12 Mars Road, Lane Cove West, NSW 2066

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Remedial Action Plan

Document Information

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12 Mars Road, Lane Cove West, NSW 2066

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Senversa acknowledges the traditional custodians of the land on which this work was created and pay our respect to Elders past and present.

Executive Summary

Introduction

This remedial action plan (RAP) has been prepared by Senversa Pty Ltd (Senversa) to accompany a State Significant Development Application (SSDA) for the construction and ongoing operation of a data centre facility at 12 Mars Road, Lane Cove West in the Lane Cove Government Area (LGA). The site is legally described as Lot 22 in Deposited Plan 732062.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the Project Mars Data Centre Project (SSD-82052708) dated 10th April 2025.

The site location is indicated on **Figure 1**.

Context

Senversa conducted a Detailed Site Investigation (DSI), which revealed that the site as predominantly bushland with unsealed roads up until the early 1950s. Aerial imagery showed large sheds and industrial buildings present from the 1950s to 1970s. In 1975, the site was occupied by the Kalamazoo Centre, focused on office equipment manufacturing and distribution. Other uses have included data processing and printing equipment, wine and spirit merchants and automotive services.

Senversa understands that GPSA is proposing to redevelop the site into a 90-megavolt ampere (MVA) (n-1) data centre, as per proposed in the development designs in **Appendix A**. The redevelopment project is designated State Significant Development.

Investigations at the site identified contamination and recommended preparation of an RAP to address data gaps, manage identified issues to make the site suitable for the proposed development.

The need to remediate arises from the presence of fill material across the site. While not all fill material is contaminated, all fill material should be considered potentially impacted by asbestos unless assessed otherwise.

Objective

The remedial objectives are:

- To derive a plan to make the site suitable for ongoing commercial/industrial land use.
- This will be achieved by mitigating potential risks to human health and managing potential environmental impacts during the remedial works, including meeting SSD conditions of approval.

Remedial Strategy

A remedial options assessment was undertaken, and the preferred strategy developed that comprised the following key components:

1. *In-situ* containment of contaminated soils. This includes leaving undisturbed materials under existing building slabs and pavement to be retained, and capping other contaminated soils via new building slabs, pavement or clean soils and a marker layer.
2. Use of suitable site soils or imported media in open space landscaping areas.
3. Passive management under a long-term environmental management plan (LTEMP).

The aim is that no actions would be needed for normal site use by workers, visitors and landscaping maintenance workers.

Conclusion

Subject to the suitable implementation of the measures described in this RAP, it is concluded that the site can be made suitable for the intended commercial/industrial use and that the risks to the environment can be appropriately protected during the remediation works. Ongoing passive management of certain intrusive works into residual contaminated soils and impacted groundwater under building slabs, pavement and a marker layer will be required via appropriate implementation of a passive LTEMP.

Contents

Tables in Text

Appendices

List of Acronyms

Acronym	Definition
ABC	Ambient Background Concentration
ACL	Added Contaminant Limit
ACM	Asbestos Containing Material
AMP	Asbestos Management Plan
ANZG	Australian and New Zealand Guidelines
AS	Australian Standard
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure
ASS	Acid Sulfate Soil
ANZECC	Australian and New Zealand Environment and Conservation Council
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CEC	Cation Exchange Capacity
CEMP	Construction Environmental Management Plan
CEnvP SC	Certified Environmental Practitioner (Site Contamination)
CPSS CSAM	Certified Professional Soil Scientist Contaminated Site Assessment and Management
COC	Chain of Custody
CoPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DEC	Department of Environment and Conservation
DGV	Default Guideline Values
DP	Deposited Plan
DQIs	Data Quality Indicators
DQOs	Data Quality Objectives

Acronym	Definition
DSI	Detailed Site Investigation
EC	Environmental Consultant
EIL	Ecological Investigation Level
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
ENM	Excavated Natural Material
EOT	End of Trip
EPA	Environment Protection Authority (NSW)
ESL	Ecological Screening Level
GPR	Ground-Penetrating Radar
GPSA	Goodman Property Services (Aust) Pty Ltd
ha	Hectare
HASP	Health and Safety Plan
HDPE	High-Density Polyethylene
HEPA	Heads of EPA Australia and New Zealand
HIL	Health Investigation Level
HSL	Health Screening Level
km	Kilometre
L	Litre
LAA	Licenced Asbestos Assessor
LOR	Limit of Reporting
m	Metre
m3	Cubic Metres
m bgl	Metres Below Ground Level
mg/kg	Milligrams per Kilogram

Acronym	Definition
mg/L	Milligrams per Litre
MVA	Megavolt Amperes
NATA	National Association of Testing Authorities
NEMP	National Environmental Management Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PACM	Potential Asbestos Containing Material
PASS	Potential Acid Sulfate Soil
PCB	Polychlorinated Biphenyls
PCBU	Person Conducting a Business or Undertaking
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photo-ionisation Detector
POEO Act	*Protection of the Environment Operations Act 1997*
PPE	Personal Protective Equipment
PSI	Preliminary Site Investigation
QA	Quality Assurance
QC	Quality Control
RAP	Remedial Action Plan
RC	Remediation Contractor
RL	Relative Level
RPD	Relative Percent Difference
RRE	Resource Recovery Exemption
RRO	Resource Recovery Order
SEARs	Secretary's Environmental Assessment Requirements
spp	Species Protection
SPR	Source-Pathway-Receptor
SSD	State Significant Development
TCLP	Toxicity Characteristic Leaching Procedure
TRH	Total Recoverable Hydrocarbons
UST	Underground Storage Tank
µg/kg	Micrograms per Kilogram
µg/L	Micrograms per Litre
VENM	Virgin Excavated Natural Material
VOC	Volatile Organic Compound

1.0 Introduction

Senversa Pty Ltd (Senversa) was engaged by Goodman Property Services (Aust) Pty Ltd (GPSA) to prepare a remedial action plan (RAP) to manage identified contamination at 12 Mars Road, Lane Cove West, NSW (the site). The site location is indicated on **Figure 1**.

The site is currently operating as a commercial warehouse unit, with surrounding hardstand parking and loading areas. The site is 3.3-hectares (ha) in area and legally described as Lot 22 DP 732062. It is currently zoned General Industrial (E4) and is located within a mixed-use industrial area.

The proposed redevelopment is to include demolition of existing structures, and construction, fit-out and operation of a data centre. The SSD application needs to comply with the NSW Planning Secretary's Environmental Assessment Requirements (SEARs). The SEARS require an Environmental Impact Statement (EIS) to be prepared that must address certain requirements, including investigation of contamination and preparation of a RAP, if required.

A preliminary site investigation (PSI)[1] consolidated the understanding of previous works and contamination conditions. A detailed site investigation (DSI)[2] was then conducted that collected data and presented a conceptual site model (CSM). The DSI recommended that an RAP be prepared to manage identified contamination issues so that the site could be made suitable for the proposed development.

1.1 Background

Senversa prepared a DSI (Senversa, 2025b) that concluded that an RAP is required to manage identified contamination issues to make the site suitable for the proposed development. These key contamination issues relate to risks associated with:

- Managing exposure to and disturbance of soils during intrusive works due to the occurrence of asbestos in fill and potential localised aesthetic.
- Controlling use of site soils, which may not be ecologically suitable for use as exposed soils or growing media in landscaping areas.
- Controlling use of groundwater that may not be suitable for extraction and use.
- Appropriate environmental management of site soils and water during development construction works.

[1] Senversa (2025a). *Preliminary Site Investigation*. S22013_002_RPT_Rev2, 21 May 2025.
[2] Senversa (2025b). *Detailed Site Investigation*. S22013_003_RPT_Rev3, 21 May 2025.

1.2 Proposed Development

A State Significant Development Application (SSDA) has been prepared to support a data centre at 12 Mars Road, Lane Cove West. The site area is 33,559 m^2 and is zoned E4 General Industrial.

The proposal will include:

- Site preparation works including demolition, bulk excavation and removal of existing structures on the site, tree and vegetation clearing and bulk earthworks.
- Construction, fit-out and operation of a three-storey data centre building with a total gross floor area of approximately 21,832 m^2 comprising:
  - 24 parking spaces.
  - 2 loading dock spaces.
  - 2 levels of technical data hall floor space.
  - 3 level office and amenities building.
- Provision of required utilities including:
  - Diesel storage tanks.
  - Water tanks.
  - Substations on site.
- Vehicle and pedestrian access provided via Mars Road.
- Associated landscaping and site servicing.
- Installation of site services and drainage infrastructure.
- A floor space ratio of approximately 0.65:1.

Development plans considered in this RAP are presented in **Appendix A**.

1.3 SEAR Conditions

The SSD application needs to comply with the NSW Planning SEARs; details of how this report complies with SEARs is summarised in **Table 1.1** below.

Table 1.1: SEARs Requirement

SEARs Requirement	Response
"17. Contamination and Remediation. • *In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development."* A prerequisite of this is that a preliminary site investigation (PSI) be completed. Pending assessments within the PSI, a DSI may be required. These investigations are required to assess and quantify any contamination on-site and demonstrate that the site is suitable (or can be made suitable) for the proposed land use, that being commercial/industrial. Should contamination be identified on-site during the PSI and DSI, an RAP and/or an environmental management plan (EMP) may be required for the proposed development.	This document has been prepared to meet the requirement to prepare a RAP as recommended in the DSI (Senversa, 2025b).

1.4 Objective

The primary objective of this RAP is to describe the remedial processes and procedures required to be implemented during site development works to make the site is suitable for the proposed development. Specific remedial objectives are presented within **Section 6.1.**

1.5 Key Stakeholders

The stakeholders likely involved in the remediation project are listed in **Table 1.2** below.

Table 1.2: Roles and Responsibilities

Role	Organisation	Qualification / Experience Requirement for Remediation
Owner/Developer	GPSA.	-
Consent Authority	Department of Planning, Housing and Infrastructure.	-
Principal Contractor (PC)	TBC.	-
Remediation Contractor (RC)	TBC.	-
Environmental Consultant (EC)	TBC.	Suitable trained and experienced. All reports to be prepared under direction of and approved by a person with an EPA-recognised consultant certification scheme: • Environment Institute of Australia and New Zealand - Certified Environmental Practitioner (Site Contamination) (CEnvP (SC)). • Soil Science Australia - Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM).

TBC = to be confirmed.

1.6 Regulatory and Guidance Requirements

This RAP has been developed with reference to the following guidelines and standards:

- DUAP & EPA (1998) Managing Land Contamination Planning Guidelines, SEPP 55 – Remediation of Land.
- HEPA (2020). *PFAS National Environmental Management Plan* (NEMP). Version 2.0. National Chemicals Working Group of the Heads of EPAs Australia and New Zealand (PFAS NEMP).
- National Environment Protection Council (2013). National Environment Protection (Assessment of Site Contamination) Amendment Measure (No.1). This is hereafter referred to as 'ASC NEPM'.
- DEC (2007). *Guidelines for the Assessment and Management of Groundwater Contamination*.
- NSW EPA (2014). *Waste Classification Guidelines. Part 1: Classifying Waste*.
- NSW EPA (2017). *Guidelines for the NSW Site Auditor Scheme (3rd edition).*
- NSW EPA (2020a). *Contaminated Land Guidelines: Consultants Reporting on Contaminated Land*.
- NSW EPA (2020b). *Assessment and Management of Hazardous Ground Gases, Contaminated Land Guidelines*.
- NSW EPA (2020c). *Guidelines for implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019.*
- NSW EPA (2022). *Sampling Design part 1 – application, Contaminated Land Guidelines*.
- WA Department of Health (DOH) (2021) *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*.

This list may be updated with reference to SSD approval conditions where relevant.

2.0 Site Information

2.1 Site Identification

A summary of the property and site identification is presented in **Table 2.1** below:

Table 2.1: Site Identification

Item	Description
Site Address	12 Mars Road, Lane Cove West, NSW.
Site Owner	GPSA.
Legal Description	Lot 22 in DP 732062.
Site Area	Approximately 33,701 m^2
Geographic Coordinates (GDA2020/MGA56)	Northwest corner: 328644 easting; 6257264 northing. Southwest corner: 328599 easting; 6256996 northing. Southeast corner: 328792 easting; 6257087 northing. Northeast corner: 328801 easting; 6257238 northing.
Local Government Area	Lane Cove Council.
Zoning	E4 – General Industrial.
Property Use	Commercial warehouses (commercial/industrial premises).
Site Location and Features	**Figure 1**.

2.2 Previous Investigations

The following investigations have been undertaken to date:

- Axis Environmental (1995). Update Environmental Audit, 12 Mars Road Lane Cove. May 1995.
- Hyder Environmental (1996). Environmental Audit Report, 12 Mars Road Lane Cove. September 1996.
- AECOM (2011). UPSS Stage 1 Inspection Program: Trans Tech Business Park, 1 November 2011.
- Senversa (2025). Preliminary Site Investigation, 12 Mars Road, Lane Cove West, NSW 2066. 21 May 2025, S22013_002_RPT_Rev0.
- Senversa (2025). Detailed Site Investigation, 12 Mars Road, Lane Cove West, NSW 2066. 21 May 2025, S22013_003_RPT_Rev0.

The findings of these are summarised in the following sections.

2.3 Site Setting

The property's environmental setting was described in the DSI (Senversa, 2025b), with a summary for the site presented in **Table 2.2.**

Table 2.2: Property Environmental Setting

Item	Description
Geology and Soil	The *Sydney 1:100,000 Geological Series Sheet 9130* (NSW Department of Mineral Resources, 1983, Edition 1) maps the entire site as underlain by Hawkesbury Sandstone, which comprises medium to coarse grained quartz sandstone displaying small to large-scale, high-angle crossbedding; minor shale and laminate lenses from the Quaternary period in the Cainozoic era. A review of eSPADE v2.2 (https://www.environment.nsw.gov.au/eSpade2Webapp/, accessed on 20/05/25) maps the site as follows: • Northern portion of the site – underlain by dermosols, described as red, brown, yellow, grey or black and have loam to clay textures; and • Southern portion of the site – underlain by tenosols, described as having low fertility and low water-holding capacity, and can be shallow and stony. The site is underlain by kandosol soils described as red, yellow and grey massive earths. They generally have a sandy to loamy-surface soil, grading to porous sandy-clay subsoils with low fertility and poor water-holding capacity.
Hydrology	The surface water features within 1 km of the site are as follows: • Stony Gully is located approximately 60 m south of the site, flowing directly into the Lane Cove River approximately 450 m west of the site, and eventually into the Parramatta River. A saline wetland is located along the Lane Cove River, 450 m east of the site.
Acid Sulphate Soil (ASS)	The NSW eSPADE v2.2 (https://www.environment.nsw.gov.au/eSpade2Webapp/, accessed on 20/05/25) indicates that there is no mapped occurrence of ASS on the site. An area of disturbed terrain (X4) and low probability of ASS is located approximately 60 m south. The site is within an area of extremely low probability of ASS.
Sensitive Receptors	Potentially sensitive receptors identified on and within 500 m of the site based on the information outlined above include: **Human Health** Current and future site employees. Intrusive maintenance workers or other maintenance contractors (e.g. gardeners). Construction workers during site redevelopment. Neighbouring residential occupants, and commercial/industrial workers. Blackman Park Playground approximately 150 m to the south. **Ecological** Native Dry Sclerophyll Forests (Shrubby sub-formation) Sydney Coastal Enriched Sandstone Forest is found on the southern boundary of the site. The area directly adjacent to the east and south of the site is zoned as an area of environmental conservation (C2). Lane Cove Community Nursery approximately 50 m to the east. Stony Gully is located approximately 60 m south of the south of the site and flows directly into the Lane Cove River, approximately 450 m west of the site and eventually to the Parramatta River 4 km to the southeast.

2.4 Contamination Setting

2.4.1 Summary of Site History

The site was predominantly bushland with unsealed roads up until the early 1950s.

Business records were unavailable pre-1970s; however, multiple large sheds and industrial buildings could be seen on aerials of the site from 1950s to 1970s.

In 1975, The Kalamazoo Centre was reported as operating, focusing on office equipment manufacturing and distribution. Dodwell & Co, an import company, also operated on the site.

During the 1980s, Kalamazoo (Aust) Pty Ltd expanded its operations to include data processing equipment and continuous stationery. By 1986, the site was primarily occupied by Baker, I. H. & Co. Wine & Spirit Merchants, and Kalamazoo, with the latter diversifying into printing and data processing equipment. The rear of the Kalamazoo building was leased to Lane Cove Automotive Services for the purpose of car maintenance and petrol supply during this period and the bottom floor of the warehouse was leased to Skansen, a giftware distribution company.

Between the years 1983 and 1984, historic business records show that Dry Cleaners & Pressers operated at the premises directly to the west of the site.

In 1991, the site hosted a variety of businesses, including Associated Industrial Insulators Pty Ltd, Australia Everex Systems Pty Ltd, Baker I H & Co Wine & Spirit Merchants, and Kalamazoo.

2.4.2 Contamination Summary

Contamination at the site is considered related to:

- On-site historical use (manufacturing of office & data processing equipment, car maintenance, petrol supply, printing activities and associated chemical storage).
- Off-site historical use (dry cleaners directly to the west of the site, photography production and processing).
- Filling material from unknown origin and quality across the site.
- Potential use and storage of per and polyfluoroalkyl substances (PFAS).

Key results are summarised below. Copies of soil vapour, groundwater and soil sampling analytical data from the DSI (Senversa 2025b) are provided in **Appendix B**.

2.4.2.1 Soil

Analytical results (excluding asbestos) were less than the adopted human health criteria in all samples collected.

Asbestos was detected in fill at BH05, BH10A and BH15. Concentrations of asbestos AF/FA in soil were reported above the adopted human health assessment criteria for commercial/industrial sites at BH05_0.2 - 0.25. Asbestos in soil >7 mm ACM were reported below the adopted human health assessment criteria for commercial/industrial sites. Additionally, bonded PACM fragments were observed on the surface in the southern portion of the site near BH27 and between BH28 and BH29 (refer **Figure 2**). Laboratory analysis confirmed that samples PACM-01 and PACM-04 contained asbestos, while PACM-02, PACM-03 and PACM-05 did not.

The detections of asbestos are presented on **Figure 2.**

2.4.2.2 Groundwater

Groundwater gauging results are presented on **Table 3** and range between 1.4 to 8.7 m bgl. Groundwater levels and flow direction are presented on **Figure 3**. These data suggest there is an overall southerly groundwater flow direction. Groundwater analytical data are presented in **Table 5**.

The Contaminant of Potential Concern (CoPC) concentrations were all reported below the adopted human health assessment criteria. A limited number of samples exceeded the groundwater maintenance of ecosystems criteria for copper, nickel and zinc. Senversa considers that the nature of the metals in groundwater reported are broadly consistent with site background conditions.

2.4.2.3 Soil Vapour

All reported soil vapour analytical results were reported below the adopted human health assessment criteria indicating there is a low risk of vapour intrusion into the existing buildings on-site.

3.0 Conceptual Site Model

An assessment of source-pathway-receptors (SPR) linkages was compiled for the site (Senversa, 2025b) as presented in **Table 3.1** below. It includes an indication of whether SPR linkages require further investigation or management.

Table 3-1: SPR Linkages

Pathway	Receptor	Complete Linkage
Dermal Contact with or Accidental Ingestion of Contaminated Soil	• Workers carrying out intrusive works including construction, maintenance or gardening. • Workers using the site and visitors.	Incomplete – Generally CoPC concentrations were reported below the adopted human health assessment criteria.
Inhalation of Vapours Emanating from Sub-Surface Soil/Groundwater		Incomplete – soil and groundwater sample analysis results identified no concentrations of total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN) or volatile organic compounds (VOCs) that would indicate a potential vapour intrusion risk to date.
Inhalation of Dust (from Soils or ACM)	• Workers carrying out intrusive works including construction, maintenance or gardening. • Workers using the site and visitors. • Nearby workers from neighbouring businesses.	Potential – ACM fragments and fines were detected in FILL during the investigation, as such, this pathway is potentially complete for construction or maintenance works that are involve the disturbance of soils.
Transport of Contaminants in Groundwater	Adjacent sensitive receptor (Lane Cove River).	Incomplete – heavy metal exceedances above the adopted ecological assessment criteria were considered broadly consistent with site background conditions.

4.0 Remediation Strategy

4.1 Remedial Objectives

Based on results of previous investigations outlined within **Section 2.2** and the CSM in **Section 3.0**, the remedial objectives are as follows:

- To derive a plan to make the site suitable for ongoing commercial/industrial land use.
- This will be achieved by mitigating potential risks to human health and managing potential environmental impacts during the remedial works, including meeting SSD conditions of approval.

4.2 Extent of Required Remediation

On the basis of Senversa's understanding of the contamination and proposed development outlined in this document, the required remediation relates to fill material across the site. While not all fill material is contaminated, for the purposes of remediation planning all fill material should be considered potentially impacted by asbestos. This is a conservative, precautionary approach adopted as the occurrence and concentrations of asbestos in fill have not been delineated laterally or vertically. Fill materials should also be assumed not suitable for use as growing media in landscaping areas unless assessed otherwise.

4.3 Constraints and Limitations

The RAP has been developed with consideration of the following key drivers and constraints:

- There is no change in land use proposed, i.e. continued commercial industrial land use.
- Some form of passive long-term EMP (LTEMP) to manage residual soil contamination underlying future building slabs and pavement, and restrict use of groundwater, is a 'presumed remedy'.
- Senversa's understanding of key features of the development works that act to limit exposure to potentially contaminated soils and water:
  - There will be minimal unpaved open space areas – being limited to minor landscaping.
  - The earthworks plan is yet to be finalised. There is expected to be minimal net cut or fill to achieve design ground levels.

4.4 Remediation Policies

4.4.1 Soil

The NSW EPA preferred hierarchy on the selection of remediation options for soil in order of preference, based on the schedule A of ASC NEPM is:

- '*on-site treatment of the contamination so that it is destroyed or the associated risk is reduced to an acceptable level; and,*
- *off-site treatment of excavated soil, so that the contamination is destroyed or the associated risk is reduced to an acceptable level, after which soil is returned to the site; or,*
- *if the above are not practicable,*
  - *consolidation and isolation of the soil on site by containment with a properly designed barrier; 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.'*

4.4.2 Groundwater

DEC (2007) groundwater guidelines set out management objectives when contamination is identified, which is to protect human and ecological health and to ultimately restore the groundwater to its natural background quality. To achieve these objectives, the following management responses must be considered:

- Control short-term threats arising from the contamination.
- Restrict groundwater use.
- Prevent or minimise further migration of contaminants from source materials to groundwater.
- Prevent or minimise further migration of the contaminant plume.
- Clean up groundwater to protect human and ecological health, restore the capacity of the groundwater to support the relevant environmental values and, as far as practicable, return groundwater quality to its natural background quality.

4.4.3 Ecological Sustainable Development

In addition, it is also a requirement under the *Contaminated Land Management Act 1997* and contaminated land management policies to consider sustainability (environmental, economic and social), in terms of achieving an appropriate balance between the benefits and effects of undertaking the option. The remediation should not proceed if it is likely to cause a greater adverse effect than leaving the site undisturbed. And, where there are large quantities of soil with low levels of contamination, alternative strategies are required to be considered or developed.

Key considerations in this RAP include:

- That there is current and ongoing industrial land use.
- Avoidance of unnecessary generation of waste soil under the *Waste Avoidance and Resource Recovery Act 2001*.
- The occurrence of soils that report generally acceptable levels of health risk from chemical contaminants, but are heterogenous with fill potentially impacted by asbestos and aesthetics that could be of a large volume.

4.4.4 UPSS Regulation

While there are no known underground petroleum storage systems at the site, the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019* (the UPSS Regulation) requires removal of disused UPSS unless it is not practicable to do so. As such, should these be uncovered during redevelopment works they should be removed.

4.5 Remediation Options Evaluation

A remedial options assessment was conducted as presented in **Table 4.1**, and focused on management of contaminated or impacted soils.

There is a presumptive remedy for passive management under an LTEMP to restrict use of groundwater and control exposure to residual contamination at depth during deep intrusive works.

Available information and evaluation of risks supports that active remediation of groundwater or soil vapour is not warranted.

Table 4.1: Soil Remedial Options Assessment

Option	Discussion	Conclusion
1. On-Site or Off-Site Treatment	On-site or off-site treatment of contaminated fill material to remove asbestos is not considered legal, appropriate or feasible due to the nature of the asbestos (bonded) and waste laws in laws in NSW. Due to the potential presence of asbestos within the contaminated fill material, it is not suitable for off-site re-use in NSW. Once leaving the site, asbestos contaminated material would become waste and would need to be disposed of at a suitably licensed landfill.	Not feasible.
2. Removal of Contaminated Soils	Excavation and off-site disposal to a suitably licenced landfill facility is technically and logistically feasible but is not considered a viable option given the large volume of fill at the site and the lack of sustainability of this option. However, this approach could remove all contamination, negating the need for ongoing management required for other approaches. This option would incur a significant cost that is not proportionate to the reduction in environmental risk that could be achieved through other methods.	Not cost-effective or sustainable. Targeted removal and disposal of contaminated soils associated with unexpected finds is retained as a contingency.
3. On-Site Containment with Ongoing Management	There are several options for on-site containment of the contaminated soils. There is a balance between the degree of conservatism in containment design and ongoing management requirements – i.e. a less conservative design (e.g. minimal capping thickness) will require more onerous ongoing management requirements. All options require ongoing passive management via implementation of a LTEMP. The LTEMP would need to be publicly notified and legally enforceable. Below ground, partial enclosure - remediation would involve excavation of contaminated fill materials and placement within a location identified to require filling for construction purposes. Placement location(s) should be selected within areas that would undergo minor future disturbance such as under warehouse buildings or pavement, with a cover comprising a constructed capping layer and marker placed over impacted fill. A base liner is not considered necessary due to the complexity of construction. Where contaminated soil remains *in-situ* upon reaching construction RLs, it should be covered with a capping layer as per placed materials. This method is viewed as suitable due to proposed construction methodology and low likelihood of contact with contaminated materials following placement and capping within the site. Above ground containment - remediation would involve construction of an above ground mound with high-density polyethylene (HDPE) cap and soil/clay cover, no base liner. This method is viewed as unsuitable due to restrictions on available space and the potential for creating increased surface water runoff to low lying areas within the site. *In-situ* capping (physical separation) – imported material may be used as a capping layer to provide physical separation between contaminated fill and site receptors. The capping layer may include one or more of a combination of environmentally and geotechnically suitable soil material, building slabs and subgrade or pavement and subgrade, with a marker. This option is viewed as being suitable due to the proposed site levelling and construction methodology, site layout mostly comprising buildings/pavement and subsequent low likelihood of contact with contaminated materials. These options are capable of mitigating risks to low levels, while minimising waste generation and impacts to the surrounding environment/community from truck movements etc. The *in-situ* capping option is preferred as it does not require bulk movement of asbestos-impacted material within the site, which has a greater risk of impact to workers and surrounding environment during remediation works.	Capping of fill material *in-situ* under existing building slabs and as part of site paving and levelling works is the preferred option. Implementation of an LTEMP is required.
4. Do Nothing and Ongoing Management	Implementation of an LTEMP is capable of managing residual contamination under the existing site condition and use. However, this is not considered suitable for the developed site where there is the opportunity to reduce risks to more acceptable levels while minimising ongoing management requirements.	Not appropriate.

4.6 Preferred Remediation Approach

The preferred remediation approach is:

1. *In-situ* containment of contaminated soils (*Option 3*). This includes capping contaminated soil via new building slabs, pavement or clean soils and a marker layer.
2. Use of suitable imported media in open space landscaping areas.
3. Passive management under an LTEMP to restrict use of groundwater and control exposure to residual contamination at depth during deep intrusive works. The aim is that no actions would be needed for normal site use by workers, visitors and landscaping maintenance workers.

While the occurrence of PFAS in groundwater is considered to represent a low risk, consideration should be given in development detailed design so that deep services that intersect the water table do not act as a preferential migration pathway.

The preferred strategy is considered consistent with NSW remediation policy and guidance based on:

- The approach is sympathetic to the construction method and will allow ongoing management under the passive LTEMP with low likelihood for human contact with practicable and minimal control measures – normal site use and typical intrusive works should not require any actions.
- While hydrocarbon impacts can feasibly be treated, potential asbestos and metals impacts cannot be destroyed or treated, with soils likely to still require passive management.
- Removal of contaminated soil is possible; however, is not economically sustainable development, and the large volume (and relatively low level of contamination based on relatively few investigation locations reporting health criteria exceedances) of materials warrants on-site management.
- Excavation and off-site disposal of materials is considered prohibitively expensive and will involve increased potential for dust generation and significant truck movements.
- While groundwater reported some site-related CoPC at concentrations exceeding conservative assessment criteria, risks are low if groundwater is not extracted and used, and average levels are low and metals levels are likely to reflect site background conditions. The capping approach will somewhat reduce exposure of fill to further leaching and control risks to low levels.

4.7 Approvals, Permits and Notifications

The works will be subject to approval under the *Environmental Planning & Assessment Act 1974* via the SSD planning pathway.

The *State Environmental Planning Policy (Resilience and Hazards) 2021* (SEPP 2021) specifies when remediation work will require development consent from the planning authority (Category 1 remediation work). Any remediation works that do not require development consent are Category 2. There are notification requirements for both Category 1 and 2 remediation works.

The proposed works could potentially comprise designated development under *Environmental Planning and Assessment Regulation 2000* and be Category 1 works if it comprises treatment of contaminated soil originating exclusively from the site on which the development is located and involves more than 30,000 m^3 of contaminated soil or disturbance of more than an aggregate area of 3 ha of contaminated soil. These are unlikely to be triggered as fill materials are proposed to be left largely undisturbed (i.e. the capping is constructed overlying the fill) and that only a portion of fill materials are contaminated such that the aggregate area and volume would be less than 3 ha (site size 3.3 ha) and 30,000 m^3.

While the works may otherwise comprise Category 2 remediation work, Senversa understands that the SSD includes provision for implementation of this RAP, and consent for remediation works will be via the SSD approval pathway.

Due to the presence of asbestos in some fill materials, consideration should be given to SafeWork NSW notification requirements prior to the commencement of site works. This is the responsibility of the *'person conducting a business or undertaking'* (PCBU) as per the SafeWork NSW *Code of Practice – How to manage and control asbestos in the workplace* (December 2022).

If disposal of water to sewer or stormwater is required during construction, approval from Council and/or the water authority will be required prior to this, and is the responsibility of the contractor.

5.0 Remediation Work Plan

The proposed remediation works will broadly comprise the following steps:

1. Enabling works including engagement of an environmental consultant (EC), develop of site management plans and establishment of environmental controls.
2. Capping contaminated soils, including in new paved areas, unpaved areas and in-ground services (refer **Section5.2)**.
3. Management of material imported and exported as waste from the site as part of the remediation works (refer **Section 5.3**).
4. Validation of the remediation above (refer **Section 5.4**).
5. Ongoing implementation of a passive LTEMP during development operation phase (refer **Section 5.5**).

These steps are described in more detail below.

The SSD conditions of approval have not yet been issued – on receipt, the EC should review these to assess whether there are any changes to the RAP required.

5.1 Design Review

The development design should avoid to the extent practicable deep services that may intersect contaminated groundwater (e.g. more than 1.5 m bgl) and could act as a preferential migration pathway. If this must occur, then mitigations (e.g. sealing, use of low-permeability 'plugs' in backfilled trenches) should be developed and installed, subject to review and approval by the EC.

5.2 Capping Contaminated Soils

Contaminated fill material shall be capped during development earthworks. The goal is to provide physical separation between potential contaminated materials and receptors to minimise the likelihood of exposure and ongoing management controls during future intrusive works.

The capping shall be via:

- Cover with a marker layer and cover by:
  - New building slabs and sub-grade; or
  - Pavement and sub-grade; or
  - Clean suitable soils in landscaping areas.
- Install new in-ground surfaces in the cover layer (above) or in trenches lined with a marker geotextile and backfilled with suitable backfill.

There is various guidance on the minimum capping thickness required to manage contaminated soils, including:

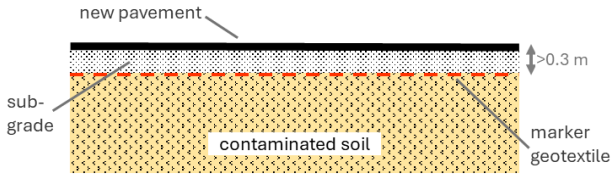
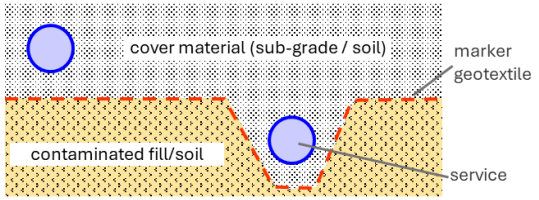
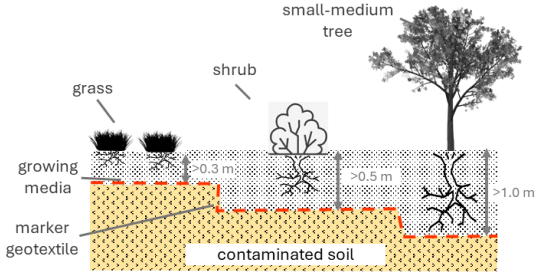
- WA DoH (2021) *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*, Western Australia Department of Health – a depth of at least 0.5 m is recommended for commercial/industrial land uses.
- *Guidelines for the assessment of on-site containment of contaminated soil* (ANZECC, 1999) – The separation layer needs to be of an appropriate thickness that is unlikely to be penetrated by future users of the site. ANZECC (1999) states that a minimum thickness of 0.5 m is commonly adopted.

However, there is a balance between depth of the capping layer (more conservative), sustainability objectives (e.g. generation of waste due to the potential need to over-excavate to construct the cover layer) and ongoing management controls. Thus, the appropriate depth of the “capping material” above the marker layer will depend on the overlying land use and structures of the developed site – there should be general goals that:

- Contaminated fill materials are preferentially retained underlying buildings or pavement to the extent practicable within design constraints.
- While minimum cover thicknesses are nominated below, the thickness should be maximised to more than 0.5 m where possible and sympathetic with the development construction.

Details and schematics of the different types of capping and minimum thickness are specified in the table below.

Table 5.1: Capping Design

Type	Design	Schematic
A. New Pavement	A marker layer should be installed underlying new pavement to the extent practicable. The sub-grade and pavement will act as the cover. The minimum thickness provided is a typical minimum depth of an asphalt roadway, and a deeper cover layer is preferable where able to be accommodated within the earthworks plan.	
B. In-Ground Services	There should be a preference to install in-ground services above the marker layer. For deeper services where this is not possible: • The perimeter of deep service trenches shall be lined with a marker layer. This should connect to surrounding marker layer. • Trench backfill materials must be imported material validated as environmentally suitable. There may also be engineering requirements specific to the service or service provider which should be adhered to. This recognises that existing in-ground services could remain in contaminated fill – exposure during maintenance works will be managed via the LTEMP.	
C. Unpaved Areas	In open space unpaved areas (e.g. grassed and landscaping areas), there is a greater likelihood of inadvertent exposure of contaminated soils. Thus, the general cover layer should be of sufficient width and depth to ensure the plant root zone or depth of normal site maintenance activities (e.g. mowing grass) are within suitable material. The minimum capping thickness is 0.3 m, though a deeper layer is warranted where shrubs or trees will be grown. If existing trees are maintained, a thinner layer may be appropriate that would not damage the health of the tree – the requirements for this should be assessed by the EC once the detailed landscaping design is complete.	

