clay	3.8	50	-	0.08	55	5.5	8.0	91	9.2
JBH12_6.9-7.0	19 Mar 2025	1200931	Sandy Clay	-	-	-	-	25	<0.005	14	100	<0.1
JBH12_7.9-8.0	19 Mar 2025	1200931	Sandy Clay	-	-	0.01	-	29	<0.005	13	100	<0.1
JBH12_7.9-8.0	19 Mar 2025	1207450	Sandy Clay	3.8	51	-	0.08	63	<0.005	12	100	<0.1
JBH14_3.9-4.0	19 Mar 2025	1207450	Clayey Sand	2.0	27	-	0.04	73	7.5	14	91	9.4
JBH14_3.9-4.0	20 Mar 2025	1200931	Clayey Sand	-	-	-	-	33	<0.005	13	100	<0.1
JBH14_4.9-5.0	20 Mar 2025	1200931	Clayey Sand	-	-	0.01	-	24	<0.005	32	100	<0.1
JBH14_5.9-6.0	19 Mar 2025	1207450	Sandy Clay	3.4	45	-	0.07	48	<0.005	22	100	<0.1
JBH14_5.9-6.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	17	<0.005	25	100	<0.1
JBH14_6.9-7.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	-	-	14	-	-
JBH14_7.9-8.0	20 Mar 2025	1200931	Sandy Clay	-	-	0.01	-	150	32	13	82	18
JBH20_4.9-5.0	18 Mar 2025	1200931	Sandy Clay	-	-	-	-	20	<0.005	18	100	<0.1
JBH20_4.9-5.0	19 Mar 2025	1207450	Sandy Clay	4.9	66	-	0.11	52	<0.005	22	100	<0.1
JBH20_5.9-6.0	18 Mar 2025	1200931	Sandy Clay	-	-	-	-	15	<0.005	25	100	<0.1
JBH20_6.9-7.0	18 Mar 2025	1200931	Sandy Clay	-	-	-	-	15	<0.005	30	100	<0.1
JBH20_6.9-7.0	19 Mar 2025	1207450	Sandy Clay	5.5	73	-	0.12	39	<0.005	33	100	<0.1
JBH20_7.9-8.0	18 Mar 2025	1200931	Sandy Clay	-	-	<0.01	-	22	<0.005	27	100	<0.1
JBH20_8.9-9.0	18 Mar 2025	1200931	Sandy Clay	-	-	<0.01	-	25	<0.005	26	100	<0.1
JBH20_8.9-9.0	19 Mar 2025	1207450	Sandy Clay	4.7	63	-	0.10	58	<0.005	26	100	<0.1
JBH21_4.9-5.0	18 Mar 2025	1200931	Sand	-	-	-	-	34	<0.005	14	100	<0.1
JBH21_5.9-6.0	18 Mar 2025	1200931	Sand	-	-	-	-	34	<0.005	9.8	100	<0.1
JBH32_1.4-1.5	19 Mar 2025	1207450	Sandy Clay	5.6	74	-	0.12	59	0.89	17	99	1.5
JBH32_1.4-1.5	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	29	<0.005	15	100	<0.1
JBH32_1.9-2.0	19 Mar 2025	1207450	Sandy Clay	5.3	71	-	0.11	77	<0.005	14	100	<0.1
JBH32_1.9-2.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	34	<0.005	15	100	<0.1
JBH32_2.9-3.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	17	<0.005	23	100	<0.1
JBH32_4.9-5.0	19 Mar 2025	1207450	Sandy Clay	5.7	76	-	0.12	60	<0.005	20	100	<0.1
JBH32_4.9-5.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	29	<0.005	20	100	<0.1
JBH32_5.9-6.0	20 Mar 2025	1200931	Sandy Clay	-	-	-	-	34	<0.005	14	100	<0.1
JBH32_7.9-8.0	20 Mar 2025	1200931	Sandy Clay	-	-	0.1	-	31	<0.005	14	100	<0.1

Table C2 - Acid Sulfate Soil Field Test Results
Project Number: 68063

Soil Sample ID	Sample Depth (m)	Date	Material Description	Time Elapsed (mins)	pH_F	pH_{FOX}	Δ pH	Reaction
JBH06	0.9-1.0	19/03/2025	Natural - SAND, yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.3	6.0	1.30	Low
				5	7.2	6.1	1.10	
				10	7.2	6.2	1.00	
				15	7.9	6.2	1.70	
JBH06	1.4-1.5	19/03/2025	Natural - SAND, yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.6	6.0	1.60	Low
				5	7.4	6.1	1.30	
				10	7.6	6.3	1.30	
				15	7.4	6.2	1.20	
JBH06	1.9-2.0	19/03/2025	Natural - SAND, yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.5	5.7	1.80	Low
				5	7.2	6.0	1.20	
				10	7.5	5.9	1.60	
				15	7.5	6.0	1.50	
JBH06	2.9-3.0	19/03/2025	Natural - SAND, light yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.5	6.1	1.40	Low
				5	7.5	6.1	1.40	
				10	7.1	6.0	1.10	
				15	7.3	6.1	1.20	
JBH06	3.9-4.0	19/03/2025	Natural - SAND, beige/ grey, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.2	6.3	0.90	Low
				5	7.2	6.2	1.00	
				10	7.1	6.0	1.10	
				15	7.1	6.0	1.10	
JBH06	4.9-5.0	19/03/2025	Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.2	5.8	1.40	Low
				5	7.4	5.9	1.50	
				10	7.2	6.0	1.20	
				15	7.2	6.0	1.20	
JBH06	5.9-6.0	19/03/2025	Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.3	5.9	1.40	Low
				5	7.4	6.0	1.40	
				10	7.3	5.9	1.40	
				15	7.4	6.1	1.30	
JBH06	6.9-7.0	19/03/2025	Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.2	6.0	1.20	Low
				5	7.3	6.1	1.20	
				10	7.2	6.2	1.00	
				15	7.3	6.1	1.20	
JBH06	7.9-8.0	19/03/2025	Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.5	5.8	1.70	Low
				5	7.5	5.9	1.60	
				10	7.5	5.9	1.60	
				15	7.4	5.9	1.50	
JBH06	8.4-8.5	19/03/2025	Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.4	5.9	1.50	Low
				5	7.4	6.0	1.40	
				10	7.2	6.0	1.20	
				15	7.3	5.9	1.40	
JBH12	0.9-1.0	20/03/2025	Natural - SAND, grey/ yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.1	5.1	1.00	Low
				5	6.3	4.8	1.50	
				10	6.1	4.7	1.40	
				15	6.1	4.7	1.40	
JBH12	1.4-1.5	20/03/2025	Natural - SAND, grey/ yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.2	5.1	1.10	Low
				5	5.9	4.8	1.10	
				10	6.0	4.6	1.40	
				15	5.8	4.6	1.20	
JBH12	1.9-2.0	20/03/2025	Natural - SAND, grey/ yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.4	5.3	1.10	Low
				5	5.9	5.2	0.70	
				10	5.9	5.0	0.90	
				15	5.3	5.1	0.20	
JBH12	2.9-3.0	20/03/2025	Natural - SAND, brown/ yellow, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.5	5.2	1.30	Low
				5	6.6	5.2	1.40	
				10	6.4	5.0	1.40	
				15	6.2	5.1	1.10	
JBH12	3.9-4.0	20/03/2025	Natural - SAND, brown, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.5	5.2	1.30	Low
				5	6.4	5.2	1.20	
				10	6.1	5.1	1.00	
				15	6.3	5.0	1.30	
JBH12	4.9-5.0	20/03/2025	Natural - SAND, brown, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.4	4.8	1.60	Low
				5	6.2	4.7	1.50	
				10	6.2	4.8	1.40	
				15	6.0	4.6	1.40	
JBH12	5.9-6.0	20/03/2025	Natural - Sandy CLAY, pink/ brown, homogenous, damp, low plasticity, soft	0	5.0	3.8	1.20	Low
				5	5.1	3.9	1.20	
				10	5.0	3.9	1.10	
				15	5.0	3.8	1.20	
JBH12	6.9-7.0	20/03/2025	Natural - Sandy CLAY, pink/ brown, homogenous, damp, low plasticity, soft	0	5.7	4.1	1.60	Low
				5	5.2	3.4	1.80	
				10	5.0	3.1	1.90	
				15	5.3	3.4	1.90	

Table C2 - Acid Sulfate Soil Field Test Results
Project Number: 68063

Soil Sample ID	Sample Depth (m)	Date	Material Description	Time Elapsed (mins)	pH_F	pH_{FOX}	Δ pH	Reaction
JBH12	7.9-8.0	20/03/2025	Natural - Sandy CLAY, pink/ brown, homogenous, damp, low plasticity, soft	0	5.5	3.9	1.60	Low
				5	4.6	3.6	1.00	
				10	4.7	3.4	1.30	
				15	4.2	3.5	0.70	
JBH14	2.9-3.0	20/03/2025	Natural - Clayey SAND, brown/ purple, homogenous, damp, well graded, sub-angular, medium sand, loose	0	7.0	6.1	0.90	Low
				5	7.0	6.0	1.00	
				10	7.1	5.9	1.20	
				15	7.2	6.0	1.20	
JBH14	3.9-4.0	20/03/2025	Natural - Clayey SAND, red/ purple, homogenous, damp, well graded, sub-angular, medium sand, loose	0	6.6	4.2	2.40	Low
				5	5.7	4.7	1.00	
				10	7.0	4.3	2.70	
				15	6.8	4.2	2.60	
JBH14	4.9-5.0	20/03/2025	Natural - Clayey SAND, red/ purple, homogenous, damp, low plasticity, soft	0	5.5	5.0	0.50	Low
				5	5.3	5.1	0.20	
				10	5.2	4.8	0.40	
				15	5.1	4.6	0.50	
JBH14	5.9-6.0	20/03/2025	Natural - Sandy CLAY, grey/ purple/ pink, homogenous, damp, well graded, sub-angular, medium sand, loose	0	5.9	3.7	2.20	Low
				5	5.6	3.8	1.80	
				10	4.9	3.8	1.10	
				15	4.9	3.9	1.00	
JBH14	6.9-7.0	20/03/2025	Natural - Sandy CLAY, grey/ purple/ pink, homogenous, damp, well graded, sub-angular, medium sand, loose	0	5.3	4.3	1.00	Low
				5	5.9	4.2	1.70	
				10	4.9	4.0	0.90	
				15	4.7	4.0	0.70	
JBH14	7.9-8.0	20/03/2025	Natural - Sandy CLAY, grey/ purple/ pink, homogenous, damp, well graded, sub-angular, medium sand, loose	0	5.2	3.7	1.50	Low
				5	5.0	3.6	1.40	
				10	4.9	3.5	1.40	
				15	4.8	3.6	1.20	
JBH20	2.9-3.0	18/03/2025	Natural - SAND, orange/ yellow, homogenous, damp, poorly graded, sub-angular, medium sand, loose	0	7.1	6.0	1.10	Low
				5	7.4	6.1	1.30	
				10	7.2	6.0	1.20	
				15	7.1	6.0	1.10	
JBH20	3.9-4.0	18/03/2025	Natural - Clayey SAND, light yellow/ grey, homogenous, damp, poorly graded, medium sand, medium dense	0	7.4	6.2	1.20	Low
				5	7.3	5.8	1.50	
				10	7.3	5.7	1.60	
				15	7.1	5.8	1.30	
JBH20	4.9-5.0	18/03/2025	Natural - Sandy CLAY, purple/ grey, homogenous, damp, low plasticity, firm	0	6.5	5.5	1.00	Low
				5	6.5	4.4	2.10	
				10	6.3	4.2	2.10	
				15	6.0	4.1	1.90	
JBH20	5.9-6.0	18/03/2025	Natural - Sandy CLAY, purple/ grey, homogenous, damp, low plasticity, firm	0	6.5	5.4	1.10	Low
				5	5.4	4.6	0.80	
				10	5.6	4.4	1.20	
				15	5.0	4.2	0.80	
JBH20	6.9-7.0	18/03/2025	Natural - Sandy CLAY, purple/ grey, homogenous, damp, low plasticity, firm	0	6.5	5.4	1.10	Low
				5	5.1	4.8	0.30	
				10	5.2	4.7	0.50	
				15	5.0	4.5	0.50	
JBH20	7.9-8.0	18/03/2025	Natural - Sandy CLAY, purple/ grey, homogenous, damp, low plasticity, firm	0	7.0	5.2	1.80	Low
				5	6.4	4.8	1.60	
				10	6.2	5.0	1.20	
				15	6.2	4.8	1.40	
JBH20	8.9-9.0	18/03/2025	Natural - Sandy CLAY, purple/ grey, homogenous, damp, low plasticity, firm	0	7.1	5.9	1.20	Low
				5	6.0	4.7	1.30	
				10	6.1	5.0	1.10	
				15	6.0	5.1	0.90	
JBH21	2.9-3.0	18/03/2025	Natural - SAND, white, homogenous, dry, poorly graded, sub-angular, medium sand, loose	0	7.2	6.0	1.20	Low
				5	6.8	5.9	0.90	
				10	6.7	6.0	0.70	
				15	6.8	6.0	0.80	
JBH21	3.9-4.0	18/03/2025	Natural - SAND, white, homogenous, dry, poorly graded, sub-angular, medium sand, loose	0	7.1	6.3	0.80	Low
				5	7.2	6.3	0.90	
				10	7.2	6.3	0.90	
				15	6.9	6.3	0.60	
JBH21	4.9-5.0	18/03/2025	Natural - SAND, white, homogenous, damp, poorly graded, sub-angular, medium sand, loose	0	7.5	6.3	1.20	Low
				5	7.4	6.4	1.00	
				10	7.3	6.3	1.00	
				15	7.2	6.4	0.80	
JBH21	5.9-6.0	18/03/2025	Natural - SAND, brown, homogenous, wet, poorly graded, sub-angular, medium sand, loose	0	7.5	6.5	1.00	Low
				5	7.4	6.5	0.90	
				10	7.3	6.3	1.00	
				15	7.3	6.4	0.90	

Table C2 - Acid Sulfate Soil Field Test Results
Project Number: 68063

Soil Sample ID	Sample Depth (m)	Date	Material Description	Time Elapsed (mins)	pH_F	pH_{FOX}	Δ pH	Reaction
JBH21	6.9-7.0	18/03/2025	Natural - SAND, brown, homogenous, wet, poorly graded, sub-angular, medium sand, loose	0	7.5	6.5	1.00	Low
				5	7.3	6.5	0.80	
				10	7.3	6.4	0.90	
				15	7.3	6.3	1.00	
JBH21	7.9-8.0	18/03/2025	Natural - SAND, brown, homogenous, saturated, poorly graded, sub-angular, medium sand, loose	0	7.3	6.0	1.30	Low
				5	7.4	6.1	1.30	
				10	7.0	6.1	0.90	
				15	7.2	6.1	1.10	
JBH21	8.2-8.3	18/03/2025	Natural - Sandy CLAY, grey, homogenous, very wet, high plasticity, firm	0	7.4	6.0	1.40	Low
				5	7.3	5.8	1.50	
				10	7.3	5.7	1.60	
				15	6.7	5.5	1.20	
BH32	1.4-1.5	20/03/2025	Natural - Sandy CLAY, brown/ black, homogenous, damp, low plasticity, firm	0	4.9	3.9	1.00	Low
				5	5.0	3.7	1.30	
				10	4.7	3.6	1.10	
				15	5.0	3.6	1.40	
BH32	1.9-2.0	20/03/2025	Natural - Sandy CLAY, brown/ grey/ red/ pink, homogenous, damp, low plasticity, firm	0	4.9	3.7	1.20	Low
				5	4.6	3.5	1.10	
				10	4.5	3.4	1.10	
				15	4.5	3.5	1.00	
BH32	2.9-3.0	20/03/2025	Natural - Sandy CLAY, bright red, homogenous, damp, medium plasticity, soft	0	5.5	4.3	1.20	Low
				5	4.8	4.0	0.80	
				10	4.7	3.9	0.80	
				15	4.6	3.9	0.70	
BH32	3.9-4.0	20/03/2025	Natural - Sandy CLAY, grey/ red, homogenous, damp, low plasticity, stiff	0	5.1	4.3	0.80	Low
				5	4.9	4.3	0.60	
				10	4.6	4.2	0.40	
				15	4.6	4.0	0.60	
BH32	4.9-5.0	20/03/2025	Natural - Sandy CLAY, beige/ white/ grey, homogenous, damp, low plasticity, stiff, inclusions of trace ironstone	0	5.1	4.2	0.90	Low
				5	5.0	4.1	0.90	
				10	4.8	4.1	0.70	
				15	4.8	4.0	0.80	
BH32	5.9-6.0	20/03/2025	Natural - Sandy CLAY, beige/ white/ grey, homogenous, damp, low plasticity, stiff, inclusions of trace ironstone	0	5.3	4.1	1.20	Low
				5	5.2	4.0	1.20	
				10	4.8	4.0	0.80	
				15	5.0	3.9	1.10	
BH32	6.9-7.0	20/03/2025	Natural - Sandy CLAY, beige/ white/ grey, homogenous, damp, low plasticity, stiff, inclusions of trace ironstone	0	5.7	5.2	0.50	Low
				5	5.5	4.7	0.80	
				10	5.2	4.4	0.80	
				15	5.5	4.4	1.10	
BH32	7.9-8.0	20/03/2025	Natural - Sandy CLAY, beige/ white/ grey, homogenous, damp, low plasticity, stiff, inclusions of trace ironstone	0	6.3	3.7	2.60	Low
				5	6.0	3.9	2.10	
				10	5.5	4.0	1.50	
				15	5.8	4.0	1.80	

Table D1 - TCLP Analytical Summary Results
Project Number: 68063
Project Name: 68063_Stockland_Waterloo South

				Metals & Metalloids								PAH																Ionic Balance			
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	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	pH of Leaching Fluid	pH (after HCl)	pH (Final)	pH (Initial)
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH Units	pH Units	pH Units	pH Units
EQL				0.01	0.005	0.05	0.05	0.01	0.001	0.01	0.05	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.1	0.1	0.1	0.1
NSW 2014 General Solid Waste TCLP1 (leached)				5	1	5		5	0.2	2						0.04															
NSW 2014 Restricted Solid Waste TCLP2 (leached)				20	4	20		20	0.8	8						0.16															
Field ID	**Date**	**Lab Report Number**	**Material Type**																												
20250320QC_02	19 Mar 2025	1208398	Fill - Silty Sand	0.02	0.007	<0.05	<0.05	1.6	<0.001	0.01	3.3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	1.4	4.7	7.6
JBH05_0-0.1	19 Mar 2025	1208398	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	1.3	4.8	7.0
JBH06_0.4-0.5	19 Mar 2025	1208398	Fill - Silty Sand	<0.01	<0.005	<0.05	<0.05	0.61	<0.001	0.02	0.73	<0.001	<0.001	<0.001	0.002	0.002	<0.001	0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	-	1.3	4.9	8.9
JBH25_0.2-0.3	19 Mar 2025	1208398	Fill - Gravelly Sand	<0.01	2.8	<0.05	13	1.3	<0.001	4.7	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	4.9	8.7
JBH26_0.2-0.3	19 Mar 2025	1208398	Fill - Sandy Clay	<0.01	0.078	<0.05	0.33	1.2	<0.001	0.18	11	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	1.5	5.0	9.1
JBH04_0.2-0.3	19 Mar 2025	1208398	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	1.4	4.8	8.0

Table D2 - ASLP Analytical Summary Table
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

	Metals & Metalloids								PAH																Ionic Balance		
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	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	pH of Leaching Fluid	pH (after HCL)	pH (Final)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH Units	pH Units	pH Units
EQL	0.01	0.005	0.05	0.05	0.01	0.001	0.01	0.05	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.1	0.1	0.1
ANZECC 2000 Recreational water quality and aesthetics	0.05	0.005	0.05	1	0.05	0.001	0.1	5					0.00001														
ANZG (2018) Marine water 95% toxicant DGVs	0.013*	0.0055	0.0044	0.0013	0.0044	0.0004	0.07	0.008			0.0004		0.0002						0.0014			0.07	0.002				
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																											
Field ID	**Date**	**Lab Report Number**	**Matrix Type**																										
20250320QC_02 (duplicate of JBH32_0.2-0.3)	19 Mar 2025	1208398	Fill - Silty Sand	0.03	<0.005	<0.05	0.11	2.5	<0.001	0.01	1.6	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	5.8	-	7.2
JBH05_0-0.1	19 Mar 2025	1208398	Fill - Silty Sand	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	5.8	-	8.1
JBH06_0.4-0.5	19 Mar 2025	1208398	Fill - Silty Sand	<0.01	<0.005	<0.05	<0.05	0.15	<0.001	<0.01	0.18	<0.001	<0.001	<0.001	0.001	0.002	0.002	0.002	0.002	0.002	<0.001	0.002	<0.001	0.001	<0.001	<0.001	0.003	5.8	-	10
JBH25_0.2-0.3	19 Mar 2025	1208398	Fill - Gravelly Sand	<0.01	0.039	<0.05	0.31	0.23	<0.001	0.06	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	8.4
JBH26_0.2-0.3	19 Mar 2025	1208398	Fill - Sandy Clay	<0.01	0.018	<0.05	0.37	0.63	<0.001	0.08	0.63	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	5.8	-	8.8

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table D2 - ASLP Analytical Summary Table
Project Number: 68063 Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

	pH (Initial)
	pH Units
EQL	0.1
ANZECC 2000 Recreational water quality and aesthetics	
ANZG (2018) Marine water 95% toxicant DGVs	
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand	

Field ID	Date	Lab Report Number	Matrix Type	
20250320QC_02 (duplicate of JBH32_0.2-0.3)	19 Mar 2025	1208398	Fill - Silty Sand	7.8
JBH05_0-0.1	19 Mar 2025	1208398	Fill - Silty Sand	7.9
JBH06_0.4-0.5	19 Mar 2025	1208398	Fill - Silty Sand	8.9
JBH25_0.2-0.3	19 Mar 2025	1208398	Fill - Gravelly Sand	8.7
JBH26_0.2-0.3	19 Mar 2025	1208398	Fill - Sandy Clay	8.8

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

			Metals & Metalloids								TPHs (NEPC 1999)					TPHs (NEPC 1999) - Silica Gel			TRHs (NEPC 2013)						
			Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C10-C14 Fraction (SG)	C15-C28 Fraction (SG)	C29-C36 Fraction (SG)	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL			0.001	0.0001	0.001	0.001	0.001	0.00005	0.001	0.001	0.01	0.05	0.1	0.1	0.05				0.01	0.05	0.1	0.1	0.05	0.02	0.05
ADWG (2011) Health x 10 (Recreational) - Updated March-2021			0.1	0.02	0.5	20	0.1	0.01	0.2																
ANZG (2018) Marine water 95% toxicant DGVs			0.013*	0.0055	0.0044	0.0013	0.0044	0.0004	0.07	0.008															
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																								1	1
PFAS NEMP 3.0 (2025) Interim marine 95% species protection																									
PFAS NEMP 3.0 (2025) Interim marine 99% species protection																									
PFAS NEMP 3.0 (2025) Recreational Water																									
Field ID	**Date**	**Lab Report Number**																							
DP 2022b																									
BH2 / MW2	25 Oct 2022	DP2022	0.001	<0.0001	<0.001	<0.001	<0.001	<0.00005	0.025	0.007	-	<0.05	0.14	<0.1	-	0.079	<0.1	<0.1	-	-	0.12	<0.1	-	<10	0.057
BH4 / MW4	25 Oct 2022	DP2022	<0.001	0.0002	<0.001	0.013	<0.001	<0.00005	0.021	0.16	-	<0.05	<0.1	<0.1	-	-	-	-	-	-	<0.1	<0.1	-	<10	<0.05
BD1/20221025	25 Oct 2022	DP2022	<0.001	0.0002	<0.001	0.003	<0.001	<0.00005	0.021	0.16	-	<0.05	<0.1	<0.1	-	-	-	-	-	-	<0.1	<0.1	-	<10	<0.05
BH7 / MW7	25 Oct 2022	DP2022	<0.001	<0.0001	<0.001	0.011	<0.001	<0.00005	0.011	0.08	-	0.3	14	1.1	-	0.21	0.59	0.1	-	-	12	0.19	-	0.049	1.5
BH10 / MW10	25 Oct 2022	DP2022	0.004	<0.0001	<0.001	<0.001	<0.001	<0.00005	0.012	0.038	-	<0.05	<0.1	<0.1	-	-	-	-	-	-	<0.1	<0.1	-	<10	<0.05
BH12 / MW12	25 Oct 2022	DP2022	0.002	<0.0001	<0.001	0.002	<0.001	<0.00005	0.012	0.008	-	<0.05	<0.1	<0.1	-	-	-	-	-	-	<0.1	<0.1	-	<10	0.051
JBS&G 2025																									
MW01	08 Apr 2025	1208047	0.002	<0.0002	<0.001	0.002	<0.001	<0.0001	0.077	0.057	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW02	08 Apr 2025	1208047	0.003	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.072	0.006	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW04	08 Apr 2025	1208047	<0.001	0.0002	<0.001	0.004	0.003	<0.0001	0.074	0.19	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW105	08 Apr 2025	1208047	0.004	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.013	0.017	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW108	08 Apr 2025	1208047	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	0.075	0.055	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW110	08 Apr 2025	1208047	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.044	0.014	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
QA10250407	07 Apr 2025	377597	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.00005	0.052	0.016	0.017	<0.05	<0.1	<0.1	<0.05	-	-	-	0.017	<0.05	<0.1	<0.1	<0.05	-	-
QC_20250407	08 Apr 2025	1208047	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.043	0.015	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW111	08 Apr 2025	1208047	<0.001	0.0002	<0.001	0.001	<0.001	<0.0001	0.022	0.044	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW115	08 Apr 2025	1208047	0.003	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.041	0.025	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW121	08 Apr 2025	1208047	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.059	0.043	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05
MW124	08 Apr 2025	1208047	<0.001	<0.0002	<0.001	0.001	<0.001	<0.0001	0.032	0.006	<0.02	<0.05	<0.1	<0.1	<0.1	-	-	-	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
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				TRHs (NEPC 2013) - Silica Gel			BTEXN						
				>C10-C16 Fraction (SG)	>C16-C34 Fraction (SG)	>C34-C40 Fraction (SG)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene_VOC
				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	0.002	0.003	0.01
ADWG (2011) Health x 10 (Recreational) - Updated March-2021							0.01	8	3	6	6	6	
ANZG (2018) Marine water 95% toxicant DGVs							0.7	0.18	0.08		0.075		0.07
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand							0.8						
PFAS NEMP 3.0 (2025) Interim marine 95% species protection													
PFAS NEMP 3.0 (2025) Interim marine 99% species protection													
PFAS NEMP 3.0 (2025) Recreational Water													
Field ID	**Date**	**Lab Report Number**											
DP 2022b													
BH2 / MW2	25 Oct 2022	DP2022		0.069	<0.1	<0.1	<0.001	0.001	<0.001	<0.001	<0.002	-	-
BH4 / MW4	25 Oct 2022	DP2022		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	-	-
BD1/20221025	25 Oct 2022	DP2022		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	-	-
BH7 / MW7	25 Oct 2022	DP2022		0.38	0.49	<0.1	<0.001	<0.001	<0.001	<0.001	<0.002	-	-
BH10 / MW10	25 Oct 2022	DP2022		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	-	-
BH12 / MW12	25 Oct 2022	DP2022		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	-	-
JBS&G 2025													
MW01	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW02	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW04	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW105	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW108	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW110	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
QA10250407	07 Apr 2025	377597		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	-	-
QC_20250407	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW111	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW115	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW121	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01
MW124	08 Apr 2025	1208047		-	-	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.003	<0.01

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
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			PAH																		
			PAHs (Sum of positives)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ	Benzo(b+j)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
			µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL			0.1	0.00001	0.00001	0.00001	0.00001	0.00001	0.0005	0.00001	0.0002	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
ADWG (2011) Health x 10 (Recreational) - Updated March-2021								0.0001														
ANZG (2018) Marine water 95% toxicant DGVs						0.0004		0.0002								0.0014			0.07	0.002		
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																						
PFAS NEMP 3.0 (2025) Interim marine 95% species protection																						
PFAS NEMP 3.0 (2025) Interim marine 99% species protection																						
PFAS NEMP 3.0 (2025) Recreational Water																						
Field ID	**Date**	**Lab Report Number**																				
DP 2022b																						
BH2 / MW2	25 Oct 2022	DP2022	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	<0.0002	<0.0001	-	<0.1
BH4 / MW4	25 Oct 2022	DP2022	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	<0.0002	<0.0001	-	<0.1
BD1/20221025	25 Oct 2022	DP2022	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	<0.0002	<0.0001	-	<0.1
BH7 / MW7	25 Oct 2022	DP2022	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	<0.0002	<0.0001	-	<0.1
BH10 / MW10	25 Oct 2022	DP2022	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	<0.0002	<0.0001	-	<0.1
BH12 / MW12	25 Oct 2022	DP2022	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	<0.0002	<0.0001	-	<0.1
JBS&G 2025																						
MW01	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW02	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW04	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0030	<0.00001	<0.00001	0.003
MW105	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW108	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW110	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0010	<0.00001	<0.00001	0.001
QA10250407	07 Apr 2025	377597	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	<0.0002	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-
QC_20250407	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW111	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW115	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW121	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW124	08 Apr 2025	1208047	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
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			Chlorinated Alkanes																	
			1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005	0.005
ADWG (2011) Health x 10 (Recreational) - Updated March-2021										0.03					0.03				0.04	
ANZG (2018) Marine water 95% toxicant DGVs				0.27	0.4	1.9				1.9	0.9	1.1			0.24				4	
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																				
PFAS NEMP 3.0 (2025) Interim marine 95% species protection																				
PFAS NEMP 3.0 (2025) Interim marine 99% species protection																				
PFAS NEMP 3.0 (2025) Recreational Water																				
Field ID	**Date**	**Lab Report Number**																		
DP 2022b																				
BH2 / MW2	25 Oct 2022	DP2022	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BH4 / MW4	25 Oct 2022	DP2022	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BD1/20221025	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 / MW7	25 Oct 2022	DP2022	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BH10 / MW10	25 Oct 2022	DP2022	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
BH12 / MW12	25 Oct 2022	DP2022	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
JBS&G 2025																				
MW01	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW02	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW04	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW105	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW108	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW110	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
QA10250407	07 Apr 2025	377597	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	-	<0.01
QC_20250407	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW111	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW115	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW121	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
MW124	08 Apr 2025	1208047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

			Chlorinated Alkenes												Solvents	PFAS											
			Vinyl Chloride	1,1-dichloroethene	1,1-dichloropropene	2-chlorotoluene	3-chloropropene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Acetone	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.002	0.001	0.0004	0.0004	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005
ADWG (2011) Health x 10 (Recreational) - Updated March-2021			0.003	0.3					0.6		0.5	0.6																
ANZG (2018) Marine water 95% toxicant DGVs			0.1	0.7							0.07			0.33														
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																												
PFAS NEMP 3.0 (2025) Interim marine 95% species protection																				220								
PFAS NEMP 3.0 (2025) Interim marine 99% species protection																				19								
PFAS NEMP 3.0 (2025) Recreational Water																				10								
Field ID	**Date**	**Lab Report Number**																										
DP 2022b																												
BH2 / MW2	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	0.0024	-	-	-	-	-	-	-	-
BH4 / MW4	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	0.0087	-	-	-	-	-	-	-	-
BD1/20221025	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 / MW7	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	0.001	-	-	-	-	-	-	-	-
BH10 / MW10	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	0.0007	-	-	-	-	-	-	-	-
BH12 / MW12	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	0.0058	-	-	-	-	-	-	-	-
JBS&G 2025																												
MW01	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.002	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW02	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.28	0.007	0.009	0.013	0.003	0.012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW04	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	0.006	0.008	0.017	0.006	0.014	0.048	0.004	0.013	<0.001	<0.001	<0.001	<0.001	<0.005
MW105	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW108	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	0.007	0.006	0.004	0.003	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW110	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.008	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
QA10250407	07 Apr 2025	377597	<0.01	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.02	0.002	0.002	0.0006	0.001	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.01
QC_20250407	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.009	0.002	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW111	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.002	0.003	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW115	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.002	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW121	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.007	0.007	0.004	0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW124	08 Apr 2025	1208047	<0.005	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	0.016	0.026	0.024	0.010	0.017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

			N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-MethylperfluorooctanesulfonamidoethanoI (N-MeFOSE)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)
			µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.005	0.005	0.005	0.005	0.002
ADWG (2011) Health x 10 (Recreational) - Updated March-2021							
ANZG (2018) Marine water 95% toxicant DGVs							
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand							
PFAS NEMP 3.0 (2025) Interim marine 95% species protection							
PFAS NEMP 3.0 (2025) Interim marine 99% species protection							
PFAS NEMP 3.0 (2025) Recreational Water							
Field ID	**Date**	**Lab Report Number**					
DP 2022b							
BH2 / MW2	25 Oct 2022	DP2022	-	-	-	-	-
BH4 / MW4	25 Oct 2022	DP2022	-	-	-	-	-
BD1/20221025	25 Oct 2022	DP2022	-	-	-	-	-
BH7 / MW7	25 Oct 2022	DP2022	-	-	-	-	-
BH10 / MW10	25 Oct 2022	DP2022	-	-	-	-	-
BH12 / MW12	25 Oct 2022	DP2022	-	-	-	-	-
JBS&G 2025							
MW01	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW02	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW04	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW105	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW108	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW110	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
QA10250407	07 Apr 2025	377597	<0.05	<0.1	<0.05	<0.5	<0.002
QC_20250407	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW111	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW115	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW121	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005
MW124	08 Apr 2025	1208047	<0.005	<0.005	<0.005	<0.005	<0.005