5.2.1 Marker Layer

The purpose of the marker is to provide a visual demarcation between potentially contaminated soils and overlying cover materials that comprise slabs/pavement or have been validated as acceptable for use.

The preference is to use a brightly coloured, geofabric placed over contaminated fill material. Specialised or improvised geotextile fabrics may be used, meeting the following conditions:

- Water permeable.
- High visibility.
- Rot-proof and chemically inert.
- High tensile strength.
- Coverage of the contaminated area and at least 0.5 m beyond boundary, if practical.
- Parallel sheets and adjoining sheets to be fixed together or overlap by at least 0.2 m.
- It is also expected that the marker layer will be placed to not significantly inhibit the growth of shrubs and trees to be used for landscaping.

5.2.2 Cover Layer

The overlying cover aims to provide physical separation between contaminated soils below the marker and site users. The cover layer material shall comprise imported material validated as environmentally suitable.

The material should also be geotechnically suitable for the development and so that there is sufficient stability of the cover layer.

5.2.3 Deviations

Potential minor deviations required by the development design include:

- There will be some localised areas where the capping thickness is expected to be less than the design minimum requirement. If there are other areas of thinner capping then the adequacy of the proposed capping layer design shall be assessed by the EC and approved by GPSA prior to construction.
- If existing trees are maintained, surface soil validation samples should be collected (**Section 6.2**), and a thinner capping layer design may be appropriate that would not damage the health of the tree as assessed by the EC and approved by GPSA prior to construction.

There may be other deviations from the conceptual approach and minimum requirements outlined above – if these occur, they should be assessed by the EC and approved by GPSA.

5.3 Materials Management

5.3.1 Material Tracking

Tracking of excavated materials, imported materials and waste must be conducted by the RC and checked by the EC as part of validation.

A Material Tracking Register must be maintained on-site which will provide information regarding the source, characteristics, destination and quantities of material beneficially reused on-site, temporarily stockpiled and disposed off-site or imported to the site for capping / backfilling purposes.

The Material Tracking Register is to include the following information within a summary spreadsheet associated with material stockpiling on the site.

Table 5.2: Stockpile Details Required in the Material Tracking Register

Material Source Information	Material Classification	Stockpile ID	Quantity (m3)	Dates Stockpiles	Final Destination/Placement

The Material Tracking Register is to include the following information within a summary spreadsheet associated with material imported to the site.

Table 5.3: Importation Details Required in the Material Tracking Register

Supplier	Supplier Address	Supplier Material ID	Classification	Quantity (m^3)	Dates Imported	Placement On-Site	Details of Sampling and compliance with RAP

The Material Tracking Register is to include the following information within a summary spreadsheet associated with material On-site Reuse to the site.

Table 5.4: On-Site Reuse Details Required in the Material Tracking Register

Material Source Information	Classification	Quantity (m^3)	Dates Excavated	Stockpile ID (where relevant)	Placement On-Site	Details of Sampling and compliance with RAP

The Material Tracking Register is to include the following information within a summary spreadsheet associated with material exported from site.

Table 5.5: Exportation Details Required in the Material Tracking Register

Source ID	Date Disposed	Classification	Quantity (T)	Docket no.	NSW EPA Integrated Waste Tracking Solution (IWTS) System Reference	Waste Classification Report Reference

5.3.2 Excavated Fill/Soils

Excavated fill (if any) shall be stockpiled in a designated area and must be managed as potentially contaminated unless its contamination status is assessed otherwise by sampling and analysis by the EC.

Excavated fill shall be preferentially retained on-site under the marker layer. No sampling of this material is required unless visual or olfactory indicators of contamination are identified, then the unexpected finds protocol should be followed (see **Section 8.2**).

Excavated materials stockpiles and stockpiling area should be designed and managed to control potential impacts to the environment (e.g. dust, erosion and leaching). This includes placement of stockpiles on hardstand, a site area that will subsequently be capped, or HDPE sheeting, with sediment erosion controls and covering stockpiles to minimise the potential for dust generation.

5.3.3 Waste (Off-site Disposal)

If off-site disposal of excavated materials is required:

- The EC shall classify the waste in accordance with NSW EPA (2014) *Waste Classification Guidelines* and prepare a waste classification.
- Comply with notification and transport requirements under NSW waste regulations.
- The Material Tracking Register should be maintained to ensure an audit trail for the movement of materials around the site and off-site. This includes retaining copies of waste transport and disposal dockets from the landfill facility to provide evidence of appropriate disposal.

The specific sampling and analysis requirements are documented in **Table 6.3.**

5.3.4 Imported Materials

Where imported fill is required at the site for reinstatement of excavations, to achieve final development levels or for landscaping purposes, the material must be validated as suitable for commercial/industrial use and able to be legally imported. Imported materials must only be any of the following:

- Commercial quarried rock or sand products.
- Virgin Excavated Natural Material (VENM) as defined in EPA (2014) *Waste Classification Guidelines* and POEO Act 1997.
- Excavated Natural Material (ENM) defined in the Resource Recovery Order (RRO) and Exemption issued under *Protection of the Environment Operations (Waste) Regulation 2014*. VENM should be used in preference to ENM.
- Other material approved in writing by EPA under a resource recovery order or exemption (RRO/RRE) and subject to agreement by GPSA and EC. VENM should be used in preference to these materials which have a greater risk of not being environmentally suitable (e.g. unexpected finds).
- Commercial landscaping products (e.g. mulch).

Imported material may be turned away from site if there is not appropriate supporting documentation for that load or there are visual or olfactory indicators of contamination. Recycled material (inter alia crushed concrete and bricks aggregate or 'DGB') imported as sub-base material represents a higher likelihood of unexpected impacts, and must therefore be supplied by a reputable supplier and validated as required in **Table 6.3**.

The preference is to identify (and validate) suitable material proposed to be imported prior to importation to site.

5.4 Remediation Validation

The EC shall conduct validation of the remediation works. The specific validation strategy is documented in **Section 6.2**.

5.5 Ongoing Management

On completion of the remediation works and development, ongoing passive management of residual contaminated soils and groundwater under the capping system will be required via implementation of an ongoing LTEMP.

The LTEMP shall be prepared by the EC.

Requirements for ongoing environmental management plans in EPA (2020) S*ite Auditor Guidelines* are applicable, including:

- The LTEMP can reasonably be made to be legally enforceable. This may be via compliance with development consent conditions issued, or as it is a legal requirement to manage asbestos under NSW Work Health and Safety Regulation 2017.
- There should be appropriate public notification of any restrictions applying to the land to ensure that potential purchasers or other interested individuals are aware of the restrictions, for example appropriate notations on a planning certificate issued under the *Environmental Planning and Assessment Act* or a covenant registered on the title to land under the *Conveyancing Act 1919*.

Liaison with Council may be required at some point on the presence of the LTEMP.

6.0 Validation Plan

The remediation validation sampling, analytical and quality requirements are described in the following sections.

6.1 Data Quality Objectives

Based on the results of previous investigations and with reference to the CSM outlined above Senversa developed the following data quality objectives (DQOs) for validation of remediation requirements in this RAP. The DQOs have been developed in accordance with the ASC NEPM.

6.1.1 Step 1 – State the Problem

Contamination at 12 Mars Road, Lane Cove West, NSW 2066 has been subject to investigation. The Senversa 2025b DSI concluded that the key contamination issues that require management relate to managing exposure to and disturbance of soils during intrusive works due to the occurrence of asbestos in fill and potential localised and issue of suitable soils for minor landscaping areas.

This RAP sets out the remediation steps to make the site suitable. The remediation works will be conducted ancillary to development works, mostly as part of initial earthworks. The remediation required to make the site suitable for the proposed development broadly comprises capping contaminated fill and ongoing passive management of residual contamination under an LTEMP.

Validation is required to verify the effectiveness of the remedial works undertaken, assess long-term management requirements and document the final site condition.

6.1.2 Step 2 – Identify the Decisions

Based on the objectives of this RAP, the decisions required to meet the objectives are listed below:

1. Are there any changes to the remediation requirements?
2. Have remaining primary contamination source structures been removed to the extent practicable?
3. Have the capping requirements in the RAP been achieved?
4. Was imported material suitable for the proposed land use?
5. Was waste material appropriately classified and transported and disposed to a suitably licensed facility?
6. Were any unexpected finds encountered during the ground disturbance works appropriately managed?
7. Are the validation data suitably reliable and complete?

6.1.3 Step 3 – Identify Information Inputs

The inputs to make the above decisions include:

- Results from previous investigations.
- Additional environmental data collected as part of remedial works – this includes field observations, field screening measurements, and laboratory analyses of soil samples for CoPC.
- Field observations in relation to removal of subsurface source structures or unexpected finds. Field observations may include odours, sheens, discolouration, asbestos and other indicators of potential contamination.
- Survey data of marker layer and capping thickness to confirm that these comply with RAP requirements.
- Environmental data collected as part of validation of excavated materials if re-used on-site above the marker layer – this includes field observations, field screening measurements, and laboratory analyses of soil samples for CoPC.
- Assessment criteria from guidelines made or approved by NSW EPA.
- Material tracking information of excavated, imported and waste materials.
- Waste classification data for surplus materials prior to off-site disposal – this includes field observations, field screening measurements, volume data, and laboratory analyses of soil samples for CoPC.
- Waste tracking and disposal records (including landfill dockets, trade waste disposal).
- Material characterisation data for material proposed to be imported to site – this includes literature information on source site, field observations, field screening measurements and laboratory analyses of soil samples for CoPC.
- Data quality assurance / quality control (QA/QC) assessment by comparison against data quality indicators (DQIs).

6.1.4 Step 4 – Define the Study Boundaries

The study population principally comprises fill material and the capping system.

The boundaries of the investigation are identified as follows:

- **Spatial boundaries** – the remediation validation extent is limited to the site boundaries as illustrated within **Figure 1** and soils to a depth of 2 m bgl or construction earthworks (whichever is deeper).
- **Temporal boundaries** – the temporal boundary is limited to the data collected during the remediation validation programme of work. Ongoing management will be required under the LTEMP.

6.1.5 Step 5 – Develop the Decision Rules

The decision rules adopted for this investigation are described within the table below.

Table 6.1: Decision Rules

Decision Required to be Made	Decision Basis
1. Are there any Changes to the Remediation Requirements?	If the inspection and sampling required in this RAP has been completed, and the findings do not indicate contamination other than asbestos impacts in fill. Fill/soil analytical data shall be compared against adopted assessment criteria: • If all concentrations of contaminants are reported to be equal to or below the adopted assessment criteria, then no additional management is required. • Statistical analysis of data sets of chemical CoPC analyte concentrations (i.e. excluding asbestos) will be used as inputs, consistent with guidance in the NEPM (NEPC, 2013). The analysis shall include: ▪ 95% upper confidence limit (UCL) of the arithmetic mean concentration of each analyte shall be less than or equal to the criterion. ▪ The maximum concentration of each analyte shall be less than or equal to 250% of the criterion. ▪ The standard deviation of each analyte shall be less than or equal to the criterion. If any of these are exceeded, then additional management needs to be assessed.
2. Have Remaining Contamination Source Structures been Removed?	This will be assessed via inspection by EC and that visual verification that structures have been removed or are not present.
3. Have the Capping Requirements in the RAP been Achieved?	Is there evidence of the following: • Survey data and inspection of marker layer placement across the site, including service trenches. • Survey data and inspection of top of cover confirming compliant thickness and extent, including service trenches. • Fill/soils underlying areas not capped shall have been appropriately inspected and sampled as required in this RAP, with an asbestos clearance by an appropriately qualified occupational hygienist.
4. Was Imported Material Suitable for the Proposed Land Use?	• Imported quarried products and exempt waste material should meet the definition of the material in the relevant order/exemption or definition of VENM. • Imported material should also contain concentrations of CoPC less than assessment criteria for commercial/industrial land use in this RAP.
5. Was Waste Material Appropriately Classified and Transported and Disposed of to a Suitably Licensed Facility?	Waste should be sampled and classified as per requirements in this RAP. Appropriate material tracking with satisfactory review by EC and retainment of transport and disposal records. If off-site waste disposal has potentially not been appropriately managed and documented further documentation on the management of waste materials will be required. In the event that insufficient or incorrect information is available in support of waste disposal activities, notification to the NSW EPA Waste Unit may be required where it is believed that waste has been disposed of incorrectly or unlawfully.
6. Are there any Unexpected Finds or Aesthetic Concerns in Fill/Soils Encountered During the Ground Disturbance Works?	This should be evaluated as per assessment of remedial works.

6.1.6 Step 6 – Specify Limits of Decision Error

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

To assess the usability of the data prior to making decisions, the data will be assessed against pre-determined DQIs for precision, accuracy, representativeness, comparability, completeness and sensitivity. These are defined below, but should broadly include:

- Guidance in ASC NEPM.
- Soil validation sampling design based on acceptable decision errors:
  - Type A error (i.e. deciding that the site is acceptable when it is not) – 5% probability.
  - Type B error (i.e. deciding that the site is unacceptable when it is) – 20% probability.
- An overall 95% compliance with pre-determined DQIs.

The pre-determined DQIs established for the project are discussed below in relation to precision, accuracy, representativeness, comparability, completeness and sensitivity.

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

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

Table 6.2: Data Quality Indicators

Data Quality Objectives	Frequency	Data Quality Indicator
Precision		
Blind duplicates (intra laboratory).	1/20 samples (or 1/10 for PFAS).	<30% RPD where result is >10 times limit of reporting (LOR).
Blind duplicates (inter laboratory).	1/20 samples (or 1/10 for PFAS).	<30% RPD where result is >10 times LOR.
Accuracy		
Surrogate spikes.	All organic samples.	70-130%.
Laboratory control samples.	1 per lab batch.	70-130%.
Matrix spikes.	1 per lab batch.	70-130%. Lower recoveries may be acceptable for organochlorine and organophosphorus pesticides (OCP/OPPs), polychlorinated biphenyls (PCBs) and phenols and will be assessed according to United States Environmental Protection Agency protocols.
Representativeness		
Sampling appropriate for media and analytes.	Sample density as detailed within **Section 6.2.**	All samples.
Samples extracted and analysed within holding times.	NA.	organics (14 days), inorganics (6 months).
Rinsate blank.	1 per day where non-dedicated equipment is used. Samples are to be analysed for all CoPCs other than asbestos.	<LOR.
Trip Blank.	1 per lab batch (PFAS only).	<LOR.
Trip spike.	1 per lab batch (BTEX only).	70-130%.
Method blank / field blank.	1 per lab batch.	<LOR.
Comparability		
Senversa standard operating procedures for sample collection & handling.	All samples.	All samples.
NATA* accredited analytical methods used for all analyses.	All samples.	All samples.
Consistent field conditions, sampling staff and laboratory analysis.	All samples.	All samples.
Completeness		
Sample description and Chain of Custodies completed and appropriate.	All samples.	All samples.
Appropriate documentation.	All samples.	All samples
Satisfactory frequency and result for QC samples.	All QA / QC samples.	-
Data from critical samples is considered valid.	NA.	Critical samples valid.
Sensitivity		
Limits of reporting appropriate and consistent.	All samples.	All samples.

*National Association of Testing Authorities.

6.1.7 Step 7 - Optimise the Design for Obtaining Data

Based on the validation methodology presented within the RAP the design for obtaining data has been developed based on a combination of:

- Systematic inspection or survey of capping layer components.
- Systematic inspection and sampling of waste and imported materials.
- Judgemental inspection and sampling of remaining sources, their removal and unexpected finds.

The sampling rationale and methodology is described in **Section 6.2**.

6.2 Validation Design and Methodology

As outlined in **Section 5.0**, the general remedial approach will involve the:

- Capping of contaminated fill and soils.
- Classification and validation of excavated site material and imported materials for on-site re-use or disposal.
- Management of unexpected finds.

The strategy and methodology to be adopted for the validation of each of the remediation elements is summarised in **Table 6.3**.

Table 6.3: Validation Strategy and Design

Area/Material	Remedial Approach	Validation Approach	Sampling Design
Capping of Contaminated Fill/Soils			
1. Capping of Contaminated Fill Material	Marker layer and capping using suitable material is to be installed as specified in this RAP (**Section 5.2**).	Approval by EC of geofabric marker layer or retained concrete slab proposed to be used. Inspection of top of fill prior to marker layer installation. Survey and inspection of: • Marker layer (installed prior to cover). • Top of capping. The extent and thickness of the capping layer should be calculated and presented on a marked plan by the surveyor. Validation that cover materials are environmentally suitable (the RC should also verify the materials are geotechnically suitable for the development).	Inspections by walking along geofabric joins or alignments on a systematic basis (e.g. 50 mm alignments and overlaps). Survey points as judged by a suitably qualified surveyor.
2. Residual Boundary Landscaping Areas	If existing trees are maintained within the existing landscaping boundary areas and fill is remaining and not capped, surface fill should be characterised to verify whether a thinner capping layer (e.g. mulch) may be appropriate and that would not damage the health of the tree.	Visible assessment to confirm free from visible asbestos and / or other visual or olfactory indicators of contamination. Collection of characterisation samples by EC in accordance with sampling densities prescribed herein.	Near surface soil samples (<0.1 m and 0.5 m bgl) are to be undertaken within residual fill every 30 m. Field screening using a PID and logging. Analysis of samples for: heavy metals, PAH, TRH, BTEX, asbestos (500 mL NEPM) and selected samples of PCBs and OCPs.
3. Validation of underlying bedrock or residual soil	Where all fill material has been removed and only bedrock and residual natural soils remain, they will need to be validated to confirm they are free of asbestos prior to importation of material being used for the development.	Visible assessment to confirm free from visible asbestos and / or other visual or olfactory indicators of contamination. **Residual soils only** – Collection of characterisation samples by EC in accordance with sampling densities prescribed herein. These areas do not require marker layer or any specific capping requirements.	• Where residual soil is <300 mm thick - surface soil samples are to be undertaken in a 10 m grid pattern for laboratory analysis. • Where residual soils are >300 mm thick, 10 L asbestos quantification samples are to be undertaken via test pitting in a 10 m grid to the maximum depth of residual soil. Additional 500 ml discrete soil samples should be collected at each location for laboratory analysis. Soil samples should be analysed for asbestos (500 mL NEPM).

Area/Material	Remedial Approach	Validation Approach	Sampling Design
Materials Management – Reuse of Excavated Site Materials			
4. Reuse of Excavated Site Soils or Concrete/ Asphalt Below the Marker Layer	Retention below the marker layer for passive management under the LTEMP.	Inspection by EC for unexpected finds. Consideration and management of acid sulfate soils as per the acid sulfate soil management plan need to be undertaken.	-
5. Reuse of Existing Concrete Slabs and Asphalt Above the Marker Layer	-	Concrete and asphalt slabs are to be inspected and asbestos clearance certificate to be issued by licenced asbestos assessor (LAA)/occupational hygienist prior to crushing for reuse. Slabs need to be cleaned and not impacted with residual sub-slab soil prior to crushing (where relevant). Details of cleaning are to be provided in the clearance letter. Verification of this via sampling crushed concrete stockpiles by EC prior to reuse above marker layer.	Inspection and clearance by LAA of slabs prior to crushing. Sampling of crushed material stockpiles for Asbestos NEPM (500 ml) at rate of 1/25m^3, plus a minimum of 3 samples per stockpile for stockpiles up to 200 m^3.
6. Reuse of Excavated Site Won Fill Above the Marker Layer	-	Sampling site won fill stockpiles by EC prior to reuse above marker layer.	Sampling of site won fill material stockpiles for 10 L asbestos quantification field sampling and collection of asbestos NEPM (500 ml) for laboratory analysis at rate of 1/25m^3, plus a minimum of 3 samples per stockpile for stockpiles for stockpiles less than 75m^3. A visual inspection of the stockpile is also required to be undertaken by an LAA, occupational hygienist or the EC to confirm that no asbestos was visible within the stockpile. Site won fill should only be used above the marker layer if the inspection undertaken and results of sampling are negative to detections of asbestos.
7. Reuse of Excavated Site Won Natural Soils and Rock Above the Marker Layer		Site won natural materials are to be inspected and asbestos clearance certificate to be issued by licenced asbestos assessor (LAA)/occupational hygienist prior to excavation to confirm that fill material was removed from above natural materials prior to excavation.	Inspection and clearance by LAA of natural material prior to excavation.

Area/Material	Remedial Approach	Validation Approach	Sampling Design
Materials Management – Imported Materials and Waste			
8. Imported Materials – Commercial Products - Quarried Natural Material (e.g. rock)	-	Quarried natural material is to be accompanied by an appropriate supplier certificate. The material should meet the general definition of VENM, except that it may have been processed as part of making the product. Sampling will not be required – inspection is required. The EC will inspect imported quarried material to confirm visual consistency with material reported at the source and absence of anthropogenic material.	-
9. Imported Materials – VENM or Tunnel Spoil Classified under a Resource Recovery Order.	-	VENM shall meet the definition of VENM under the *Protection of the Environment Operations (POEO) Act 1997*. It is recommended that sampling of this material is undertaken at source sites where possible. Imported Tunnel Spoil shall meet the definition under a resource recovery order/exemption under the *Protection of the Environment Operations (Waste) Regulations 2014*. The EC may conduct validation sampling or the RC must source and ensure the commercial supplier of the material provides a characterisation letter/report stating that the material meets the definition of VENM or the resource recovery order/exemption. The EC will observe imported material to confirm consistency with material reported at the source. One characterisation letter per material type will be required, which shall be reviewed by the EC. The characterisation letter should include a summary of the site history of the source site, the findings of any environmental site investigations undertaken at that site and the results of any soil analysis undertaken. Minimum sampling requirements should conform with this table.	1 sample per 100 m^3 imported, with a minimum of 5 samples collected per source site. A lower sampling density than indicated for stockpiles in NSW EPA (2022). *Sampling Design Guideline* is considered suitable given the low likelihood of contamination of the material. Field screening using a PID and logging. Material samples analysed for asbestos (500 mL NEPM), heavy metals, PAH, TRH, BTEXN and other relevant CoPCs based on source site land use.

Area/Material	Remedial Approach	Validation Approach	Sampling Design
10. Imported Materials – other Resource Recovery Materials (e.g. ENM, Reused/Recycled Materials, Mulch).	-	Imported exempt waste shall meet the definition of ENM in *Excavated Natural Material (ENM) Order 2014* or under a resource recovery order/exemption under the *Protection of the Environment Operations (Waste) Regulations 2014*. The EC will observe imported material to confirm consistency with material reported at the source. It is recommended that sampling of this material is undertaken at source sites where possible. The EC may conduct validation sampling or the RC must source the following information for any ENM imported to the site for review by the EC: • The commercial supplier of the material must provide a letter stating that the material is ENM or other exempt waste. One letter per material type will be required. • The commercial supplier must provide copies of test results, confirming contaminant concentrations meet the concentration criteria in the RRO.	Supplier certificates must be provided that identify the relevant RRO/RRE that material is being imported under. The supplier certificates must confirm that the relevant RRO sampling and analysis has been met. These are to be provided to the EC for review prior to material being imported to site. Additional sampling to that within supplier certificates and for the purpose of validation is to be undertaken by the EC: • ENM - a minimum of 1 sample per 75 m^3 imported, with a minimum of 5 samples collected per source site. A lower sampling density than indicated for stockpiles in NSW EPA (2022). *Sampling Design Guideline* is considered suitable given the low likelihood of contamination of the material. • Other exempt waste - at rate of 1/25m^3, plus a minimum of 3 samples per stockpile for stockpiles for stockpiles less than 75m^3. Field screening using a PID and logging. As a minimum, there should be analysis of asbestos (500 mL NEPM), heavy metals, PAH, TRH, BTEXN, OCP and PCBs and other relevant CoPCs based on source site land use.
11. Waste	-	If off-site disposal of excavated materials is required, this will be undertaken in accordance with the NSW EPA (2014) *Waste Classification Guidelines*. Consideration and management of acid sulfate soils as NSW EPA (2014) *Waste Classification Guidelines – Part 4*. Site won concrete (e.g. slabs) and inground structures (e.g. redundant services) requiring off-site disposal require a visual inspection and an asbestos clearance certificate from an LAA or competent person to confirm they are not impacted with asbestos prior to off-site disposal at a licenced waste facility.	For soils, at rate of 1/25m^3, plus a minimum of 3 samples per stockpile for stockpiles for stockpiles less than 75m^3. As a minimum, there should be analysis of asbestos (absence/presence), heavy metals, PAH, TRH, BTEXN, OCP, PCBs and PFAS. Additional analysis for Toxicity Characteristic Leaching Procedure (TCLP) for PFAS, and other CoPCs as required.
12. All Excavated and Placed Contaminated Materials, Imported Materials, and Waste	-	Material Tracking Register as specified in **Section 5.3.1**.	-

6.3 Environmental Consultant Presence

A suitably qualified and experienced EC is to be engaged to advise, provide oversight and undertake all validation requirements specified within this RAP. The EC may be one or more entities (i.e. different companies or skillets). The EC is to undertake the following:

- Oversight of all remediation requirements specified within this RAP. This includes physical site presence as required to conduct inspections, sampling and monitoring.
- Conduct remediation validation, including:
  - Observations of the materials encountered.
  - Undertake sampling and analysis of site materials as deemed necessary.
  - Inspect and review survey records of capping and marker layers.
  - Classify waste fill/soils.
  - Characterise imported materials.
  - Review materials tracking register maintained by the RC for accurate documentation of locations of excavations, materials beneficially reused on-site, materials taken off-site and imported materials.
- Provide guidance to assist with the appropriate on-site re-use and/or disposal of material (if required).
- Make an evaluation of potential risks to human health and the environment posed by the materials remaining on-site (inclusive of imported materials) and ensure the risk to health and the environment are acceptable (if required).

When the EC is not present the RC will be required to have a suitably trained and qualified person to identify unexpected finds; in particular, in imported materials and during bulk earthworks.

6.4 Quality Assurance and Quality Control

The field and laboratory quality assurance and quality control (QA/QC) plan to be adopted for the investigation has been designed to achieve pre-determined DQI that will demonstrate that the precision, accuracy, representativeness, completeness, comparability and sensitivity of the dataset meet the objectives of the investigation.

The specific QA/QC for the field and laboratory components of the investigation have been developed based on ASC NEPC.

6.4.1 Field QA/QC

The field quality assurance procedures to be adopted and the field quality control samples to be collected during the investigation and the corresponding acceptable control limits are presented below.

Table 6.4: Field Quality Assurance Procedures

Data Type	Comments and Acceptable Control Limits
Field Personnel	• Use appropriately trained field personnel.
Field Data Collection	• Site conditions and sample locations properly described. • Information to be recorded in field notes. Field notes are appropriately completed and summarised in the report on the investigation.
Sample Handling (storage and transport)	• Soil samples will be collected into the sample jars and bags supplied by the selected analytical laboratory. • The filled jars will be stored on ice in a chilled, insulated container until received by the analysing laboratory. • Sample numbers, dates, preservation and analytical requirements will be recorded on Chain of Custody (COC) documentation, which will also be delivered to the analytical laboratory. • All samples are required to be documented as received by the laboratory chilled and intact.
Calibration of Field Equipment	• The Photo-ionisation detector (PID) will be calibrated with isobutylene gas at 100 ppm at the commencement of each day of sampling and if necessary, during the day in accordance with the procedure provided by the supplier. • Calibration records will be kept for inclusion in the validation report.
Field Duplicates (Intra-Laboratory and Inter-Laboratory)	• Intra-laboratory duplicates will be collected and analysed at a rate of 1 in every 20 (or 1/10 for PFAS primary samples), with a minimum of 1 sample. • Inter-laboratory duplicates will be collected and analysed at a rate of 1 in every 20 (or 1/10 for PFAS primary samples), with a minimum of 1 sample. • The duplicate samples will be obtained from locations suspected of being contaminated and analysed for the key CoPCs (soil: asbestos, TRH, BTEX, M8, PAHs). • Duplicated samples will be labelled so as to conceal, from the laboratory, the relationship of the primary sample to the secondary sample. • RPDs to be less than 30% for inorganic and organic analyses where the results of one or both values are greater than 10 times the limit of reporting. Where both values are less than 10 times the LOR RPDs of less than 100% are acceptable.
Rinsate Blanks	• Rinsate blank samples (from an item of sampling equipment) will be collected and analysed at a rate of one per day of sampling. • Concentrations of analytes to be less than the laboratory limits of reporting.
Trip Spikes	• Laboratory prepared trip spikes will be used and analysed at a rate of one per batch for the soil investigation for BTEX analysis. • Recovery to be greater than 70%.

6.4.2 Laboratory QA / QC

The laboratory quality assurance procedures to be adopted and the internal laboratory QC samples to be analysed and the corresponding acceptable control limits are presented below.

Table 6.5: Laboratory Quality Assurance Procedures

Item	Comments and Acceptable Control Limits
Sample Analysis	• All sample analyses to be conducted using NATA certified laboratories which will implement a quality control plan in accordance with NEPC (2013).
Holding Times	• All samples are to be submitted to the laboratory within the required laboratory holding times. • Maximum acceptable sample holding times for soil are14 days for organic analyses and 6 months for inorganic analyses (28 days for mercury).
Laboratory Detection Limits	• All laboratory detection limits to be less than the adopted assessment criteria.
Laboratory Blanks	• Laboratory blanks to be analysed at a rate of 1 in 20, with a minimum of one analysed per batch. • Concentration of analytes to be less than the laboratory detection limits.
Laboratory Duplicates	• Laboratory duplicates to be analysed at a rate of 1 in 20, with a minimum of one analysed per batch. • RPDs to be less than 30%.
Laboratory Control Samples (Lcs)	• LCSs to be analysed at a rate of 1 in 20, with a minimum of one analysed per analytical batch. • Control limits: 70 to 130 % Acceptable Recovery.
Surrogates	• Surrogate compound concentrations will be required to be spiked at a similar concentration to sample results, at a rate of 1 in 20. • Control limits: 70% to 130% Acceptable recovery.
Matrix Spikes	• A matrix spike is an aliquot of a sample spiked with a known concentration of target analyte. A matrix spike documents the effect(s) of bias of matrix on method performance. • Matrix spike control limits: 70 to 130 % Acceptable recovery.

6.5 Remediation Acceptance Criteria

To assess whether the remediation goal has been achieved, validation criteria are adopted for the works:

- Capping extent and depth per the concept design in **Section 5.2**.
- Sourced from ASC NEPM and other NSW EPA made or approved guidelines for the purpose of validating soil samples and screening concentrations of contaminants. Criteria set out in ASC NEPM for a commercial/industrial setting, where available, are adopted based on the proposed re-development, the land use zoning of General Industrial (IN1) under the *Canterbury-Bankstown Local Environmental Plan 2023*, the surrounding environmental conditions, and the neighbouring receptors.

The following assessment criteria listed in **Table 6.4** below shall be adopted for the purpose of screening concentrations of contaminants.

Table 6.6: Adopted Assessment Criteria

Media	Receptor	Adopted Assessment Criteria
Soil	Human Health.	• Health investigation level D (HIL D), applicable for commercial/industrial in ASC NEPM and PFAS NEMP. • Health screening level D (HSL D) for vapour intrusion, clay, 0-<1 and 1 - <2 m in ASC NEPM. • Health screening level D (HSL D) for asbestos contamination in ASC NEPM. • HSL direct contact applicable for commercial/industrial (HSL D) in CRC CARE (protective of intrusive maintenance workers).
	Ecological.	Ther are expected to be limited exposure of site soils to ecological receptors – the developed site will be used for industrial purposes and mostly covered by hard stand and buildings. However, to inform evaluation of management requirements, screening shallow be conducted adopting for soils in landscaping and unpaved areas: • Ecological investigation level (EIL) for commercial/industrial sites for soil is applicable to shallow soil to 2 m bgl. Site-specific EILs were calculated consistent with NEPC (2013) using the average of laboratory results; pH, total organic carbon, clay % and CEC. • The ASC NEPM (2013) methodology for derivation of site-specific EILs for lead, nickel, chromium III, copper and zinc was used to determine site specific screening criteria. The derivation process requires determination of ambient background concentrations (ABC) and added contaminant limits (ACLs) for these chemicals, and the EIL is then calculated as the ABC plus the ACL. The ACL is calculated using site-specific soil properties such as soil pH, organic carbon content and cation exchange capacity (CEC). Further details are provided in **Section 8.1**. • Ecological screening level (ESL) for fine soils in commercial/industrial sites. • PFAS NEMP interim soil ecological criteria (all land uses) for direct exposure (EDE).
	Infrastructure.	Management Limits shall be used to assess the potential impacts of petroleum hydrocarbons which consider potential fire and explosive hazards and the effects of petroleum hydrocarbons on buried infrastructure.
	Aesthetics.	The ASC NEPM does not provide assessment criteria but states that site assessment requires balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity. Aesthetic issues generally relate to the presence of low-concern inert foreign material in soil or fill resulting from human activity. Issues that require further assessment could include: • Highly malodorous soil or extracted groundwater. • Hydrocarbon sheen on surface water. • Discoloured chemical deposits or soil staining with chemical waste. • Presence of putrescible waste that may generate hazardous levels of methane. Aesthetics considerations are of a lesser concern for areas of the site which will have a sealed surface.
	Waste.	Thresholds and limits in NSW EPA (2014) *Waste Classification Guidelines*.
	VENM.	VENM (and quarried natural products) should meet the definition of VENM in POEO Act and the following will apply: • Analysis results for organics (i.e. TRH, BTEX, PAH, OCP, OPP and PCB) must be below the LOR. Any results above the LOR should be assessed on a case by case basis before allowing any material on-site. • Analysis results for metals should be consistent with the range of expected background concentrations. • Analysis results should not exceed HIL-D or HSL-D. • If asbestos is identified, the material will not be acceptable for use at site.
	ENM, other exempt waste under an RRO.	As per the ENM or other RRO/exemption and the following will apply: • Analysis results for metals should be consistent with the range of expected background concentrations. • Analysis results should not exceed HIL-D or HSL-D. • If asbestos is identified, the material will not be acceptable for use at site.