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

			PFAS																		
			N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecanesulfonic acid (PFDS)	1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of WA DWER PFAS (n=10)*	Sum of PFAS	Perfluorononanesulfonic acid ion	Per- and Polyfluoroalkyl Substances (PFAS)
			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	ug/L	µg/L	µg/L	
EQL			0.002	0.001	0.0004	0.001	0.0002	0.001	0.0001	0.001	0.001	0.0004	0.0004	0.001	0.0002	0.001	0.0002	0.005	0.0002	0.001	
ADWG (2011) Health x 10 (Recreational) - Updated March-2021																					
ANZG (2018) Marine water 95% toxicant DGVs																					
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																					
PFAS NEMP 3.0 (2025) Interim marine 95% species protection									0.13												
PFAS NEMP 3.0 (2025) Interim marine 99% species protection									0.00023												
PFAS NEMP 3.0 (2025) Recreational Water							2		2						2						
Field ID	**Date**	**Lab Report Number**																			
DP 2022b																					
BH2 / MW2	25 Oct 2022	DP2022	-	-	-	-	0.0039	-	0.002	-	-	-	-	-	0.0057	-	-	-	-	-	0.013
BH4 / MW4	25 Oct 2022	DP2022	-	-	-	-	0.034	-	0.054	-	-	-	-	-	0.087	-	-	-	-	-	0.15
BD1/20221025	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 / MW7	25 Oct 2022	DP2022	-	-	-	-	0.0005	-	0.0025	-	-	-	-	-	0.003	-	-	-	-	-	0.0098
BH10 / MW10	25 Oct 2022	DP2022	-	-	-	-	0.001	-	0.0021	-	-	-	-	-	0.0033	-	-	-	-	-	0.0062
BH12 / MW12	25 Oct 2022	DP2022	-	-	-	-	0.0062	-	0.021	-	-	-	-	-	0.027	-	-	-	-	-	0.062
JBS&G 2025																					
MW01	08 Apr 2025	1208047	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.005	<0.001	<0.001	0.0016	0.0036	0.0036	0.0076	0.0076	<0.001	-
MW02	08 Apr 2025	1208047	<0.005	0.001	0.008	0.003	0.022	<0.001	0.010	<0.001	<0.001	0.008	<0.001	<0.001	0.032	0.044	0.022	0.092	0.096	<0.001	-
MW04	08 Apr 2025	1208047	<0.005	0.001	0.012	0.011	0.12	0.011	0.55	<0.001	<0.001	<0.005	<0.001	<0.001	0.67	0.684	0.564	0.733	0.824	0.003	-
MW105	08 Apr 2025	1208047	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	-
MW108	08 Apr 2025	1208047	<0.005	<0.001	0.007	<0.001	0.005	<0.001	0.0042	<0.001	<0.001	<0.005	<0.001	<0.001	0.0092	0.0132	0.0082	0.0402	0.0402	<0.001	-
MW110	08 Apr 2025	1208047	<0.005	<0.001	<0.001	<0.001	0.002	<0.001	0.011	<0.001	<0.001	<0.005	<0.001	<0.001	0.013	0.013	0.011	0.024	0.024	<0.001	-
QA10250407	07 Apr 2025	377597	<0.002	-	0.0006	<0.001	0.0026	<0.001	0.024	<0.002	<0.001	<0.0004	<0.0004	<0.002	0.027	-	0.025	-	0.034	-	-
QC_20250407	08 Apr 2025	1208047	<0.005	<0.001	<0.001	<0.001	0.003	<0.001	0.015	<0.001	<0.001	<0.005	<0.001	<0.001	0.018	0.019	0.016	0.03	0.03	<0.001	-
MW111	08 Apr 2025	1208047	<0.005	<0.001	0.001	<0.001	0.003	<0.001	0.0079	<0.001	<0.001	<0.005	<0.001	<0.001	0.0109	0.0129	0.0099	0.0199	0.0199	<0.001	-
MW115	08 Apr 2025	1208047	<0.005	0.001	0.003	0.001	0.004	<0.001	0.012	<0.001	<0.001	<0.005	<0.001	<0.001	0.016	0.016	0.012	0.024	0.026	<0.001	-
MW121	08 Apr 2025	1208047	<0.005	<0.001	0.003	<0.001	0.008	<0.001	0.013	<0.001	<0.001	<0.005	<0.001	<0.001	0.021	0.031	0.023	0.052	0.052	<0.001	-
MW124	08 Apr 2025	1208047	<0.005	<0.001	0.033	<0.001	0.011	<0.001	0.013	<0.001	<0.001	<0.005	<0.001	<0.001	0.024	0.041	0.03	0.15	0.15	<0.001	-

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
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			MAH										Miscellaneous Hydrocarbons						
			1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	tert-butylbenzene	Total MAH	Bromobenzene	Isopropylbenzene	1,2-dibromoethane	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	4-Methyl-2-pentanone	Methyl Ethyl Ketone
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.005	0.005
ADWG (2011) Health x 10 (Recreational) - Updated March-2021									0.3					0.01	0.01					
ANZG (2018) Marine water 95% toxicant DGVs													0.03							
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																				
PFAS NEMP 3.0 (2025) Interim marine 95% species protection																				
PFAS NEMP 3.0 (2025) Interim marine 99% species protection																				
PFAS NEMP 3.0 (2025) Recreational Water																				
Field ID	**Date**	**Lab Report Number**																		
DP 2022b																				
BH2 / MW2	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4 / MW4	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD1/20221025	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 / MW7	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10 / MW10	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12 / MW12	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JBS&G 2025																				
MW01	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW02	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW04	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW105	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW108	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW110	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
QA10250407	07 Apr 2025	377597	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.01	0.002	<0.001	-	-	-
QC_20250407	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW111	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW115	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW121	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005
MW124	08 Apr 2025	1208047	<0.001	<0.001	-	-	-	-	<0.001	-	<0.003	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.005	<0.005

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Table E - Groundwater Analytical Data Summary
Project Number: 68063
Project Name: 68063_Stockland_Waterloo South , Waterloo Redevelopment Precinct , Stockland

			Chlorinated Benzenes						Trihalomethanes				Organic Sulfur Compounds	Major Cations				Ionic Balance			
			1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Carbon disulfide	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Electrical Conductivity (Lab)	Hardness	Hardness as CaCO3	pH (Lab)
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mgCaCO 3/L	mg/L	pH Units
EQL			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.5	0.5	0.5	0.5	10		1	0.1
ADWG (2011) Health x 10 (Recreational) - Updated March-2021					15		0.4	3													
ANZG (2018) Marine water 95% toxicant DGVs				0.08				0.055		0.77											
NEPM 2013 Table 1A(4) Res HSL A/B GW for Vapour Intrusion, Sand																					
PFAS NEMP 3.0 (2025) Interim marine 95% species protection																					
PFAS NEMP 3.0 (2025) Interim marine 99% species protection																					
PFAS NEMP 3.0 (2025) Recreational Water																					
Field ID	**Date**	**Lab Report Number**																			
DP 2022b																					
BH2 / MW2	25 Oct 2022	DP2022	-	-	-	-	-	-	-	<0.001	-	-	-	28	-	13	-	-	120	-	-
BH4 / MW4	25 Oct 2022	DP2022	-	-	-	-	-	-	-	0.001	-	-	-	11	-	3	-	-	40	-	-
BD1/20221025	25 Oct 2022	DP2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 / MW7	25 Oct 2022	DP2022	-	-	-	-	-	-	-	0.028	-	-	-	23	-	11	-	-	100	-	-
BH10 / MW10	25 Oct 2022	DP2022	-	-	-	-	-	-	-	<0.001	-	-	-	5.6	-	7.8	-	-	46	-	-
BH12 / MW12	25 Oct 2022	DP2022	-	-	-	-	-	-	-	<0.001	-	-	-	13	-	2	-	-	40	-	-
JBS&G 2025																					
MW01	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	25	-	42	-	960	-	240	6.1
MW02	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	7.5	-	15	-	950	-	82	6.6
MW04	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	9.6	-	3.6	-	190	-	39	5.1
MW105	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	1.5	-	7.3	-	210	-	34	6.4
MW108	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	25	-	10	-	560	-	110	6.2
MW110	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	28	-	5.3	-	460	-	92	6.8
QA10250407	07 Apr 2025	377597	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	-	-	24	-	3	470	72	-	6.7
QC_20250407	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	24	-	4.5	-	440	-	78	6.5
MW111	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	0.001	<0.001	16	-	6.2	-	430	-	65	6.3
MW115	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	9.9	-	8.0	-	390	-	58	6.1
MW121	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	0.002	<0.001	21	-	5.4	-	310	-	75	6.2
MW124	08 Apr 2025	1208047	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.013	<0.001	0.002	<0.001	42	-	6.2	-	430	-	130	6.6

*In the absence of an ANZG (2018) marine criteria, results are compared against the ANZG (2018) freshwater DGVs.

Appendix C Historical Borelogs

SOIL BOREHOLE JBH02

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 19 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.1		Fill - Silty SAND, grey/ brown, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of gravels (shale/ bitumen/ concrete), rootlets, plastic and tile	DP	JBH02_0.00-0.10	2	No odour, staining or asbestos
	0.2				JBH02_0.20-0.30	1	
	0.3						
	0.4		Natural - Silty SAND, grey/ brown, heterogeneous, damp, well graded, medium sand, sub-angular, loose	DP	JBH02_0.40-0.50	4	No odour, staining or asbestos
	0.5						
	0.6						
	0.7						
	0.8						
	0.9				JBH02_0.90-1.00	4	
	1						
	1.1						
	1.2						
	1.3						
	1.4				JBH02_1.40-1.50	3	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9				JBH02_1.90-2.00	4	
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

SOIL BOREHOLE JBH03

PROJECT NUMBER 68063	**DRILLING COMPANY** Terratest	**EASTING**
PROJECT NAME Waterloo Estate South	**DRILL RIG** GeoProbe	**NORTHING**
CLIENT Stockland	**DRILLING METHOD** Solid Flight Auger	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS Waterloo Redevelopment Precinct	**DIAMETER**	**TOTAL DEPTH** 2.00 m bgl
DRILLING DATE 19 Mar 2025		**LOGGED BY** HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.1 0.2 0.3 0.4		Fill - Silty SAND, grey/ black, heterogeneous, dry, well graded, medium sand, sub-angular, loose, with inclusions of gravel (concrete/ shale), plastic, rootlets	DR	JBH03_0.00-0.10 JBH03_0.20-0.30	6 2	No odour, staining or asbestos
	0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4		Natural - SAND, yellow/ grey, homogenous, damp, well graded, medium sand, sub-angular, loose, with inclusions of shale gravels	DP	JBH03_0.40-0.50 JBH03_0.90-1.00	2 3	No odour, staining or asbestos
	1.5 1.6 1.7 1.8 1.9 2		Natural - SAND, light yellow/ grey, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH03_1.40-1.50 JBH03_1.90-2.00	3 3	No odour, staining or asbestos
	2.1 2.2 2.3 2.4		End of Hole at 2 m bgs. Programmed Depth.				

SOIL BOREHOLE JBH04

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 20 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.1		Fill - Silty SAND, brown/ grey, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of rootlets	DP	JBH04_0.00-0.10	3	No odour, staining or asbestos
	0.2						
	0.3				JBH04_0.20-0.30	1	
	0.4						
	0.5				JBH04_0.40-0.50	2	
	0.6						
	0.7						
	0.8						
	0.9		Natural - SAND, grey/ brown, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH04_0.90-1.00	5	No odour, staining or asbestos
	1						
	1.1						
	1.2						
	1.3						
	1.4				JBH04_1.40-1.50	2	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9		Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH04_1.90-2.00	2	No odour, staining or asbestos
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH05

PROJECT NUMBER 68063	**DRILLING COMPANY** Terratest	**EASTING**
PROJECT NAME Waterloo Estate South	**DRILL RIG** GeoProbe	**NORTHING**
CLIENT Stockland	**DRILLING METHOD** Solid Flight Auger	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS Waterloo Redevelopment Precinct	**DIAMETER**	**TOTAL DEPTH** 2.00 m bgl
DRILLING DATE 19 Mar 2025		**LOGGED BY** HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.1		Fill - Silty SAND, black/ brown, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of trace plastic, bitumen/ coal/ shale gravels and pebbles (quartz)	DP	JBH05_0.00-0.10	1	No odour, staining or asbestos
	0.2				JBH05_0.20-0.30	2	
	0.3						
	0.4		Fill - SAND, brown/ yellow, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of bitumen/ coal/ shale gravels, tiles, plastic and quartz	DP	JBH05_0.40-0.50	2	No odour, staining or asbestos
	0.5						
	0.6						
	0.7						
	0.8						
	0.9				JBH05_0.90-1.00	3	
	1						
	1.1						
	1.2						
	1.3						
	1.4		Natural - SAND, yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH05_1.40-1.50	3	No odour, staining or asbestos
	1.5						
	1.6						
	1.7						
	1.8						
	1.9		Natural - SAND, light yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH05_1.90-2.00	2	No odour, staining or asbestos
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH06

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 19 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 8.50 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.5		Fill - Silty SAND, black/ brown, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of shale/ concrete gravels, plastic, tiles and roots	DP	JBH06_0.00-0.10 JBH06_0.20-0.30 JBH06_0.40-0.50	2 3 2	No odour, staining or asbestos
	1		Natural - SAND, yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH06_0.90-1.00	3	No odour, staining or asbestos
	1.5				JBH06_1.40-1.50	3	
	2				JBH06_1.90-2.00	10	
	2.5						
	3		Natural - SAND, light yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH06_2.90-3.00	3	No odour, staining or asbestos
	3.5						
	4		Natural - SAND, beige/ grey, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH06_3.90-4.00	2	No odour, staining or asbestos
	4.5						
	5		Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH06_4.90-5.00	2	No odour, staining or asbestos
	5.5						
	6				JBH06_5.90-6.00	3	
	6.5						
	7				JBH06_6.90-7.00	4	
	7.5						
	8				JBH06_7.90-8.00	2	
	8.5				JBH06_8.40-8.50	10	
			End of Hole at 8.5 m bgs. Programmed Depth.				

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SOIL BOREHOLE JBH07

PROJECT NUMBER 68063	**DRILLING COMPANY** Terratest	**EASTING**
PROJECT NAME Waterloo Estate South	**DRILL RIG** GeoProbe	**NORTHING**
CLIENT Stockland	**DRILLING METHOD** Push Tube	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS Waterloo Redevelopment Precinct	**DIAMETER**	**TOTAL DEPTH** 2.00 m bgl
DRILLING DATE 19 Mar 2025		**LOGGED BY** HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0.1		Asphalt - Gravelly Silty SAND, black/ grey/ brown, heterogeneous, damp, well graded, medium sand, sub-angular, medium dense	DP	JBH07_0.00-0.10	2	No odour, staining or asbestos
	0.2		Fill - Silty SAND, brown/ red/ white, heterogeneous, damp, well graded, medium sand, sub-angular, medium dense, with inclusions of trace sandstone gravels	DP	JBH07_0.20-0.30	3	No odour, staining or asbestos
	0.3						
	0.4				JBH07_0.40-0.50	2	
	0.5						
	0.6		Natural - SAND, yellow, homogenous, damp, well graded, medium sand, sub-angular, medium dense, with inclusions of trace charcoal	DP			No odour, staining or asbestos
	0.7						
	0.8						
	0.9				JBH07_0.90-1.00	3	
	1						
	1.1						
	1.2						
	1.3						
	1.4				JBH07_1.40-1.50	2	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9		Natural - SAND, light yellow, homogenous, damp, well graded, medium sand, sub-angular, medium dense	DP	JBH07_1.90-2.00	3	No odour, staining or asbestos
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH09

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 19 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.1		Fill - Silty SAND, brown/ black, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of shale/ bitumen/ sandstone gravels, rootlets and tiles	DP	JBH09_0.00-0.10	3	No odour, staining or asbestos
	0.2						
	0.3				JBH09_0.20-0.30	3	
	0.4						
	0.5				JBH09_0.40-0.50	3	
	0.6						
	0.7						
	0.8						
	0.9		Fill - SAND, brown/ yellow, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with trace concrete/ sandstone gravels and charcoal	DP	JBH09_0.90-0.10	2	No odour, staining or asbestos
	1						
	1.1						
	1.2						
	1.3						
	1.4		Natural - SAND, yellow, homogenous, damp, well graded, medium sand, sub-angular, medium dense	DP	JBH09_1.40-1.50	2	No odour, staining or asbestos
	1.5						
	1.6						
	1.7						
	1.8						
	1.9				JBH09_1.90-2.00	3	
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

SOIL BOREHOLE JBH11

PROJECT NUMBER 68063	**DRILLING COMPANY** Terratest	**EASTING**
PROJECT NAME Waterloo Estate South	**DRILL RIG** GeoProbe	**NORTHING**
CLIENT Stockland	**DRILLING METHOD** Solid Flight Auger	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS Waterloo Redevelopment Precinct	**DIAMETER**	**TOTAL DEPTH** 2.00 m bgl
DRILLING DATE 20 Mar 2025		**LOGGED BY** HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.1		Fill - Silty SAND, brown, heterogeneous, dry, poorly graded, medium sand, sub-angular, loose, with inclusions of rootlets and fine gravels	DR	JBH11_0.00-0.10	2	No odour, staining or asbestos
	0.2				JBH11_0.20-0.30	2	
	0.3						
	0.4		Fill - SAND, orange/ brown, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose, with inclusions of fine gravels	DP	JBH11_0.40-0.50	1	No odour, staining or asbestos
	0.5						
	0.6						
	0.7						
	0.8						
	0.9		Natural - SAND, tan/ yellow, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose, with inclusions of fine gravels	DP	JBH11_0.90-1.00	3	No odour, staining or asbestos
	1						
	1.1						
	1.2						
	1.3						
	1.4				JBH11_1.40-1.50	3	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9		Natural - SAND, lighter tan/ yellow, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose	DP	JBH11_1.90-2.00	3	No odour, staining or asbestos
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH12

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 20 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 8.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0		Fill - Silty SAND, brown/ black, heterogeneous, dry, well graded, medium sand, sub-angular, loose, with inclusions of shale/ bitumen gravel, charcoal and rootlets	DR	JBH12_0.00-0.10	1	No odour, staining or asbestos
					JBH12_0.20-0.30	1	
	0.5		Fill - Silty SAND, dark grey, homogenous, dry, well graded, medium sand, sub-angular, loose, with inclusions of charcoal	DR	JBH12_0.40-0.50	1	No odour, staining or asbestos
	1		Natural - SAND, yellow/ grey, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH12_0.90-1.00	1	No odour, staining or asbestos
	1.5				JBH12_1.40-1.50	1	
	2				JBH12_1.90-2.00	2	
	2.5						
	3		Natural - SAND, brown/ yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH12_2.90-3.00	2	No odour, staining or asbestos
	3.5						
	4		Natural - SAND, brown, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH12_3.90-4.00	1	No odour, staining or asbestos
	4.5						
	5				JBH12_4.90-5.00	2	
	5.5						
	6		Natural - Sandy CLAY, pink/ brown, homogenous, damp, low plasticity, soft	DP	JBH12_5.90-6.00	1	No odour, staining or asbestos
	6.5						
	7				JBH12_6.90-7.00	2	
	7.5						
	8				JBH12_7.90-8.00	2	
			Termination Depth at:8.00 m.				End of Hole at 8 m bgs. Programmed Depth.

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SOIL BOREHOLE JBH14

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 20 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 8.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0		Fill - Silty SAND, black/ brown, heterogeneous, dry, well graded, medium sand, sub-angular, loose, with inclusions of glass, charcoal and shale/ bitumen gravels	DR	JBH14_0.00-0.10	3	No odour, staining or asbestos
					JBH14_0.20-0.30	3	
	0.5		Fill - SAND, grey/ black, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of glass	DP	JBH14_0.40-0.50	5	No odour, staining or asbestos
	1				JBH14_0.90-1.00	6	
	1.5		Natural - SAND, grey/ black, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH14_1.40-1.50	4	No odour, staining or asbestos
	2				JBH14_1.90-2.00	4	
	2.5						
	3		Natural - Clayey SAND, brown/ purple, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH14_2.90-3.00	5	No odour, staining or asbestos
	3.5						
	4		Natural - Clayey SAND, red/ purple, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH14_3.90-4.00	3	No odour, staining or asbestos
	4.5						
	5				JBH14_4.90-5.00	3	
	5.5						
	6		Natural - Sandy CLAY, grey/ purple/ pink, homogenous, damp, low plasticity, soft	DP	JBH14_5.90-6.00	5	No odour, staining or asbestos
	6.5						
	7				JBH14_6.90-7.00	4	
	7.5						
	8				JBH14_7.90-8.00	2	
			End of Hole at 8 m bgs. Programmed Depth.				

SOIL BOREHOLE JBH15

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 20 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0.1		Asphalt - Sandy GRAVEL, grey/ black, heterogeneous, dry, well graded, medium gravel, angular, medium dense	DR	JBH15_0.00-0.10	3	No odour, staining or asbestos
	0.2		Natural - Silty SAND, brown/ black/ grey, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of asphalt gravels	DP	JBH15_0.20-0.30	4	No odour, staining or asbestos
	0.3						
	0.4				JBH15_0.40-0.50	2	
	0.5						
	0.6						
	0.7						
	0.8						
	0.9		Natural - SAND, white/ yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH15_0.90-1.00	2	No odour, staining or asbestos
	1						
	1.1						
	1.2						
	1.3						
	1.4				JBH15_1.40-1.50	2	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9		Natural - SAND, dark yellow/ orange, homogenous, damp, well graded, medium sand, sub-angular, loose	DP	JBH15_1.90-2.00	3	No odour, staining or asbestos
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH17

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 18 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0.1		Fill - Sandy SILT, brown/ black, heterogeneous, damp, low plasticity, soft, with trace inclusions of sandstone gravels	DP	JBH17_0.00-0.10	5	No odour, staining or asbestos
	0.2		Fill - Sandy GRAVEL, red/ grey, heterogeneous, damp, poorly graded, medium gravel, angular, loose	DP	JBH17_0.20-0.30	9	No odour, staining or asbestos
	0.3		Natural - Silty SAND, grey, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	0.4				JBH17_0.40-0.50	7	
	0.5						
	0.6						
	0.7		Natural - Clayey SAND, dark brown/ orange, homogenous, damp, poorly graded, medium sand, sub-angular, medium dense	DP			No odour, staining or asbestos
	0.8						
	0.9				JBH17_0.90-1.00	4	
	1		Natural - Clayey SAND, orange, homogenous, damp, poorly graded, medium sand, sub-angular, medium dense	DP			No odour, staining or asbestos
	1.1						
	1.2						
	1.3						
	1.4				JBH17_1.40-1.50	5	
	1.5						
	1.6		Natural -Sandy CLAY, grey/ orange with red mottle, homogenous, damp, high plasticity, soft	DP			No odour, staining or asbestos
	1.7						
	1.8						
	1.9				JBH17_1.90-2.00	6	
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

SOIL BOREHOLE JBH18

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 18 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0.1		Fill - Sandy SILT, black/ brown, heterogeneous, damp, low plasticity, soft, with trace inclusions of sandstone gravels and rootlets	DP	JBH18_0.00-0.10	2	No odour, staining or asbestos
	0.2		Fill - Sandy GRAVEL, red/ grey, heterogeneous, damp, poorly graded, medium gravel, angular, loose, with inclusions of sandstone/ shale/ bitumen gravels	DP	JBH18_0.20-0.30	8	No odour, staining or asbestos
	0.3		Natural - SAND, grey, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	0.4				JBH18_0.40-0.50	7	
	0.5		Natural - SAND, orange, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	0.6						
	0.7						
	0.8						
	0.9				JBH18_0.90-1.00	5	
	1						
	1.1		Natural -SAND, yellow/ white, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.2						
	1.3						
	1.4				JBH18_1.40-1.50	8	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9				JBH18_1.90-2.00	3	
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH20

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 18 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 9.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.5		Fill - Sandy SILT, brown/ black, heterogeneous, damp, low plasticity, soft, with little inclusions of glass and concrete pipe, trace plastics and shale/ charcoal/ coal gravels	DP	JBH20_0.00-0.10 JBH20_0.20-0.30 JBH20_0.40-0.50	3 5 4	No odour, staining or asbestos. QA/QC20250318_01 taken at 0.4-0.5 m bgs.
	1				JBH20_0.90-1.00	5	
	1.5		Fill - Sandy SILT, light black/ grey, heterogeneous, damp, low plasticity, soft, with little inclusions of glass and concrete pipe, trace plastics and shale/ charcoal/ coal gravels	DP	JBH20_1.40-1.50	2	No odour, staining or asbestos
	2				JBH20_1.90-2.00	3	
	2.5		Natural - SAND, orange/ yellow, homogenous, damp, poorly graded, medium sand, sub-angular, medium dense	DP			No odour, staining or asbestos
	3				JBH20_2.90-3.00	6	
	3.5						
	4				JBH20_3.90-4.00	3	
	4.5		Natural - Clayey SAND, light yellow/ grey, homogenous, damp, poorly graded, medium sand, sub-angular, medium dense	DP			No odour, staining or asbestos
	5				JBH20_4.90-5.00	5	
	5.5		Natural - Sandy CLAY, purple/ grey, homogenous, damp, low plasticity, firm	DP			No odour, staining or asbestos
	6				JBH20_5.90-6.00	2	
	6.5						
	7				JBH20_6.90-7.00	3	
	7.5						
	8				JBH20_7.90-8.00	3	
	8.5						
	9				JBH20_8.90-9.00	2	
			End of Hole at 9 m bgs. Programmed Depth.				

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SOIL BOREHOLE JBH21

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 18 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube/ SFA
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 8.50 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0		Fill - SILT, brown, homogenous, dry, low plasticity, soft	DR	JBH21_0.00-0.10	3	No odour, staining or asbestos
			Natural - SAND, grey/ white, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose	DP	JBH21_0.20-0.30	3	
	0.5			DP	JBH21_0.40-0.50	3	No odour, staining or asbestos
			Natural - SAND, brown, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			
					JBH21_0.90-1.00	5	No odour, staining or asbestos
	1		Natural - SAND, white , homogenous, dry, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.5			DR	JBH21_1.40-1.50	4	
					JBH21_1.90-2.00	7	
SFA	2						
	2.5						
	3				JBH21_2.90-3.00	2	
	3.5						
	4				JBH21_3.90-4.00	4	
	4.5						
	5				JBH21_4.90-5.00	3	
			Natural - SAND, white, homogenous, wet, poorly graded, medium sand, sub-angular, loose	W			No odour, staining or asbestos
	5.5						
	6				JBH21_5.90-6.00	4	
	6.5						
	7				JBH21_6.90-7.00	3	
	7.5		Natural - SAND, brown, homogenous, saturated, poorly graded, medium sand, sub-angular, loose	S			No odour, staining or asbestos
					JBH21_7.90-8.00	4	
	8		Natural - Sandy CLAY, grey, homogenous, wet, high plasticity, firm	W	JBH21_8.20-8.30	4	No odour, staining or asbestos
	8.5		End of Hole at 8.5 m bgs. Programmed Depth.				

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SOIL BOREHOLE JBH25

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 18 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0.1		Asphalt - GRAVEL, grey, heterogeneous, dry, well graded, medium gravel, sub-angular, medium dense	DR	JBH25_0.00-0.10	4	No odour, staining or asbestos
	0.2		Fill - Sandy GRAVEL, grey, heterogeneous, dry, well graded, medium gravel, sub-angular, loose, with inclusions of asphalt gravels	DR	JBH25_0.10-0.20	4	No odour, staining or asbestos
	0.3		Fill - Gravelly SAND, grey, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with inclusions of asphalt gravels.	DP	JBH25_0.20-0.30	3	No odour, staining or asbestos
	0.4						
	0.5		Fill - Gravelly Sandy CLAY, brown/ tan, heterogeneous, damp, well graded, medium sand, sub-angular, loose	DP	JBH25_0.40-0.50	3	No odour, staining or asbestos
	0.6		Fill - SAND, brown/ tan, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose	DP			Slight staining. No odour or asbestos
	0.7						
	0.8						
	0.9				JBH25_0.90-1.00	5	
	1		Natural - SAND, brown, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.1		Natural - SAND, grey, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.2						
	1.3		Natural - SAND, yellow, homogenous, damp, poorly graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.4				JBH25_1.40-1.50	6	
	1.5						
	1.6						
	1.7						
	1.8						
	1.9				JBH25_1.90-2.00	5	
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

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SOIL BOREHOLE JBH26

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 18 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Push Tube
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 2.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT	0.1		Asphalt - Sandy GRAVEL, dark grey, heterogeneous, dry, well graded, medium gravel, sub-angular, loose, with inclusions of asphalt gravels and trace clay clasts	DR	JBH26_0.00-0.10	3	No odour, staining or asbestos
	0.2		Fill - Sandy CLAY, grey/ brown, heterogeneous, dry, low plasticity, soft, with inclusions of sandstone gravels	DR	JBH26_0.20-0.30	4	No odour, staining or asbestos
	0.3						
	0.4		Fill SAND, black/ yellow, heterogeneous, damp, poorly graded, medium sand, sub-angular, medium dense, with inclusions of sandstone gravels	DP	JBH26_0.40-0.50	2	No odour, staining or asbestos
	0.5						
	0.6						
	0.7		Natural - Clayey SAND, brown/ grey, homogenous, damp, poorly graded, medium sand, sub-angular, medium dense	DP			No odour, staining or asbestos
	0.8						
	0.9				JBH26_0.90-1.00	3	
	1		Natural - SAND, brown/ yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.1						
	1.2						
	1.3						
	1.4				JBH26_1.40-1.50	4	
	1.5		Natural - SAND, grey, homogenous, damp, well graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.6		Natural - SAND, yellow, homogenous, damp, well graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.7		Natural - SAND, grey, homogenous, damp, well graded, medium sand, sub-angular, loose	DP			No odour, staining or asbestos
	1.8						
	1.9				JBH26_1.90-2.00	3	
	2		End of Hole at 2 m bgs. Programmed Depth.				
	2.1						
	2.2						
	2.3						
	2.4						

SOIL BOREHOLE JBH32

PROJECT NUMBER 68063
PROJECT NAME Waterloo Estate South
CLIENT Stockland
ADDRESS Waterloo Redevelopment Precinct
DRILLING DATE 20 Mar 2025

DRILLING COMPANY Terratest
DRILL RIG GeoProbe
DRILLING METHOD Solid Flight Auger
DIAMETER

EASTING
NORTHING
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 8.00 m bgl
LOGGED BY HRM/ EF

COMMENTS

Drilling Method	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA	0.5		Fill - Silty SAND, black/ brown, heterogeneous, damp, well graded, medium sand, sub-angular, loose, with trace inclusions of rootlets, plastic and concrete/ bitumen gravel	DP	JBH32_0.00-0.10 JBH32_0.20-0.30 JBH32_0.40-0.50	8 4 6	No odour, staining or asbestos. QA/QC20250320_02 taken at 0.2-0.3 m bgs.
	1 1.5		Natural - Sandy CLAY, brown/ black, homogenous, damp, low plasticity, firm	DP	JBH32_0.90-1.00 JBH32_1.40-1.50	7 6	No odour, staining or asbestos
	2 2.5		Natural - Sandy CLAY, red/ grey/ pink/ brown, homogenous, damp, low plasticity, firm	DP	JBH32_1.90-2.00	10	No odour, staining or asbestos
	3 3.5		Natural - Sandy CLAY, red, homogenous, damp, medium plasticity, soft	DP	JBH32_2.90-3.00	18	No odour, staining or asbestos
	4 4.5		Natural - Sandy CLAY, grey/ red, homogenous, damp, low plasticity, stiff	DP	JBH32_3.90-4.00	6	No odour, staining or asbestos
	5 5.5 6 6.5 7 7.5		Natural - Sandy CLAY, beige/ white/ grey, homogenous, damp, low plasticity, stiff, with trace inclusions of ironstone	DP	JBH32_4.90-5.00 JBH32_5.90-6.00 JBH32_6.90-7.00 JBH32_7.90-8.00	6 3 3 2	No odour, staining or asbestos
	8		End of Hole at 8 m bgs. Programmed Depth.				