Media	Receptor	Adopted Assessment Criteria
Groundwater	Human Health.	• HSL for vapour intrusion, clay aquifer, 2-4 m for commercial/industrial (HSL D) in ASC NEPM. • Incidental contact under recreational or during drain maintenance work settings will be assessed via Australian Drinking Water Guidelines (ADWG) (2022) drinking water values x 10 consistent with evaluation for recreational contact and recreational water quality guideline values in PFAS NEMP. Drinking water guidelines have not been considered, given that there is no groundwater extraction for drinking purposes and provision of a reticulated water supply.
	Ecological.	• The Default Guidelines Values (DGV) provided by ANZG (2018) will be used to assess aquatic exposure. DGVs apply to receiving waters rather than groundwater under the site. Salt Pan Creek is identified as the closest surface water receptor and is considered a slightly to moderately disturbed environment. As such the 95% spp level is relevant for the assessment. DGVs for freshwater are adopted, which are relevant to Salt Pan Creek. ANZG (2018) states that for chemicals that that bioaccumulate the higher 99% spp level is relevant. • ECHA (European Chemicals Agency) value for fresh and marine water for formaldehyde. • Interim water quality guidelines presented in the PFAS NEMP have been adopted for PFAS. The 95% spp DGVs shall be used to assess direct toxicity.
Soil Vapour	Human Health.	• HSLs for vapour intrusion (sand, depth based) for commercial/industrial (HSL D) in ASC NEPM. • Interim soil vapour health investigation levels for volatile organic chlorinated compounds for commercial/industrial (HSL D) in ASC NEPM. Where VOCs that do not have an HSL/HIL value are detected, additional screening levels have been sought from: • Reference concentrations in *Vapour Intrusion: Technical Practice Note* (NSW EPA, 2010); or • US EPA Regional Screening Levels (RSLs) for Commercial Air adjusted as follows: ▪ The RSLs are indoor air values and so have been adjusted to soil vapour screening levels using an attenuation factor of 0.03 consistent with the recent enHealth 2023 guidance. ▪ Where the RSLs are based on carcinogenic evaluation the value has also been adjusted by a factor of 10 consistent with the acceptable risk level of 1x10-5 identified in the ASC NEPM. ▪ If a compound is not considered to be genotoxic or mutagenic then the threshold RSL value have been selected consistent with evaluation of threshold/ non threshold evaluation in the ASC NEPM.

6.6 Validation Reporting

A validation report shall be prepared by the EC on completion of the in-ground and at-grade development works. This report shall comply with requirements in NSW EPA (2020a) *Contaminated Land Guidelines: Consultants Reporting on Contaminated Land*, including the following:

- Survey data confirming the location and depth of marker layer and capping thickness.
- A summary of material tracking records, including receiving facilities, landfill disposal dockets and NSW EPA IWTS data to be summarised within a table as described in **Section 5.3.**
- Imported material certificates/classifications.
- Plans of sampling locations (as applicable) including historical and validation sampling.
- Inspection records and photographs.
- Tables of sample inspection, field screening and analysis results.
- NATA approved laboratory reports.
- Validation of field and laboratory data quality.
- Unexpected finds documentation.
- A summary of environmental monitoring activities (e.g. air monitoring records and asbestos clearance certificates) undertaken by the RC during remediation works.
- Identify ongoing management requirements.

The report will include an assessment of all results and data and re-evaluation of the CSM, and then draw a conclusion on the suitability of the site for ongoing commercial/industrial land use contingent upon appropriate implementation of the LTEMP.

7.0 Site Management Provisions

Prior to the commencement of remediation works the following environmental management procedures and controls are to be implemented. These should include, but are not limited to, the following:

- Asbestos works notification and management controls, including dust and fugitive fibre emission controls and monitoring.
- Sediment/erosion management.
- Stockpile management including identification of temporary stockpiling locations.
- Reference to health and safety management, including provisions for personal protective equipment.
- Excavation water (groundwater and stormwater runoff) management.
- Material tracking and disposal.
- Site access.
- Noise, odour and vibration controls.
- Monitoring requirements.

It is envisaged that these are developed and documented in:

- Site-Specific Health and Safety Plan (HASP).
- Construction Environmental Management Plan (CEMP).
- Construction Asbestos Management Plan (AMP), which could form part of the CEMP.

These may be prepared specifically for remediation works or for development construction works generally.

The following summarises the site management requirements. There may be additional requirements in DA conditions of approval or from GPSA – the SSD conditions of approval should take preference where there are any conflicts.

7.1 Asbestos Management

Asbestos has been detected in some fill material and will require management during remediation works. As such, remediation works involving asbestos impacted fill material must be conducted in accordance with regulations and SafeWork NSW (2022a/b) codes of practice for managing asbestos in workplaces.

The management controls and procedures shall be documented in the AMP. It is expected that the PC or RC will prepare and implement a construction AMP, including details on the personal protective equipment (PPE) and monitoring. The AMP must be provided to the EC prior to the initiation of the remediation works.

The AMP should be developed in accordance with SafeWork NSW (2022a/b) in consideration of site-specific risks and proposed development works but should consider at a minimum, the following:

- The location and extent of asbestos within the site.
- Notification requirements, including to SafeWork NSW.
- Roles and responsibilities, including appropriate supervision, monitoring and clearance for friable asbestos. E.g., all works that expose and/or penetrate asbestos impacted fill material must be supervised by a Class A licensed asbestos removalist contractor.
- Air monitoring requirements, which should include boundary monitoring for asbestos fibres.
- Demarcation and signage of the works area.
- Training and induction requirements.
- PPE and decontamination procedures.
- Reference to related environmental management controls in the CEMP.

7.2 Construction Environmental Management

The CEMP should outline authority approvals, regulatory requirements, team contacts, pre-construction planning, site management strategy, project administration, project specific requirements, site layout and logistics, construction methodology and construction risks and mitigation measures.

The CEMP should also discuss safety and environmental management and, inclusive of RAP requirements, discuss hazardous materials and unexpected discovery protocol.

7.2.1 Site Access

All remediation-related heavy vehicle access and egress from the site should follow a designated heavy vehicle route specified by the RC. As a minimum, the following traffic control measures will be implemented:

- All streets along the designated heavy vehicle route will be kept free from detritus material sourced from the site during the course of the project. A representative of the contractor will, on a daily basis, monitor the roadways leading to and from the site, and take steps to clean any adversely impacted pavements.
- Materials such as soil, mud, earth or similar tracked onto the driveways will be removed by means such as sweeping and shovelling, but not washing.
- Vehicles travelling along the designated heavy vehicle route shall have covered loads and adhere to the relevant speed limits.

7.2.2 Vehicle Cleaning

The following controls will be placed on operation and movement of vehicles that have been in contact with contaminated material:

- The surface of internal access roads carrying vehicular traffic will be kept clean.
- Vehicles carrying fill material shall be covered at all times with an “enviro-tarp” or similar impervious material to prevent the escape of dust or other material.
- A record of all trucks removing fill or natural materials from the site will be kept in a logbook and tracked to its final destination, NSW EPA IWTS information and tip dockets shall be retained on-site.
- The wheels and wheel arches of all vehicles having had access to the fill material will be inspected and if required, cleaned by the use of a broom or water spray to prevent mud and sediment from being deposited on Council roadways.

7.2.3 Dust Control

All practicable measures will be taken to ensure that dust emanating from the site is minimised. Measures to minimise the potential for dust generation may include:

- Where practicable minimising the excavation area and total number of stockpiles of impacted materials present within the site.
- Any asbestos material which may be encountered during the excavation works will be kept wetted at all times or otherwise covered.
- Use of water sprays over unsealed or bare surfaces, which are generating unacceptable amounts of dust.
- Covering of excavation faces and stockpiles, where necessary (if unacceptable amounts of dust are generated or if weather forecasts predict strong winds).
- Establishing dust screens consisting of a minimum of 2 m high shade cloth or similar material secured to a chain wire fence where dust is noted to be escaping the site boundary.
- Maintenance of all dust control measures to ensure good operating condition.
- All vehicles having had access to unpaved areas of the site shall exit via a wheel wash facility to prevent mud and sediment from being deposited on public roadways.

7.2.4 Odour Control

While odour is not considered to be a significant risk, all activities conducted at the site will be controlled such that all equipment used is designed and operated to control the emission of smoke, fumes and vapour into the atmosphere and any possible odours arising from the excavation or stockpiled material is controlled.

Control measures may include:

- Maintenance of construction equipment so that exhaust emissions comply with the relevant NSW legislation.
- Use of covers (if required, e.g. HDPE).

7.2.5 Soil Erosion and Surface Water Runoff

During remediation works, sediment and surface water controls in accordance with the Southern Sydney Regional Organisation of Council's brochure "*Soil and Water Management for Urban Development*" should be implemented. While the specific controls to be implemented will be documented within contractor site management plans the following should be considered:

- Sediment control.
- Clean water diversions.
- Stormwater drain protection.

Sediment and clean water diversion control measures (i.e., silt fencing, hay bales, gravel bags etc.) should be strategically placed at the following locations:

- Down-gradient of temporary stockpiles.
- Up-gradient of temporary stockpiles to redirect water.
- Down-gradient of any surrounding stormwater channels that flow within / through the site as a contingency against overflow into bunded stockpile locations.

Stormwater runoff should be diverted around open excavations.

Stormwater drain protection may comprise:

- Installation of sediment controls in any identified stormwater drains located down-gradient of any temporary stockpile areas.

During remediation works all sediment and surface water controls will be routinely inspected. Should any control measure be damaged or defective, the issue will be reported to the site superintendent to arrange for repair or modification.

7.2.6 Site Security and Signage

The site shall be secured by means of an appropriate fence to guard against unauthorised access if required.

A sign displaying the contact details of the RC will be displayed on the site adjacent to the works area.

The sign/s will be displayed throughout the duration of the remediation works in accordance with NSW regulatory requirements.

7.3 Worker Health and Safety

Remediation works shall be conducted compliant with requirements under relevant NSW or National worker health and safety regulations and guidance.

A worker health and safety plan (HASP) shall be prepared by the RC prior to commencement of remedial works. The HASP shall contain procedures and controls that are to be implemented to mitigate potential risks to site workers and surrounding residents/workers during remediation works. The approved HASP shall be implemented during remediation works.

All personnel undertaking work on the site will have undergone training relevant to the handling and management of contaminated materials including asbestos.

The HASP shall include or address:

- Roles and responsibilities.
- An assessment of hazards, risks and mitigations.
- Establishment of worker protection standards, safety practices and procedures.
- Monitoring requirements, instruments and trigger values (which may prompt a higher level of management).
- Provision for contingencies and emergency response.
- Any other requirements by the site owner or DA consent conditions.

The HASP shall consider normal construction related hazards and controls, and those specific to the proposed remediation works, including:

- Potential exposure to contaminated soil and asbestos.
- Excavations safety.
- Contingency procedures, controls and asbestos air monitoring.
- Personal Protective Equipment (PPE).
- Under/aboveground services, including USTs (if encountered), trade waste drains and sewerage.
- Excavation safety and operation of machinery in restricted spaces like excavations.

7.4 Reporting

7.4.1 Non-conformance and Corrective Action Reports

Non-conformances will be recorded within the Remediation Contractor's Non-Conformance and Corrective Action Report (or equivalent).

Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the on-site project team.

It is the responsibility of the project team to immediately initiate corrective actions, if required. Once completed, the project team will provide details of the actions undertaken on the Non-Conformance Report and sign, date and file the report.

7.4.2 Incident Management Reports

Reporting of environmental incidents will be undertaken in accordance with the EC's incident reporting procedures and timelines.

Records will be kept of any environmental incidents, accidents, hazardous situations, unusual events and unsafe health exposures and the corrective action taken.

The project team will investigate the cause of any emergency so that necessary changes in work practices can be made to prevent the incident recurring.

7.4.3 Complaint Reporting

The project team will maintain a register of complaints, which will include a record of any action taken with respect to the complaints.

If a complaint identifies a non-conformance, a Non-Conformance & Corrective Action report is to be initiated as per requirements of the CEMP.

Nature of the complaint is to be documented in the site's Complaints and Environmental Incidences Register (or equivalent).

7.5 Remediation Schedule

The PC or RC is to prepare a detailed program of remediation works, outlining key activities, milestones and completion dates. It is anticipated that most remediation works will be undertaken following demolition during initial site levelling and civil earthworks associated with site development.

7.6 Hours of Operation

Hours of operation are expected to be consistent with the SSD conditions of approval.

8.0 Contingency Plan

8.1 Remedial Contingencies

The purpose of the contingency plan is to identify unexpected situations that could occur, to specify procedures that can be implemented to manage such situations and to prevent adverse impacts to the environment and human health should these situations occur.

The conditions that may be encountered when undertaking works are uncertain. As unknown and variable sub-surface conditions impose a degree of uncertainty for the project, a set of anticipated conditions has been assumed in developing the RAP. However, because field conditions may vary, flexibility has been built into the RAP to adapt to differing conditions.

The conditions that can reasonably be expected, the resulting problems they may cause, and how these problems may be resolved within the context of the program have been summarised below.

Table 8.1: Contingencies

Potential Scenario	Action
Other Types of Contamination	The capping approach and broad analytical suite adopted in previous investigations mitigates this risk. Further evaluation of associated risks and incorporation into the LTEMP may be required.
Soil Contamination Underlying Existing Trees to Be Retained	If soil contamination is identified underlying existing trees to be retained, contingency management will be required to either: • remove the tree with permission from Council and remediate the soil; or • install a cover and marker layer overlying contamination to the extent that a horticulturalist indicates will not impact tree health, and ongoing management; and • ongoing passive management under the LTEMP.
Contamination of Groundwater	The remedial approach assumes that groundwater is not suitable for extraction and use. There is a low likelihood of active groundwater remediation being required. If required, a risk assessment could be undertaken to quantify risks and a dewatering management plan should be prepared.

8.2 Unexpected Finds

In addition to the above listed contingencies, the following steps may need to be undertaken should unexpected finds such as stained or odorous materials, buried drums or tanks, or suspect contaminated materials (other than identified impacts) be discovered during the works:

In the event that unexpected finds are encountered, the following protocol will be adopted:

- All works in the affected area will cease, the project manager, RC and GPSA will be contacted.
- The area of concern will be suitably barricaded / suitably fenced.
- Notify the EC and site auditor as soon as practicable.
- The nature of the contamination will be characterised visually and, if required, appropriate sampling and analysis will be completed by the EC.
- The requirement for any additional remediation and or sampling will then be assessed.
- Records will be kept in relation to the nature, location and management of the particular material.

Additional environmental and occupational safety controls may include:

- Upgrade of PPE, for workers within the active work zone, in accordance with the HASP.
- Segregation and bunding of discovered material.
- Use of odour suppressants (where appropriate).
- Cover the discovered material with plastic sheeting (where appropriate/possible).
- Appropriate sampling and analysis to assess potential contaminants; and
- Appropriate treatment and/or disposal of the materials following receipt of analytical results and any associated regulatory approvals required.

9.0 Conclusion

This RAP was developed to provide a framework describing the requirements for remediation, validation, and worker health and safety and environment management strategies associated with the identified contamination at the site.

Subject to the suitable implementation of the measures described in this RAP, it is concluded that the site can be made suitable for the intended commercial/industrial use and that the risks to the environment can be appropriately protected during the remediation works. Ongoing passive management of certain intrusive works into residual contaminated soils and impacted groundwater under building slabs, pavement and a marker layer will be required via appropriate implementation of a passive LTEMP.

10.0 Principles and Limitations

The following principles are an integral part of site contamination assessment practices and are intended to be referred to in resolving any ambiguity or exercising such discretion as is accorded the user or site assessor.

Table 10.1: Principal and Limitation of Investigation

Area	Field Observation and Analytical Results
Elimination of Uncertainty	Some uncertainty is inherent in all site investigations. Furthermore, any sample, either surface or subsurface, taken for chemical testing may or may not be representative of a larger population or area. Professional judgment and interpretation are inherent in the process, and even when exercised in accordance with objective scientific principles, uncertainty is inevitable. Additional assessment beyond that which was reasonably undertaken may reduce the uncertainty.
Failure to Detect	Even when site investigation work is executed competently and in accordance with the appropriate Australian guidance, such as the National Environmental Protection (Assessment of site Contamination) Amendment Measure ('the NEPM'), it must be recognised that certain conditions present especially difficult target analyte detection problems. Such conditions may include, but are not limited to, complex geological settings, unusual or generally poorly understood behaviour and fate characteristics of certain substances, complex, discontinuous, random, or heterogeneous distributions of existing target analytes, physical impediments to investigation imposed by the location of services, structures and other man-made objects, and the inherent limitations of assessment technologies.
Limitations of Information	The effectiveness of any site investigation may be compromised by limitations or defects in the information used to define the objectives and scope of the investigation, including inability to obtain information concerning historic site uses or prior site assessment activities despite the efforts of the user and assessor to obtain such information.
Chemical Analysis Error	Chemical testing methods have inherent uncertainties and limitations. Senversa routinely seeks to require the laboratory to report any potential or actual problems experienced, or non-routine events which may have occurred during the testing, so that such problems can be considered in evaluating the data.
Level of Assessment	The investigation herein should not be considered to be an exhaustive assessment of environmental conditions on a property. There is a point at which the effort of information obtained and the time required to obtain it outweigh the benefit of the information gained and, in the context of private transactions and contractual responsibilities, may become a material detriment to the orderly conduct of business. If the presence of target analytes is confirmed on a property, the extent of further assessment is a function of the degree of confidence required and the degree of uncertainty acceptable in relation to the objectives of the assessment.
Comparison with Subsequent Inquiry	The justification and adequacy of the investigation findings in light of the findings of a subsequent inquiry should be evaluated based on the reasonableness of judgments made at the time and under the circumstances in which they were made.
Data Useability	Investigation data generally only represent the site conditions at the time the data were generated. Therefore, the usability of data collected as part of this investigation may have a finite lifetime depending on the application and use being made of the data. In all respects, a future reader of this report should evaluate whether previously generated data are appropriate for any subsequent use beyond the original purpose for which they were collected or are otherwise subject to lifetime limits imposed by other laws, regulations or regulatory policies.
Nature of Advice	The investigation works herein are intended to develop and present sound, scientifically valid data concerning actual site conditions. Senversa does not seek or purport to provide legal or business advice.

11.0 References

enHealth (2023). *Guidance for the human health risk assessment of volatile chlorinated hydrocarbon vapour intrusion*. Canberra. Australian Government Department of Health and Aged Care.

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NSW EPA (2014). *Waste Classification Guidelines*.

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Senversa (2025). *Detailed Site Investigation*. S22013_003_RPT_Rev3, 21 May 2025.

WA Department of Health (2021) *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*.

Figures

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Legend

- Lot Boundary
- Site Boundary

Notes:
Aerial Imagery (14/07/2024) © Metromap

Created:	E. Marha	Date:	20/05/2025
Reviewed:	L. Dzalakowski	Revision:	0
Approved:	Z. Smith	Scale:	1:1,200 (A3)
File:	S22013_005_F001 Site Location and Layout		

0 5 10 20 30 40 50 Metres

Coordinate System: GDA2020 MGA Zone 56

Figure No:	**1**
Title:	**Site Location and Layout**
Project:	Remediation Action Plan
Location:	12 Mars Rd, Lane Cove, NSW 2066
Client:	Goodman Property Services (Aust) Pty Ltd

Path: S:\01_Jobs\1 NSW_Jobs\S22013_GPSA_MARS RD_DS\APRX\S22013_005.aprx

Legend

- Groundwater Monitoring Well
- Soil Bore
- PACM Fragment
- Existing Groundwater Monitoring Well
- Asbestos Detected
- Lot Boundary
- Site Boundary

Notes:
Aerial Imagery (14/07/2024) © Metromap

Created:	E. Marha	Date:	20/05/2025
Reviewed:	L. Dzalakowski	Revision:	0
Approved:	Z. Smith	Scale:	1:1,000 (A3)
File:	S22013_005_F002 Sample Locations		

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Coordinate System: GDA2020 MGA Zone 56

Figure No: 2

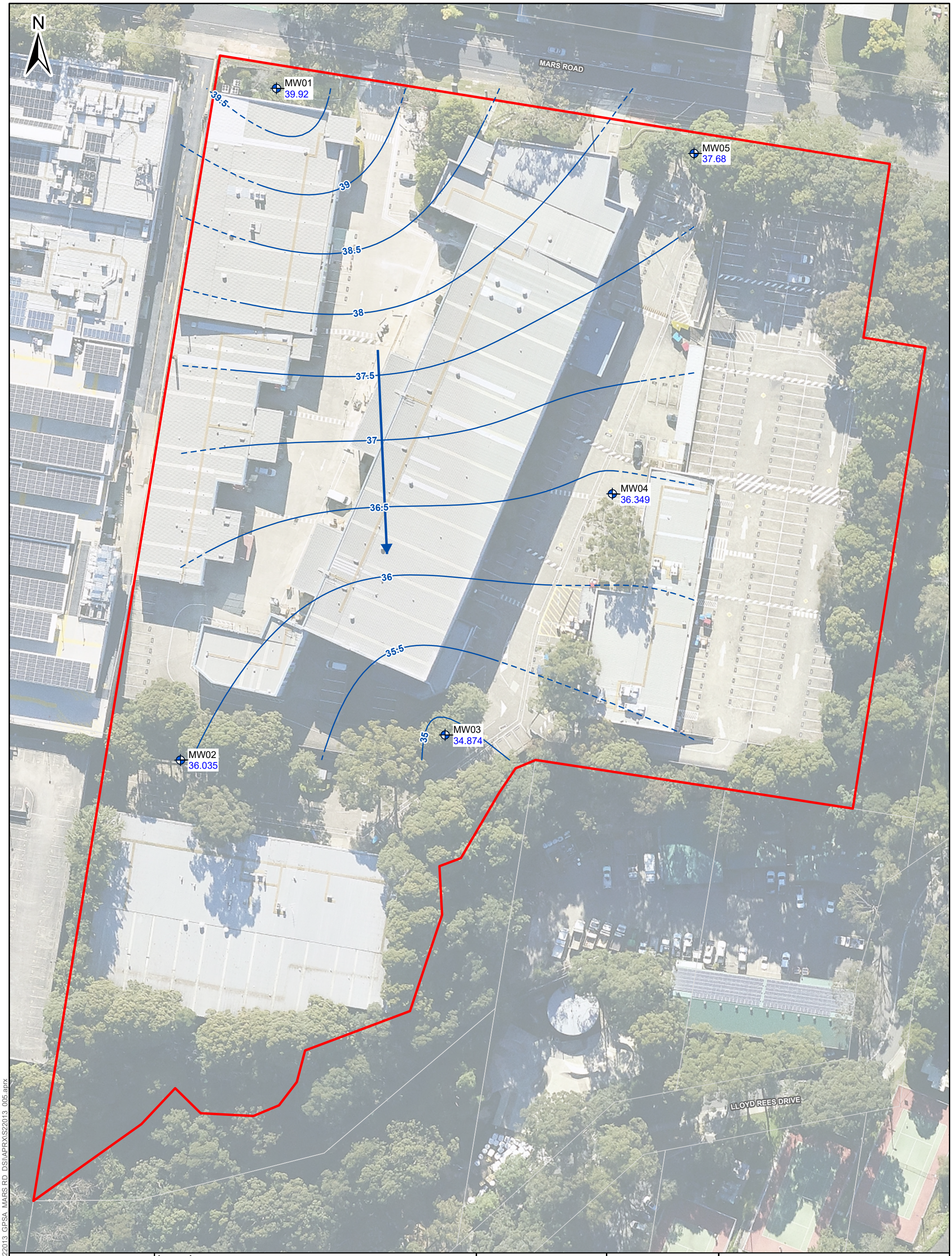
Title: Sample Locations

Project: Remediation Action Plan

Location: 12 Mars Rd, Lane Cove, NSW 2066

Client: Goodman Property Services (Aust) Pty Ltd

Path: S:\01_Jobs\1.NSW_Jobs\S22013_GPSA_MARS RD_DSI\APRX\S22013_005.aprx



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Legend

- Groundwater Monitoring Well
- Estimated Groundwater Contour (mAHD)
- Inferred Groundwater Contour (mAHD)
- Inferred Groundwater Flow Direction
- Lot Boundary
- Site Boundary

Well ID
Reduced Water Level (m AHD)

Notes:
Gauging data from 21/11/2024
Aerial Imagery (14/07/2024) © Metromap

Created:	E. Marha	Date:	20/05/2025
Reviewed:	L. Dzalakowski	Revision:	0
Approved:	Z. Smith	Scale:	1:800 (A3)
File:	S22013_005_F003 Groundwater Contours and Flow		

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Coordinate System: GDA2020 MGA Zone 56

Figure No: 3

Title: **Groundwater Contours and Inferred Flow Direction**

Project: Remediation Action Plan

Location: 12 Mars Rd, Lane Cove, NSW 2066

Client: Goodman Property Services (Aust) Pty Ltd

Path: S:\01_Jobs\1_NSW_Jobs\S22013_GPSA_MARS RD_DSI\APRX\S22013_005.aprx

Appendix A: Proposed Development Plans

PROJECT MARS

12 Mars Rd, Lane Cove West NSW 2066

SSDA APPLICATION

DRAWING LIST - TOA APPLICATION

DRAWING NUMBER	DRAWING NAME	CURRENT REVISION
AR-00 - PRELIMINARY WORK		
MAR-AR-DRG-00000	COVER SHEET	B
AR-10 - PRELIMINARY WORK		
MAR-AR-DRG-11000	URBAN CONTEXT PLAN	B
MAR-AR-DRG-11001	MASTERPLAN	B
MAR-AR-DRG-11002	SURVEY & EXISTING SITE PLAN	B
MAR-AR-DRG-11003	SITE PLAN	B
MAR-AR-DRG-11004	AXO VIEWS	B
MAR-AR-DRG-12000	DEMOLITION PLAN	B
MAR-AR-DRG-17000	SHADOW STUDY - SUMMER	B
MAR-AR-DRG-17001	SHADOW STUDY - SPRING	B
MAR-AR-DRG-17002	SHADOW STUDY - WINTER	B
MAR-AR-DRG-17003	SHADOW STUDY - AUTUMN	B
MAR-AR-DRG-18000	STAGING	B
AR-20 - GENERAL ARRANGEMENT		
MAR-AR-DRG-20000	AREA SCHEDULE	B
MAR-AR-DRG-21000	GENERAL ARRANGEMENT - LOWER GROUND FLOOR PLAN	B

DRAWING LIST - TOA APPLICATION

DRAWING NUMBER	DRAWING NAME	CURRENT REVISION
MAR-AR-DRG-21001	GENERAL ARRANGEMENT - GROUND FLOOR PLAN	B
MAR-AR-DRG-21002	GENERAL ARRANGEMENT - LEVEL 1 FLOOR PLAN	B
MAR-AR-DRG-21003	GENERAL ARRANGEMENT - LEVEL 2 FLOOR PLAN	B
MAR-AR-DRG-21004	GENERAL ARRANGEMENT - ROOF PLAN	B
MAR-AR-DRG-21005	GENERAL ARRANGEMENT - TOP OF SCREEN	B
MAR-AR-DRG-21006	GENERAL ARRANGEMENT - OFFICE - GROUND & LEVEL 01	B
MAR-AR-DRG-21007	GENERAL ARRANGEMENT - OFFICE - LEVEL 2 & 3	B
AR-30 - GENERAL ARRANGEMENT		
MAR-AR-DRG-30000	NORTH ELEVATION	B
MAR-AR-DRG-30001	EAST ELEVATION	B
MAR-AR-DRG-30002	SOUTH ELEVATION	B
MAR-AR-DRG-30003	WEST ELEVATION	B
MAR-AR-DRG-31000	SECTIONS SHEET 1 OF 2	B
MAR-AR-DRG-31001	SECTIONS SHEET 2 OF 2	B
AR-90 - SPECIAL PURPOSE		
MAR-AR-DRG-94101	SIGNAGE DETAILS - SITE TOTEM POLE + SIGNAGE	B
MAR-AR-DRG-96000	FINISHES SCHEDULE	B

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VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT

Goodman

PROJECT

PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE

COVER SHEET

SCALE: NTS @ A1
PROJECT NUMBER: 10417434
DRAWING NUMBER: **MAR-AR-DRG-00000**
ISSUE: **B**

PROJECT STATUS

SSDA APPLICATION

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ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
URBAN CONTEXT PLAN

SCALE
NTS @ A1

PROJECT NUMBER
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DRAWING NUMBER
MAR-AR-DRG-11000

ISSUE
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PROJECT STATUS
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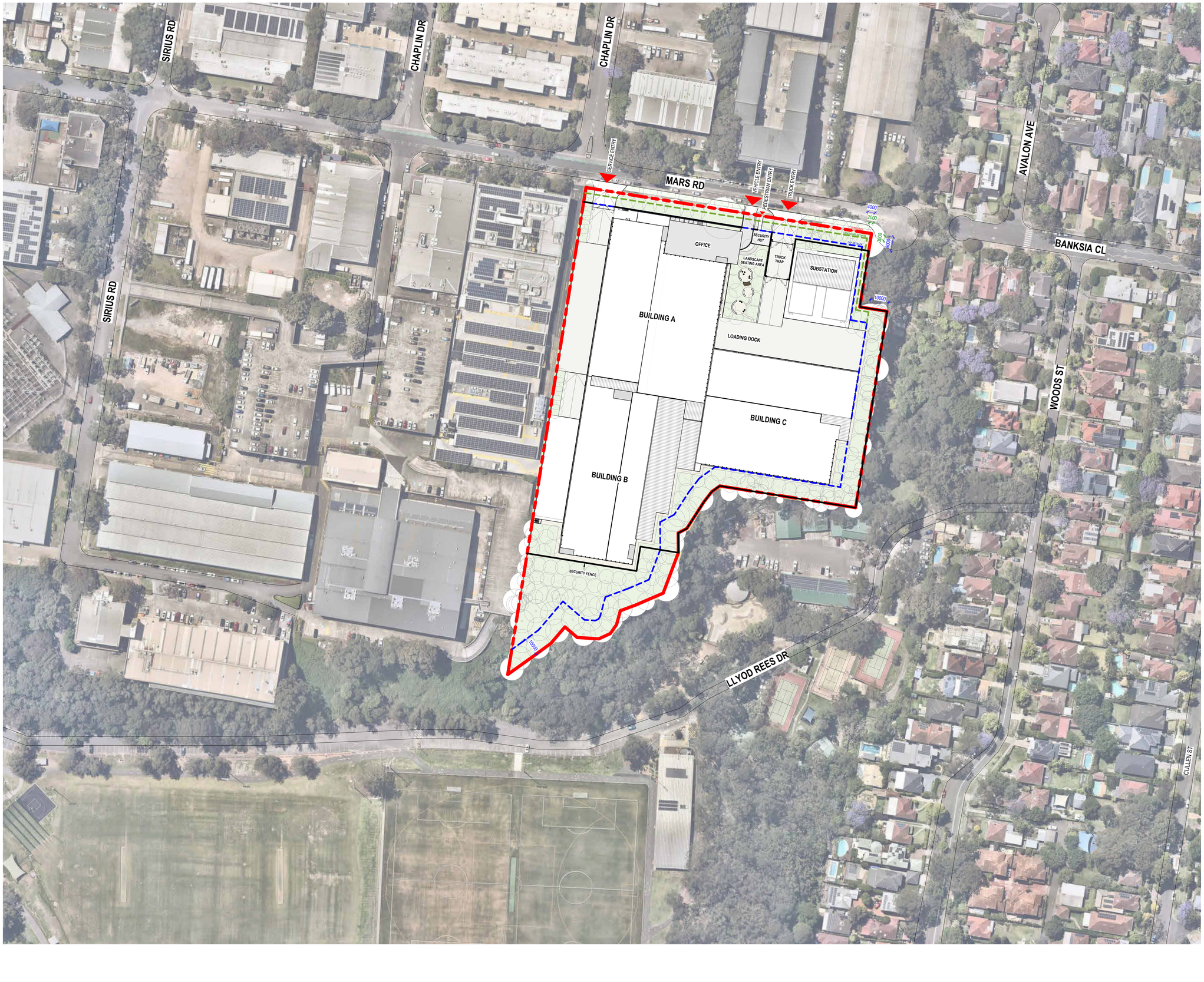

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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- PROPOSED TREES

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PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
MASTERPLAN

SCALE
As indicated @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
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ISSUE
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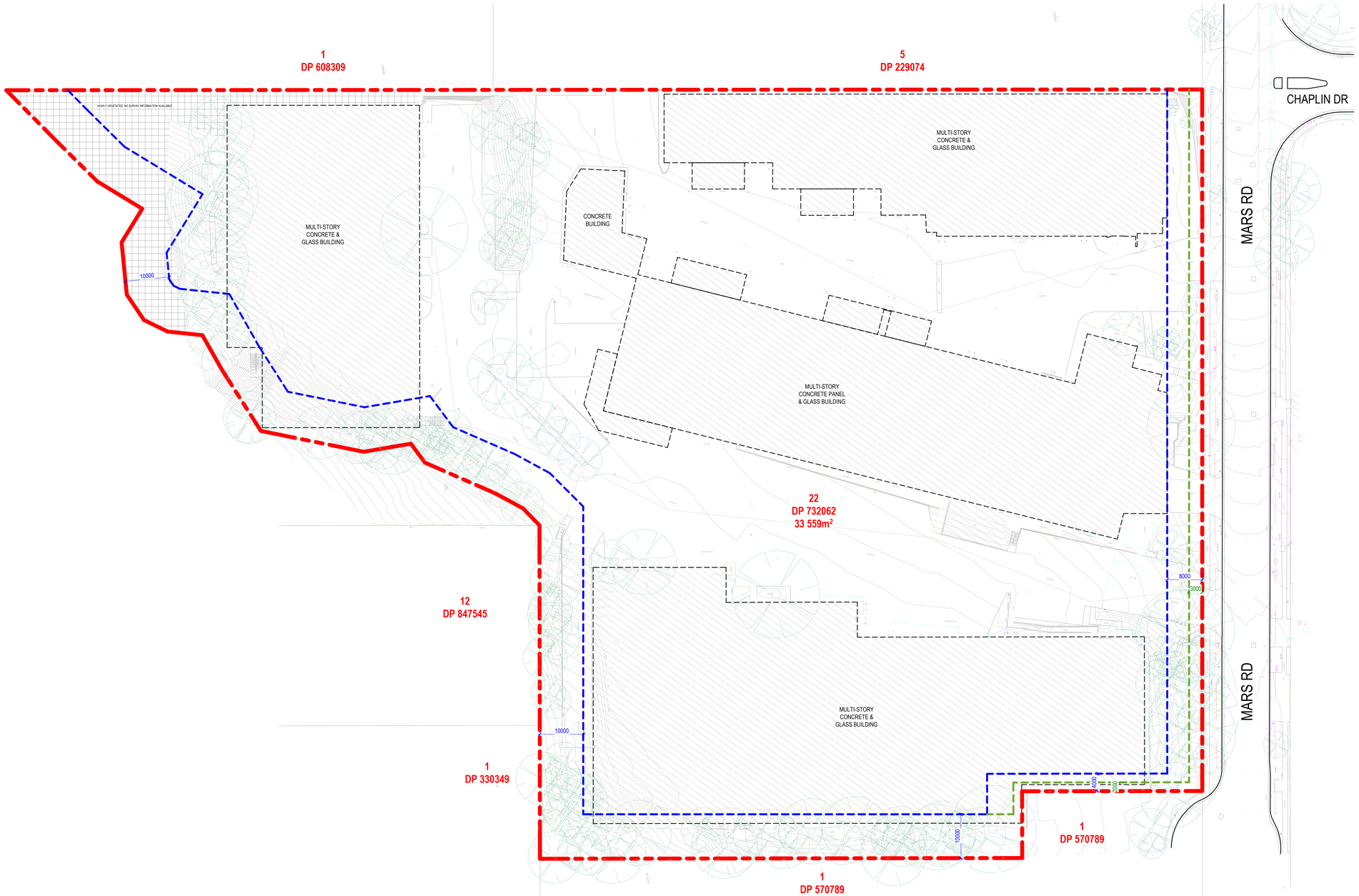

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REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

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- *DCP SETBACK*
- *DCP LANDSCAPE SETBACK*
- *CONTOURS*
- *STORMWATER*
- *ELECTRICAL OH*
- *EXISTING BUILDINGS*
- *NO SURVEY INFORMATION AVAILABLE*
- *EXISTING TREES*

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PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SURVEY & EXISTING SITE PLAN

SCALE
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PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-11002

ISSUE
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PROJECT STATUS
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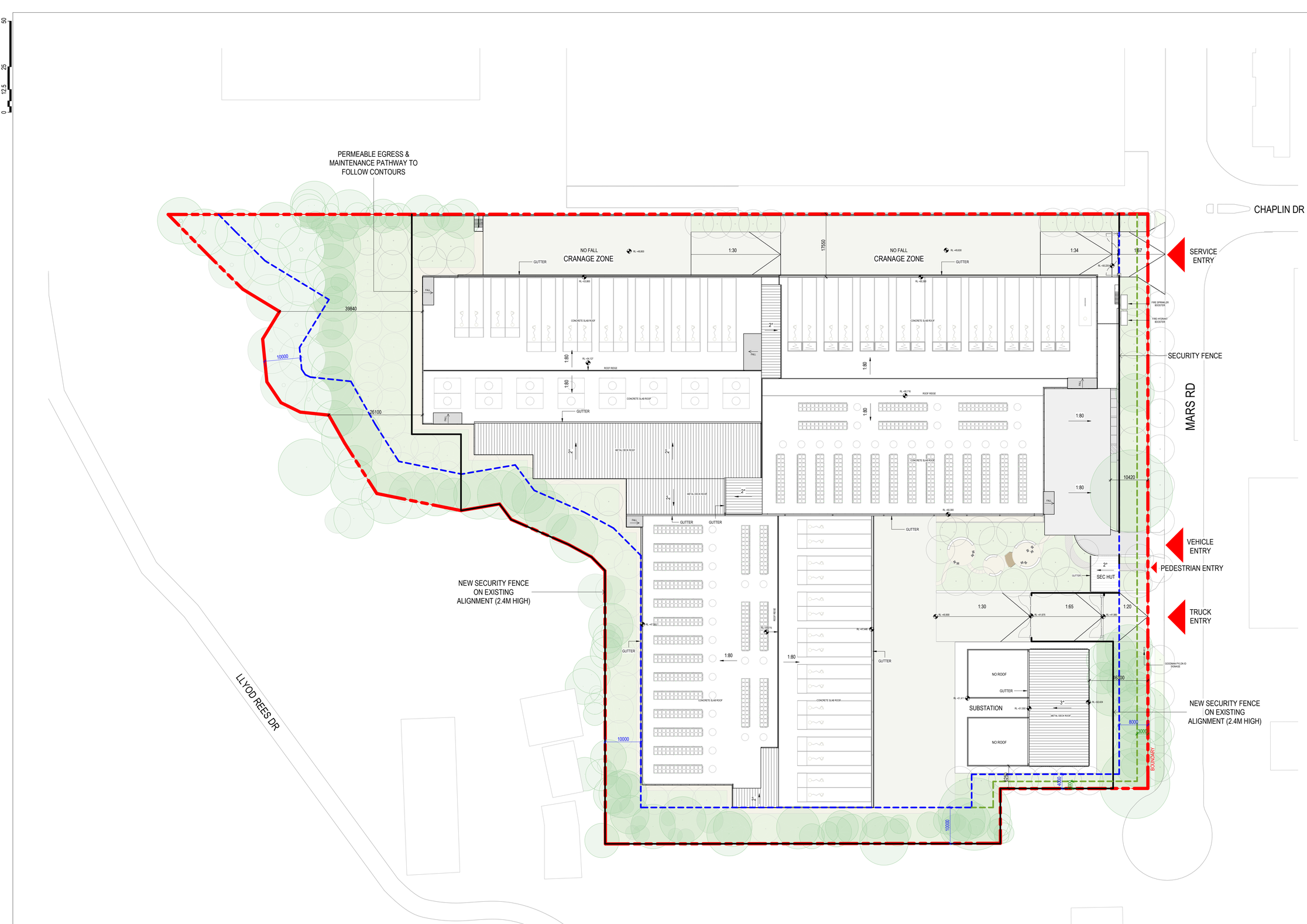

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REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- *BOUNDARY*
- *DCP LANDSCAPE SETBACK*
- *DCP SETBACK*
- *SECURITY FENCE*
- *PROPOSED LANDSCAPE*
- *PROPOSED EGRESS PATHWAY*
- *EXISTING TREES RETAINED*
- *PROPOSED TREES*

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PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SITE PLAN

SCALE
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PROJECT NUMBER
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DRAWING NUMBER
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ISSUE
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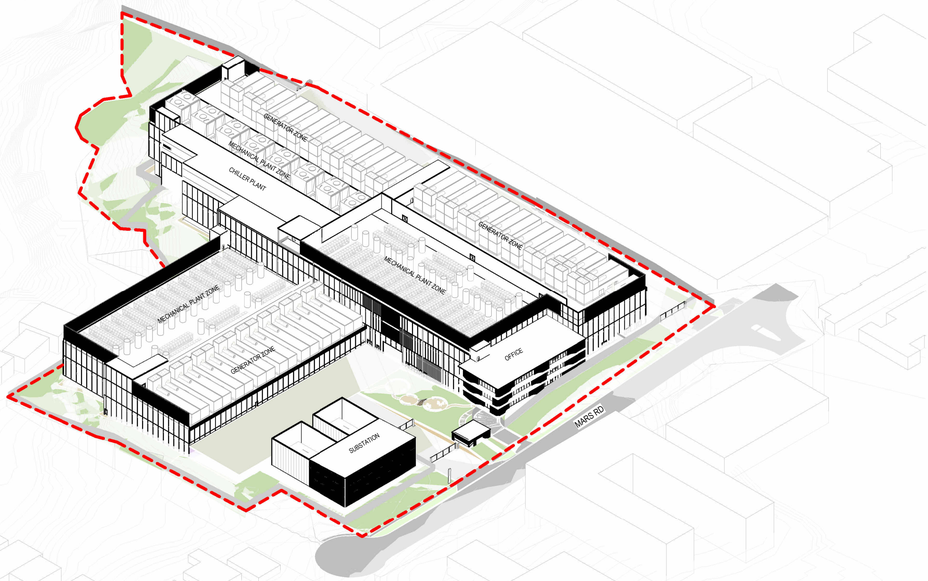

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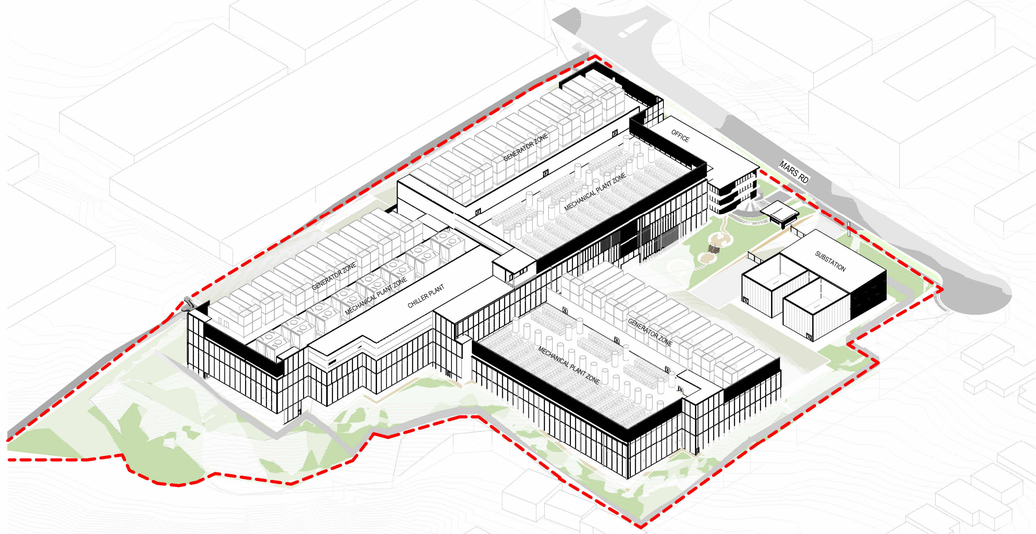

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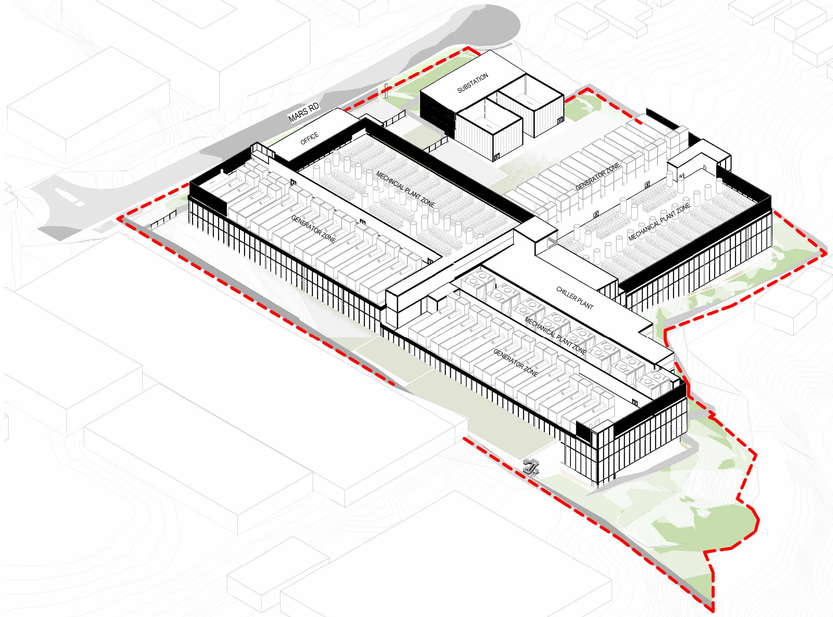

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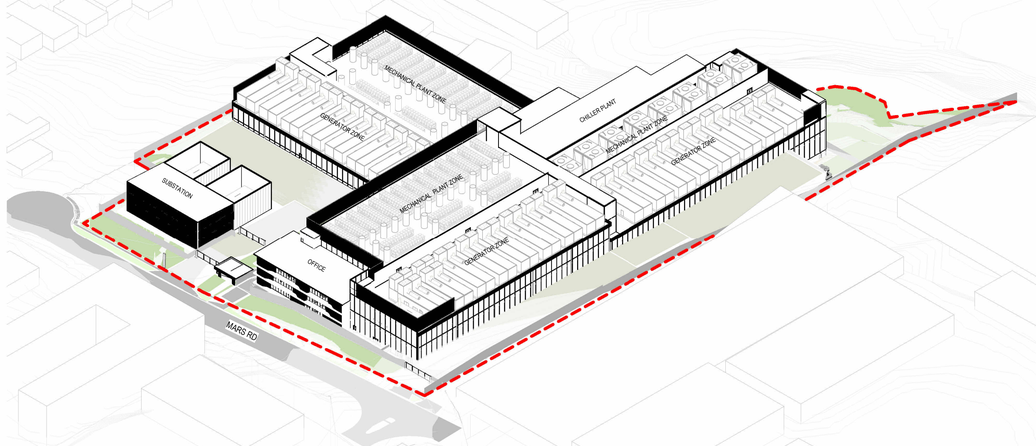

4 AXO VIEW - NORTH WEST

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REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

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PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
AXO VIEWS

SCALE
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PROJECT NUMBER
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MAR-AR-DRG-11004

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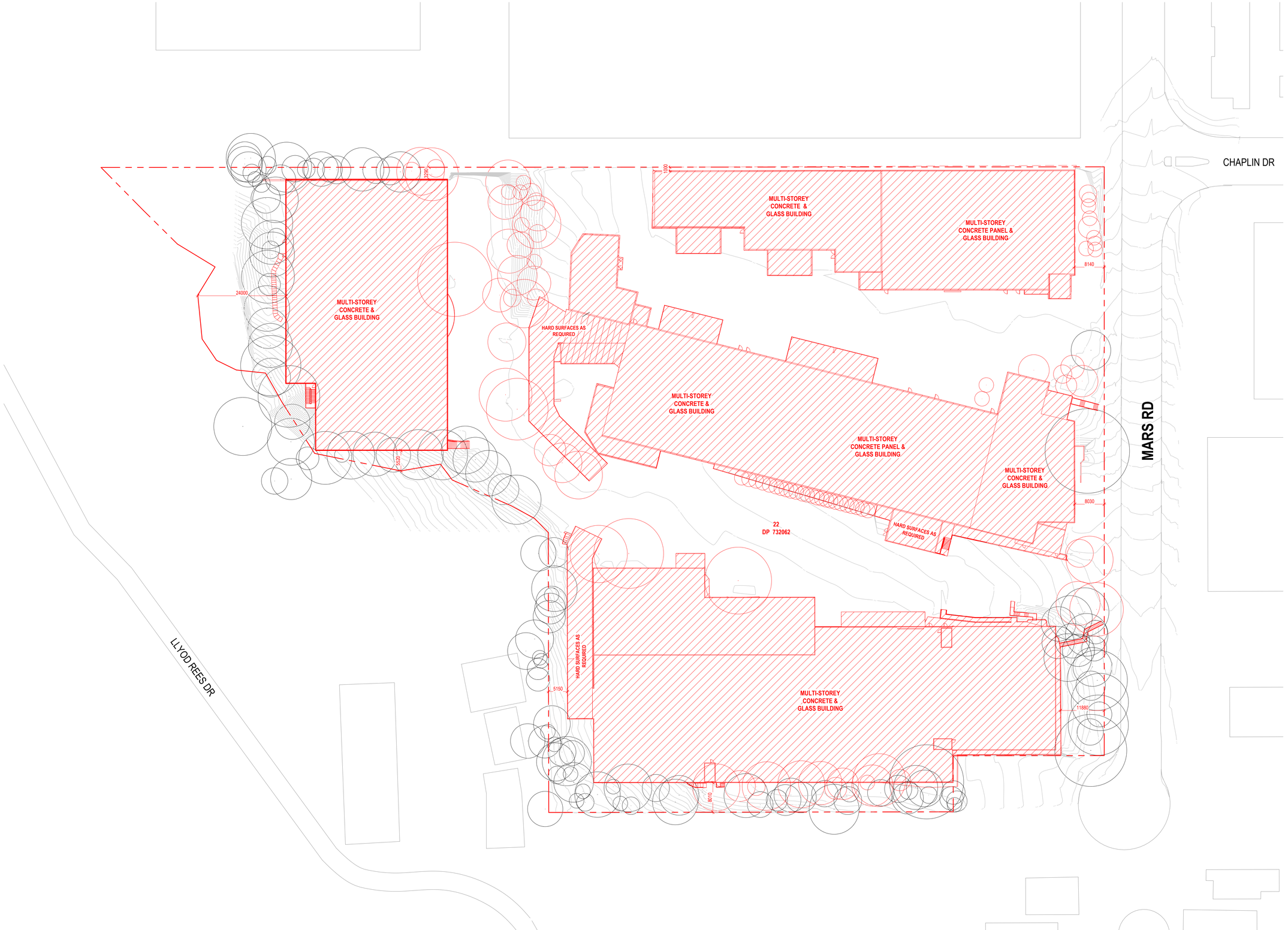

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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND - DEMOLITION

INDICATES EXTENT OF DEMOLITION WORKS. REFER TO ADJACENT / LEADER NOTES FOR DEMOLITION REQUIREMENTS.

INDICATES EXTENT OF DEMOLITION WORKS EXISTING TREES TO BE DEMOLISHED

INDICATES EXTENT EXISTING TREES TO BE RETAINED

**REFER TO CIVIL DRAWING SET FOR EARTHWORK & SITEWORK PLANS*

CLIENT
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PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
DEMOLITION PLAN

SCALE
1 : 500 @ A1

PROJECT NUMBER
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1 : 2000

2 **21ST DECEMBER - 12PM - PROPOSED**
1 : 2000

3 **21ST DECEMBER - 3PM - PROPOSED**
1 : 2000

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REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
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PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SHADOW STUDY - SUMMER

SCALE
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PROJECT NUMBER
10417434
DRAWING NUMBER
MAR-AR-DRG-17000
ISSUE
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SSDA APPLICATION
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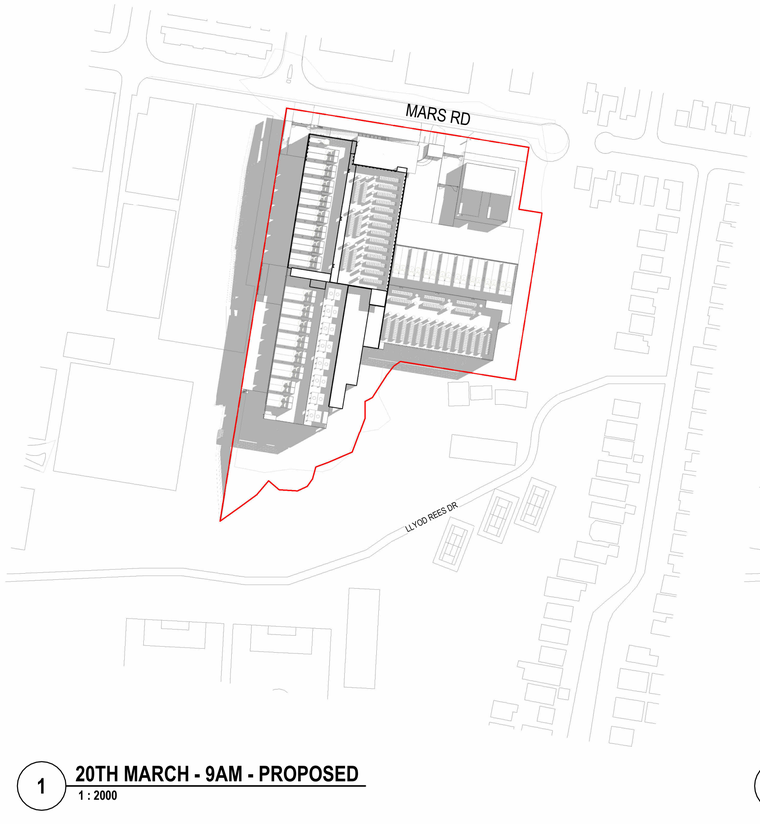

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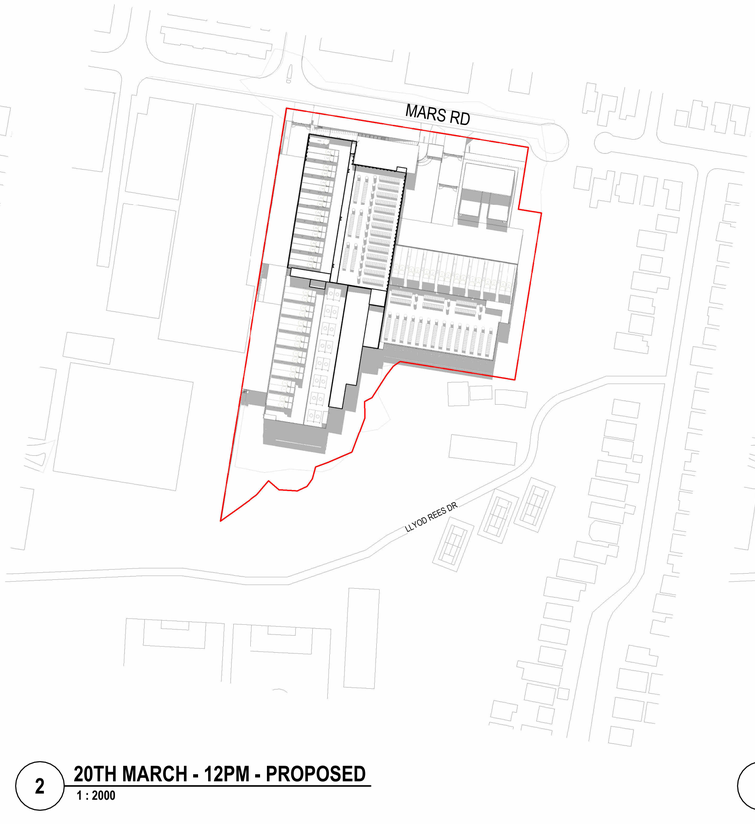

2 **20TH MARCH - 12PM - PROPOSED**
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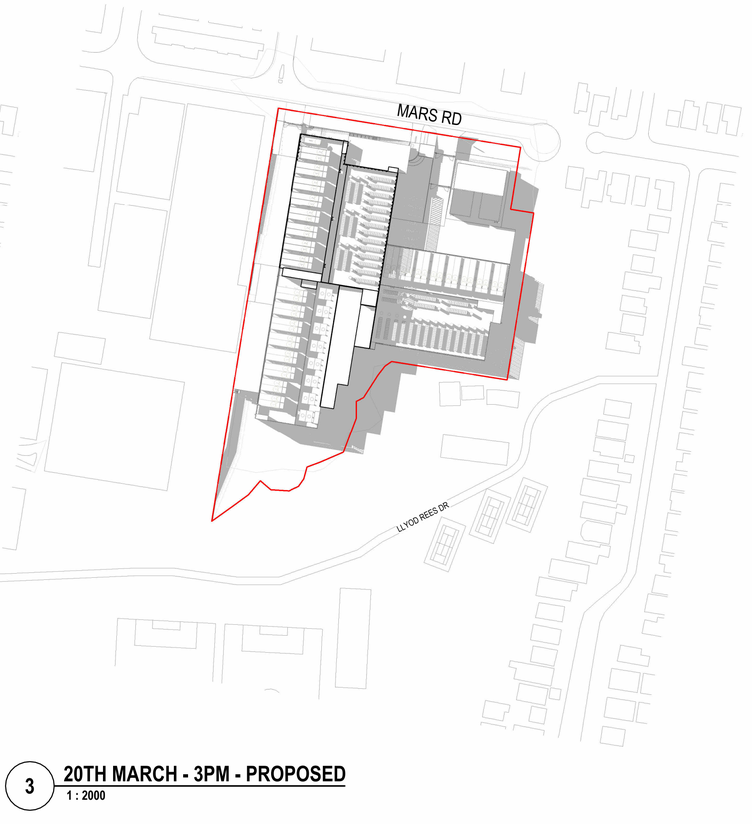

3 **20TH MARCH - 3PM - PROPOSED**
1 : 2000

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SHADOW STUDY - SPRING

SCALE
1 : 2000 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-17001

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 12:21:41 PM

Autodesk Docs://10417434 Goodman 12 Mars Rd SSD/MAR-HDR-AR-R24_BLD.rvt

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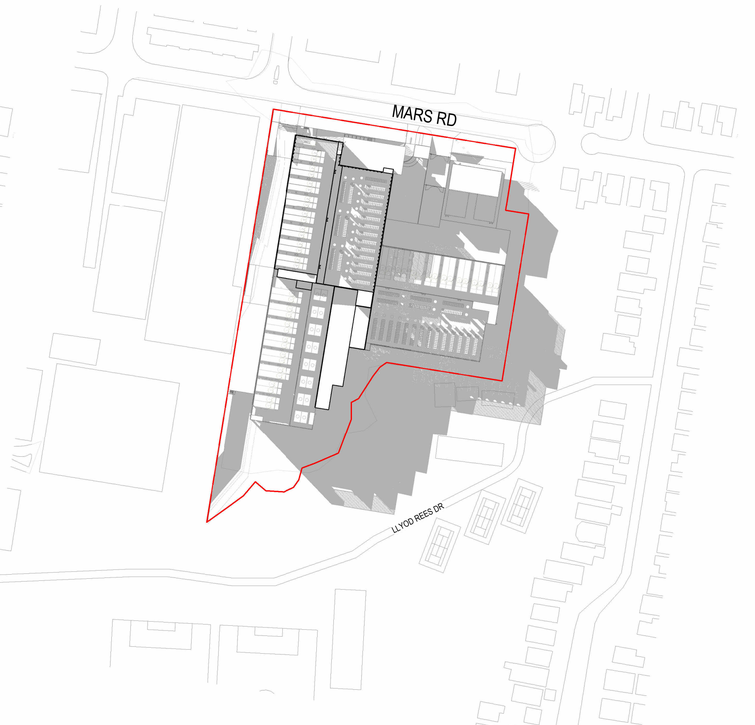
1 **21ST JUNE - 9AM - PROPOSED**
1 : 2000

2 **21ST JUNE - 12PM - PROPOSED**
1 : 2000



3 **21ST JUNE - 3PM - PROPOSED**
1 : 2000

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SHADOW STUDY - WINTER

SCALE
1 : 2000 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-17002

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

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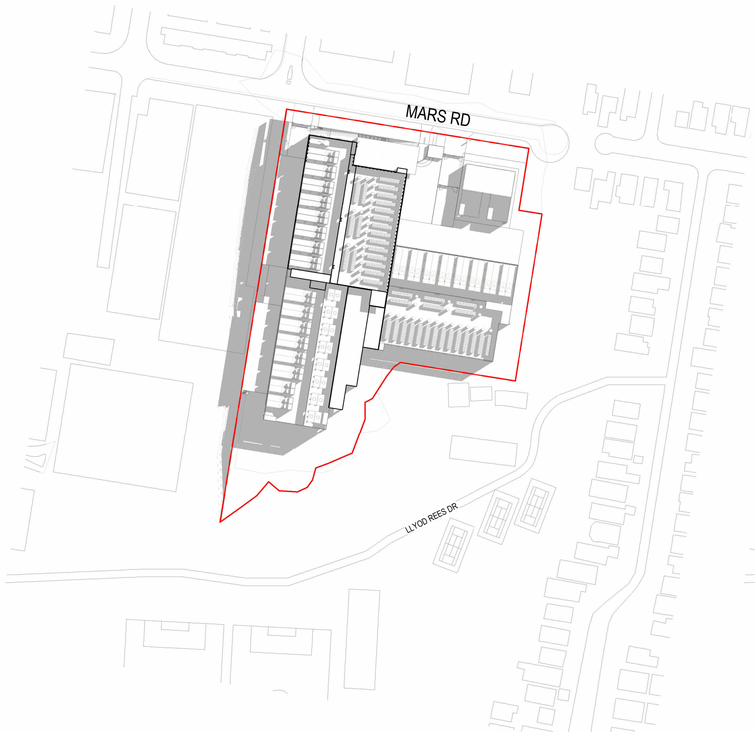
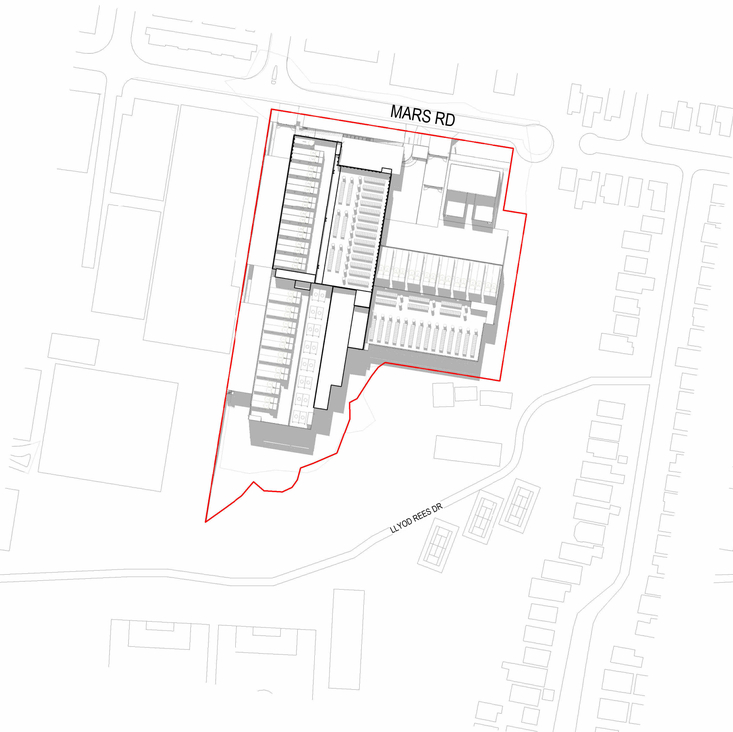
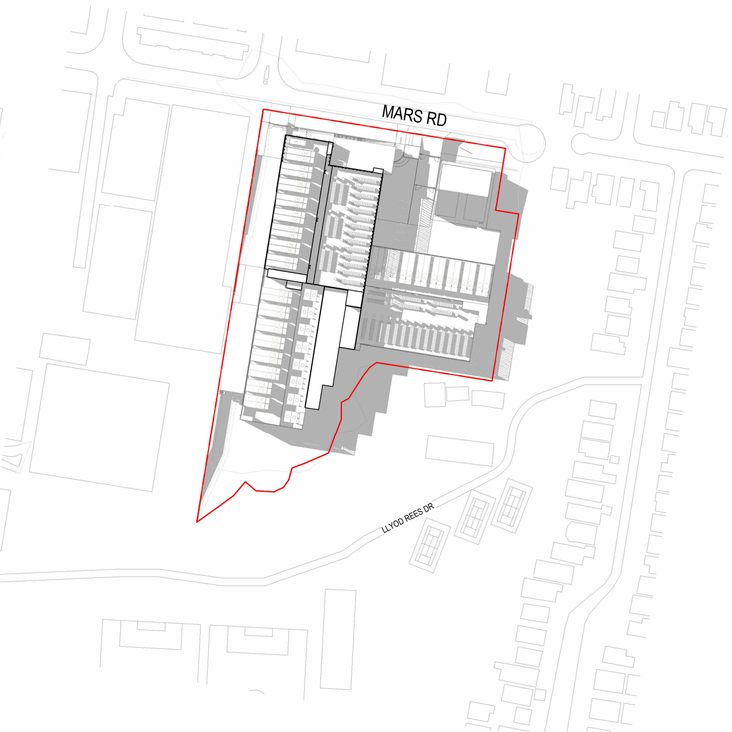


1 **20TH SEPTEMBER - 9AM - PROPOSED**
1 : 2000



2 **20TH SEPTEMBER - 12PM - PROPOSED**
1 : 2000



3 **20TH SEPTEMBER - 3PM - PROPOSED**
1 : 2000

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SHADOW STUDY - AUTUMN

SCALE
1 : 2000 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-17003

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 12:25:59 PM

Autodesk Docs://10417434 Goodman 12 Mars Rd SSD/MAR-HDR-AR-R24_BLD.rvt

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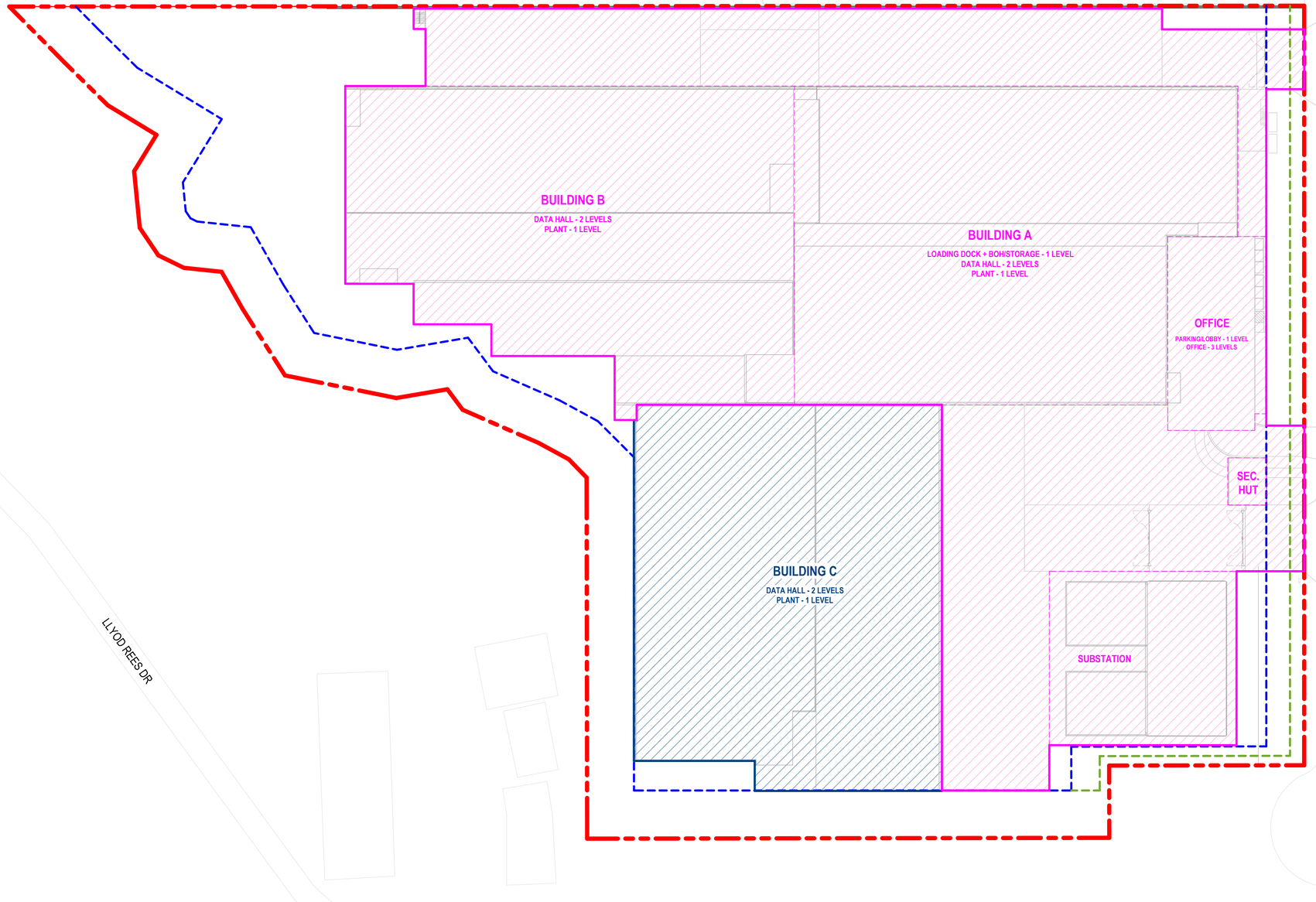

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- *BOUNDARY*
- *DCP LANDSCAPE SETBACK*
- *DCP SETBACK*
- *PHASE 1*
- *PHASE 2*