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Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Mead St, Waterloo NSW
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333897.49E, 6247523.63N
Driller: SS
Logged: MB
RL Surface: 22.26m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT	Not Encountered		22	0		-	TOPSOIL: Silty SAND, fine to medium grained, dark brown, trace rootlets.		-	-	TOPSOIL
						-	FILL: Silty SAND, fine to coarse grained, trace fine to coarse angular to subrounded sandstone gravel, appears poorly compacted.	0.0-0.5 DS<5kg	D - M		FILL
						-	FILL: SAND, fine to coarse grained, pale grey, appears poorly compacted.	0.5-1.0 DS<5kg			
			21	1							
							At 1.5m: becoming dark brown.	SPT 3, 4, 4 N=8			
				2				1.95-2.0 DS<5kg			
			20					1.5-2.5 ES			
						SW	SAND, fine to coarse grained, pale orange brown, trace silt.	SPT 1, 2, 2 N=4	M	VL	MARINE/AEOLIAN
			19	3				3.0-4.0 DS<5kg/ ES			
							At 3.5m: becoming yellow brown.				
				4			At 5.5m: becoming red brown, trace clay.	SPT 6, 9, 12 N=21		MD	
			18								
				5							
			17			CH	CLAY, high plasticity, pale red and grey.	SPT 10, 13, 18 N=31 PP=500	MC < PL	H	RESIDUAL SOIL
				6							
			16								
				7		CH	Extremely Weathered Siltstone recovered as CLAY, high plasticity. red with grey and orange, with fine to coarse angular to subangular ironstone gravel.	SPT 8, 25/150mm N=R	MC << PL		EXTREMELY WEATHERED MATERIAL
			15								
				8							
			14								
				9		-	SILTSTONE, dark grey, highly weathered, inferred very low to low strength.	SPT 9, 5/130mm	-	-	BEDROCK
			13								
				10							

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Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Mead St, Waterloo NSW
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333897.49E, 6247523.63N
Driller: SS
Logged: MB
RL Surface: 22.26m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
			12		× × × ×	-	SILTSTONE, dark grey, highly weathered, inferred very low to low strength. *(continued)*		-	-	
							Borehole BH105 continued as cored hole				
			11	11							
			10	12							
			9	13							
			8	14							
			7	15							
			6	16							
			5	17							
			4	18							
			3	19							
				20							

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Mead St, Waterloo NSW
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333897.49E, 6247523.63N
Driller: SS
Logged: MB
RL Surface: 22.26m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (● Axial, ○ Diametral) EL -0.03 / VL -0.1 / L -0.3 / M -1 / H -3 / VH -10 / EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30 100 300 1000 3000)	Additional Data
						Continued from non-cored borehole						
HQ3	0-5% Water Loss		12			SILTSTONE, dark grey, with iron staining and carbonaceous laminations, laminated at 0-20°.	HW					10.3 - BP, 10°, PL, SO, FE, IN. 10.34 - BP, 0°, PL, SO, FE, SN.
				11					D 0.32 A 0.23			10.37 - EWS, CY, 20mm. 10.42 - DB. 10.47 - EWS, gravels, 25mm. 10.56 - DB. 10.65 - DB.
			11							19		10.7 - DB. 10.74 - DB. 10.78 - DB. 10.82 - BP, 30°, PL, SO, CA, CO. 10.85 - EWS, gravel, 60mm. 10.94 - BP, 20°, UN, SO, FE, VN. 10.98 - BP, 5°, CU, SO, FE, VN.
				12					D 0.27			11.0 - HB. 11.02 - HB. 11.04 - BP, 10°, PL, SO, FE, SN. 11.06 - BP, 5°, PL, SO, FE, SN.
			10									11.11 - JT, 45°, PL, SO, FE, SN. 11.17 - EWS, gravels, 10mm.
						Clayey GRAVEL, medium to coarse, dark grey and orange.	EW					11.22 - JT, 45°, PL, SO, FE, SN.
							HW		D 0.02 A 0.05			11.24 - JT, 90°, CU, SO, FE, SN. 11.25 - BP, 5°, ST, SO, FE, SN.
						SILTSTONE, dark grey, with iron staining and carbonaceous laminations, laminated at 0-20°.						
				13			EW					11.35 - EWS, gravels, 20mm. 11.38 - BP, 20°, PL, SO, FE, VN.
						Clayey GRAVEL, medium to coarse, dark grey and orange.	HW					11.47 - BP, 5°, ST, SO, FE, SN.
			9				FR					11.48 - BP, 0°, PL, SO, FE, SN. 11.5 - JT, 85°, CU, SO, FE, SN.
						SILTSTONE, dark grey, with iron staining and carbonaceous laminations, laminated at 0-20°.				69		11.53 - BP, 0°, CU, SO, FE, SN. 11.54 - BP, 0°, PL, SO, FE, SN. 11.56 - BP, 0°, PL, SO, FE, SN.
						INTERBEDDED SILTSTONE AND SANDSTONE, Siltstone is grey brown, laminated at 0-5°; Sandstone is fine grained, grey, bedded at 0-5°.						
				14					D 0.45 A 0.34			11.58 - JT, 90°, CU, SO, FE, SN. 11.63 - BP, 0°, PL, SO, FE, SN. 11.65 - EWS, gravels, 10mm. 11.66 - BP, 0°, PL, SO, FE, SN.
			8									11.7 - BP, 0°, PL, SO, FE, SN. 11.77 - BP, 5°, CU, SO, FE, SN. 11.74 - BP, 15°, PL, SO, FE, SN. 11.8 - BP, 25°, CU, SO, FE, SN. 11.83 - BP, 20°, PL, SO, FE, SN.
						LAMINITE: SILTSTONE (80%)/ SANDSTONE (20%), Siltstone is dark grey; Sandstone is fine grained, grey, trace carbonaceous laminations.						
				15					D 0.08 A 0.15			11.87 - HB. 11.89 - HB. 11.94 - HB. 11.95 - HB. 11.97 - HB.
			7									12.0 - HB. 12.05 - BP, 10°, CU, SO, FE, SN. 12.08 - BP, 10°, PL, SO, FE, SN.
	90% Water Loss					SANDSTONE, fine to coarse grained, grey, with carbonaceous laminations, bedded at 0-10°.			D 0.36 A 0.55			12.12 - BP, 15°, ST, SO, FE, SN. 12.16 - BP, 20°, PL, SO, FE, SN.
				16								12.2 - DB. 12.23 - BP, 5°, PL, SO, FE, SN.
			6									12.27 - DB. 12.29 - DB. 12.31 - CS, gravels, 30mm.
										94		12.36 - BP. 12.4 - JT, 90°, PL, SO, FE, SN. 12.56 - EWS, gravels, 30mm.
						SANDSTONE, fine to coarse grained, orange and grey, with ironstaining and quartz inclusions, bedded at 0-20°.	SW					
				17					D 0.15 A 0.19			12.65 - JT, 90°, PL, SO, FE, SN. 12.66 - JT, 90°, PL, SO, FE, SN. 12.7 - BP, 0°, PL, SO, FE, SN.
			5									12.72 - BP, 0°, PL, SO, FE, SN. 12.75 - BP, 20°, PL, SO, FE, SN. 12.77 - BP, 20°, PL, SO, FE, SN.
	0-5% Water Loss					SANDSTONE, fine to coarse grained, grey, with carbonaceous laminations, bedded at 0-25°.	FR					13.0 - HB. 13.05 - JT, 80°, CU, SO, CN. 13.22 - JT, 90°, ST, SO, CN.
				18					D 1.38 A 1.23			13.59 - HB. 13.82 - HB. 14.0 - HB.
			4									14.35 - BP, 0°, PL, SO, X, SN. 14.42 - BP, 15°, PL, SO, X, SN. 14.52 - BP, 10°, PL,SO, CN. 14.84 - BP, 0°, PL, SO, CN. 14.93 - EWS, gravels, 70mm.
				19					D 0.85 A 0.98	100		15.02 - JT, 60°, PL, SO, X, SN. 15.03 - DB. 15.06 - DB. 15.13 - DB.
			3									15.2 - DB. 15.23 -DB. 15.3 - DB. 15.36 - DB. 15.43 - BP, 0°, PL, RO, CN.
				20					D 0.98 A 1.23			15.48 - DB. 15.5 - DB.

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Mead St, Waterloo NSW
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333897.49E, 6247523.63N
Driller: SS
Logged: MB
RL Surface: 22.26m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial O- Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30, 100, 300, 1000, 3000)	Additional Data
HQ3			2	21		Target depth. BH105 terminated at 20.35m	FR			100		15.52 - DB. 15.54 - DB. 15.69 - HB. 15.95 - HB. 16.0 - HB. 16.16 - BP, 5°, UN, RO, X, SN. 16.42 - JT, 90°, PL, RO, CN. 16.83 - BP, 5°, ST, RO, FE, SN. 16.85 - BP, 10°, PL, RO, FE, SN. 17.0 - HB. 17.06 - DB. 17.12 - 80°, CU, RO, FE, SN. 17.19 - JT, 45°, PL, RO, FE, SN. 17.21 - JT, 45°, PL, RO, FE, SN. 17.34 - CS, gravels, 30mm. 17.82 - DB. 18.0 - DB. 18.18 - DB. 18.71 - DB. 19.0 - HB. 19.05 - HB. 19.19 - BP, 0°, PL, RO, X, SN. 19.96 - BP, 0°, PL, RO, X, SN. 20.0 - HB. 20.22 - BP, 0°, PL, RO, X, SN. 20.35 - DB. End of Borehole.
			1	22								
			0	23								
			-1	24								
			-2	25								
			-3	26								
			-4	27								
			-5	28								
			-6	29								
			-7	30								

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Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: McEvoy St, Waterloo NSW
Started: 31/03/2025
Finished: 31/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333961.56E, 6247413.25N
Driller: SS
Logged: WS
RL Surface: 22.54m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT	Not Encountered		22	1		-	FILL: SAND, fine grained, brown and red brown, with low plasticity clay, with gravel to cobble-sized concrete fragments, appears moderately compacted.	0.0-0.5 DS 0.5-1.0 DS 1.0-1.5 DS	D - M	-	FILL
			21	2		CL	Sandy CLAY, low plasticity, yellow brown.	2.0-2.5 DS	MC ~ PL	St	MARINE/AEOLIAN
			20	3		Cl	Sandy CLAY, medium plasticity, orange brown grey, trace silt.	SPT 1, 3, 5 N=8			
			19	4		CL-Cl	Silty CLAY, low to medium plasticity, reddish brown grey, with sand.	3.5-4.0 DS SPT 2, 9, 16 N=25	MC <= PL	VSt	RESIDUAL SOIL
			18	5			At 5.0m: becoming pale brown.	5.0-5.5 DS			
			17	6		CL-Cl	Extremely Weathered Shale, recovered as Silty CLAY, low to medium plsaticity, grey and orange brown.	SPT 5, 14, 20 N=34	MC < PL	H	EXTREMELY WEATHERED MATERIAL
			16	7		-	SHALE, brown and dark grey, highly weathered, inferred very low to low strength.	6.5-6.6 ES	-	-	BEDROCK
			15	8							
			14								
			13	9			Borehole BH108 continued as cored hole				
				10							

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: McEvoy St, Waterloo NSW
Started: 31/03/2025
Finished: 31/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333961.56E, 6247413.25N
Driller: SS
Logged: WS
RL Surface: 22.54m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial O- Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30, 100, 300, 1000, 3000)	Additional Data
			22	1								
			21	2								
			20	3								
			19	4								
			18	5								
			17	6								
			16	7								
			15	8								
			14			Continued from non-cored borehole						
HQ3	0-10% Loss		13	9		SHALE, dark grey, laminated at 0-5°	MW - SW		D A	0 / 48		~~8.74-8.8 - CS.~~ 8.82 - BP, 0°, UN, SO, CN. 8.85 - JT, 03°, UN, SO, CN. 8.87 - BP, 0°, PL, SO, CN. 8.88 - BP, 0°, PL, SO, CN. 8.9 - JT, 30°, UN, SO, CN. 8.91-8.98 - BP, 0°, PL, SO, CN, 30-40mm spacing. 8.94 - JT, 0-90°, ST, SO, SN. 9.0 - DB. 9.02 - BP, 0°, PL, SO, CN.
				10								

5. CORED BOREHOLE 18639.GPJ GINT STD AUSTRALIA.GDT 5/5/25

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: McEvoy St, Waterloo NSW
Started: 31/03/2025
Finished: 31/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333961.56E, 6247413.25N
Driller: SS
Logged: WS
RL Surface: 22.54m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, O- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
HQ3			12	11		SHALE, dark grey, laminated at 0-5° *(continued)*	MW - SW		D A 0.35 0.69			9.04 - JT, 10°, UN, SO, CN. 9.10 - JT, 70-90°, UN, SO, CN. 9.13 - BP, 0°, UN, SO, CN. 9.48-9.49 - CS. 9.54 - JT, 10°, PL, SO, CN. 9.78 - BP, 0°, PL, SO, CN. 9.91 - BP, 0°, PL, SO, CN. 10.0 - JT, 30°, PL, SO, CN. 10.11-10.12 - CS, siltstone gravel, 10mm. 10.34-10.48 - CS, siltstone gravel, 140mm. 10.52 - JT, 30°, UN, SO, CN. 10.54-10.91 - BP, 0°, PL, SO, CN, 30-40mm spacing.
			11	12		SANDSTONE, fine grained, grey.	SW		D A 0.22 0.25	48		10.57-10.58 - EWS, CY and siltstone gravel, 10mm 10.61-10.62 - CS, siltstone gravel, 10mm. 10.64 - JT, 20°, UN, SO, CN. 10.75 - JT, 20-30°, UN, SO, CN. 10.92 - JT, 90°, PL, SO, CN.
			10	13		CORE LOSS, 100mm. INTERBEDDED SILTSTONE (50%)/SANDSTONE (50%): Siltstone is grey; Sandstone is fine grained, pale grey; interbedded at 0-15°.	- SW		D A 0.55 1.12	15		11.0 - HB. 11.02 - BP, 0°, PL, SO, CN. 11.06 - JT, 30-45°, PL, SO, CN. 11.07 - JT, 90°, PL, SO, CN. 11.11 - BP, 0°, UN, SO, CN. 11.3-11.6 - HB. 11.6 - DB. 11.69-12.2 - HB. 12.1-12.27 - JT, 70-90°, UN, RO, CN. 12.15-12.39 - BP, 0-5°, UN, RO, CN, 50-70mm spacing.
			9	14		SANDSTONE, medium to coarse grained, grey. bedded at 0-15°.			D A 0.27 0.41			12.46-12.52 - CS, silstone gravel, 60mm. 12.53 - JT, 20°, PL, RO, CN. 12.63 - BP, 0°, UN, RO, CN. 12.7-12.71 - CS, siltstone gravel, 10mm. 12.78-13.0 - BP, 0°, UN, RO, CN, 10-100mm spacing. 13.09-13.12 - EWS, CY, 30mm. 13.19-13.43 - BP, UN, RO, CN, 10-80mm spacing. 13.57 - DB. 13.61-13.83 - BP, UN, RO, CN, 10-100mm spacing. 14.0 - HB. 14.02 - HB.
			8	15		SHALE, dark grey. SANDSTONE, medium to coarse grained, grey, bedded at 0-20°.			D A 0.88 0.64	93		14.2 - BP, 0°, PL, RO, CN. 14.58 - BP, 0°, PL, RO, CN. 14.88 - JT, 10°, UN, RO, CN. 15.0 - HB.
			7						D A 0.42 0.7			15.67 - BP, 6°, PL, RO, CN.
				16								15.85 - BP, 6°, PL, RO, CN. 16.0 - HB. 16.0-16.18 - JT, 90°, UN, RO, CN.
			6									16.43 - BP, 20°, UN, RO, CN. 16.54 - BP, 20°, UN, RO, CN. 16.62 - DB.
				17					D A 0.49 0.29			17.0 - HB. 17.1 - JT, 70°, PL, RO, CN.
			5									17.4 - JT, 60-90°, closed.
									D A 0.27 0.68			17.65 - BP, 10°, UN, RO, CN.
				18						65		17.9 - BP, 0°, UN, RO, CN. 17.9-17.97 - JT, 60°, closed. 17.97 - HB. 18.0 - HB. 18.24 - BP, 0°, UN, RO, CN. 18.26 - JT, 70-90°, closed.
			4									18.72-18.76 - CS, sandstone gravel, 40mm.
				19					D A 0.81 0.99			18.91 - BP, 0°, PL, RO, CN. 19.0 - DB.
			3						D A 1.63 1.82	19		19.24 - JT, 30°, UN, RO, CN. 19.26 - JT, 30°, UN, RO, CN. 19.42 - BP, 0°, PL, RO, CN.
				20						100		19.64 - DB.

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: McEvoy St, Waterloo NSW
Started: 31/03/2025
Finished: 31/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333961.56E, 6247413.25N
Driller: SS
Logged: WS
RL Surface: 22.54m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, O- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30 100 300 1000 3000)	Additional Data
HQ3			2	21		SANDSTONE, medium to coarse grained, grey, bedded at 0-20°. *(continued)*	SW			100		20.0 - HB. 21.0 - HB. 21.04 - BP, 0°, PL, RO, CN.
			1	22								21.96 - JT, 10°, UN, RO, CN. 22.0 - HB. 22.12 - BP, 10°, UN, RO, CN. 22.23 - BP, 10°, UN, RO, CN. 22.42- BP, 0°, PL, RO, CN.
			0						D A 1.77 1.69			22.54 - BP, 0°, PL, RO, CN. 22.72 - DB.
				23					D A 1.49 1.26			23.0-23.04 - HB. 23.1 - BP, 20°, UN, RO, CN. 23.14 - BP, 20°, UN, RO, CN.
			-1	24								24.0 - HB.
			-2							95		
				25					D A 1 1.62 D A 1.51 1.68			24.9-24.82 - BP, 0-5°, PL, RO, CN, 190-400mm spacing. 25.0 - HB. 25.02-25.03 - HB. 25.23 - BP, 0°, PL, RO, CN. 25.24 - JT, 0-70°, ST, RO, CN. 25.57 - JT, 20°, PL, RO, CN.
			-3									
				26		Target depth. BH108 terminated at 25.81m						End of Borehole.
			-4									
				27								
			-5									
				28								
			-6									
				29								
			-7									
				30								

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BH No: BH110
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Job No: 18639

Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Kellick St, Waterloo NSW
Started: 25/03/2025
Finished: 25/03/2025
Borehole Size: 120 mm

Rig Type: Massenza MI3
Hole Coordinates 333984.33E, 6247604.07N
Driller: SS
Logged: WS
RL Surface: 35.24m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT	Not Encountered		35			-	Asphalt, 100mm thickness.	0.0-0.2	-	-	PAVEMENT
						-	FILL: Clayey SAND, fine grained, brown, with medium to coarse subangular igneous gravel, appears moderately compacted.		D - M	-	FILL
						SP	SAND, fine to medium grained, yellow brown.		D - M	MD	MARINE/AEOLIAN
				1				SPT 5, 6, 5 N=11			
			34								
				2				2.0-2.5			
			33					SPT 5, 5, 7 N=12			
				3				3.0-4.0			
			32								
				4				SPT 6, 6, 7 N=13			
			31					4.5-5.5			
				5							
			30					SPT 3, 5, 7 N=12			
				6				6.0-7.0			
			29								
				7				SPT 5, 8, 9 N=17	M	D	
			28								
				8				8.0-8.5			
			27					SPT 3, 7, 8 N=15			
				9		SC	Clayey SAND, fine grained, yellow brown.				
			26					9.5-10.0			
				10		CL-CI	Silty CLAY, low to medium plasticity, grey brown.			H	

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Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Kellick St, Waterloo NSW
Started: 25/03/2025
Finished: 25/03/2025
Borehole Size: 120 mm

Rig Type: Massenza MI3
Hole Coordinates 333984.33E, 6247604.07N
Driller: SS
Logged: WS
RL Surface: 35.24m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT			25			-	SHALE, dark grey, highly weathered, inferred very low to low strength	SPT 11 DB N=R	MC ~ PL -	-	BEDROCK
			24	11							
			23	12							
			22	13			Borehole BH110 continued as cored hole				
			21	14							
			20	15							
			19	16							
			18	17							
			17	18							
			16	19							
				20							

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Kellick St, Waterloo NSW
Started: 25/03/2025
Finished: 25/03/2025
Borehole Size: 120 mm

Rig Type: Massenza MI3
Hole Coordinates 333984.33E, 6247604.07N
Driller: SS
Logged: WS
RL Surface: 35.24m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial O- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
			25	11								
			24	12								
			23	13		Continued from non-cored borehole						
HQ3	0-10% Loss		22	14		Silty CLAY, low to medium plasticity, dark grey, with siltstone gravel.	EW					13.14-13.27 - EWS, Silty CLAY, 130mm.
						LAMINITE: SHALE (80%)/ SANDSTONE (20%): Shale is dark grey; Sandstone is fine grained, pale grey.	MW - HW					13.27-13.35 - CS, laminite gravel, 80mm. 19.3-19.38 - JT, 90°, PL, SO, CN. 13.39 - BP, 0°, PL, SO, CN. 13.41 - BP, 0°, PL, SO, CN. 13.49-13.58 - CS, laminite gravel, 90mm. 13.62 - JT, 90°, PL, SO, CN. 13.62- BP, 0°, PL, SO, CN. 13.64 - BP, 0°, PL, SO, CN.
			21	15		Gravelly CLAY, low plasticity, dark grey, fine to coarse angular shale gravel.	EW					13.66-13.69 - CS, siltstone gravel, 30mm.
						LAMINITE: SHALE (80%)/ SANDSTONE (20%): Shale is dark grey; Sandstone is fine grained, pale grey.	MW - HW		D A 0.08 0.11	0		13.7-13.79 - BP, 0°, PL, SO, CN. 13.76 - JT, 60-80°, UN, SO, CN. 13.82-13.85 - EWS, CY and siltstone gravel, 30mm. 14.08-14.16 - CZ, siltstone gravel, 80mm. 14.19 - BP, 0°, PL, SO, CN. 14.21 - BP, 0°, PL, SO, CN. 14.23 - JT, 45°, PL, RO, CN. 14.26-14.31 - BP, 0°, PL, SO, CN, 10-20mm spacing. 14.32-14.4 - JT, 20°, PL, SO, CN, 10-40mm spacing. 14.4-14.48 - CS, siltstone gravel, 80mm. 14.7 - BP, 0°, PL, SO, CN. 14.74 - BP, 0°, PL, SO, CN. 14.82 - JT, 90°, UN, SO, CN. 14.9 - DB.
			20			Core Loss, 450mm.	-					
				16		LAMINITE: SHALE (80%)/ SANDSTONE (20%): Shale is dark grey; Sandstone is fine grained, pale grey.	MW - HW					15.44 - JT, 80°, PL, SO, CN. 15.5-15.57 - CS, siltstone gravel, 70mm. 15.62-15.97 - BP, 0°, PL, SO, CN, 10-130mm spacing. 16.0 - HB. 16.05 - BP, 0°, PL, SO, CN. 16.09 - BP, 0°, PL, SO, CN. 16.1 - DB.
			19	17						12		
			18			Gravelly CLAY, low plasticity, dark grey, fine to coarse angular shale gravel.	EW					16.18-16.25 - EWS, CY and siltstone gravel, 70mm.
						LAMINITE: SHALE (80%)/ SANDSTONE (20%): Shale is dark grey; Sandstone is fine grained, pale grey.	MW - HW		D A 0.12 0.07			16.26 - BP, PL, RO, CY, CO, 2mm. 16.33 - BP, 0°, PL, SO, CN. 16.37- BP, 5°, PL, RO, siltstone gravel, CO. 16.41 - DB.
				18		Core Loss, 100mm.	-		D A 0.07 0.05			16.49 - JT, 90°, PL, SO, CN. 16.55 - BP, 0°, PL, SO, CN.
			17			LAMINITE: SHALE (90%)/ SANDSTONE (10%): Shale is dark grey; Sandstone is fine grained, pale grey.	FR		D A 0.1 0.08			16.63-16.66 - CS, CY and siltstone gravel, 30mm. 16.77 - DB. 16.82 - BP, 0°, PL, SO, CN. 16.84 - JT, 30°, UN, SO, CN. 16.9 - BP, 0°, PL, SO, CN. 17.0 - HB.
				19						28		17.37 - JT, 45°, IR, RO, CY, CO, 10mm. 17.46 - JT, 60°, UN, SO, CN. 17.57 - BP, 0°, PL, SO, CN. 17.61 - BP, 0°, PL, SO, CN. 17.74 - JT, 60°, UN, SO, VN. 17.75 - JT, 45°, PL, SO, CY, VNR. 17.78-17.8 - EWS, CY, 20mm. 17.8 - DB. 18.0 - HB. 18.04 - BP, 0°, PL, RO, CY, CO, 1mm. 18.06-18.31 - BP, 0°, PL, SO, CN, 10-90mm
			16						D A 0.12 0.03			
				20								

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BH No: BH110
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Job No: 18639

Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Kellick St, Waterloo NSW
Started: 25/03/2025
Finished: 25/03/2025
Borehole Size: 120 mm

Rig Type: Massenza MI3
Hole Coordinates 333984.33E, 6247604.07N
Driller: SS
Logged: WS
RL Surface: 35.24m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, O- Diametral) EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
HQ3			15	21		SHALE, dark grey.	FR		D 0.29 A 0.27	28		spacing. 18.35 - JT, 20°, CU, SO, CN. 18.38-18.64 - BP, 0°, PL, SO, CN, 40-120mm spacing. 18.86 - CS, siltstone gravel, 2mm. 18.85 - JT, 60°, UN, SO, CN. 18.87 - JT, 30°, PL, SO, CN. 19.0 - HB. 19.03-19.30 - BP, 0°, UN, SO, CN, 10-110mm spacing. 19.16 -JT, PL, SO, CN. 19.36 - JT, 90°, PL, SO, CN. 19.4 - DB. 19.54 - JT, 30°, PL, SO, CN. 19.56 - BP, 0°, PL, SO, VN. 19.78 - JT, 30°, UN, SO ,CN. 19.83-19.98 - BP, 0°, PL, SO, CN, 70-80mm spacing. 20.0 - HB. 20.04 - BP, 0°, PL, SO, CN. 20.08 - JT, 45°, IR, ST, CN. 20.1 - BP, 0°, IR, ST, CN. 20.16 - JT, 90°, UN, closed. 20.2 - BP, 0°, PL, SO, CN. 20.31 - BP, 0°, PL, SO, CN. 20.4 - BP, 0°, PL, SO, CN. 20.47 - JT, 70°, CU, SO, CN. 20.56 - JT, 60°, CU, closed. 20.61 - BP, 0°, PL, SO, CN. 20.67 - BP, 0°, PL, RO, shale gravel, CO. 20.69 - JT, 60°, CU, RO, shale gravel, CO. 20.81 - JT, 70°, PL, SO, CN. 20.9 - DB. 21.0 - HB. 21.07 - CS, shale gravel, 20mm. 21.09 - CS, shale gravel, 20mm. 21.12-21.2 - CS, shale gravel, 20mm. 21.26 - JT, 45°, PL, SO, CN. 21.31 - BP, 0°, PL, SO, CN. 21.87-21.98 - BP, 0°, PL, SO, CN. 22.0 - HB. 22.19 - JT, 70°, PL, SO, CN. 22.26-22.31 - CZ, shale gravel, 50mm. 22.4 - JT, 80°, PL, SO, CN. 22.66 - BP, 0°, PL, SO, CN. 23.0 - HB. 23.08 - BP, 0°, PL, SO, CN. 23.2 - JT, 90°, PL, SO, CN. 23.28 - JT, 45°, ST, RO, CN. 23.36 - JT, 80°, ST, CN, closed. 23.39 - JT, 80°, ST, CN, closed. 23.44 - BP, 0°, PL, SO, CN. 23.56 - BP, 0°, PL, SO, CN. 23.86 - BP, 0°, PL, SO, CN. 23.91 - JT, 90°, IR, SO, CN. 23.95 - BP, 0°, PL, SO, CN. 24.04 - JT, 45°, PL, SO, CN. 24.08 - JT, 45°, PL, SO, CN. 24.17 - JT, 30°, PL, SO, CN. 24.31-24.35 - CZ, 60°, clay and shale gravel, 40mm. 24.64 - BP, 0°, PL, SO, CN. 24.94 - BP, 0°, IR, RO, CN. 24.98 - BP, 0°, IR, RO, CN. 25.0 - HB. 25.04-25.06 - SM, CY and shale gravel, 20mm. 25.19 - JT, 25°, PL, SO, CN. 25.22 - BP, 0°, IR, RO, CY and shale gravel, CO, 2mm. 25.45 - BP, 0°, PL, RO, CN. 25.5 - BP, 0°, PL, RO, CY, VN. 25.63 - BP, 5°, PL, RO, CN. 25.7 - BP, 5°, PL, RO, CN. 25.81 - BP, 0°, UN, RO, sandstone gravel, CT. 25.86 - BP, 0°, UN, RO, sandstone gravel, CT. 26.0 - HB. 26.08 - BP, 0°, IR, RO, CY, CO. 26.12 - BP, 0°, PL, RO, CN. 26.74 - BP, 0°, PL, RO, CY, VN. 26.82 - BP, 0°, IR, RO, CY, CO. End of Borehole.
			14	22								
			13	23					D 0.34 A 0.81	56		
			12	24					D 0.1 A 0.73			
			11	25		INTERBEDDED SHALE (70%)/SANDSTONE (30%): Shale is dark grey; Sandstone is fine grained, pale grey, bedded at 0-5°.						
			10	26		SANDSTONE, fine to medium grained, pale grey, with carbonaceous laminations, bedded at 0-10°.			D 0.59 A 0.51			
			9	27		INTERBEDDED SANDSTONE (80%)/ SHALE (20%): Sandstone is fine to medium grained, pale grey; Shale is dark grey, bedded at 0-5°.			D 0.08 A 0.15	75		
			8	28		Target depth. BH110 terminated at 27m			D 0.08 A 0.66			
			7	29								
			6	30								

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Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cnr Pitt St & Reeve St
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333942.79E, 6247603.85N
Driller: SS
Logged: MB
RL Surface: 29.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT	Not Encountered					-	TOPSOIL/FILL: Silty SAND, fine to coarse grained, dark brown, with fine to coarse angular to subrounded sandstone and igneous gravel.		D - M	-	TOPSOIL/FILL
								0.0-1.0 DS>5kg			
						SP	SAND, fine to coarse grained, yellow brown.		M	L	MARINE/AEOLIAN
			29	1				SPT 2, 3, 4 N=7			
			28	2				1.5-2.5 DS>5kg			
			27	3				SPT 3, 4, 5 N=9			
							At 3.0m: yellow brown with orange and grey.				
								3.5-4.0 ES			
			26	4				SPT 3, 4, 4 N=8			
							At 4.4m: becoming pale yellow brown.				
			25	5				5.0-5.55 ES			
								SPT 3, 6, 8 N=14		MD	
			24	6		SC	Clayey SAND, fine to coarse grained, orange brown, low plasticity clay.				
						SC	Extremely Weathered Sandstone, recovered as Clayey SAND, fine to medium grained, pale grey, low plasticity clay.		D	D - VD	EXTREMELY WEATHERED MATERIAL
			23	7				SPT 5, 20, 2/20mm HB N=R			
						-	SANDSTONE, fine to medium grained, pale grey, highly weathered, inferred very low strength.		-	-	BEDROCK
							Borehole BH111 continued as cored hole				
			22	8							
			21	9							
			20	10							

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cnr Pitt St & Reeve St
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333942.79E, 6247603.85N
Driller: SS
Logged: MB
RL Surface: 29.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial O- Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30, 100, 300, 1000, 3000)	Additional Data
			29	1								
			28	2								
			27	3								
			26	4								
			25	5								
			24	6								
			23	7		Continued from non-cored borehole						
HQ3	0-10% Water Loss		22	8		SILTSTONE, grey and orange, with ironstaining, laminated at 0°.	HW		A 0.24	27		7.67 - BP, 0°, PL, SO, FE, SN. 7.95 - JT, 80°, PL, SO, CY, VN. 7.96 - JT, 80°, PL, SO, CY, VN. 8.0-8.05 - HB. 8.13 - EWS, CY, 10mm. 8.19 - HB. 8.2 - JT, 85°, PL, SO, CY, VN. 8.26 - JT, 45°, PL, SO, CY, VN. 8.53-8.74 - HB.
						Gravelly CLAY, low to medium plasticity, pale grey, fine to coarse angular to subangular siltstone gravel.	EW					
			21	9		SILTSTONE, grey and orange, with ironstaining, laminated at 0°. At 9.0m: becoming dark grey with orange.	HW		A 0.03	10		8.76 - JT, 90°, UN, SO, CY, VN. 8.82-8.96 - HB. 9.0 - DB. 9.03 - HB. 9.06 - HB. 9.1 - JT, 90°, PL, SO, FE, SN. 9.11-9.19 - HB. 9.2 - DB. 9.27-9.48 - HB. 9.51 - DB.
			20	10								