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
STAGING

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-18000

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

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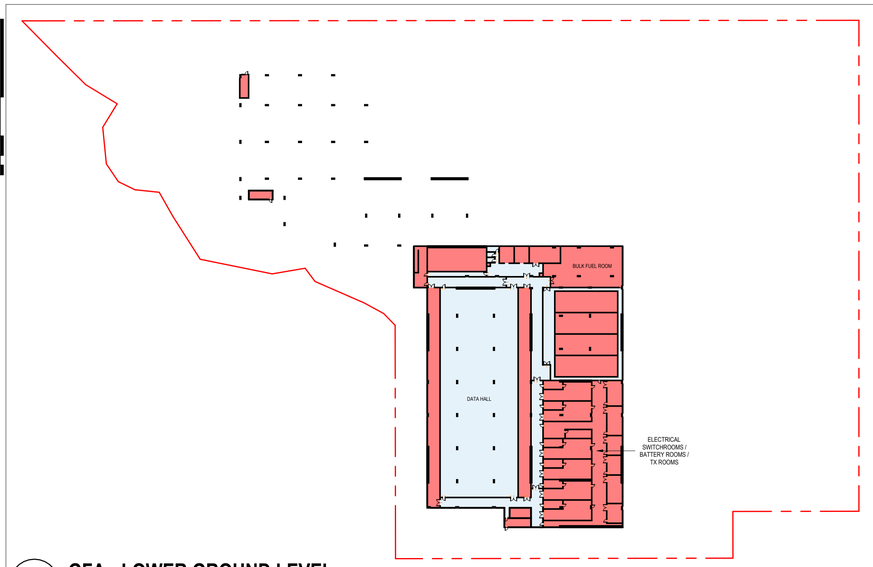
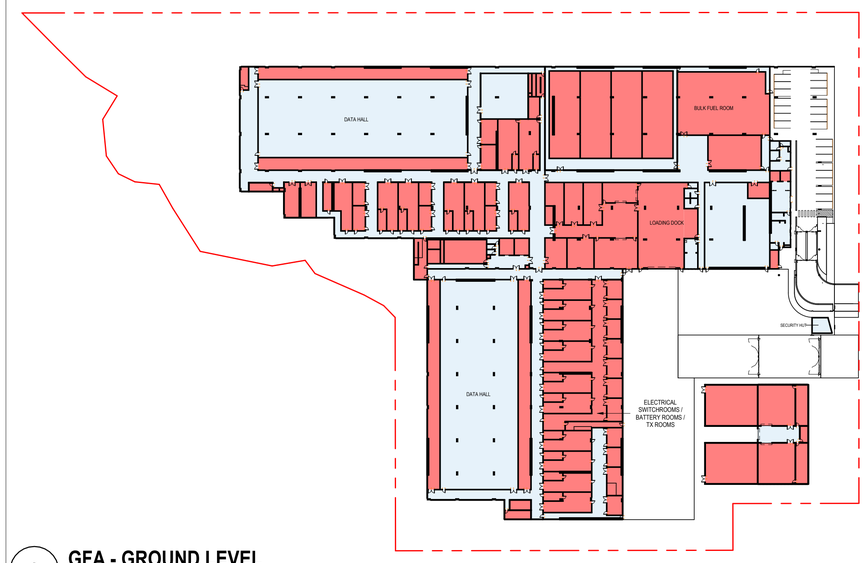


1 GFA - LOWER GROUND LEVEL
1 : 1000



2 GFA - GROUND LEVEL
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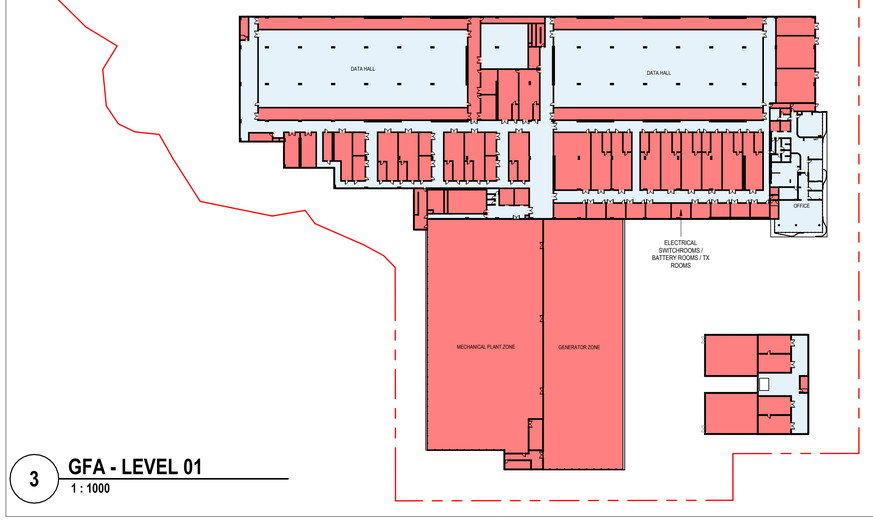
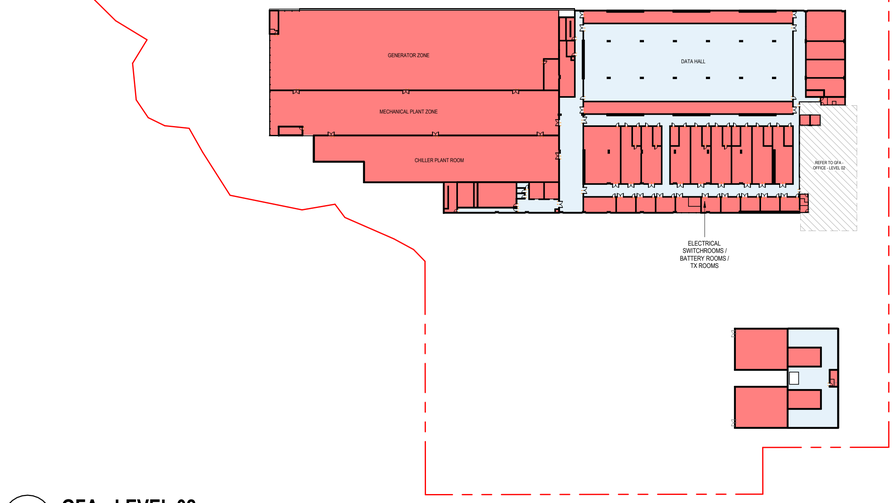
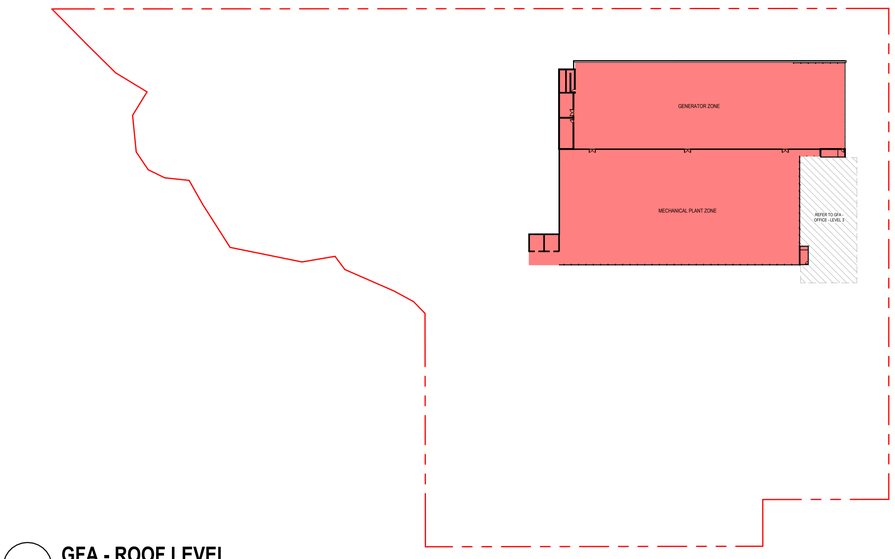


3 GFA - LEVEL 01
1 : 1000



4 GFA - LEVEL 02
1 : 1000



5 GFA - ROOF LEVEL
1 : 1000

6 GFA - OFFICE - LEVEL 02
1 : 1000

7 GFA - OFFICE - LEVEL 03
1 : 1000

GFA AREA SCHEDULE - OFFICE

Level	Department	Area
OFFICE - GROUND LEVEL	Office	166 m²
LEVEL 01	Office	489 m²
OFFICE - LEVEL 02	Office	541 m²
OFFICE - LEVEL 03	Office	490 m²
		1,686 m²

GFA AREA SCHEDULE - DATA HALLS

Level	Department	Area
LOWER GROUND	Data Hall	1,736 m²
GROUND	Data Hall	3,469 m²
LEVEL 01	Data Hall	3,468 m²
LEVEL 02	Data Hall	1,735 m²
		10,408 m²

GFA AREA SCHEDULE - BACK OF HOUSE / STORAGE

Level	Department	Area
LOWER GROUND	Back of House / Storage	8 m²
GROUND	Back of House / Storage	2,058 m²
OFFICE - GROUND LEVEL	Back of House / Storage	6 m²
LEVEL 01	Back of House / Storage	286 m²
OFFICE - LEVEL 02	Back of House / Storage	18 m²
LEVEL 02	Back of House / Storage	8 m²
OFFICE - LEVEL 03	Back of House / Storage	39 m²
		2,422 m²

GFA AREA SCHEDULE - CIRCULATION - VERTICAL

Level	Department	Area
LOWER GROUND	Circulation - Vertical	72 m²
GROUND	Circulation - Vertical	266 m²
OFFICE - GROUND LEVEL	Circulation - Vertical	24 m²
LEVEL 01	Circulation - Vertical	230 m²
OFFICE - LEVEL 02	Circulation - Vertical	45 m²
LEVEL 02	Circulation - Vertical	141 m²
OFFICE - LEVEL 03	Circulation - Vertical	50 m²
ROOF LEVEL	Circulation - Vertical	62 m²
		890 m²

GFA AREA SCHEDULE - PLANT / SERVICES

Level	Department	Area
LOWER GROUND	Plant / Services	2,900 m²
GROUND	Plant / Services	7,595 m²
LEVEL 01	Plant / Services	9,827 m²
OFFICE - LEVEL 02	Plant / Services	7 m²
LEVEL 02	Plant / Services	7,846 m²
OFFICE - LEVEL 03	Plant / Services	7 m²
ROOF LEVEL	Plant / Services	5,635 m²
		33,819 m²

GFA AREA SCHEDULE - CIRCULATION - HORIZONTAL

Level	Department	Area
LOWER GROUND	Circulation - Horizontal	877 m²
GROUND	Circulation - Horizontal	3,020 m²
LEVEL 01	Circulation - Horizontal	2,682 m²
OFFICE - LEVEL 02	Circulation - Horizontal	30 m²
LEVEL 02	Circulation - Horizontal	1,645 m²
OFFICE - LEVEL 03	Circulation - Horizontal	52 m²
		8,307 m²

GFA AREA SCHEDULE BY DEPARTMENT

Department	Area
Amenities	237 m²
Back of House / Storage	2,422 m²
Circulation - Horizontal	8,307 m²
Circulation - Vertical	890 m²
Data Hall	10,408 m²
Office	1,686 m²
Plant / Services	33,819 m²
	57,769 m²

GFA AREA SCHEDULE

Occupancy	Area
AREA EXCLUDED FROM GFA	35,937 m²
AREA INCLUDED IN GFA	21,832 m²
	57,769 m²

SITE AREA	**33 559 m²**
GFA	**21 832 m²**
FSR	**0.65 : 1**

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
AREA SCHEDULE

SCALE
1 : 1000 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-20000

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

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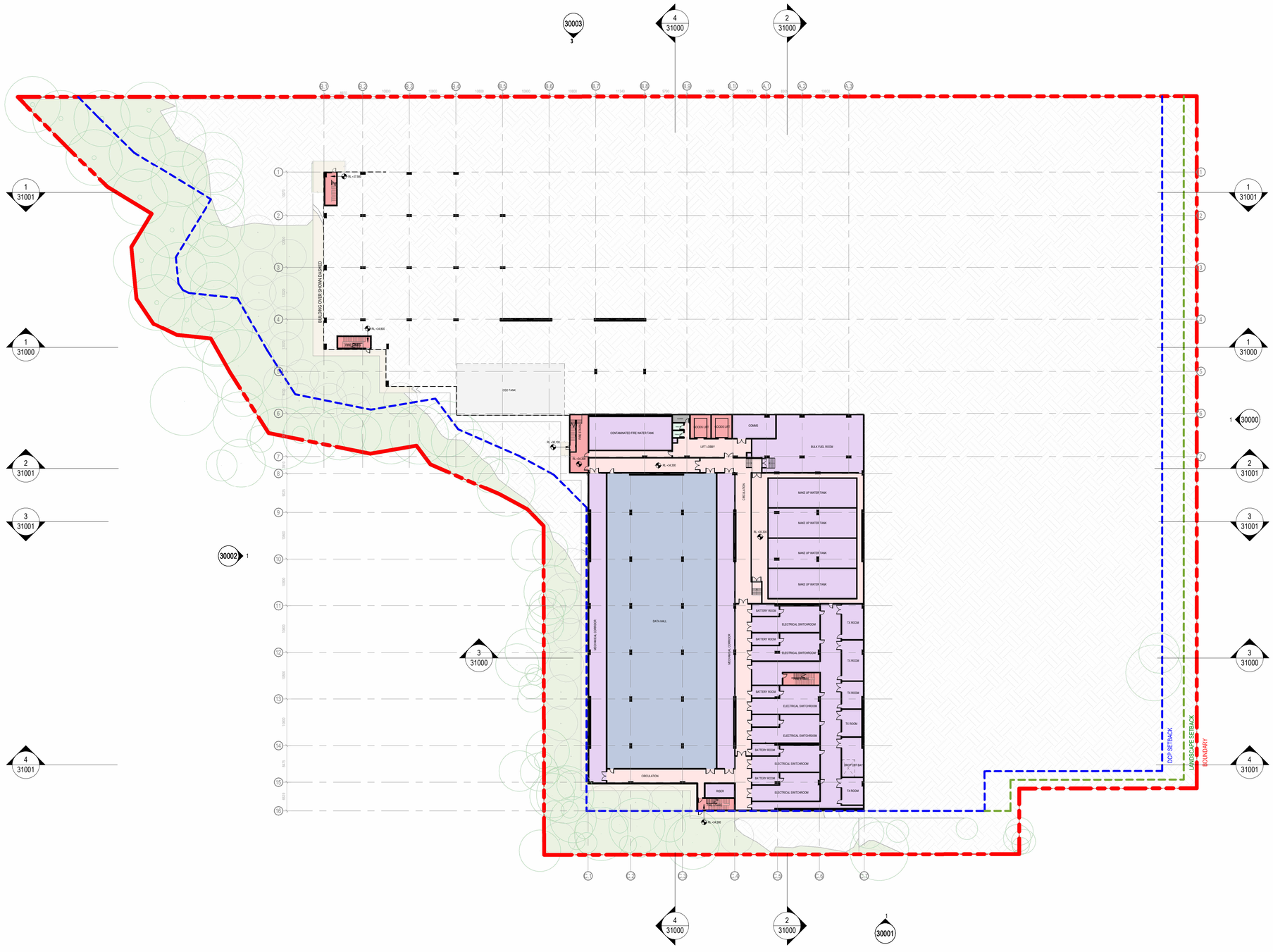

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
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ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- EXISTING TREES RETAINED
- PROPOSED TREES
- DATA HALL
- PLANT / SERVICES
- OFFICE
- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
GENERAL ARRANGEMENT - LOWER GROUND FLOOR PLAN

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-21000

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 11:47:44 AM

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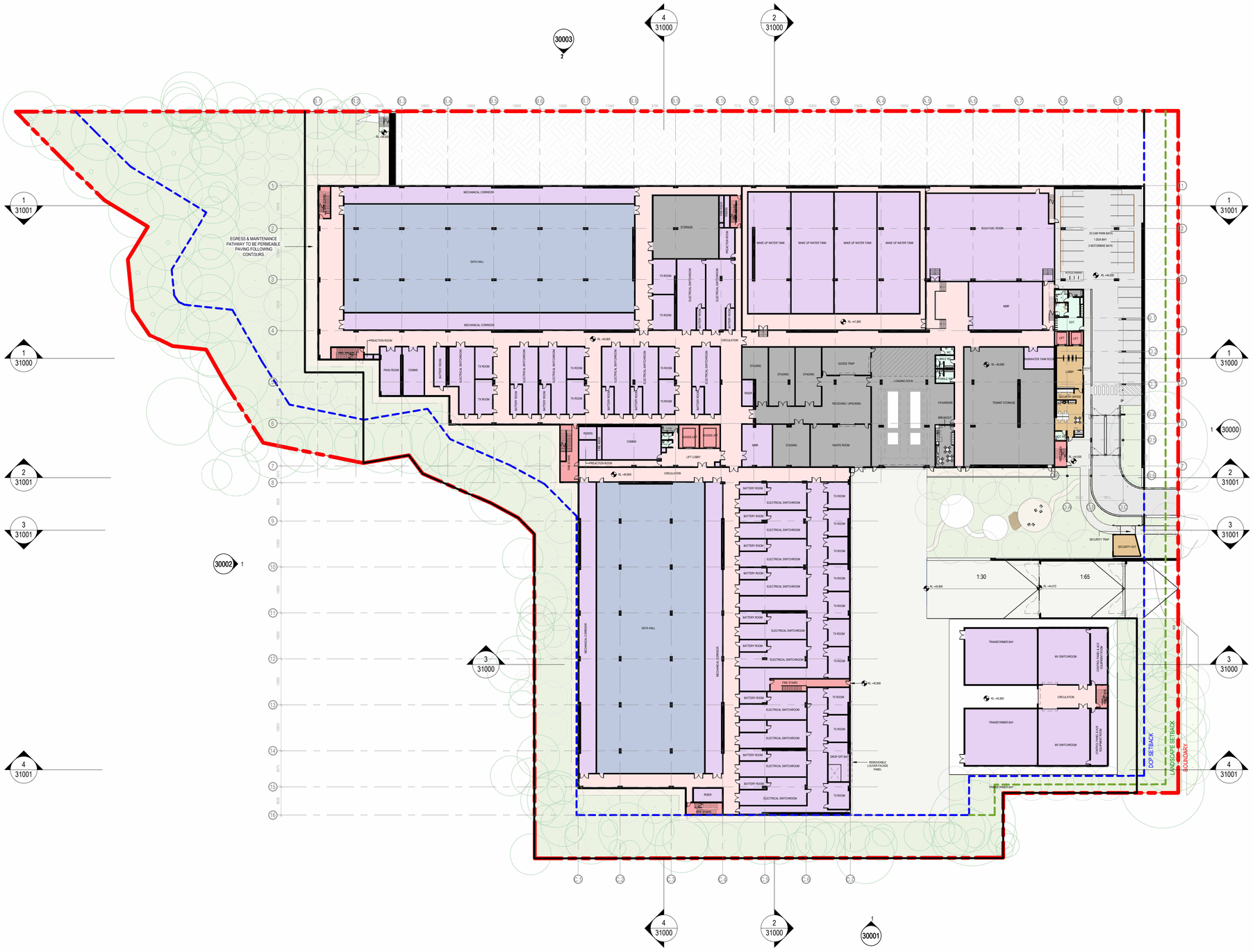

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NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- EXISTING TREES RETAINED
- PROPOSED TREES
- DATA HALL
- PLANT / SERVICES
- OFFICE
- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
GENERAL ARRANGEMENT - GROUND FLOOR PLAN

SCALE 1 : 500 @ A1
PROJECT NUMBER 10417434
DRAWING NUMBER **MAR-AR-DRG-21001**
ISSUE **B**
PROJECT STATUS **SSDA APPLICATION**

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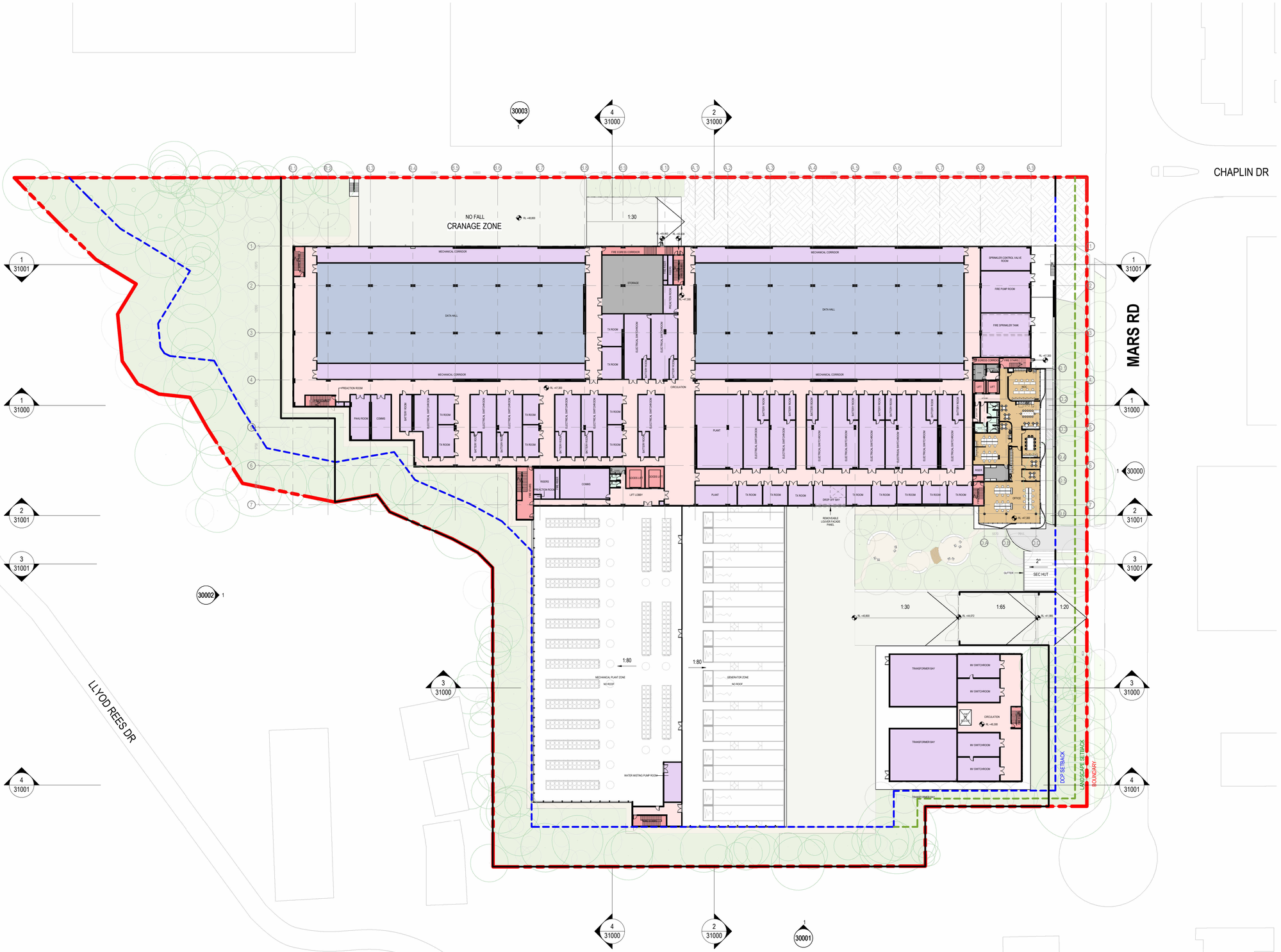

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
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VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- EXISTING TREES RETAINED
- PROPOSED TREES
- DATA HALL
- PLANT / SERVICES
- OFFICE
- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
GENERAL ARRANGEMENT - LEVEL 1 FLOOR PLAN

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-21002

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

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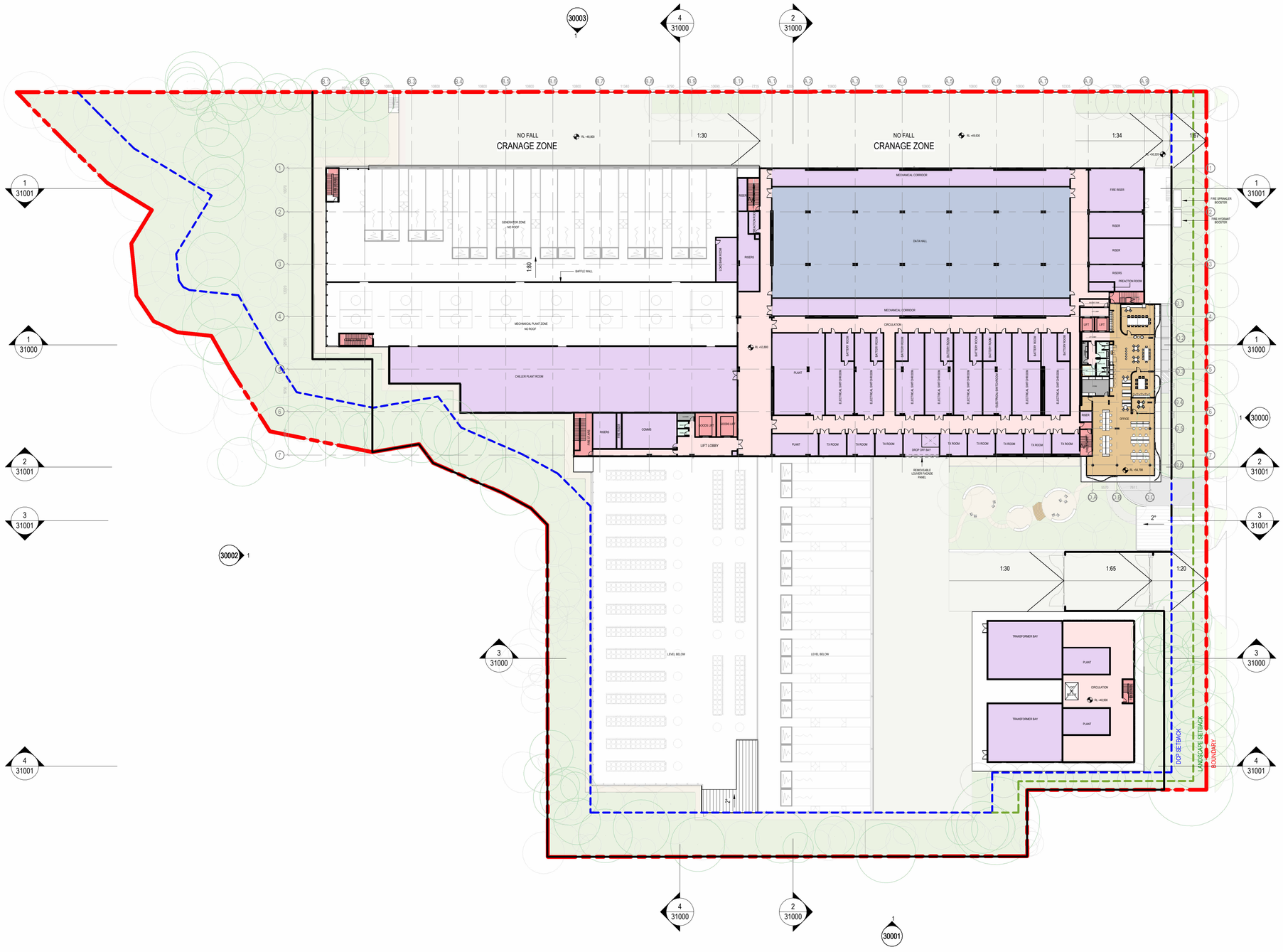

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
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VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- EXISTING TREES RETAINED
- PROPOSED TREES
- DATA HALL
- PLANT / SERVICES
- OFFICE
- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
GENERAL ARRANGEMENT - LEVEL 2 FLOOR PLAN

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-21003

ISSUE
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PROJECT STATUS
SSDA APPLICATION

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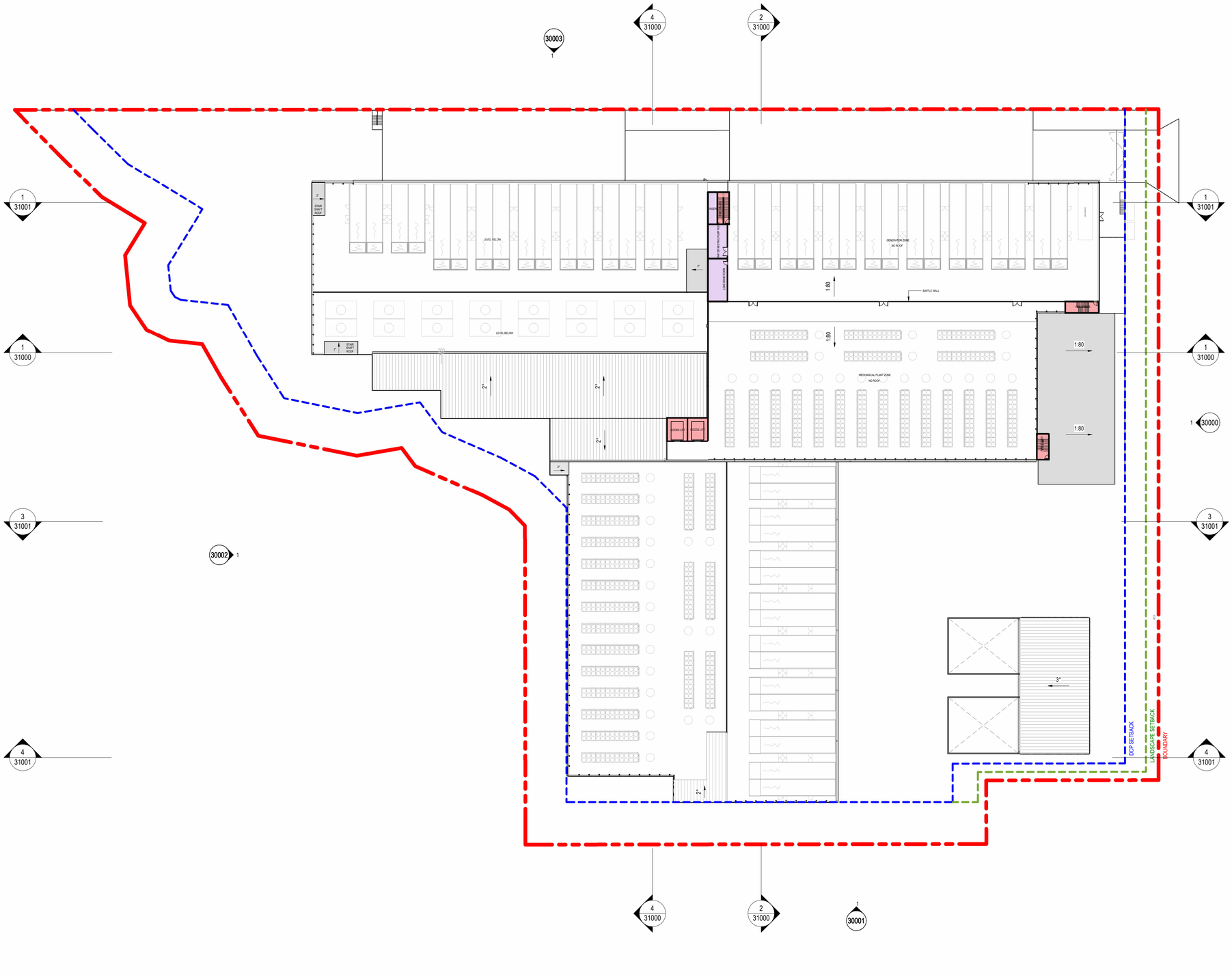

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:

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VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- EXISTING TREES RETAINED
- PROPOSED TREES
- DATA HALL
- PLANT / SERVICES
- OFFICE
- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT

Goodman

PROJECT

PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE

GENERAL ARRANGEMENT - ROOF PLAN

SCALE: 1 : 500 @ A1
PROJECT NUMBER: 10417434
DRAWING NUMBER: **MAR-AR-DRG-21004**
ISSUE: **B**
PROJECT STATUS: **SSDA APPLICATION**

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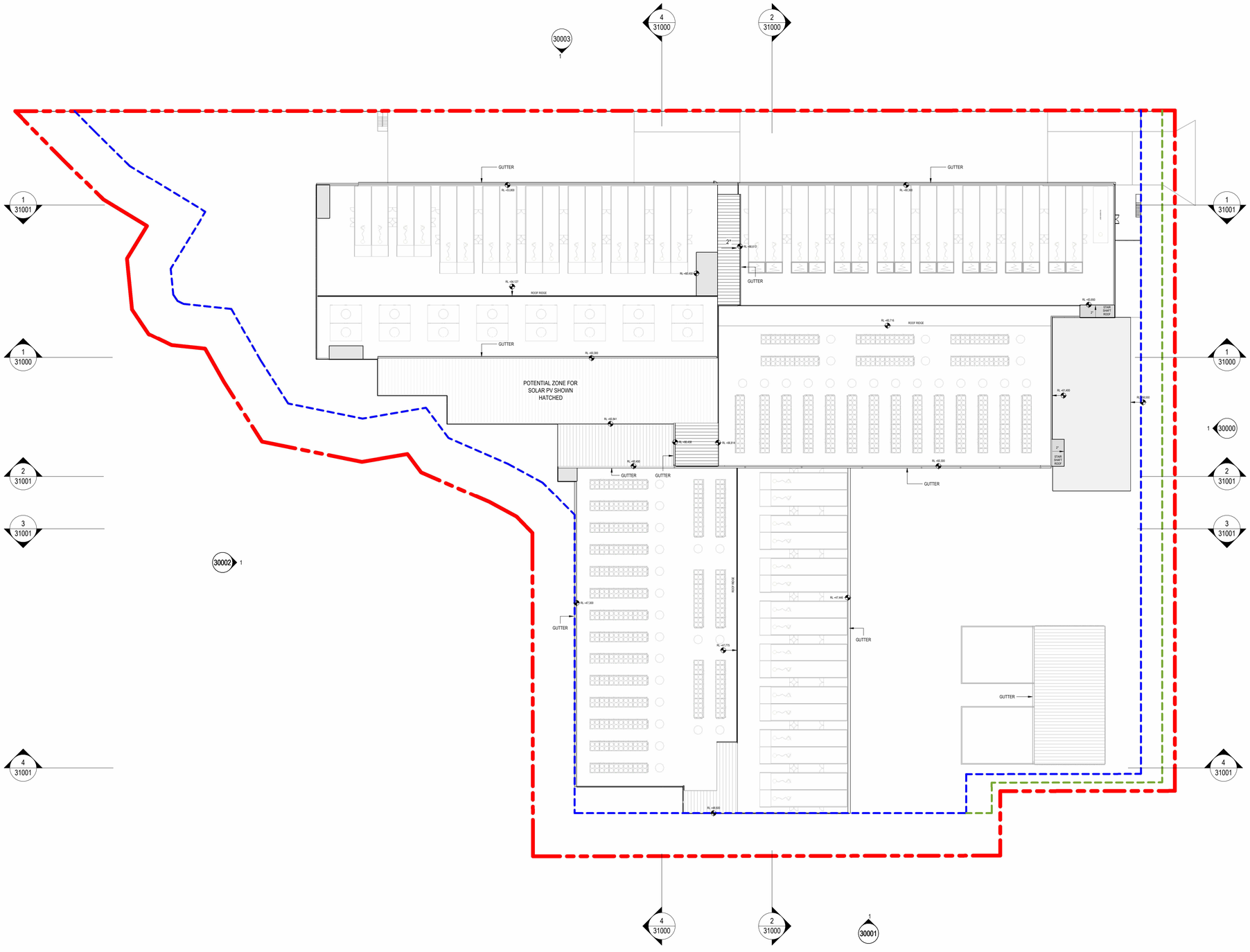

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ACT Huai Lim 16065

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REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- SECURITY FENCE
- PROPOSED LANDSCAPE
- PROPOSED EGRESS PATHWAY
- EXISTING TREES RETAINED
- PROPOSED TREES
- DATA HALL
- PLANT / SERVICES
- OFFICE
- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
GENERAL ARRANGEMENT - TOP OF SCREEN