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cnr Pitt St & Reeve St
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333942.79E, 6247603.85N
Driller: SS
Logged: MB
RL Surface: 29.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, O- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
HQ3			19	11		Core Loss, 590mm thickness.	-					9.52 - DB. 9.56 - HB. 9.61 - JT, 90°, UN, SO, FE, SN. 10.0 - HB.
						SILTSTONE, grey and orange, with ironstaining, laminated at 0°.	HW			10		10.6 - EWS, CY, 30mm. 10.74 - BP, 10°, ST, SO, FE, SN. 10.84 - HB. 10.92 - BP, 0°, PL, SO, FE, SN. 10.93 - HB. 10.94 - HB. 10.95 - EWS, CY, 50mm. 11.0 - HB. 11.07 - JT, 50°, PL, SO, CY, CO. 11.08 - JT, 90°, UN, SO, FE, SN. 11.16 - CS, gravel, 30mm. 11.45 - HB. 11.6 - BP, 10°, ST, SO, CN.
			18	12		Core Loss, 200mm thickness.	-					12.0 - HB.
						Gravelly CLAY, low to medium plasticity, dark grey, fine to coarse angular to subangular siltstone gravel.	EW					12.23 - JT, 75°, PL, SO, CN. 12.26 - DB.
						SILTSTONE, dark grey, laminated at 0-10°, interlaminated with fine grained sandstone.	MW					12.33 - JT, 35°, PL, SO, CN. 12.38 - DB. 12.4 - JT, 45°, PL, SO, CN. 12.45 - JT, 45°, PL, SO, CN. 12.47 - HB.
			17	13					A 0.06	15		12.0 - DB. 12.56 - HB. 12.57 - JT, 60°, PL, SO, CN. 12.59 - JT, 60°, CU, SO, CN. 12.61 - HB. 12.64 - HB. 12.67 - JT, 60°, PL, SO, CN. 12.7 - HB.
			16	14			HW					12.71 - DB. 12.79 - DB. 12.87 - BP, 5°, CU, SO, CY, CO. 12.93 - BP, 5°, CU, SO, CN. 12.95 - BP, 20°, PL, SO, CN. 13.0 - HB.
			15	15			SW - FR		D A 0.29 0.3			13.18 - BP, 25°, PL, SO, CN. 13.2 - HB. 13.26 - HB. 13.28 - JT, 90°, UN, SO, CN. 13.29 - HB. 13.3-13.35 - HB. 13.45 - BP, 15°, PL, SO, CY, VN. 13.48-13.61 - HB. 13.63 - JT, 90°, UN, SO, CN. 13.63 - BP, 20°, PL, SO, CN. 13.64-13.75 - HB.
			14	16					D A 0.38 0.76	55		13.78 - EWS, CY, 30mm. 13.83-13.93 - HB. 14.22 - JT, 90°, UN, SO, CN. 14.61 - HB. 14.62 - JT, 45°, PL, SO, CN. 14.69 - BP, 5°, PL, SO, CN. 14.72 - JT, 45°, PL, SO, CN. 14.74 - BP, 5°, PL, SO, CN.
						GRAVEL, fine to coarse, angular shale, with clay	EW					14.78 - JT, 80°, PL, SO, CN.
			13	17		SILTSTONE, dark grey, laminated at 0-10°, interlaminated with fine grained sandstone.	SW - FR		D A 0.31 0.85			14.81 - DB. 14.85 - BP, 0°, PL, SO, CN. 14.87 - BP, 0°, PL, SO, CN. 14.89 - BP, 0°, PL, SO, CN. 14.96 - DB. 15.0 - DB.
							FR			88		15.06-15.1 - HB. 15.2 - DB. 15.4 - JT, 80°, PL, SO, CN. 15.45 - EWS, gravels, 30mm. 15.52 - HB.
			12	18					D A 0.54 0.79			15.63 - JT, 50°, PL, SO, CY, VN. 15.63 - CS, gravels, 90mm. 15.78 - HB. 15.8 - JT, 90°, CU, SO, CN. 15.81 - HB. 15.82 - HB. 15.95 - DB.
			11	19					D A 0.31 0.62	78		16.0-16.35 - HB. 16.36 - JT, 50°, PL, SO, CN. 16.37 - HB. 16.42 - DB. 16.47 - HB. 16.51-16.79 - HB. 16.74 - JT, 90°, UN, SO, CN. 16.86 - DB.
			10	20					D A 0.52 0.59			16.97 - HB. 17.0-17.17 - DB.

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cnr Pitt St & Reeve St
Started: 18/03/2025
Finished: 18/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333942.79E, 6247603.85N
Driller: SS
Logged: MB
RL Surface: 29.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial O- Diametral EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
HQ3			9	21		SILTSTONE, dark grey, laminated at 0-10°, interlaminated with fine grained sandstone. *(continued)* At 20.24m: becoming grey.	FR		D 0.33 A 0.58	78		17.3 - JT, 90°, UN, SO, CN. 17.87 - DB. 17.98 - HB. 18.0 - DB. 18.15 - DB. 19.0 - HB. 19.06 - JT, 45°, PL, SO, CN. 19.21 - JT, 80°, PL, SO, CN. 19.47 - JT, 5°, PL, SO, CN. 19.75 - CS, gravels, 20mm. 19.83-19.91 - HB. 19.92 - HB. 19.93 - JT, 45°, PL, SO, CN. 20.06 - BP, 15°, PL, SO, CN. 20.11 - BP, 15°, PL, SO, CN. 20.13 - HB. 20.14 - BP, 15°, PL, SO, CN. 20.18 - CS, gravels, 20mm. 20.24 - BP, 10°, CU, SO, CN. 20.35 - CS, gravels, 20mm. 20.52 - CS, gravels, 20mm. 20.79 - JT, 90°, CU, SO, CN. 20.87 - JT, 60°, PL, SO, CN. 20.92 - BP, 15°, PL, SO, CN. 21.0 - HB. 21.1 - DB. End of Borehole.
			8	22		Target depth. BH111 terminated at 21.1m						
			7	23								
			6	24								
			5	25								
			4	26								
			3	27								
			2	28								
			1	29								
			0	30								

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BH No: BH115
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Job No: 18639

Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: West St, Waterloo NSW
Started: 24/03/2025
Finished: 24/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333886.84E, 6247584.73N
Driller: SS
Logged: MB
RL Surface: 22.35m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT	Not Encountered		22			-	Asphalt, 30mm thickness.		-	-	PAVEMENT
						-	FILL: Silty SAND, fine to medium grained, dark grey, with fine to coarse angular to subrounded igneous gravel, trace glass fragments, appears poorly to moderately compacted.	0.0-0.5 DS<5kg	D - M	-	FILL
						SP	SAND, fine to coarse grained, pale grey and grey.	0.5-1.0 DS<5kg		L - MD	MARINE/AEOLIAN
				1				SPT 5, 5, 5 N=10			
			21			SP	SAND, fine to coarse grained, orange brown, trace clay.		M		
				2				1.5-2.5 ES			
			20					SPT 3, 4, 7 N=11			
				3		CI-CH	CLAY, medium to high plasticity, pale grey mottled red, with fine to medium angular to subangular ironstone gravel.		MC < PL	VSt - H	RESIDUAL
			19					3.0-4.0 ES/DS<5kg			
				4				SPT 5, 14, 17/100mm HB N=R			
			18								
				5							
			17				At 5.5m: with fine to coarse angular to subangular ironstone and siltstone gravel.				
				6							
			16								
				7							
			15								
				8		-	Extremely Weathered Siltstone recovered as Gravelly CLAY, low to medium plasticity, dark grey, fine to coarse angular to subangular siltstone gravel.		MC << PL	H	EXTREMELY WEATHERED MATERIAL
			14								
			13	9			Borehole BH115 continued as cored hole				
				10							

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: West St, Waterloo NSW
Started: 24/03/2025
Finished: 24/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333886.84E, 6247584.73N
Driller: SS
Logged: MB
RL Surface: 22.35m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, ○- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
			22	0								
				1								
			21									
				2								
			20									
				3								
			19									
				4								
			18									
				5								
			17									
				6								
			16									
				7								
			15									
				8								
			14									
						Continued from non-cored borehole						
HQ3	0-10% Loss		13	9		SHALE, dark grey and yellow brown, with ironstaining and carbonaceous laminations, laminations at 0-5°.	HW		D 0.91 A 0.15	0 72		8.73 - HB. 8.74 - HB. 8.81 - DB. 8.82 - BP, 10°, CU, SO, FE, SN. 8.84 - JT, 45°, PL, SO, FE, SN. 8.86 - BP, 10°, PL, SO, FE, SN. 8.9 - BP, 5°, UN, SO, SE, SN. 8.91-8.94 - DB. 9.0 - HB. 9.03 - DB. 9.23 - DB.
				10			MW - SW					

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: West St, Waterloo NSW
Started: 24/03/2025
Finished: 24/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333886.84E, 6247584.73N
Driller: SS
Logged: MB
RL Surface: 22.35m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, ○- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
HQ3			12	11		SHALE, dark grey and yellow brown, with ironstaining and carbonaceous laminations, laminations at 0-5°. *(continued)*	MW - SW		D A 0.53 0.4	72		9.33 - BP, 5, PL, SO, FE, SN. 9.38-9.44 - DB. 9.48 - BP, 15°, PL, SO, FE, SN. 9.5-10.0 - DB. 10.14-10.27 - DB. 10.28 - JT, 90°, PL, SO, FE, SN. 10.29 - DB. 10.35 - DB. 10.46 - CS, shale gravel, 10mm.
			11	12					D A 0.28 0.71			10.55 - DB. 10.63 - HB. 10.65 - DB. 10.66 - JT, 90°, PL, SO, CN. 10.68 -DB. 10.69 - DB. 10.72-10.82 - HB. 10.89 - DB. 11.0 - HB. 11.02 - HB. 11.1 - JT, 60°, PL, SO, CN.
			10	13								11.14 - DB. 11.2 - JT, 50°, PL, SO, FE, CO. 11.25 - DB. 11.32 - DB. 11.33 - BP, 15°, PL, SO, CN. 11.39 - DB. 11.4 - BP, 15°, PL, SO, CN. 11.5 - DB. 11.53 - BP, 15°, PL, SO, CN.
			9	14		LAMINITE: SANDSTONE (70%)/ SHALE (30%), Sandstone is fine to medium grained, grey; Shale is dark grey.	FR		D A 0.17 0.42	81		11.62 - JT, 60°, PL, SO, CN. 11.67 - JT, 60°, PL, SO, CN. 11.77 - DB. 12.0 - HB. 12.17-12.26 - DB. 12.27 - BP, 15°, PL, SO, CN. 12.35 - BP, 15°, PL, SO, FE, SN. 12.39 - BP, 5°, UN, SO, FE, SN. 12.43 - BP, 5°, PL, SO, CN. 12.44-12.65 - DB. 12.78 - HB. 12.79 - JT, 60°, PL, SO, FE, SN.
			8	15		SANDSTONE, fine to medium grained, grey, with carbonaceous laminations, bedded at 0-5°.						12.8 - HB. 12.84 - DB. 13.0 - HB. 13.06 - HB. 13.21 - DB. 13.32 - BP, 10°, PL, SO, CN.
			7	16					D A 0.92 0.97			13.52 - BP, 0°, PL, SO, CN. 13.56 - BP, 5°, PL, SO, CN. 13.6 - HB. 13.65 - DB. 13.66 - DB. 13.73 - BP, 0°, PL, RO, CN. 13.83 - BP, 5°, UN, RO, CN.
			6	17					D A 0.08 0.52	100		13.94-14.0 - HB. 14.09 - BP, 0°, PL, RO, CN. 14.22 - EWS, CY, 10mm. 14.32 - BP, 0°, PL, RO, CN. 14.4 - HB. 14.49 - BP, 0°, PL, RO, CN. 14.56 - BP, 0°, ST, RO, CN. 14.76 - BP, 0°, UN, RO, X, SN.
			5	18		SANDSTONE, fine to coarse grained, grey, with carbonaceous laminations, distinctly bedded at 0-20°.			D A 1.08 0.86			14.85-15.0 - DB. 15.03-15.24 - DB. 15.3 - EWS, CY, 10mm. 15.32-15.57 - DB. 15.63 - BP, 10°, ST, RO, CN. 15.72-15.98 - DB. 16.0-16.23 - HB. 16.3 - DB. 16.36 - HB. 16.9 - JT, 45°, CU, RO, CN.
			4	19					D A 1.14 1.13	100		16.62 - BP, 0°, PL, RO, X, SN. 16.74 - BP, 0°, PL, RO, X, SN. 17.0 - HB. 17.1 - BP, 5°, PL, RO, CY, VN. 17.2 - BP, 0°, UN, RO, X, SN. 17.56 - BP, 10°, PL, RO, X, SN. 17.9 - DB. 18.0 - DB.
			3	20					D A 0.91 0.29			18.71 - BP, 0°, PL, RO, CY, CO. 18.98 - HB. 19.0 - HB. 19.3 - BP, 5°, PL, RO, X, SN. 19.38 - HB. 19.97 - HB.

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: West St, Waterloo NSW
Started: 24/03/2025
Finished: 24/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333886.84E, 6247584.73N
Driller: SS
Logged: MB
RL Surface: 22.35m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial O- Diametral EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH / $Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
			2	21		Target depth. BH115 terminated at 20m					20.0 - HB. End of Borehole.
			1	22							
			0	23							
			-1	24							
			-2	25							
			-3	26							
			-4	27							
			-5	28							
			-6	29							
			-7	30							

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BH No: BH121
PAGE 1 OF 4
Job No: 18639

Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 21/03/2025
Finished: 21/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333728.94E, 6247406.37N
Driller: SS
Logged: MB
RL Surface: 16.40m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT			16			-	TOPSOIL/FILL: Silty SAND, fine to medium grained, dark brown, with fine subangular to subrounded igneous gravel, trace foreign material (concrete), trace rootlets.	0.0-0.5 DS<5kg	D	-	TOPSOIL/FILL
				1		SP	SAND, fine to coarse grained, yellow orange, poorly graded.	0.5-1.0 DS<5kg	D - M	L	MARINE/AEOLIAN
			15					SPT 4, 4, 3 N=7			
						SP	SAND, fine to coarse grained, pale grey, trace fine subrounded ironstone gravel.		M		
				2				1.5-2.5 DS<5kg/ ES			
			14				At 2.5m: becoming grey.	SPT 2, 4, 5 N=9			
				3			At 3.2m: becoming dark grey.	3.0-4.0 DS<5kg			
			13							MD	
				4			At 4.2m: becoming grey brown.	SPT 7, 8, 11 N=19			
			12				At 4.4m: becoming pale grey.				
				5				4.5-5.5 DS<5kg			
			11					SPT 2, 10, 12 N=22			
	▼ GW seepage at 5.8m			6			At 5.8m: becoming grey.		M		
			10								
				7				SPT 4, 8, 16 N=24			
			9			SC	Clayey SAND, fine to coarse grained, grey, low to medium plasticity clay.				
				8				7.5-8.0 ES			
			8								
WB						CI	Extremely Weathered Siltstone recovered as CLAY, high plasticity, grey, with fine to coarse angular to subangular siltsotne gravel.	SPT 4, 17, 11/50mm PP=340, 340, 280	MC << PL	H	EXTREMELY WEATHERED MATERIAL
				9			Borehole BH121 continued as cored hole				
			7								
				10							

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 21/03/2025
Finished: 21/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333728.94E, 6247406.37N
Driller: SS
Logged: MB
RL Surface: 16.40m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, O- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm 30 100 300 1000 3000	Additional Data
			16	1								
			15	2								
			14	3								
			13	4								
			12	5								
			11	6								
			10	7								
			9	8								
			8			Continued from non-cored borehole						
HQ3	0-10% Water Loss		7	9		LAMINITE: SILTSTONE (80%)/SANDSTONE(20%); Siltstone is dark grey; sandstone is fine grained, pale grey; laminated at 0-5°.	MW		D A 0.05 0.14	100		8.8 - JT, 45°, PL, SO, CY, VNR. 8.81 - HB. 8.83 - HB. 8.84-9.0 - DB. 9.05-9.42 - DB.
				10					D A	47		9.48 - BP, 10°, PL, SO, CO. 9.51 - JT, 90°, ST, SO, CN. 9.52-9.56 - DB. 9.63 - JT, 90°, ST, SO, CN. 9.7 - HB.