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-21005

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

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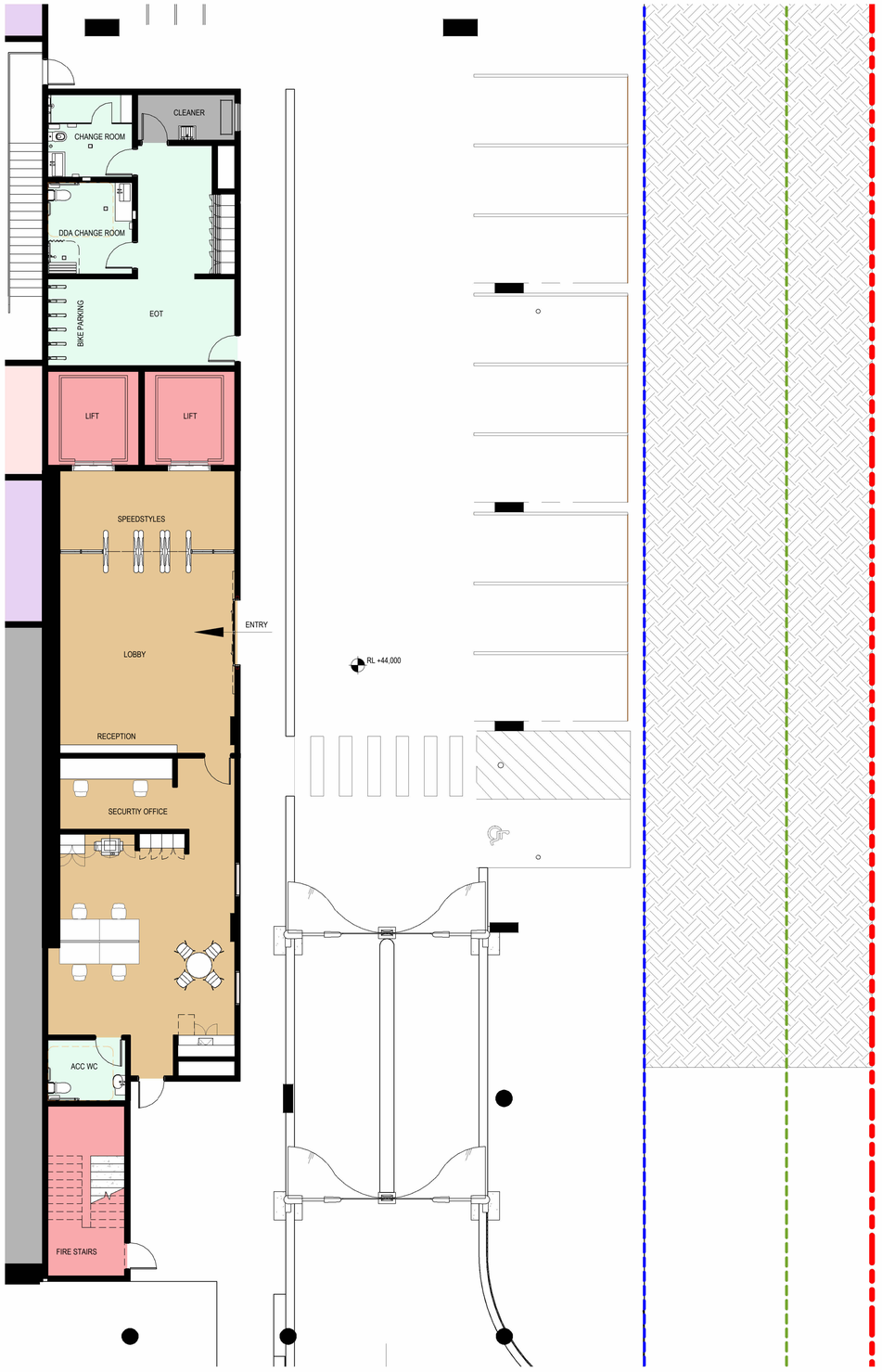
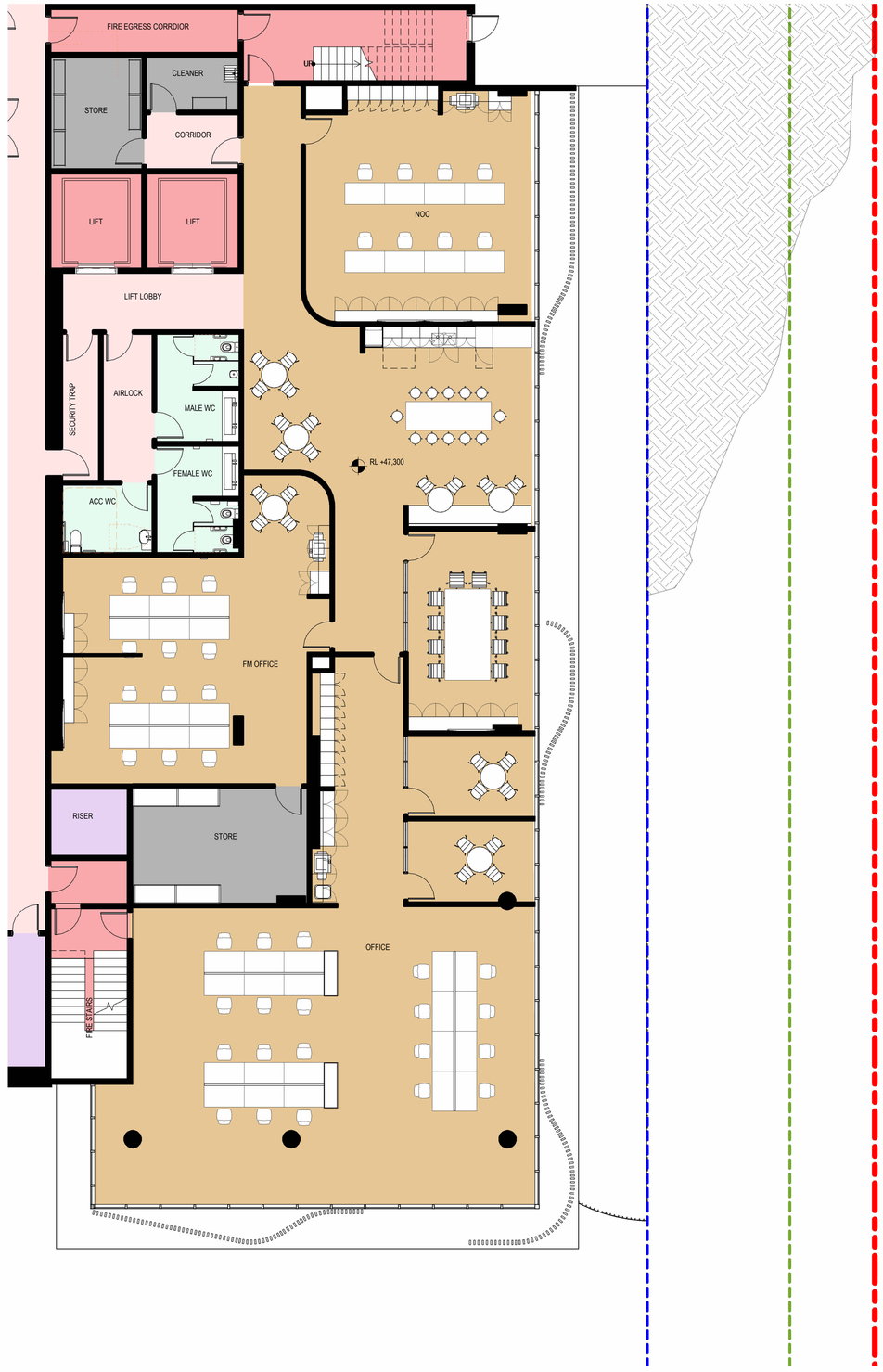


1 **OFFICE - GROUND LEVEL**
1 : 100



2 **OFFICE - LEVEL 01**
1 : 100

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- *BOUNDARY*
- *DCP LANDSCAPE SETBACK*
- *DCP SETBACK*
- *SECURITY FENCE*
- *PROPOSED LANDSCAPE*
- *PROPOSED EGRESS PATHWAY*
- *EXISTING TREES RETAINED*
- *PROPOSED TREES*
- *DATA HALL*
- *PLANT / SERVICES*
- *OFFICE*
- *BACK OF HOUSE / STORAGE*
- *CIRCULATION - HORIZONTAL*
- *CIRCULATION - VERTICAL*
- *AMENITIES*

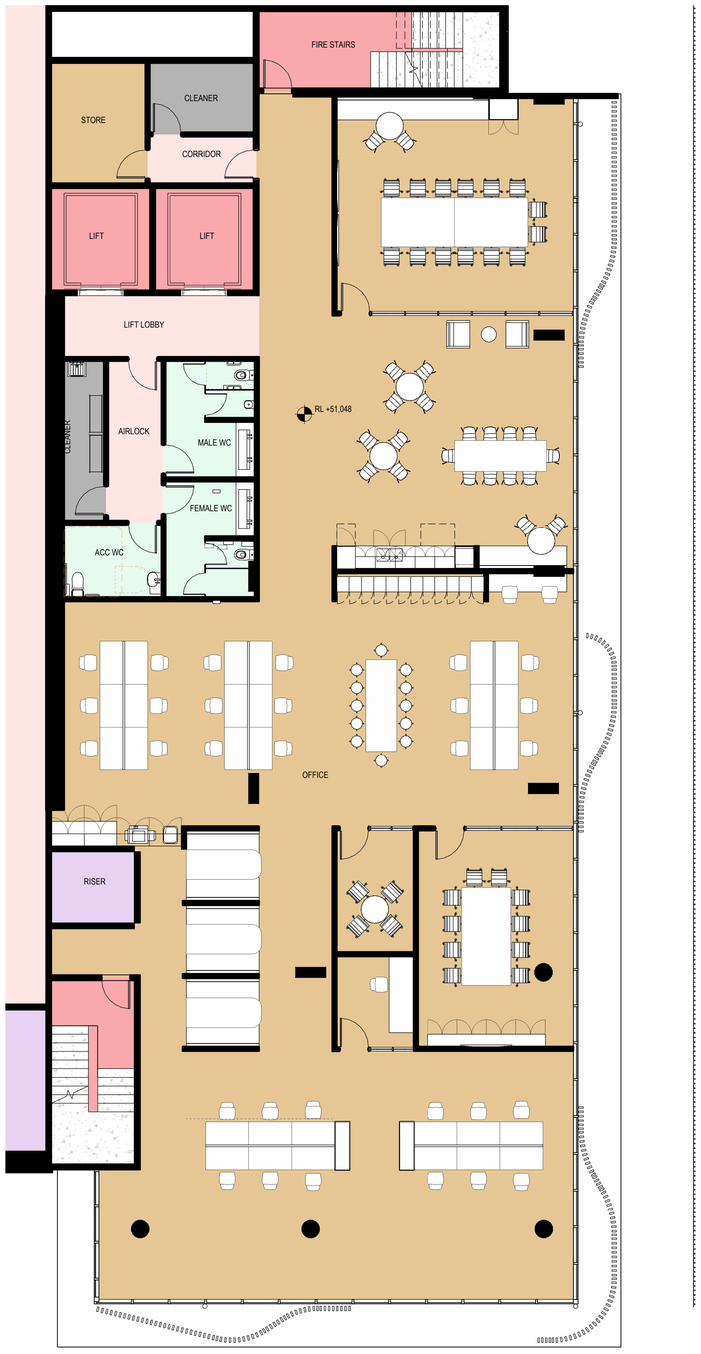
CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

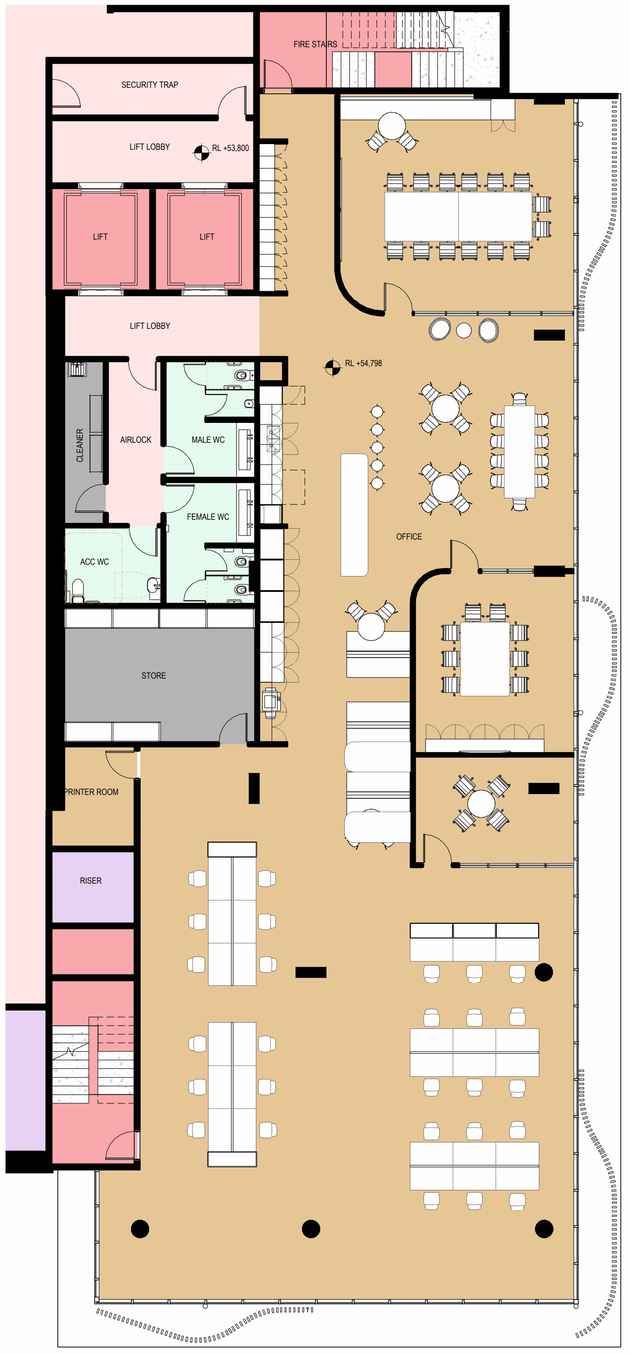
DRAWING TITLE
GENERAL ARRANGEMENT - OFFICE - GROUND & LEVEL 01

SCALE: As indicated @ A1
PROJECT NUMBER: 10417434
DRAWING NUMBER: **MAR-AR-DRG-21006**
ISSUE: **B**
PROJECT STATUS: **SSDA APPLICATION**

3/12/2025 12:14:17 PM



1 **OFFICE - LEVEL 02**
1 : 100



2 **OFFICE - LEVEL 03**
1 : 100

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

LEGEND:

- *BOUNDARY*
- *DCP LANDSCAPE SETBACK*
- *DCP SETBACK*
- *SECURITY FENCE*
- *PROPOSED LANDSCAPE*
- *PROPOSED EGRESS PATHWAY*
- *EXISTING TREES RETAINED*
- *PROPOSED TREES*
- *DATA HALL*
- *PLANT / SERVICES*
- *OFFICE*
- *BACK OF HOUSE / STORAGE*
- *CIRCULATION - HORIZONTAL*
- *CIRCULATION - VERTICAL*
- *AMENITIES*

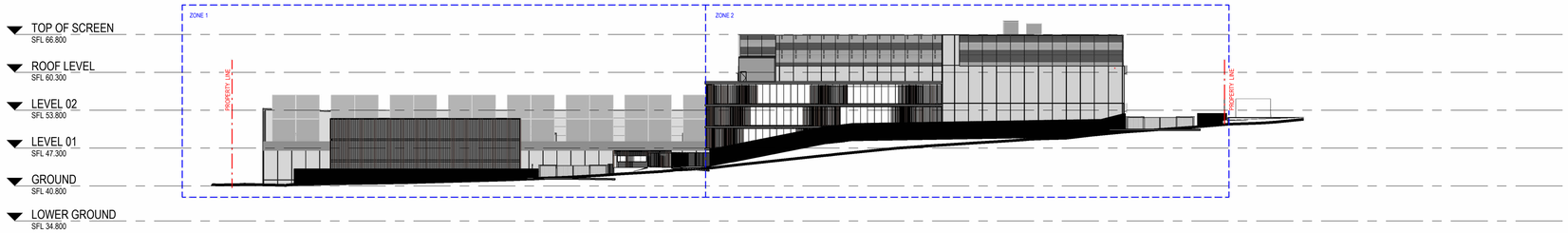
CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
GENERAL ARRANGEMENT - OFFICE - LEVEL 2 & 3

SCALE
As indicated @ A1
PROJECT NUMBER
10417434
DRAWING NUMBER
MAR-AR-DRG-21007
ISSUE
B
PROJECT STATUS
SSDA APPLICATION
3/12/2025 12:14:29 PM

Autodesk Docs://10417434_Goodman 12 Mars Rd SSD/MAR-HDR-AR-R24_B.rvt



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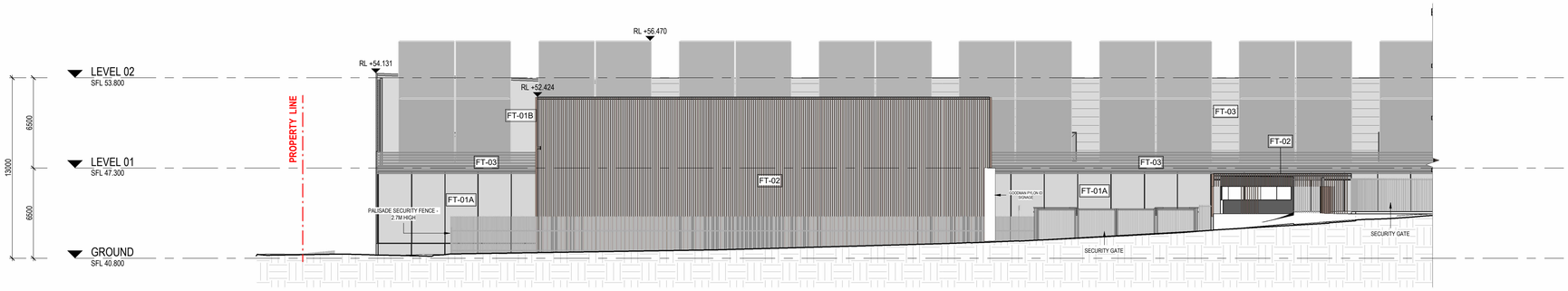
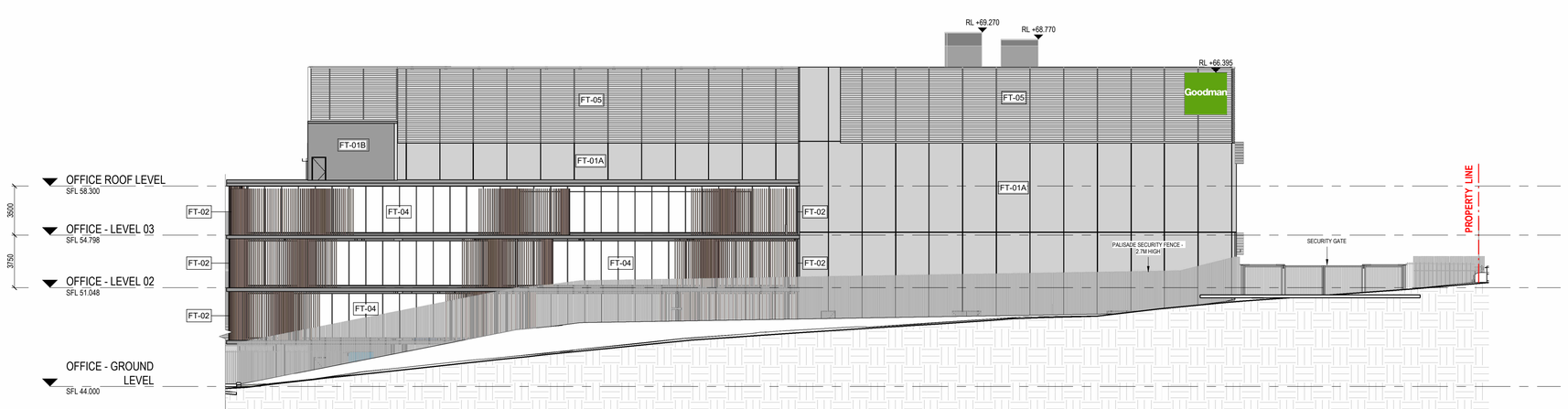
1 : 500



2 NORTH ELEVATION - ZONE 1
1 : 200



3 NORTH ELEVATION - ZONE 2
1 : 200

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
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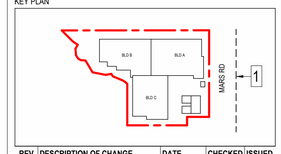
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

KEY PLAN



REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

MATERIAL LEGEND

FT-01	FT-01A	PRECAST CONCRETE PANELS WITH VERTICAL RIBBING
	FT-01B	PRECAST CONCRETE PANELS
FT-02		METAL SCREEN BATTENS ON EXPOSED CONCRETE SLAB EDGES
FT-03		HORIZONTAL METAL CORRUGATED CLADDING
FT-04		CLEAR GLASS, ALUMINIUM FRAME
FT-05		HORIZONTAL METAL LOUVRE SCREEN
FT-06		MESH WITH VERTICAL CABLES FOR PLANTING
FT-07		LARGE PROFILE METAL ROOFING

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
NORTH ELEVATION

SCALE
As indicated @ A1

PROJECT NUMBER
10417434

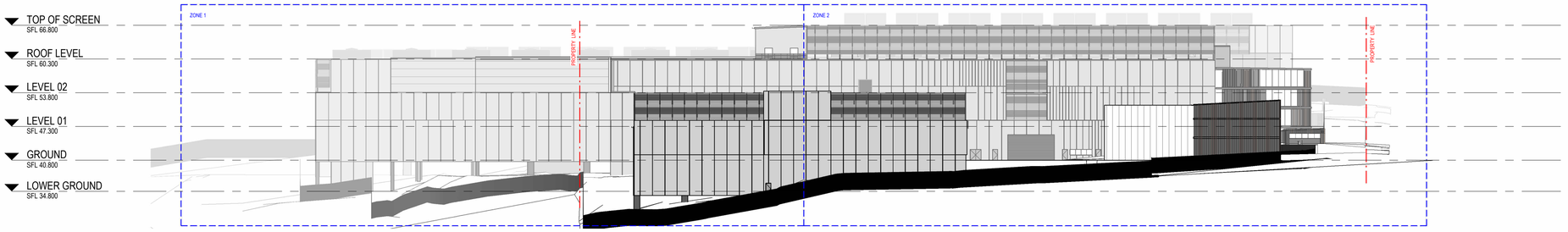
DRAWING NUMBER
MAR-AR-DRG-30000

ISSUE
B

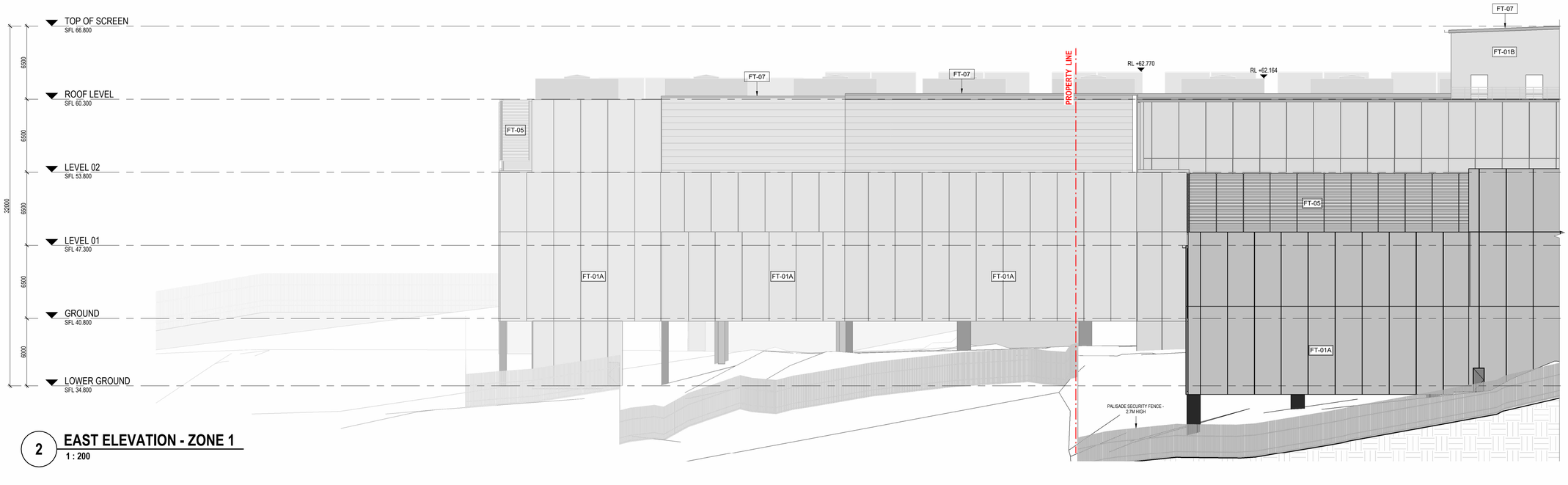
PROJECT STATUS
SSDA APPLICATION

3/12/2025 11:35:50 AM

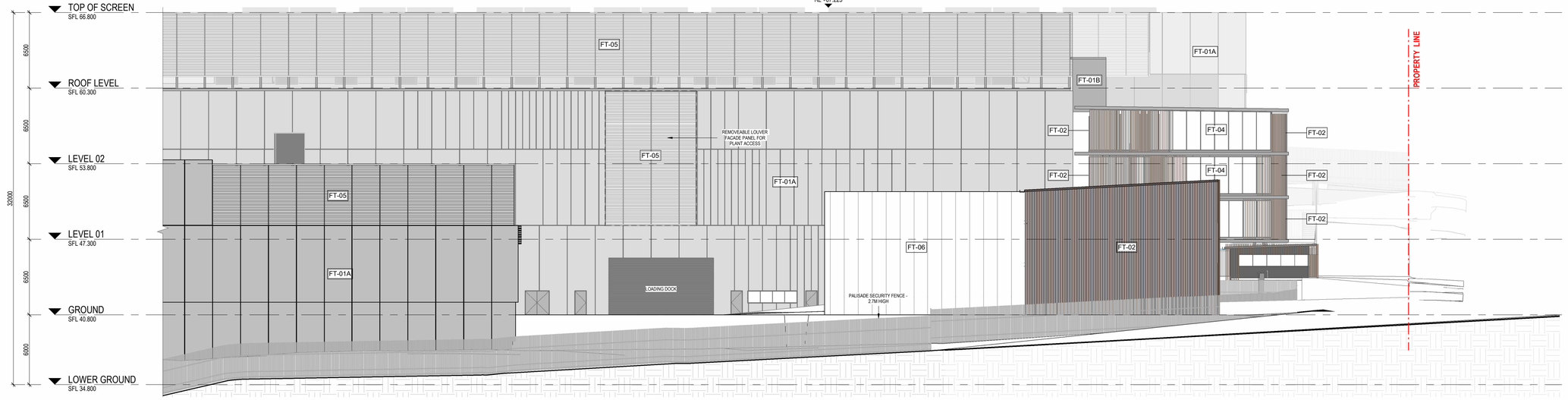
Autodesk Docs://10417434 Goodman 12 Mars Rd SSD/MAR-HDR-AR-R24_BLD.rvt



1 EAST ELEVATION
1 : 500



2 EAST ELEVATION - ZONE 1
1 : 200



3 EAST ELEVATION - ZONE 2
1 : 200

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
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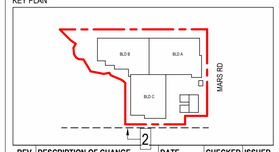
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

KEY PLAN



REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

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FT-05		HORIZONTAL METAL LOUVRE SCREEN
FT-06		MESH WITH VERTICAL CABLES FOR PLANTING
FT-07		LARGE PROFILE METAL ROOFING

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
EAST ELEVATION

SCALE
As indicated @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-30001

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 11:36:32 AM

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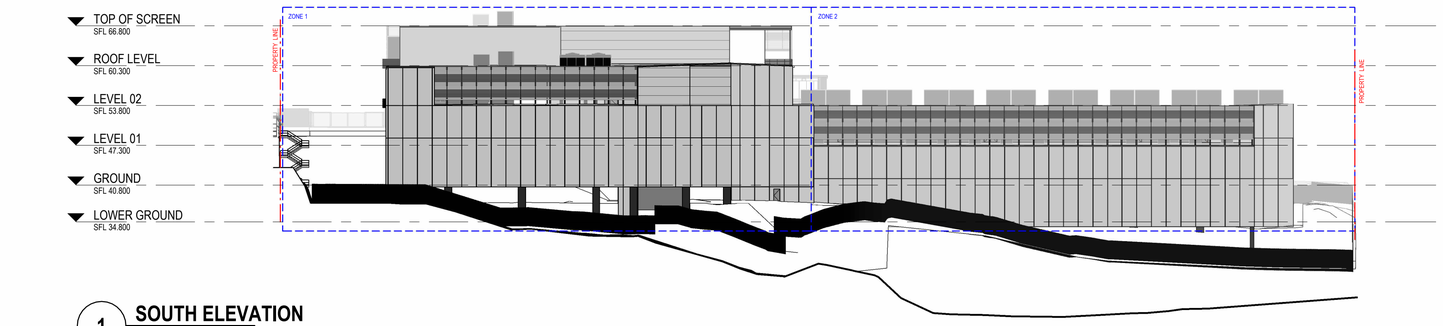
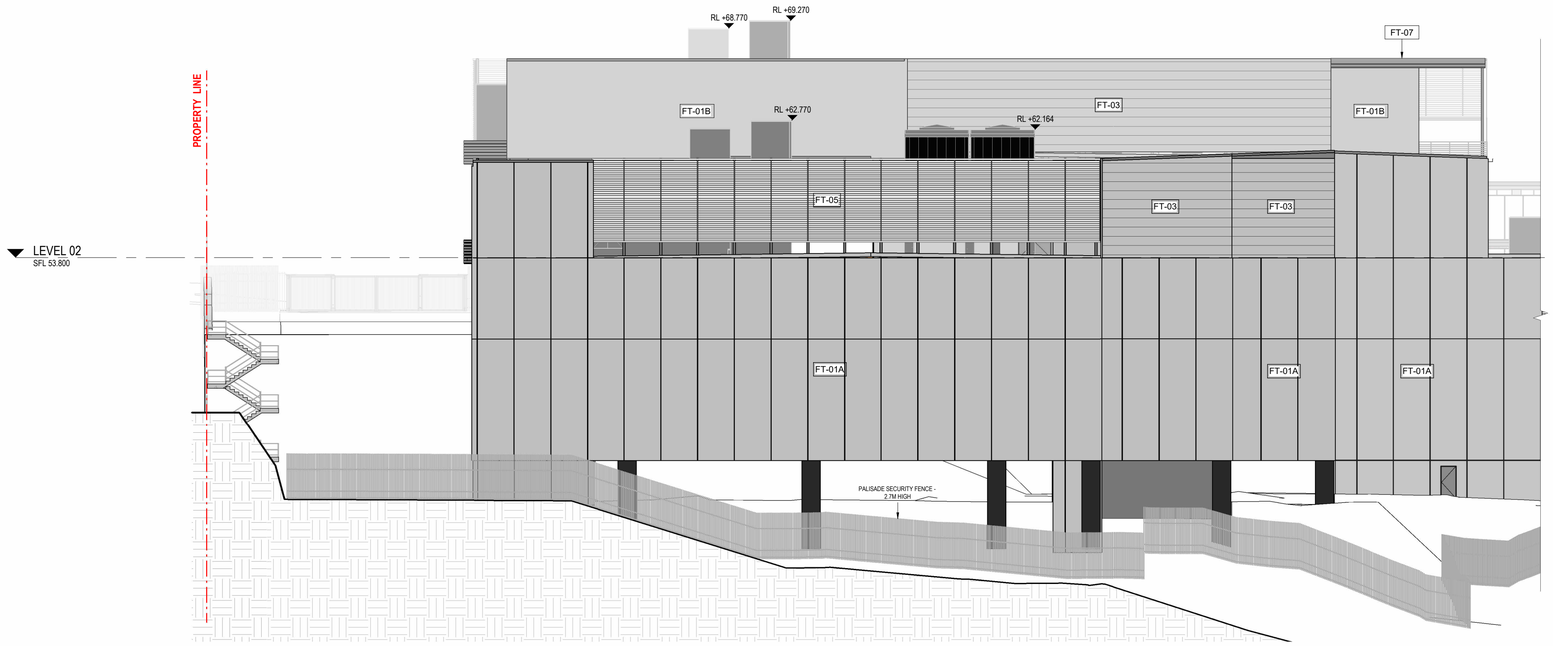
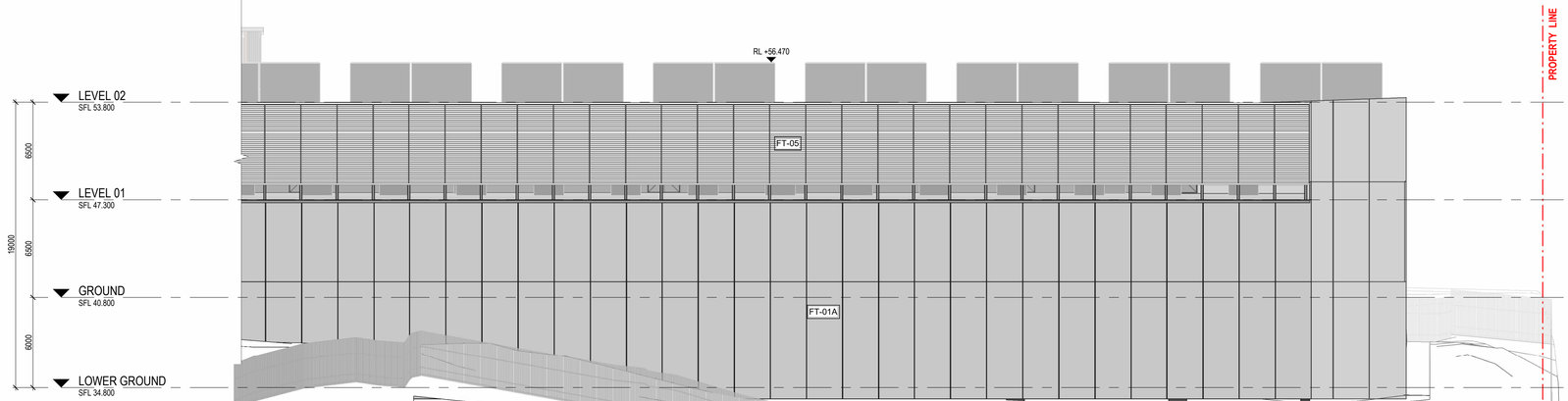


1 SOUTH ELEVATION
1 : 500



2 SOUTH ELEVATION - ZONE 1
1 : 200

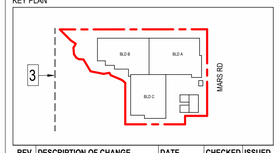


3 SOUTH ELEVATION - ZONE 2
1 : 200

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

KEY PLAN



REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
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B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

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FT-05		HORIZONTAL METAL LOUVRE SCREEN
FT-06		MESH WITH VERTICAL CABLES FOR PLANTING
FT-07		LARGE PROFILE METAL ROOFING