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 21/03/2025
Finished: 21/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333728.94E, 6247406.37N
Driller: SS
Logged: MB
RL Surface: 16.40m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength (●- Axial, ○- Diametral) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30 100 300 1000 3000)	Additional Data
HQ3			6	11		LAMINITE: SILTSTONE (80%)/SANDSTONE(20%); Siltstone is dark grey; sandstone is fine grained, pale grey; laminated at 0-5°. *(continued)*	MW		0.1 0.04			9.75 - DB. 9.81 - BP, 0°, PL, SO, VN. 9.82 - DB. 9.86 - DB. 9.92 - JT, 90°, CU, SO, SN. 9.98 - DB. 10.0 - HB. 10.05-10.29 - DB.
						At 10.54m: trace iron staining.	SW					
			5						D A 0.1 0.15	47		10.4 - JT, 75°, PL, SO, SN. 10.44 - JT, 60°, PL, SO, CN. 10.47-10.5 - EWS, CY and siltstone gravels, 30mm. 10.54 - JT, 60°, PL, SO, CN. 10.55 - HB. 10.71-10.9 - DB. 11.0-11.09 - HB.
				12					D A 0.09 0.12			11.12 - JT, 80°, PL, SO, CN. 11.17-11.19 - EWS, CY, 20mm.
			4	13		SILTSTONE, dark grey, trace fine grained sandstone laminations, trace iron staining, laminated at 0°.	FR		D A 0.05 0.09			11.31 - DB. 11.32 - HB. 11.33 - JT, 25°, PL, SO, CN. 11.36 - HB. 11.4-17.3 - JT, 90°, UN, SO, CN. 11.47 - HB. 11.61 - BP, 15°, PL, SO, CO. 11.64 - DB. 11.65 - BP, 15°, PL, SO, CN. 11.66 - DB.
			3	14		GRAVEL, fine to coarse, angular shale, dark grey.	HW/MW			3		11.77-11.78 - EWS, siltstone gravels, 10mm. 11.8 - HB. 11.81-14 - JT set, 90°, UN, SO, CN. 11.82-11.87 - HB. 11.96 - JT, 90°, ST, SO, CN. 11.98 - DB.
			2	15		Core Loss, 100mm thickness.	-					12.08 - JT, 80°, PL, SO, CN. 12.12 - BP, 0°, PL, SO, CN. 12.16 - JT, 70°, PL, SO, CN. 12.28 - JT, 60°, PL, SO, CN. 12.30 - BP, 0°, PL, SO, CY, SN. 12.34-12.42 - DB.
			1	16		SILTSTONE, dark grey, trace fine grained sandstone laminations, trace iron staining, laminated at 0°.	FR		D A 0.05 0.06	8		12.43 - BP, 0°, PL, SO, CN. 12.52 - BP, 0°, PL, SO, CN. 12.53-12.55 - CS, siltstone gravel, 20mm. 12.58 - JT, 70°, PL, SO, CN. 12.63-12.68 - CS, siltstone gravel, 50mm. 12.72 - DB. 12.76 - JT, 80°, CU, SO, CN. 12.83 - JT, 60°, PL, RO, CY and siltstone gravel, CT. 12.93 - JT, 70°, PL, SO, CN. 13.0 - HB. 15.03 - HB. 15.07 - DB. 15.15 - DB. 15.21-15.23 - CS, shale gravels, 20mm.
			0	17		GRAVEL, fine to coarse, angular shale.			D 0.03			15.34-15.37 - EWS, shale gravels and CY, 30mm. 15.4 - JT, 90°, ST, SO, CN. 15.42-15.44 - HB. 15.5 - BP, 10°, PL, SO, VN. 15.53 - HB. 15.54 - JT, 80°, PL, SO, CN. 15.56 - HB. 15.63-15.65 - EWS, CY, 20mm. 15.67 - DB. 15.73 - HB.
			-1	18		SILTSTONE, dark grey, trace fine grained sandstone laminations, trace iron staining, laminated at 0°.			D A 0.36 0.22	97		15.8 - JT, 90°, ST, RO, CN. 15.92 - JT, 80-90°, PL, SO, CN. 16.0 - HB. 16.05 - JT, 60°, CO, SO, CN. 16.15 - JT, 70°, PL, SO, CN.
			-2	19		SANDSTONE, fine to medium grained, grey, indistinctly bedded at 0-10°.			D A 0.22 0.21	99		16.2 - BP, 0°, IR, RO, CN. 16.23 - BP, 0°, IR, RO, CN. 16.26 - DB. 16.29-16.43 - BP, 0°, PL , SO, CN, 10-20mm spacing. 16.48 - JT, 60°, PL, SO, SN. 16.56-16.8 - BP, 0-10°, IR, RO, CN, 20-40mm spacing. 17.48-17.53 - HB.
			-3	20		SANDSTONE, fine to coarse grained, pale grey and grey, bedded at 0-15°, with carbonaceous laminations.			D A			17.58 - BP, 0°, PL, SO, VN. 17.72 - DB. 17.74-17.75 - EWS, shale gravels, 10mm. 17.87 - DB. 17.97 - DB. 18.0 - HB. 18.11 - HB. 18.15 - DB. 18.46 - BP, 0°, PL, RO, VN.

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Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 21/03/2025
Finished: 21/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333728.94E, 6247406.37N
Driller: SS
Logged: MB
RL Surface: 16.40m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial O- Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30, 100, 300, 1000, 3000)	Additional Data
HQ3			-4	21		SANDSTONE, fine to coarse grained, pale grey and grey, bedded at 0-15°, with carbonaceous laminations. *(continued)*	FR		0.08 0.07 D A 0.12 0.29	99		19.0 - HB. 19.12 - BP, 10°, PL, RO, SN. 19.51-19.53 - EWS, CY, 20mm. 20.0 - HB. 20.17-20.18 - EWS, CY, 10mm. 20.5-21.0 - HB. 21.04 - BP, 10°, UN, RO, SN.
			-5	22		Target depth. BH121 terminated at 21.11m						End of Borehole.
			-6	23								
			-7	24								
			-8	25								
			-9	26								
			-10	27								
			-11	28								
			-12	29								
			-13	30								

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BH No: BH124
Sheet: 1 of 2
Job No: 18639

Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 28/03/2025
Finished: 28/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333702.48E, 6247515.7N
Driller: SS
Logged: WS
RL Surface: 15.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT						-	Concrete, 120mm thickness.		-	-	PAVEMENT
						-	FILL: SAND, fine grained, dark brown, trace conglomerate, coal fragments, appears moderately compacted.	0.3-0.5	M	-	FILL
			15	1				0.8-1.0			
							At 1.2m: becoming pale grey.	SPT 2, 2, 2 N=4			
							At 1.4m: becoming brown.				
			14	2		SP	SAND, fine grained, orange brown.	1.7-1.8		MD	MARINE/AEOLIAN
							At 2.2m: becoming yellow brown.	2.2-2.5			
			13	3			At 2.5m: becoming yellow.	SPT 2, 5, 7 N=12			
			12	4			At 3.8m: becoming yellow brown orange.	3.8-4.0			
								SPT 10, 9, 6 N=15			
			11	5			At 5.0m: becoming dark grey, yellow brown.				
							At 5.5m: becoming dark grey.	SPT 7, 16, 23 N=39		D	
	▼ GW at 6.0m		10	6							
			9	7				6.5-7.0			
						CH	Silty CLAY, high plasticity, grey.	SPT 2, 3, 5 N=8	MC > PL	St	RESIDUAL
			8	8							
							At 8.5m: becoming red brown grey.	SPT 3, 6, 9 N=15			
			7	9			At 9.2m: becoming red grey yellow, trace fine to medium angular ironstone gravel.				
			6	10							

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BH No: BH124
Sheet: 2 of 2
Job No: 18639

Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 28/03/2025
Finished: 28/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333702.48E, 6247515.7N
Driller: SS
Logged: WS
RL Surface: 15.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
ADT			5	11		CH	Silty CLAY, high plasticity, grey. *(continued)*	SPT 9, 12, 12 N=24	MC > PL	VSt - H	
			4	12				SPT 9, 14, 15/140mm DB N=R			
			3	13				SPT 2, 4, 9 N=13		St	
			2	14							
			1	15							
			0	16		-	Extremely Weathered Shale, recovered as CLAY, medium plasticity, grey.	SPT 12, 24/150mm N=R	MC < PL	H	EXTREMELY WEATHERED MATERIAL
			-1	17			Target depth. Borehole BH124 terminated at 16.3m				
			-2	18							
			-3	19							
			-4	20							

1.2 - UPDATED NON CORED HOLE 18639.GPJ GINT STD AUSTRALIA.GDT 5/5/25

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BH No: BH124
Sheet: 1 of 2
Job No: 18639

Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 28/03/2025
Finished: 28/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333702.48E, 6247515.7N
Driller: SS
Logged: WS
RL Surface: 15.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial ○- Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30, 100, 300, 1000, 3000)	Additional Data
ADT	GW at 6.0m		15	1		Concrete, 120mm thickness.						
						FILL: SAND, fine grained, dark brown, trace conglomerate, coal fragments, appears moderately compacted.						
						At 1.2m: becoming pale grey.						
						At 1.4m: becoming brown.						
			14	2		SAND, fine grained, orange brown.						
						At 2.2m: becoming yellow brown.						
						At 2.5m: becoming yellow.						
			13	3								
			12	4		At 3.8m: becoming yellow brown orange.						
			11	5		At 5.0m: becoming dark grey, yellow brown.						
						At 5.5m: becoming dark grey.						
			10	6								
			9	7		Silty CLAY, high plasticity, grey.						
			8	8		At 8.5m: becoming red brown grey.						
			7	9		At 9.2m: becoming red grey yellow, trace fine to medium angular ironstone gravel.						
			6	10								

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BH No: BH124
Sheet: 2 of 2
Job No: 18639

Cored Borehole Log

Client: Stockland Development Pty Ltd
Project: Waterloo South Estate Redevelopment
Location: Waterloo, NSW
Hole Location: Cope St, Waterloo NSW
Started: 28/03/2025
Finished: 28/03/2025
Borehole Size: 110 mm

Rig Type: Massenza MI3
Hole Coordinates 333702.48E, 6247515.7N
Driller: SS
Logged: WS
RL Surface: 15.85m
Contractor: Stratacore
Bearing: ---
Checked: RM/GG

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Material Description	Weathering	Estimated Strength ●- Axial ○- Diametral (EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	$Is_{(50)}$ MPa D- diametral A- axial	RQD %	Defect Spacing mm (30, 100, 300, 1000, 3000)	Additional Data
ADT			5	11		Silty CLAY, high plasticity, grey. *(continued)*						
			4	12								
			3	13								
			2	14								
			1	15								
			0	16								
						Extremely Weathered Shale, recovered as CLAY, medium plasticity, grey.						
			-1	17		Target depth. BH124 terminated at 16.3m						
			-2	18								
			-3	19								
			-4	20								

WELL CONSTRUCTION LOG

CLIENT: New South Wales Land and Housing Corporation
PROJECT: Proposed Residential Development
LOCATION: George Street, Waterloo

SURFACE LEVEL: 15.8 AHD
EASTING: 333635
NORTHING: 6247755.7
DIP/AZIMUTH: 90°/--

BORE No: BH1
PROJECT No: 215694.00
DATE: 10-10-2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.04	ASPHALTIC CONCRETE		A/E	0.1				Gatic Cover Top Cap
	0.3	FILL/Sandy GRAVEL		A/E	0.2 0.4				
	1.0	FILL/SAND		A/E	0.5				
		SAND SP: fine to medium, yellow and brown, trace clay, moist, loose, alluvial		S	0.9 1.0		2,2,3 N = 5		
				A/E	1.45				
				A/E	1.5 1.6				
	2.5			A	1.9				
		Clayey SAND SC: fine to medium, orange and pale grey, wet, loose, alluvial		S	2.0 2.4 2.5 2.95		3,4,6 N = 10		Gravel (0.10-6.00m)
	4.0	CLAY CH: high plasticity, pale grey mottled orange, w>PL, very stiff, residual		S	4.0 4.45		5,10,14 N = 24		Solid PVC Casing (0.10-7.50m)
		Below 5.5m: pale grey, hard, grading into weathered siltstone		S	5.5 5.95		16,16,19 N = 35		
	6.6	SILTSTONE: pale grey and orange-brown, very low strength, highly weathered with some extremely weathered bands, fractured, Ashfield Shale		C	6.6 7.7				Bentonite Plug (6.00-7.00m)
	8.7	SILTSTONE: dark grey and grey, very low and low strength, highly weathered, fractured, Ashfield Shale		C	8.7				
	9.31 9.63	SILTSTONE: dark grey, medium strength, fresh, fractured and slightly fractured, Ashfield Shale		C	9.58 10.5				
				C	11.28				Gravel (7.00-16.00m)
				C	12.8				
				C	13.7				Slotted PVC Pipe (7.50-16.00m)
				C	14.62				
	15.77			C					
	16.03	SANDSTONE: fine to medium grained Bore discontinued at 16.0m Target depth reached			16.03				Bottom Cap

RIG: MD300 **DRILLER:** Traccess Drilling **LOGGED:** AN **CASING:** HW to 6.00m

TYPE OF BORING: Diatube to 0.04m, Solid Flight Auger (TC Bit) to 3.50m, Rotary (Wash Bore) to 6.60m, NMLC Coring to 16.00m

WATER OBSERVATIONS: Free groundwater observed at 1.8 m

REMARKS: Groundwater monitoring well installed upon completion: Blank PVC Casing (0.1-7.5m), Slotted PVC Casing (7.5-16.0m), Gravel (0.1-6.0m and 7.0-16.0m), Bentonite Plug (6.0-7.0m), Gatic installed flush with surface level

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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WELL CONSTRUCTION LOG

CLIENT: New South Wales Land and Housing Corporation
PROJECT: Proposed Residential Development
LOCATION: George Street, Waterloo

SURFACE LEVEL: 17.1 AHD
EASTING: 333700.9
NORTHING: 6247786.9
DIP/AZIMUTH: 90°/--

BORE No: BH2
PROJECT No: 215694.00
DATE: 12 - 13/10/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
17	0.15	CONCRETE SLAB: 150mm thick		A/E	0.15				Gatic Cover Top Cap
	0.5	FILL/Silty SAND		A/E	0.25 0.5				
16	1.0	FILL/ Sandy CLAY		A/E	0.6 0.9				Bentonite Plug (6.00-7.00m) Solid PVC Casing (0.10-1.70m)
	1.5	CLAY CL-CI: low to medium plasticity, orange-brown and red, with sand, w<PL, very stiff, alluvial/possibly residual		U_{75} S	1.0 1.4		3,4,7 N = 11		
15		CLAY CI-CH: medium to high plasticity, pale grey mottled orange, trace fine ironstone gravel, w~PL, stiff, residual		A	1.85 2.0 2.1				
14	3			S	3.0 3.45		2,10,14 N = 24		Gravel (1.30-4.80m)
13	4.3								Slotted PVC Pipe (1.70-4.50m) Bottom Cap
	4.57	SILTSTONE: inferred low strength, pale to dark grey		S	4.5		30/70 refusal		
12	5	INTERLAMINATED SILTSTONE AND SANDSTONE: 70-80% dark grey siltstone interlaminated with 20-30% pale grey, fine grained sandstone		C	4.57 4.92				
11	6.05	SILTSTONE: dark grey, 5-10% pale grey, fine grained sandstone laminations, medium strength, fresh, slightly fractured and unbroken		C					
10	7								
9	8			C	7.89				
8	9								
7	10			C	9.35				Bentonite (4.80-15.44m)
6	11.12	SILTSTONE: dark grey, high strength, fresh, slightly fractured, Ashfield Shale		C	10.9				
5	12								
4	13			C	12.35				
3	14								
2	15			C	13.92				
1	15.44	Bore discontinued at 15.44m Target depth reached			15.44				
0	16								
-1	17								
-2	18								
	19								

RIG: D4TAPG **DRILLER:** Macquarie Geotech **LOGGED:** HS **CASING:** HWT to 3.50m

TYPE OF BORING: Diatube to 0.15m, Solid Flight Auger (TC Bit) to 4.57m, HQ Coring to 15.44m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Groundwater monitoring well installed upon completion: Blank PVC Casing (0.1-1.7m), Slotted PVC Casing (1.7-4.5m), Bentonite Plug (0.1-1.3m), Gravel (1.3-4.8m), Bentonite (4.8-15.44m), Gatic installed flush with surface level

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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WELL CONSTRUCTION LOG

CLIENT: New South Wales Land and Housing Corporation
PROJECT: Proposed Residential Development
LOCATION: George Street, Waterloo

SURFACE LEVEL: 15.4 AHD
EASTING: 333734
NORTHING: 6247622.2
DIP/AZIMUTH: 90°/--

BORE No: BH4
PROJECT No: 215694.00
DATE: 11-10-2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.13	CONCRETE SLAB: 130mm thick		A/E	0.1				Gatic Cover
	0.3	FILL/Sandy GRAVEL		A/E	0.2 0.4				Top Cap Bentonite Plug (6.00-7.00m)
	0.8	CLAY CL-CI: low to medium plasticity		A/E	0.5				
	1.0	Sandy CLAY CL-CI: low to medium plasticity		A/E S	0.9 1.0		4,6,6 N = 12		Solid PVC Casing (0.10-1.70m)
	1.5	Clayey SAND SC: fine to medium grained		A/E	1.45				
	2.3	SAND SP-SC: fine to medium, red-brown, with clay, wet, medium dense, alluvial		A/E	1.5 1.6 1.9				
	2.5	Sandy CLAY CL-CI: low to medium plasticity		S	2.0 2.5		2,4,5 N = 9		
		CLAY CI-CH: medium to high plasticity, pale grey, w~PL, stiff, residual/possibly alluvial		U_{75}	2.95 3.0 3.4				Gravel (1.30-4.80m)
	4.0	CLAY CI-CH: medium to high plasticity, pale grey mottled red-brown, w<PL, very stiff to hard, residual		S	4.0 4.45		11,13,18 N = 31		Slotted PVC Pipe (1.50-6.00m)
				S	5.5 5.77		14,30/120 refusal		
	5.9	Silty CLAY CI: medium plasticity, pale grey and brown, hard			5.9				Bottom Cap
	6.3	SILTSTONE: pale grey and brown, very low strength		C					
	7.15	SILTSTONE: dark grey and brown, low and medium strength, Ashfield Shale		C	7.15				
				C	9.26				
	10.1	SILTSTONE: dark grey, medium and high strength, Ashfield Shale		C	12.19				Bentonite (6.50-16.28m)
				C	15.16				
	16.28	Bore discontinued at 16.28m Target depth reached			16.28				

RIG: MD300 **DRILLER:** Traccess Drilling **LOGGED:** AN **CASING:** HW to 5.90m

TYPE OF BORING: Diatube to 0.13m, Solid Flight Auger (TC Bit) to 5.90m, NMLC Coring to 16.28m

WATER OBSERVATIONS: Free groundwater observed at 2.6 m

REMARKS: Groundwater monitoring well installed upon completion: Blank PVC Casing (0.1-1.5m), Slotted PVC Casing (1.5-6.0m), Bentonite Plug (0.1-1.0m), Gravel (1.0-6.5m), Bentonite (6.5-16.28m), Gatic installed flush with surface level

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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