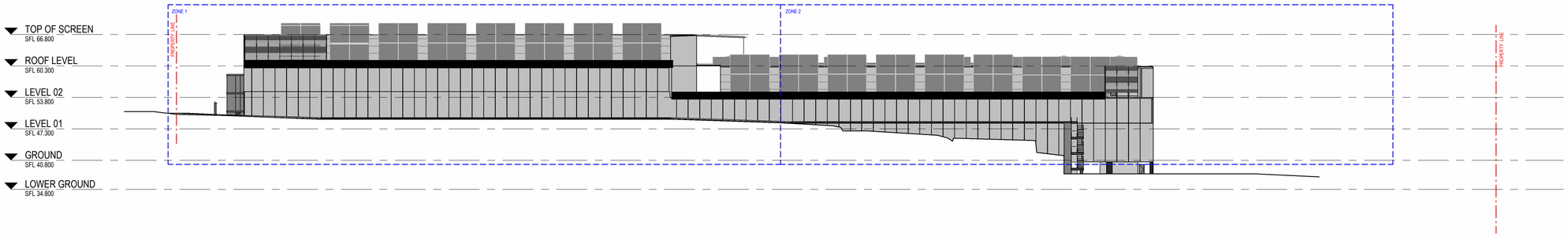
CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SOUTH ELEVATION

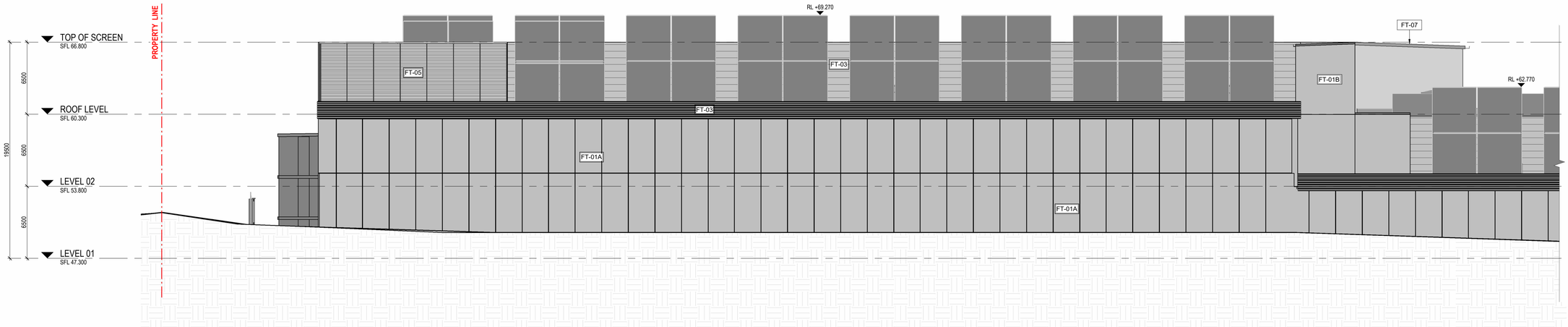
SCALE
As indicated @ A1
PROJECT NUMBER
10417434
DRAWING NUMBER
MAR-AR-DRG-30002
ISSUE
B
PROJECT STATUS
SSDA APPLICATION
3/12/2025 11:37:08 AM

Autodesk Docs://10417434-Goodman 12 Mars Rd SSD/MAR-HDR-AR-R24_BLD.rvt



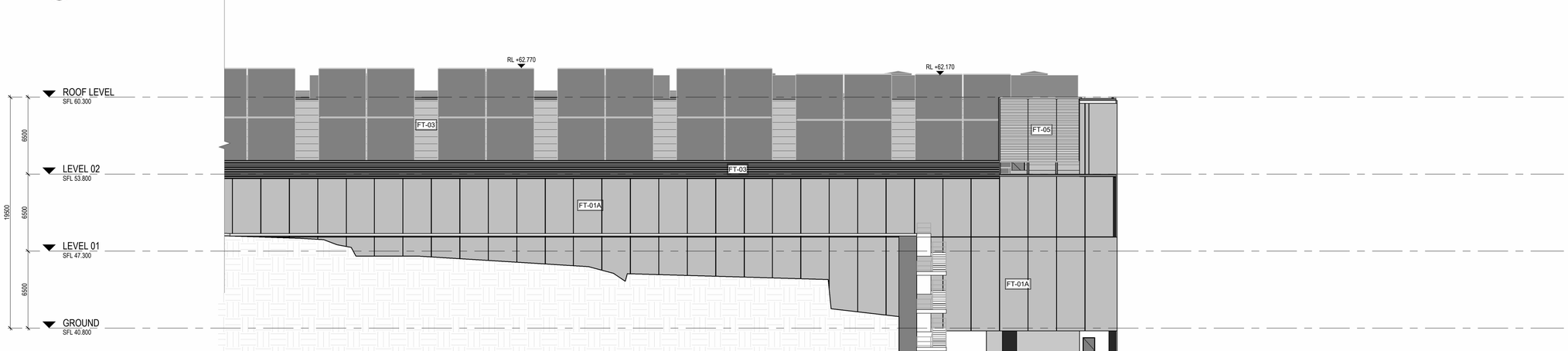
1 WEST ELEVATION

1 : 500



2 WEST ELEVATION - ZONE 1

1 : 200



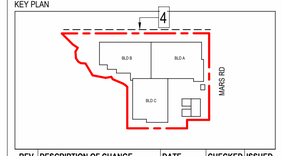
3 WEST ELEVATION - ZONE 2

1 : 200

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

KEY PLAN



REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

MATERIAL LEGEND

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FT-06		MESH WITH VERTICAL CABLES FOR PLANTING
FT-07		LARGE PROFILE METAL ROOFING

CLIENT

Goodman

PROJECT

PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE

WEST ELEVATION

SCALE
As indicated @ A1

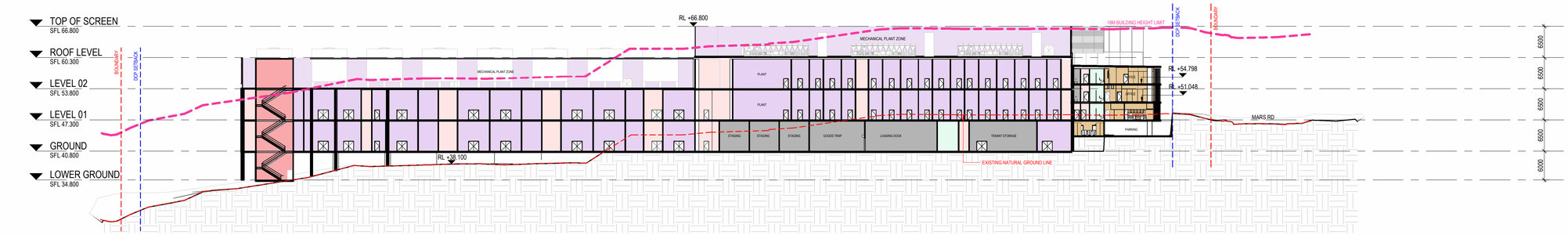
PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-30003

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 11:37:45 AM



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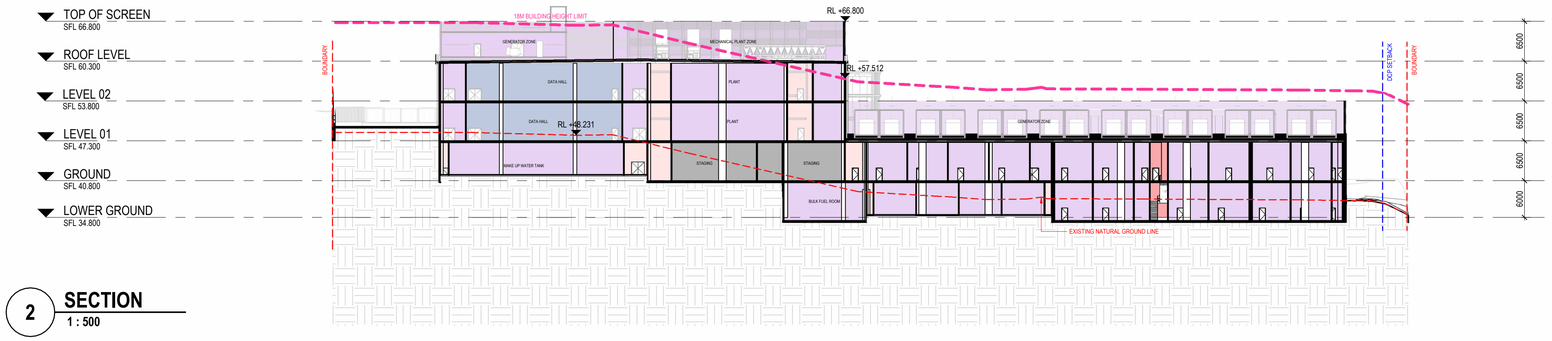
1 : 500



2 SECTION
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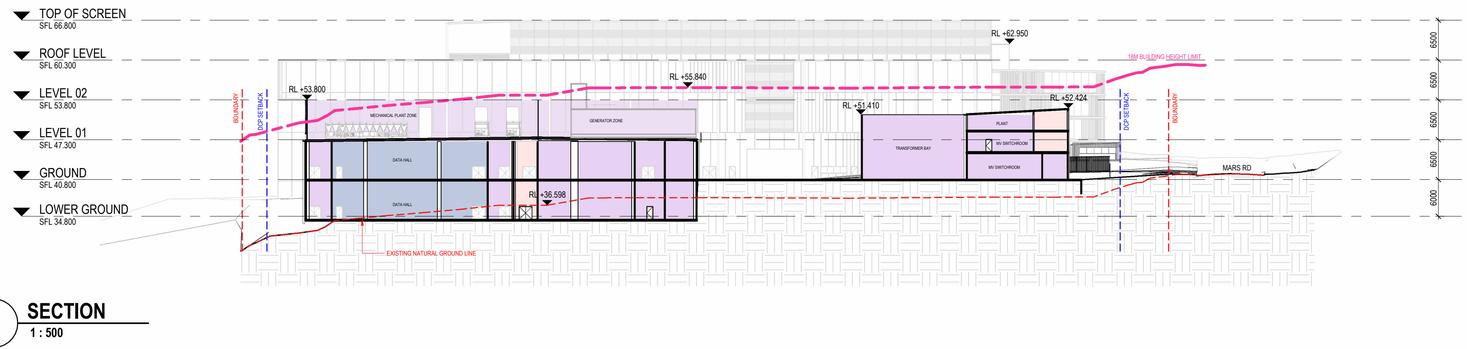

3 SECTION
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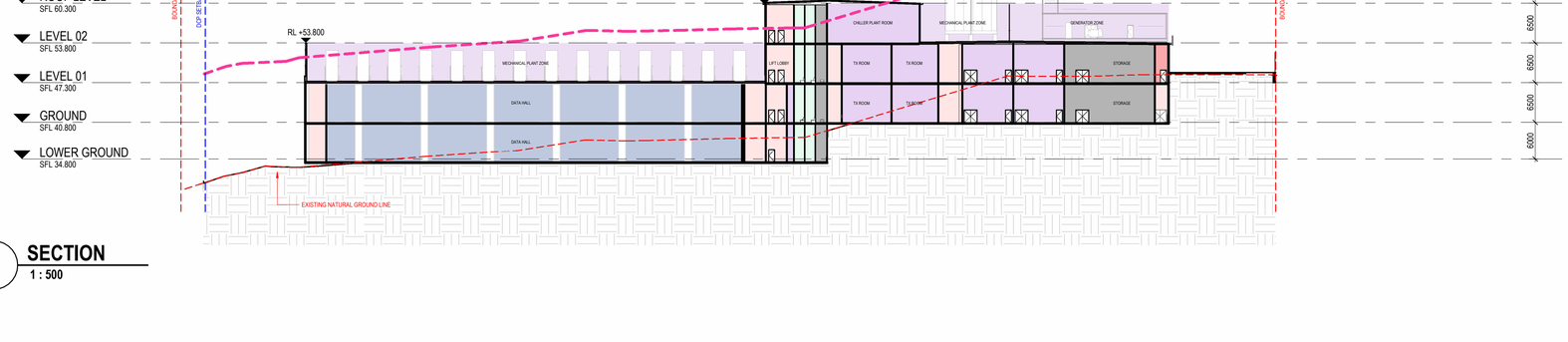

4 SECTION
1 : 500

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+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

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ACT Huai Lim 16065

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
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LEGEND:

- BOUNDARY
- DCP LANDSCAPE SETBACK
- DCP SETBACK
- DATA HALL
- PLANT / SERVICES
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- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SECTIONS SHEET 1 OF 2

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-31000

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 12:35:47 PM

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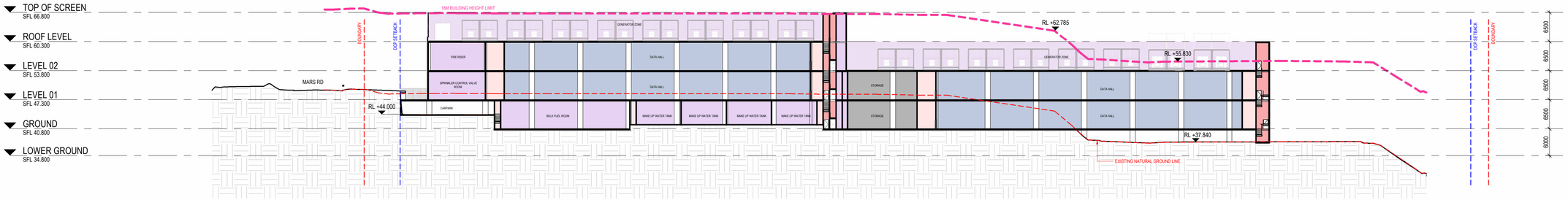

1 SECTION
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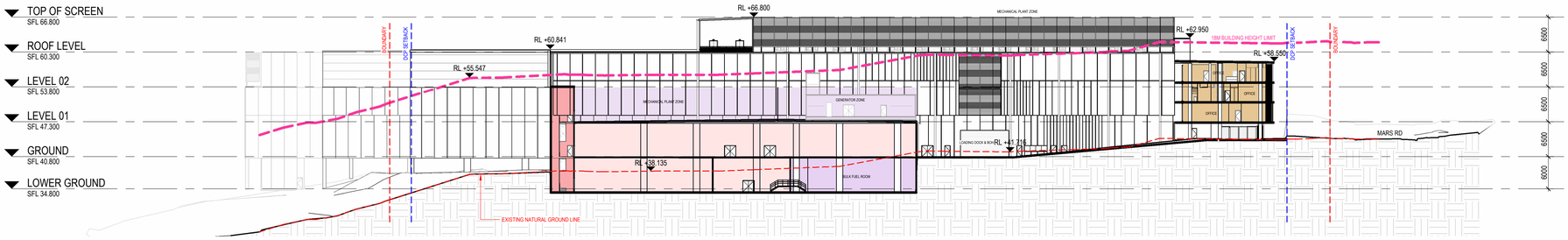

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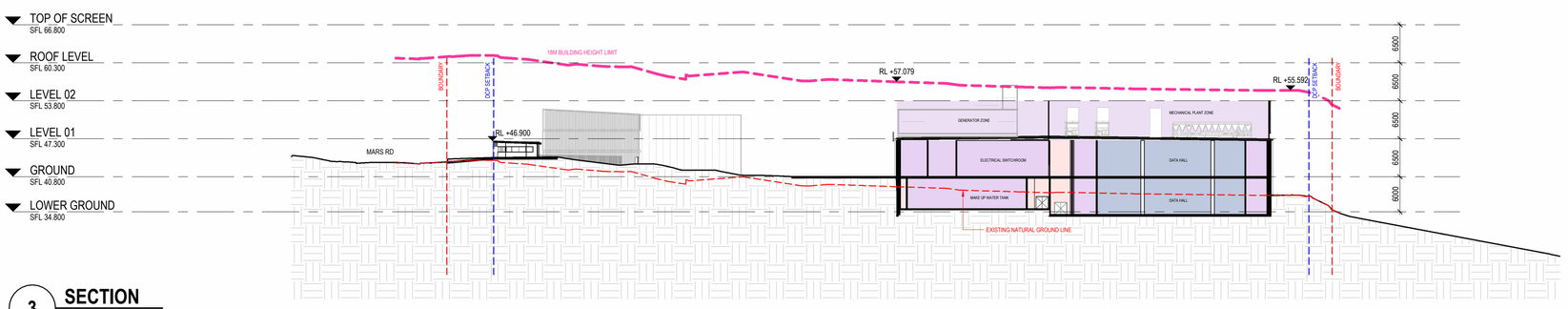

3 SECTION
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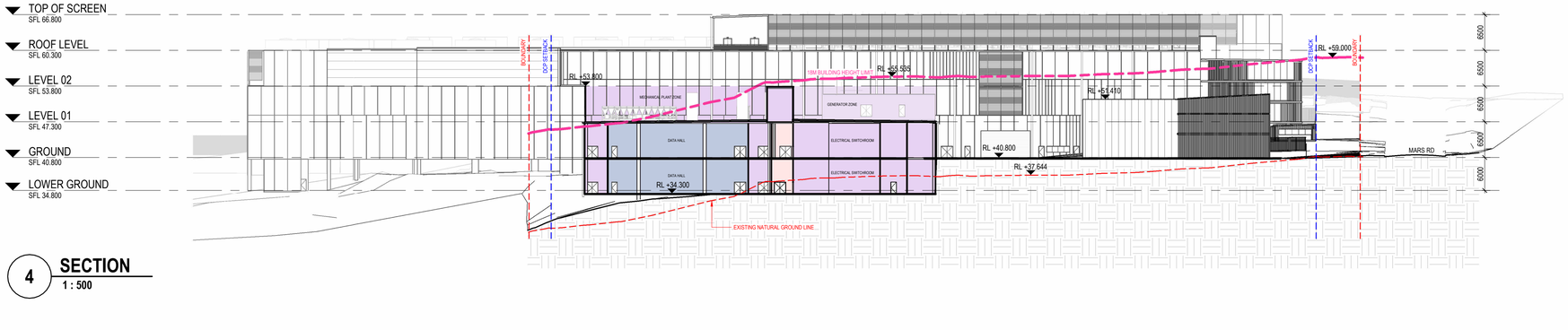

4 SECTION
1 : 500

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
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ACT Huai Lim 16065

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LEGEND:

- BOUNDARY
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- DCP SETBACK
- DATA HALL
- PLANT / SERVICES
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- BACK OF HOUSE / STORAGE
- CIRCULATION - HORIZONTAL
- CIRCULATION - VERTICAL
- AMENITIES

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SECTIONS SHEET 2 OF 2

SCALE
1 : 500 @ A1

PROJECT NUMBER
10417434

DRAWING NUMBER
MAR-AR-DRG-31001

ISSUE
B

PROJECT STATUS
SSDA APPLICATION

3/12/2025 11:39:27 AM

Autodesk Docs://10417434 Goodman 12 Mars Rd SSD/MAR-HDR-AR-R21_BLD.rvt

Goodman

S1 Site ID
Illuminated

A Plinth
Concrete Plinth - poured in situ. Allow for adequate fixings to substructure. Allow for power reticulation to all locations.

B Panel
Aluminium fascia, fabricated to 10mm thickness. Secured to substructure with countersunk fixings, painted to match external surface.

C Text
Profile cut letterforms + logo, face filled with opal acrylic and backlit. Letterforms to be flush with signform. LED units to be 4000K, evenly lit with no visible hot spotting.

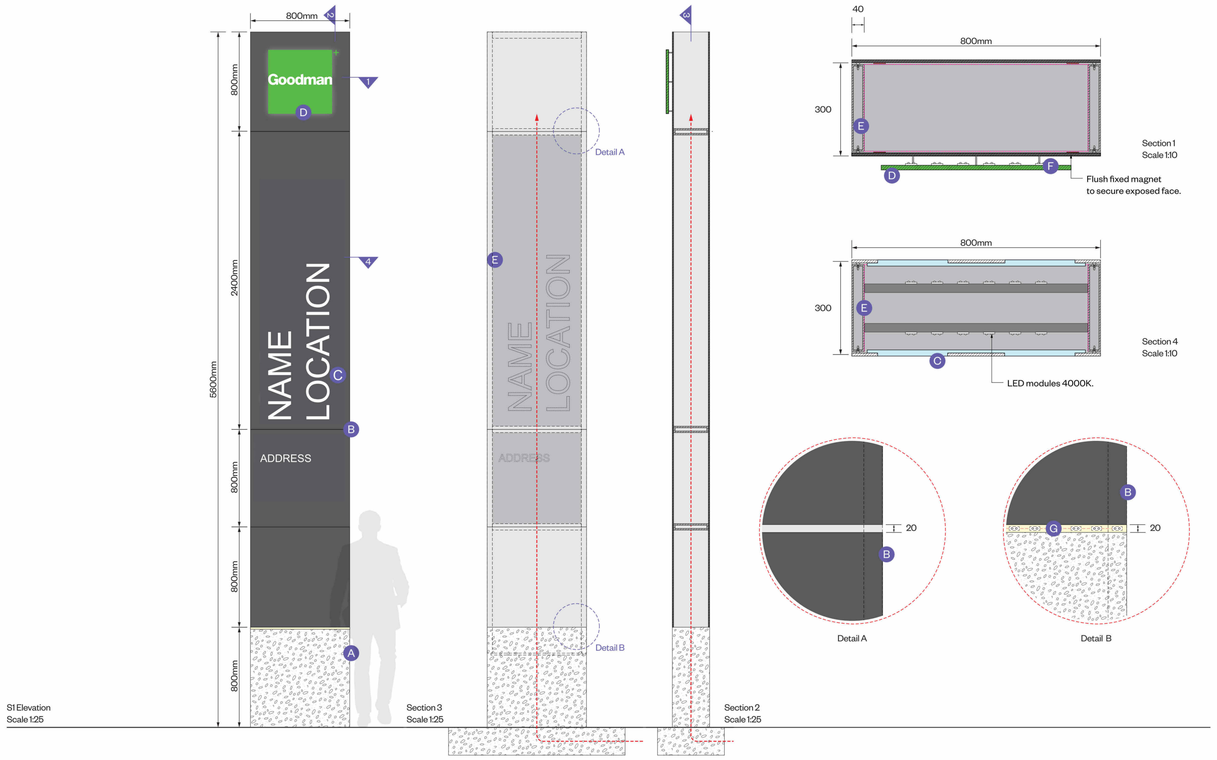
D Logo
10mm thick acrylic profile cut logo, pinfixed off steel substrate. Backlit with LED modules as required.

E Structure
No. 5mm THK galvanised steel RHS.
Cross-bracing to be determined by builder.

F LED
Modules to flush rear of 'Goodman' logo. LED to be 4000K, evenly lit with no visible hot spotting.

G Base LED
Aluminium channel with flush faced opal acrylic - mounted flush to extrernal surface of sign form. LED units to be 4000K, evenly lit with no visible hot spotting.

I



Detail A

Detail B

S5 Lightbox

Sign Case
Material: Fabricated aluminium sign case.
'Flexface' extrusion with self tensioning banner system.
Structural design of supporting frame to local Engineer's specifications.

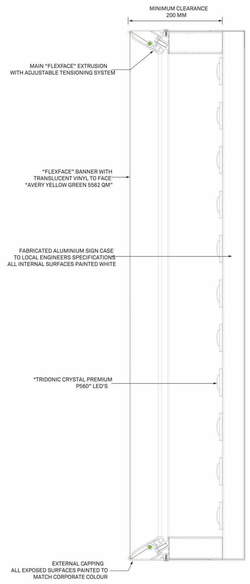
Finish: Two pack polyurethane paint.
To match corporate colour.
All internal surface painted white.

Illumination: "Tridonic Atco" LEDs.
Note: 'Tridonic Atco' specifications regarding maximum placement distance to prevent voltage drop.

'Flexface' face
Material: Backlit 'Flexface' PVC
Fixed to sign case extrusion by appropriate method.

Finish: Translucent vinyl film
Laminated to face of 'Flexface' PVC.
Colour 'Avery Yellow Green 5562 QM'.
The 'Goodman lettering is cut out of film allowing it to illuminate white.

Elevation



Section

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

NOMINATED ARCHITECTS:
NSW Huai Lim DR16065, D. Joe Mihaljevic 8699, Mark Gazy 7289, Simon Fleet 8363
VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

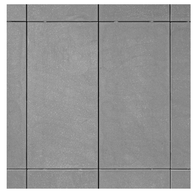
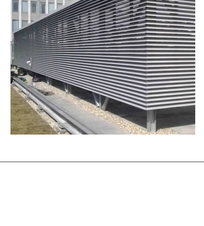
CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
SIGNAGE DETAILS - SITE TOTEM POLE + SIGNAGE

SCALE @ A1
PROJECT NUMBER 10417434
DRAWING NUMBER **MAR-AR-DRG-94101**
ISSUE **B**
PROJECT STATUS **SSDA APPLICATION**

3/12/2025 11:40:04 AM

CATEGORY	REFERENCE IMAGE	CODE	DESCRIPTION	FINISH
PRECAST CONCRETE		FT-01A FT-01B	PRECAST CONCRETE PANELS WITH VERTICAL RIBBING PRECAST CONCRETE PANELS	LIGHT GREY
METAL CLADDING		FT-02	METAL SCREEN BATTENS ON EXPOSED CONCRETE SLAB EDGES	TIMBER LOOK
METAL CLADDING		FT-03	HORIZONTAL METAL CORRUGATED CLADDING	LIGHT GREY
GLASS		FT-04	CLEAR GLAZING, ALUMINIUM FRAME	LIGHT GREY
ACOUSTIC		FT-05	METAL LOUVRE SCREEN	LIGHT GREY

CATEGORY	REFERENCE IMAGE	CODE	DESCRIPTION	FINISH
MESH		FT-06	MESH WITH VERTICAL CABLES FOR PLANTING	BLACK
ROOFING		FT-07	LARGE PROFILE METAL ROOFING	LIGHT GREY
SECURITY FENCE		- - -	PALISADE FENCE	DARK GREY

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VIC HDR Pty Ltd 51752
ACT Huai Lim 16065

NORTH POINT

REV	DESCRIPTION OF CHANGE	DATE	CHECKED	ISSUED
A	ISSUE FOR TOA	17/11/25	HDR	HDR
B	ISSUE FOR FORMAL LODGEMENT	03/12/25	HDR	HDR

CLIENT
Goodman

PROJECT
PROJECT MARS
12 Mars Rd, Lane Cove West NSW 2066

DRAWING TITLE
FINISHES SCHEDULE

SCALE
@ A1
PROJECT NUMBER
10417434
DRAWING NUMBER
MAR-AR-DRG-96000
ISSUE
B
PROJECT STATUS
SSDA APPLICATION

3/12/2025 11:40:13 AM

Appendix B: Contamination Data Tables

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

							Metals								BTEX							Total Petroleum Hydrocarbons				
							Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total Xylene	Total BTEX	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
						Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						LOR	4	0.4	1	1	1	0.1	1	1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	50	100	100	50
						Human Health - NEPM Setting 'D' - Commercial / Industrial	3,000[#1]	900[#1]	3,600[#2]	240,000[#1]	1,500[#3]	730[#1]	6,000[#1]	400,000[#1]	3[#4]	99,000[#4]	27,000[#4]			230[#4]		260[#5]	20,000[#6]			
						Maintenance of Ecosystems - Commercial / Industrial	160[#14]		320[#15]	95[#16]	1,830[#17]		60[#16]	150[#16]	75[#18]	135[#18]	165[#18]			95[#19]		215[#20]	170[#21]			
						TPH Management Limits - NEPM Setting D - Commercial / Industrial																				
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																				
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	6	<0.4	24	13	43	<0.1	13	43	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	5	<0.4	15	10	22	<0.1	9	32	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	<4	<0.4	16	10	14	<0.1	9	31	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730	<5	<1	15	9	20	<0.1	10	28	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346	<4	<0.4	7	2	12	<0.1	4	16	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	11	<0.4	12	19	13	<0.1	2	5	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	10	<0.4	14	<1	15	<0.1	2	2	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	<4	<0.4	7	22	11	<0.1	17	23	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	<4	<0.4	9	9	14	<0.1	8	24	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	5	<0.4	7	6	12	<0.1	20	17	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	4	<0.4	8	12	11	0.2	83	27	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	5	<0.4	11	5	12	<0.1	13	23	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	<4	<0.4	10	23	23	<0.1	21	50	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	100	100
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	5	<0.4	5	2	10	<0.1	2	29	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	<5	<1	4	<5	10	<0.1	2	19	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	8	<0.4	19	11	18	<0.1	7	28	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	4	<0.4	16	25	25	<0.1	12	46	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	7	<0.4	18	9	23	<0.1	6	24	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	<4	<0.4	7	3	4	<0.1	6	4	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	4	<0.4	24	17	19	<0.1	3	35	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	130	120	250
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	<4	<0.4	9	12	12	<0.1	14	20	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	<4	<0.4	4	<1	5	<0.1	2	9	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	<4	<0.4	10	5	11	<0.1	2	17	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	12	<0.4	18	13	39	<0.1	9	32	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	4	<0.4	22	25	35	<0.1	21	48	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	<4	<0.4	15	4	11	<0.1	3	14	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	<4	<0.4	7	2	3	<0.1	2	8	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<4	<0.4	4	4	2	<0.1	<1	4	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	6	<0.4	14	4	14	<0.1	5	18	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	110	110
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472	5	<0.4	23	4	12	<0.1	4	14	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	150	150
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	6	<0.4	41	36	250	<0.1	10	140	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	120	300	420
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472	<4	<0.4	22	3	10	<0.1	1	4	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	7	<1	24	<5	10	<0.1	<2	<5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	<4	<0.4	18	3	8	<0.1	6	8	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197	<4	<0.4	31	22	29	0.1	3	39	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	110	130	240
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	<4	<0.4	2	<1	6	<0.1	<1	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346	<4	<0.4	7	4	7	<0.1	4	17	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	<4	<0.4	3	<1	5	<0.1	<1	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	4	<0.4	22	4	9	<0.1	9	11	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	<4	<0.4	5	<1	3	<0.1	1	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	5	<0.4	14	7	12	<0.1	3	10	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	18	<0.4	14	15	40	<0.1	3	78	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	<4	<0.4	18	4	6	<0.1	2	8	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<4	<0.4	11	12	6	<0.1	1	10	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	7	<0.4	10	25	630	<0.1	6	57	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	110	120	230
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	6	<0.4	13	15	57	<0.1	4	32	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	<4	<0.4	3	1	57	<0.1	10	7	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	<4	<0.4	25	65	75	<0.1	15	150	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	<4	<0.4	7	11	180	<0.1	1	97	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	4	<0.4	11	16	390	0.1	4	150	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	680	470	1,100
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	<4	<0.4	12	5	12	<0.1	5	16	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	6	<0.4	5	19	13	<0.1	1	6	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	4	<0.4	15	10	69	0.1	6	40	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	<100	<50
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	<4	0.9	8	13	24	<0.1	2	170	<0.2	<0.5	<1	<2	<1	<1	-	<25	<50	<100	380	380
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

								Total Recoverable Hydrocarbons							PAHs																
								C6-C10 Fraction	C6-C10 Fraction minus BTEX (F1)	>C10-C16 Fraction	>C10-C16 Fraction minus naphthalene (F2)	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Sum)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(g,h,i)perylene	Benzo(b+j+k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Naphthalene (VOC)	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ (Zero)	Sum of Polycyclic aromatic hydrocarbons (PAH)
	Unit							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR							10	10	50	50	100	100	50	0.1	0.1	0.1	0.1	0.05	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.5	0.5
	Human Health - NEPM Setting 'D' - Commercial / Industrial								260[#7]		20,000[#8]	27,000[#9]	38,000[#9]														NL[#4]				40[#1]	4,000[#1]
	Maintenance of Ecosystems - Commercial / Industrial								215		170	1,700[#22]	3,300[#22]					1.4[#23]									370[#24]					
	TPH Management Limits - NEPM Setting D - Commercial / Industrial							**700[#26]**		**1,000[#26]**		**3,500[#26]**	**10,000[#26]**																			
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																										
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	0.06	<0.1	<0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<1	<0.1	0.1	<0.5	0.3
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472		<25	<25	<50	<50	100	<100	100	<0.1	<0.1	<0.1	<0.1	0.08	<0.1	<0.2	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<1	<0.1	0.2	<0.5	0.4
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730		<10	<10	<50	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	0.2	0.5	0.55	0.3	0.8	0.5	<0.1	1.3	<0.1	0.4	<0.1	<1	0.7	1.2	0.7	6.5
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	0.2	0.2	0.2	0.3	0.2	<0.1	0.4	<0.1	0.2	<0.1	<1	<0.1	0.5	<0.5	2.1
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.2	0.1	<0.1	0.4	<0.1	<0.1	<0.1	<1	0.1	0.3	<0.5	1.3
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.2	0.1	<0.1	0.3	<0.1	0.1	<0.1	<1	<0.1	0.3	<0.5	1.4
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546		<25	<25	<50	<50	120	120	240	<0.1	<0.1	<0.1	0.2	0.2	0.2	0.3	0.2	<0.1	0.2	<0.1	0.2	<0.1	<1	<0.1	0.2	<0.5	1.7
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.3	0.2	<0.1	0.4	<0.1	0.1	<0.1	<1	0.2	0.3	<0.5	1.9
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730		<10	<10	<50	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.2	0.1	<0.1	0.4	<0.1	<0.1	<0.1	<1	0.2	0.3	<0.5	1.3
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546		<25	<25	<50	<50	150	<100	150	<0.1	<0.1	<0.1	0.2	0.3	0.2	0.4	0.2	<0.1	0.5	<0.1	0.2	<0.1	<1	0.1	0.5	<0.5	2.7
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197		64	64	<50	<50	210	<100	210	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<1	<0.1	0.2	<0.5	0.4
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	0.06	<0.1	<0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<1	<0.1	0.1	<0.5	0.3
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472		<25	<25	<50	<50	160	150	310	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472		<25	<25	<50	<50	340	160	500	<0.1	<0.1	<0.1	<0.1	0.08	<0.1	<0.2	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<1	<0.1	0.2	<0.5	0.4
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730		<10	<10	<50	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197		<25	<25	<50	<50	190	<100	190	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	0.4	0.53	0.4	0.8	0.6	<0.1	1.4	<0.1	0.3	<0.1	<1	0.6	1.3	0.7	6.2
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472		<25	<25	<50	<50	190	130	320	<0.1	<0.1	<0.1	0.1	0.2	0.1	0.3	0.2	<0.1	0.5	<0.1	<0.1	<0.1	<1	0.3	0.4	<0.5	2
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472		<25	<25	<50	<50	100	<100	100	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.3	0.1	<0.1	0.5	<0.1	0.1	<0.1	<1	0.3	0.4	<0.5	2.2
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<1	<0.1	0.2	<0.5	0.9
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635		<25	<25	<50	<50	<100	<100	<50	<0.1	0.1	0.2	0.8	0.81	0.4	1	0.7	0.1	1.4	<0.1	0.4	<0.1	<1	0.7	1.4	1.2	8.4
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635		<25	<25	53	53	1,000	250	1,300	0.3	1.9	2.4	6.4	6.5	3.2	9.2	5.6	0.9	11	0.7	2.6	0.4	<1	6.3	12	9.3	70
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.05
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091		<25	<25	<50	<50	<100	<100	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<1	<0.1	0.1	<0.5	0.2
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197		<25	<25	<50	<50	280	230	500	<0.1	<0.1	<0.1	0.1	0.2	0.1	0.2	0.1	<0.1	0.3	<0.1	<0.1	<0.1	<1	0.2	0.3	<0.5	1.6
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
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						MAH									Halogenated Benzenes									Halogenated Hydrocarbons			
						1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Isopropylbenzene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	tert-Butylbenzene	Styrene	1,2,3-Trichlorobenzene	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,3-Dichlorobenzene	2-Chlorotoluene	1,4-Dichlorobenzene	4-Chlorotoluene	Bromobenzene	Chlorobenzene	1,2-Dibromoethane	Bromomethane	Dichlorodifluoromethane	Trichlorofluoromethane
					Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					LOR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
					Human Health - NEPM Setting 'D' - Commercial / Industrial	1,800[#10]	1,500[#10]	9,900[#10]	58,000[#10]	24,000[#10]		120,000[#10]	120,000[#10]	35,000[#10]	930[#10]	9,300[#10]	110[#10]		23,000[#10]	11[#10]	23,000[#10]	1,800[#10]	1,300[#10]	0.16[#10]	30[#10]	370[#10]	350,000[#10]
					Maintenance of Ecosystems - Commercial / Industrial																							
					TPH Management Limits - NEPM Setting D - Commercial / Industrial																							
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																						
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

																Chlorinated Hydrocarbons										
						1,1-Dichloropropene	1,1-Dichloroethane	1,1-Dichloroethene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,2-Dibromo-3-chloropropane	1,1,2-Trichloroethane	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	1,2-Dichloroethane	1,3-Dichloropropane	1,2-Dichloropropane	2,2-Dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dibromomethane
					Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					LOR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
					Human Health - NEPM Setting 'D' - Commercial / Industrial		16[#10]	1,000[#10]	8.8[#10]	36,000[#10]	0.064[#10]	5[#10]	2.7[#10]	0.11[#10]	2[#10]	23,000[#10]	11[#10]		630[#10]	1.3[#10]	86[#10]	2.9[#10]	39[#10]	23,000[#10]	1.4[#10]	460[#10]	370[#10]	99[#10]
					Maintenance of Ecosystems - Commercial / Industrial																							
					TPH Management Limits - NEPM Setting D - Commercial / Industrial																							
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																						
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

						Chlorinated Hydrocarbons							Solvents	Pesticides	Polychlorinated Biphenyls								Organochlorine Pesticides					
						cis-1,3-Dichloropropene	Hexachlorobutadiene	Tetrachloroethene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Vinyl Chloride	Cyclohexane	Mirex	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Sum of total)	a-BHC	b-BHC	d-BHC	Dieldrin	g-BHC (Lindane)	Aldrin
	Unit					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR					1	1	1	1	1	1	1	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
	Human Health - NEPM Setting 'D' - Commercial / Industrial						5.3[#10]	100[#10]	300[#10]		6[#10]	1.7[#10]	27,000[#10]	100[#1]								7[#11]	0.36[#10]	1.3[#10]			2.5[#10]	
	Maintenance of Ecosystems - Commercial / Industrial																											
	TPH Management Limits - NEPM Setting D - Commercial / Industrial																											
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																						
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	<1	<1	<1	<1	<1	<1	<1	<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
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	-	-	-	-	-	-	-	-	<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
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	<1	<1	<1	<1	<1	<1	<1	<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
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	<1	<1	<1	<1	<1	<1	<1	<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
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	<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
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	-	-	-	-	-	-	-	-	<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
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	<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
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<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
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	<1	<1	<1	<1	<1	<1	<1	<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
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	-	-	-	-	-	-	-	-	<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
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	<1	<1	<1	<1	<1	<1	<1	<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
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	-	-	-	-	-	-	-	-	<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
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	<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
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	<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
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	-	-	-	-	-	-	-	-	<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
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	<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
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	<1	<1	<1	<1	<1	<1	<1	<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
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	-	-	-	-	-	-	-	-	<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
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	<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
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

						Organochlorine Pesticides																Fungicides	Asbestos				
						Aldrin + Dieldrin	DDT	4,4'-DDE	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Chlordane (cis)	Chlordane (trans)	Endrin aldehyde	Heptachlor	Heptachlor epoxide	Methoxychlor	Hexachlorobenzene	Asbestos	Asbestos in soil (<2mm AF/FA)		Asbestos in soil (>7mm ACM)	Total Asbestos g/kg*
					Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	g	%(w/w)	%(w/w)	mg/kg
					LOR	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					
					Human Health - NEPM Setting 'D' - Commercial / Industrial	45[#1]				3,600[#1]			4,900[#10]	100[#1]	500[#10]	500[#10]		50[#1]	0.33[#10]	2,500[#1]	80[#1]			0.001	0.05	
					Maintenance of Ecosystems - Commercial / Industrial		640[#24]																			
					TPH Management Limits - NEPM Setting D - Commercial / Industrial																					
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																				
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	<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	Absent	0	<0.001	<0.01	<100
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	<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	-	-	-	-	-
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	<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	Absent	0	<0.001	<0.01	<100
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	<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	Present	0.1557	0.0295	<0.01	294.6
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	<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	-	-	-	-	-
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	<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	-	-	-	-	-
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	<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	-	-	-	-	-
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	<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	Absent	0	<0.001	<0.01	<100
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	<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	Absent	0	<0.001	<0.01	<100
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	<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	Present	0.0028	<0.001	<0.01	<100
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	<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	Absent	0	<0.001	<0.01	<100
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absent	0	<0.001	<0.01	<100
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	<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	Absent	0	<0.001	<0.01	<100
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	<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	Absent	0	<0.001	<0.01	<100
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	<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	Present	0.0018	<0.001	<0.01	<100
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	<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	Absent	0	<0.001	<0.01	<100
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	<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	Absent	0	<0.001	<0.01	<100
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	<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	-	-	-	-	-
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	<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	Absent	0	<0.001	<0.01	<100
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	<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	Absent	0	<0.001	<0.01	<100
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	<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	Absent	0	<0.001	<0.01	<100
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	<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	Absent	0	<0.001	<0.01	<100
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	<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	Absent	0	<0.001	<0.01	<100
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	<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	Absent	0	<0.001	<0.01	<100
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	<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	Absent	0	<0.001	<0.01	<100
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	<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	Absent	0	<0.001	<0.01	<100
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Present	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absent	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absent	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Present	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absent	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
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						(n:2) Fluorotelomer Sulfonic Acids				Perfluoroalkane Carboxylic Acids					Perfluoroalkane Sulfonic Acids				PFAS	
						4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorobutanoic acid (PFBA)	Perfluorooctanoic acid (PFOA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorobutane sulfonic acid (PFBS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	Sum of PFAS
Unit						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR						0.0005	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Human Health - NEPM Setting 'D' - Commercial / Industrial														50[#12]	20[#13]	20[#13]		20[#12]		
Maintenance of Ecosystems - Commercial / Industrial															0.01[#25]					
TPH Management Limits - NEPM Setting D - Commercial / Industrial																				
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**														
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	-	<0.0001	<0.0002	-	-	-	-	-	0.0002	0.0019	<0.0001	<0.0001	0.0019	0.0021	0.0021
BH02	QC201	13/11/2024	0.2 - 0.3	Natural	Interlab_D	ES2437730	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	0.0021	<0.0002	<0.0002	0.0021	-	-
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	0.0004	<0.0001	<0.0001	0.0004	0.0004	0.0004
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	-	<0.0001	<0.0002	-	-	-	-	-	0.0001	0.0002	<0.0001	<0.0001	0.0002	0.0003	0.0003
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	QC103	14/11/2024	0.7 - 0.8	Natural	Field_D	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
BH18	QC100	12/11/2024	0.25 - 0.3	Natural	Field_D	366197	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Fill	Normal	366346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	0.0001	<0.0001	<0.0001	0.0001	0.0001	0.0001
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	-	<0.0001	<0.0002	-	-	-	-	-	<0.0001	0.0005	<0.0001	<0.0001	0.0005	0.0005	0.0005
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	-	<0.0001	<0.0002	-	-	-	-	-	0.001	0.0011	<0.0001	<0.0001	0.0011	0.002	0.002
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	<0.0001	<0.0002	-	-	-	-	-	0.0002	0.0007	<0.0001	<0.0001	0.0007	0.0008	0.0008
PACM_01	PACM_01	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_02	PACM_02	11/11/2024	Surface	Fill	Normal	366091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_03	PACM-03	12/11/2024	Surface	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_04	PACM_04	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACM_05	PACM_05	15/11/2024	Surface	Fill	Normal	366635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
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Comments

#1 NEPC (2013) - HIL 'D'.
#2 NEPC (2013) - HIL 'D'. Value is for Chromium (VI). Refer Cr III and Cr VI results if speciated data are available.
#3 NEPC (2013) - HIL 'D'. Assumes 50% bioavailability. Consider site-specific bioavailability where appropriate.
#4 Friebel & Nadebaum (2011) - HSL-D.
#5 HSL for TRH F1 adopted for this historical fraction. Where F1 data are available, screening based on this fraction is not required.
#6 HSL for TRH F2 adopted for this historical fraction. Where F2 data are available, screening based on this fraction is not required.
#7 HSL based on vapour intrusion pathway (sand <1 m depth)
#8 HSL based on direct contact pathways (Friebel and Nadebaum, 2011) as vapour intrusion HSL is not limiting.
#9 HSL based on direct contact pathways (Friebel and Nadebaum, 2011) as fraction is not volatile.
#10 USEPA RSLs (May 2024 Update) - Industrial.
#11 NEPC (2013) - HIL 'D'. Relates to non-dioxin like PCBs only. Where a PCB source is known or suspected, site-specific risk assessment should be undertaken.
#12 PFAS NEMP 2.0: Health, Industrial/commercial (HIL D)
#13 PFAS NEMP 2.0: Health, Industrial/commercial (HIL D). Value is for PFOS+PFHxS
#14 NEPC (2013) EIL - Commercial and Industrial. Value applies to aged arsenic (contamination present in soil for at least two years). For fresh contamination refer Schedule B7 of the NEPM.
#15 NEPC (2013) EIL - Commercial and Industrial. Value is for chromium III. Initial screening value applicable to all aged soils (see text). Derive site-specific value if contamination is fresh (<2 years) or if EILs are exceeded.
#16 NEPC (2013) EIL - Commercial and Industrial. Initial screening value applicable to all aged soils (see text). Derive site-specific value if contamination is fresh (<2 years) or if EILs are exceeded.
#17 NEPC (2013) EIL - Commercial and Industrial. Initial screening value applicable to all aged soils (see text). Derive site-specific value if contamination is fresh (<2 years) or if EILs are exceeded. Assumes ABC of 30 mg/kg
#18 NEPC (2013) ESL - Commercial and Industrial. Coarse soil value adopted for initial screening.
#19 NEPC (2013) ESL - Commercial and Industrial. Fine soil value (most conservative) adopted for initial screening.
#20 ESL for TRH F1 adopted for this historical fraction. Where F1 data are available, screening based on this fraction is not required.
#21 ESL for TRH >C10-C16 adopted for this historical fraction. Where >C10-C16 data are available, screening based on this fraction is not required.
#22 ESL for coarse soil adopted for initial screening.
#23 NEPC (2013) ESL - Commercial and Industrial. Value applies to both coarse and fine soil.
#24 NEPC (2013) EIL - Commercial and Industrial. Value applies to both fresh and aged contamination.
#25 PFAS NEMP 2.0: Ecological, indirect exposure
#26 Coarse soil values adopted for initial screening

Table 2: Soil Analytical Results (Waste)
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
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					Metals								BTEX						Total Petroleum Hydrocarbons				
					Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total Xylene	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
				Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				LOR	4	0.4	1	1	1	0.1	1	1	0.2	0.5	0.5	0.5	0.5	0.5	10	50	100	100	50
				NSW EPA 2014 - General Solid Waste CT1 (No Leaching)	100	20	100[#1]		100	4	40		10	288	600			1,000	650				10,000
				NSW EPA 2014 - General Solid Waste SCC1 (with leached)	**500**	**100**	**1,900[#1]**		**1,500**	**50**	**1,050**		**18**	**518**	**1,080**			**1,800**	**650**				**10,000**
				NSW EPA 2014 - General Solid Waste TCLP1 (leached)																			
				NSW EPA 2014 - Restricted Solid Waste CT2 (No Leaching)	400	80	400[#1]		400	16	160		40	1,152	2,400			4,000	2,600				40,000
				NSW EPA 2014 - Restricted Solid Waste SCC2 (with leached)	*2,000*	*400*	*7,600 [#1]*		*6,000*	*200*	*4,200*		*72*	*2,073*	*4,320*			*7,200*	*2,600*				*40,000*
				NSW EPA 2014 - Restricted Solid Waste TCLP2 (leached)																			
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**	**Lab Report**																	
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	6	<0.4	24	13	43	<0.1	13	43	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	366472	5	<0.4	15	10	22	<0.1	9	32	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	366346	<4	<0.4	16	10	14	<0.1	9	31	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH02	QC201	13/11/2024	0.2 - 0.3	Fill	Interlab_D	ES2437730	<5	<1	15	9	20	<0.1	10	28	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Natural	Normal	366346	<4	<0.4	7	2	12	<0.1	4	16	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	366472	11	<0.4	12	19	13	<0.1	2	5	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	366472	10	<0.4	14	<1	15	<0.1	2	2	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	366546	<4	<0.4	7	22	11	<0.1	17	23	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	366546	<4	<0.4	9	9	14	<0.1	8	24	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	366546	5	<0.4	7	6	12	<0.1	20	17	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	366546	4	<0.4	8	12	11	0.2	83	27	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	366546	5	<0.4	11	5	12	<0.1	13	23	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	366546	<4	<0.4	10	23	23	<0.1	21	50	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	100	100
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	366546	5	<0.4	5	2	10	<0.1	2	29	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	ES2437730	<5	<1	4	<5	10	<0.1	2	19	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	366546	8	<0.4	19	11	18	<0.1	7	28	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366546	4	<0.4	16	25	25	<0.1	12	46	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	366546	7	<0.4	18	9	23	<0.1	6	24	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	<4	<0.4	7	3	4	<0.1	6	4	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	366197	4	<0.4	24	17	19	<0.1	3	35	<0.2	<0.5	<1	<2	<1	<1	<25	<50	130	120	250
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	366091	<4	<0.4	9	12	12	<0.1	14	20	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	366091	<4	<0.4	4	<1	5	<0.1	2	9	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	366091	<4	<0.4	10	5	11	<0.1	2	17	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	366472	12	<0.4	18	13	39	<0.1	9	32	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	366472	4	<0.4	22	25	35	<0.1	21	48	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	366091	<4	<0.4	15	4	11	<0.1	3	14	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	366091	<4	<0.4	7	2	3	<0.1	2	8	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<4	<0.4	4	4	2	<0.1	<1	4	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	366472	6	<0.4	14	4	14	<0.1	5	18	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	110	110
BH17	QC103	14/11/2024	0.7 - 0.8	Fill	Field_D	366472	5	<0.4	23	4	12	<0.1	4	14	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	150	150
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	366472	6	<0.4	41	36	250	<0.1	10	140	<0.2	<0.5	<1	<2	<1	<1	<25	<50	120	300	420
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Natural	Normal	366472	<4	<0.4	22	3	10	<0.1	1	4	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	ES2437730	7	<1	24	<5	10	<0.1	<2	<5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100	<50
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	366197	<4	<0.4	18	3	8	<0.1	6	8	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH18	QC100	12/11/2024	0.25 - 0.3	Fill	Field_D	366197	<4	<0.4	31	22	29	0.1	3	39	<0.2	<0.5	<1	<2	<1	<1	<25	<50	110	130	240
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	366197	<4	<0.4	2	<1	6	<0.1	<1	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Natural	Normal	366346	<4	<0.4	7	4	7	<0.1	4	17	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	366472	<4	<0.4	3	<1	5	<0.1	<1	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	366472	4	<0.4	22	4	9	<0.1	9	11	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	366472	<4	<0.4	5	<1	3	<0.1	1	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	366197	5	<0.4	14	7	12	<0.1	3	10	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	366197	18	<0.4	14	15	40	<0.1	3	78	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	366197	<4	<0.4	18	4	6	<0.1	2	8	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	366197	<4	<0.4	11	12	6	<0.1	1	10	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	366472	7	<0.4	10	25	630	<0.1	6	57	<0.2	<0.5	<1	<2	<1	<1	<25	<50	110	120	230
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	366472	6	<0.4	13	15	57	<0.1	4	32	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	366472	<4	<0.4	3	1	57	<0.1	10	7	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	366546	<4	<0.4	25	65	75	<0.1	15	150	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	366635	<4	<0.4	7	11	180	<0.1	1	97	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	366635	4	<0.4	11	16	390	0.1	4	150	<0.2	<0.5	<1	<2	<1	<1	<25	<50	680	470	1,100
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	366091	<4	<0.4	12	5	12	<0.1	5	16	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	366091	6	<0.4	5	19	13	<0.1	1	6	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	366091	4	<0.4	15	10	69	0.1	6	40	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	366197	<4	0.9	8	13	24	<0.1	2	170	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	380	380

Comments
#1 As chromium (VI)

Table 2: Soil Analytical Results (Waste)
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

						PAH		MAH	Halogenated Benzenes			Chlorinated Hydrocarbons										Polychlorinated Biphenyls	Asbestos	PFAS			
						Benzo(a)pyrene	Sum of Polycyclic aromatic hydrocarbons (PAH)	Styrene	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene	1,1-Dichloroethene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1,2,2-Tetrachloroethane	1,2-Dichloroethane	Carbon Tetrachloride	Chloroform	Tetrachloroethene	Trichloroethene	Vinyl Chloride	PCBs (Sum of total)	Asbestos	Perfluorooctanoic acid (PFOA)	Perfluorooctanoic acid (PFOA)	Sum of PFHxS and PFOS	Sum of PFHxS and PFOS
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	mg/kg	µg/L	mg/kg	µg/L
						0.05	0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.1		0.0001	0.01	0.0001	0.01
					NSW EPA 2014 - General Solid Waste	0.8	200	60	86	150	2,000	14	200	600	24	26	10	10	120	14	10	4	50					
					NSW EPA 2014 - General Solid Waste S	**10**	**200**	**108**	**155**	**270**	**3,600**	**25**	**360**	**1,080**	**43.2**	**46.8**	**18**	**18**	**216**	**25.2**	**18**	**7.2**	**50**		**18**		**1.8**	
					NSW EPA 2014 - General Solid Wa																					500		50
					NSW EPA 2014 - Restricted Solid Waste	3.2	800	240	344	600	8,000	56	800	2,400	96	104	40	40	480	56	40	16	50					
					NSW EPA 2014 - Restricted Solid Waste S	*23*	*800*	*432*	*620*	*1,080*	*14,400*	*100*	*1,440*	*4,320*	*172.8*	*187.2*	*72*	*72*	*864*	*100.8*	*72*	*28.8*	*50*		*72*		*7.2*	
					NSW EPA 2014 - Restricted Solid Wa																					2,000		200
Location	**Field ID**	**Date**	**Depth**	**Lithology**	**Sample Type**																							
BH01	BH01_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	0.06	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH01	QC104	14/11/2024	0.4 - 0.5	Fill	Field_D	0.08	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	BH02_0.2-0.3	13/11/2024	0.2 - 0.3	Fill	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	0.0002	<0.01	0.0019	0.03
BH02	QC201	13/11/2024	0.2 - 0.3	Fill	Interlab_D	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	0.0021	-
BH02	BH02_7.9-8.0	13/11/2024	7.9 - 8	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.5-0.7	14/11/2024	0.5 - 0.7	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH03	BH03_0.5-0.7 - [TRIPLICATE]	14/11/2024	0.5 - 0.7	Natural	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.24-0.3	15/11/2024	0.24 - 0.3	Fill	Normal	0.55	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH04	BH04_0.24-0.3 - [TRIPLICATE]	15/11/2024	0.24 - 0.3	Fill	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_0.2-0.25	15/11/2024	0.2 - 0.25	Fill	Normal	0.2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Present	-	-	-	-
BH06	BH06_0.2-0.23	15/11/2024	0.2 - 0.23	Fill	Normal	0.1	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH07	BH07_0.21-0.25	15/11/2024	0.21 - 0.25	Fill	Normal	0.1	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH08	BH08_0.13-0.16	15/11/2024	0.13 - 0.16	Fill	Normal	0.2	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH09	BH09_0.18-0.26	15/11/2024	0.18 - 0.26	Fill	Normal	0.2	1.9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	<0.0001	-	0.0004	-
BH09	QC205	15/11/2024	0.18 - 0.26	Fill	Interlab_D	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	BH10_0.4-0.5	15/11/2024	0.4 - 0.5	Fill	Normal	0.1	1.3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	<0.0001	-	<0.0001	-
BH10A	BH10A_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	0.3	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Present	-	-	-	-
BH11	BH11_0.9-1.0	15/11/2024	0.9 - 1	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH12	BH12_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH13	BH13_0-0.1	12/11/2024	0 - 0.1	Fill	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absent	-	-	-	-
BH13	BH13_0.4-0.5	12/11/2024	0.4 - 0.5	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH14	BH14_0.16-0.2	11/11/2024	0.16 - 0.2	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	0.0001	<0.01	0.0002	<0.01
BH14	BH14_4.0-4.2	11/11/2024	4 - 4.2	Natural	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-
BH14	BH14_7.8-8.0	11/11/2024	7.8 - 8	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2-0.3	14/11/2024	0.2 - 0.3	Fill	Normal	0.1	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Present	-	-	-	-
BH15	BH15_0.9-1.0	14/11/2024	0.9 - 1	Fill	Normal	0.06	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH16	BH16_1.0-2.1	11/11/2024	1 - 1.1	Fill	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	<0.0001	<0.01	<0.0001	<0.01
BH16	BH16_4.0-4.1	11/11/2024	4 - 4.1	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-
BH17	BH17_0.7-0.8	14/11/2024	0.7 - 0.8	Fill	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	-	-	-	-
BH17	QC103	14/11/2024	0.7 - 0.8	Fill	Field_D	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.1-1.2	14/11/2024	1.1 - 1.2	Natural	Normal	0.08	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_1.6-1.7	14/11/2024	1.6 - 1.7	Natural	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-
BH17	QC203	14/11/2024	1.6 - 1.7	Natural	Interlab_D	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.25-0.3	12/11/2024	0.25 - 0.3	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	<0.0001	<0.01	<0.0001	<0.01
BH18	QC100	12/11/2024	0.25 - 0.3	Fill	Field_D	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-
BH18	BH18_1.0-1.1	12/11/2024	1 - 1.1	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_5.9-6.0	13/11/2024	5.9 - 6	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.22-0.25	14/11/2024	0.22 - 0.25	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
BH20	BH20_0.2-0.35	14/11/2024	0.2 - 0.35	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH20	BH20_0.35-0.45	14/11/2024	0.35 - 0.45	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.2-0.5	12/11/2024	0.2 - 0.5	Fill	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	<0.0001	<0.01	0.0001	<0.01
BH21	BH21_0.7-0.8	12/11/2024	0.7 - 0.8	Fill	Normal	0.53	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH21	BH21_1.1-1.2	12/11/2024	1.1 - 1.2	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_7.9-8.0	12/11/2024	7.9 - 8	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1-0.2	14/11/2024	0.1 - 0.2	Fill	Normal	0.2	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	<0.0001	-	0.0005	-
BH22	BH22_0.4-0.5	14/11/2024	0.4 - 0.5	Fill	Normal	0.2	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH23	BH23_0.2-0.3	14/11/2024	0.2 - 0.3	Natural	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH25	BH25_0.0-0.2	15/11/2024	0 - 0.2	Fill	Normal	0.1	0.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	0.001	-	0.0011	-
BH26	BH26_0.1-0.35	15/11/2024	0.1 - 0.35	Fill	Normal	0.81	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.2-0.3	15/11/2024	0.2 - 0.3	Fill	Normal	6.5	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0-0.2	11/11/2024	0 - 0.2	Fill	Normal	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH28	BH28_0.9-1.0	11/11/2024	0.9 - 1	Fill	Normal	<0.05	<0.05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	Absent	-	-	-	-
BH29	BH29_0-0.1	11/11/2024	0 - 0.1	Fill	Normal	<0.05	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	-	-	-	-
BH30	BH30_0.0-0.1	12/11/2024	0 - 0.1	Fill	Normal	0.2	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	Absent	0.0002	-	0.0007	-

Comments
#1 As chromium (VI)

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.2 15/05/2025 12:13:10 PM
From File	95% UCL Data Source_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Lead (Fill)

General Statistics

Total Number of Observations	37	Number of Distinct Observations	26
		Number of Missing Observations	2
Minimum	5	Mean	53.05
Maximum	630	Median	18
SD	118.3	Std. Error of Mean	19.45
Coefficient of Variation	2.23	Skewness	4.089

Normal GOF Test

Shapiro Wilk Test Statistic	0.406	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.814	Data Not Normal at 1% Significance Level
Lilliefors Test Statistic	0.372	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.168	Data Not Normal at 1% Significance Level

Data Not Normal at 1% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	85.9	95% Adjusted-CLT UCL (Chen-1995)	99.03
		95% Modified-t UCL (Johnson-1978)	88.08

Gamma GOF Test

A-D Test Statistic	4.488	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.791	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.263	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.151	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.718	k star (bias corrected MLE)	0.678
Theta hat (MLE)	73.9	Theta star (bias corrected MLE)	78.28
nu hat (MLE)	53.13	nu star (bias corrected)	50.15
MLE Mean (bias corrected)	53.05	MLE Sd (bias corrected)	64.44
		Approximate Chi Square Value (0.05)	34.89
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	34.34

Assuming Gamma Distribution

95% Approximate Gamma UCL	76.26	95% Adjusted Gamma UCL	77.49

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.845	**Shapiro Wilk Lognormal GOF Test**
10% Shapiro Wilk Critical Value	0.946	Data Not Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.17	**Lilliefors Lognormal GOF Test**
10% Lilliefors Critical Value	0.132	Data Not Lognormal at 10% Significance Level

Data Not Lognormal at 10% Significance Level

58					**Lognormal Statistics**						
59				Minimum of Logged Data	1.609				Mean of logged Data		3.132
60				Maximum of Logged Data	6.446				SD of logged Data		1.04
61											
62					**Assuming Lognormal Distribution**						
63				95% H-UCL	60.03				90% Chebyshev (MVUE) UCL		61.67
64				95% Chebyshev (MVUE) UCL	72.16				97.5% Chebyshev (MVUE) UCL		86.71
65				99% Chebyshev (MVUE) UCL	115.3						
66											
67					**Nonparametric Distribution Free UCL Statistics**						
68					**Data do not follow a Discernible Distribution**						
69											
70					**Nonparametric Distribution Free UCLs**						
71				95% CLT UCL	85.05				95% BCA Bootstrap UCL		104.4
72				95% Standard Bootstrap UCL	84.13				95% Bootstrap-t UCL		171.7
73				95% Hall's Bootstrap UCL	199.1				95% Percentile Bootstrap UCL		85.86
74				90% Chebyshev(Mean, Sd) UCL	111.4				95% Chebyshev(Mean, Sd) UCL		137.9
75				97.5% Chebyshev(Mean, Sd) UCL	174.5				99% Chebyshev(Mean, Sd) UCL		246.6
76											
77					**Suggested UCL to Use**						
78				95% Student's-t UCL	85.9						
79											
80					**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**						
81					**Please verify the data were collected from random locations.**						
82					**If the data were collected using judgmental or other non-random methods,**						
83					**then contact a statistician to correctly calculate UCLs.**						
84											
85					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
86					Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.						
87					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.						
88											
89											
90	**Lead (Natural)**										
91											
92					**General Statistics**						
93				Total Number of Observations	17				Number of Distinct Observations		13
94									Number of Missing Observations		2
95				Minimum	2				Mean		24.71
96				Maximum	250				Median		7
97				SD	59.4				Std. Error of Mean		14.41
98				Coefficient of Variation	2.404				Skewness		3.847
99											
100					**Normal GOF Test**						
101				Shapiro Wilk Test Statistic	0.387				**Shapiro Wilk GOF Test**		
102				1% Shapiro Wilk Critical Value	0.851				Data Not Normal at 1% Significance Level		
103				Lilliefors Test Statistic	0.447				**Lilliefors GOF Test**		
104				1% Lilliefors Critical Value	0.241				Data Not Normal at 1% Significance Level		
105					**Data Not Normal at 1% Significance Level**						
106											
107					**Assuming Normal Distribution**						
108				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
109				95% Student's-t UCL	49.86				95% Adjusted-CLT UCL (Chen-1995)		62.76
110									95% Modified-t UCL (Johnson-1978)		52.1
111											
112					**Gamma GOF Test**						
113				A-D Test Statistic	2.295				**Anderson-Darling Gamma GOF Test**		
114				5% A-D Critical Value	0.788				Data Not Gamma Distributed at 5% Significance Level		

115				K-S Test Statistic	0.351	**Kolmogorov-Smirnov Gamma GOF Test**						
116				5% K-S Critical Value	0.219	Data Not Gamma Distributed at 5% Significance Level						
117	**Data Not Gamma Distributed at 5% Significance Level**											
118												
119	**Gamma Statistics**											
120				k hat (MLE)	0.616				k star (bias corrected MLE)	0.546		
121				Theta hat (MLE)	40.11				Theta star (bias corrected MLE)	45.21		
122				nu hat (MLE)	20.94				nu star (bias corrected)	18.58		
123				MLE Mean (bias corrected)	24.71				MLE Sd (bias corrected)	33.42		
124									Approximate Chi Square Value (0.05)	9.812		
125				Adjusted Level of Significance	0.0346				Adjusted Chi Square Value	9.149		
126												
127	**Assuming Gamma Distribution**											
128				95% Approximate Gamma UCL	46.79				95% Adjusted Gamma UCL	50.18		
129												
130	**Lognormal GOF Test**											
131				Shapiro Wilk Test Statistic	0.855	**Shapiro Wilk Lognormal GOF Test**						
132				10% Shapiro Wilk Critical Value	0.91	Data Not Lognormal at 10% Significance Level						
133				Lilliefors Test Statistic	0.214	**Lilliefors Lognormal GOF Test**						
134				10% Lilliefors Critical Value	0.19	Data Not Lognormal at 10% Significance Level						
135	**Data Not Lognormal at 10% Significance Level**											
136												
137	**Lognormal Statistics**											
138				Minimum of Logged Data	0.693				Mean of logged Data	2.208		
139				Maximum of Logged Data	5.521				SD of logged Data	1.152		
140												
141	**Assuming Lognormal Distribution**											
142				95% H-UCL	40.75				90% Chebyshev (MVUE) UCL	32.36		
143				95% Chebyshev (MVUE) UCL	39.48				97.5% Chebyshev (MVUE) UCL	49.36		
144				99% Chebyshev (MVUE) UCL	68.76							
145												
146	**Nonparametric Distribution Free UCL Statistics**											
147	**Data do not follow a Discernible Distribution**											
148												
149	**Nonparametric Distribution Free UCLs**											
150				95% CLT UCL	48.4				95% BCA Bootstrap UCL	70.88		
151				95% Standard Bootstrap UCL	48.05				95% Bootstrap-t UCL	301.5		
152				95% Hall's Bootstrap UCL	173				95% Percentile Bootstrap UCL	52.24		
153				90% Chebyshev(Mean, Sd) UCL	67.92				95% Chebyshev(Mean, Sd) UCL	87.5		
154				97.5% Chebyshev(Mean, Sd) UCL	114.7				99% Chebyshev(Mean, Sd) UCL	168		
155												
156	**Suggested UCL to Use**											
157				95% Student's-t UCL	49.86							
158												
159	**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**											
160	**Please verify the data were collected from random locations.**											
161	**If the data were collected using judgmental or other non-random methods,**											
162	**then contact a statistician to correctly calculate UCLs.**											
163												
164	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
165	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
166	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
167												
168												
169	**Nickel (Fill)**											
170												
171	**General Statistics**											

172			Total Number of Observations		37				Number of Distinct Observations			18
173									Number of Missing Observations			2
174				Minimum	1						Mean	9.73
175				Maximum	83						Median	6
176				SD	13.64						Std. Error of Mean	2.243
177			Coefficient of Variation		1.402						Skewness	4.535
178												
179					**Normal GOF Test**							
180			Shapiro Wilk Test Statistic		0.528			**Shapiro Wilk GOF Test**				
181			1% Shapiro Wilk Critical Value		0.814			Data Not Normal at 1% Significance Level				
182			Lilliefors Test Statistic		0.261			**Lilliefors GOF Test**				
183			1% Lilliefors Critical Value		0.168			Data Not Normal at 1% Significance Level				
184					**Data Not Normal at 1% Significance Level**							
185												
186					**Assuming Normal Distribution**							
187			**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**				
188			95% Student's-t UCL		13.52			95% Adjusted-CLT UCL (Chen-1995)				15.21
189								95% Modified-t UCL (Johnson-1978)				13.79
190												
191					**Gamma GOF Test**							
192			A-D Test Statistic		0.706			**Anderson-Darling Gamma GOF Test**				
193			5% A-D Critical Value		0.773			Detected data appear Gamma Distributed at 5% Significance Level				
194			K-S Test Statistic		0.113			**Kolmogorov-Smirnov Gamma GOF Test**				
195			5% K-S Critical Value		0.149			Detected data appear Gamma Distributed at 5% Significance Level				
196					**Detected data appear Gamma Distributed at 5% Significance Level**							
197												
198					**Gamma Statistics**							
199				k hat (MLE)	1.187				k star (bias corrected MLE)			1.109
200				Theta hat (MLE)	8.196				Theta star (bias corrected MLE)			8.774
201				nu hat (MLE)	87.85				nu star (bias corrected)			82.06
202			MLE Mean (bias corrected)		9.73				MLE Sd (bias corrected)			9.24
203									Approximate Chi Square Value (0.05)			62.18
204			Adjusted Level of Significance		0.0431				Adjusted Chi Square Value			61.43
205												
206					**Assuming Gamma Distribution**							
207			95% Approximate Gamma UCL		12.84				95% Adjusted Gamma UCL			13
208												
209					**Lognormal GOF Test**							
210			Shapiro Wilk Test Statistic		0.972			**Shapiro Wilk Lognormal GOF Test**				
211			10% Shapiro Wilk Critical Value		0.946			Data appear Lognormal at 10% Significance Level				
212			Lilliefors Test Statistic		0.0705			**Lilliefors Lognormal GOF Test**				
213			10% Lilliefors Critical Value		0.132			Data appear Lognormal at 10% Significance Level				
214					**Data appear Lognormal at 10% Significance Level**							
215												
216					**Lognormal Statistics**							
217			Minimum of Logged Data		0						Mean of logged Data	1.798
218			Maximum of Logged Data		4.419						SD of logged Data	0.958
219												
220					**Assuming Lognormal Distribution**							
221				95% H-UCL	13.89				90% Chebyshev (MVUE) UCL			14.49
222			95% Chebyshev (MVUE) UCL		16.81				97.5% Chebyshev (MVUE) UCL			20.02
223			99% Chebyshev (MVUE) UCL		26.32							
224												
225					**Nonparametric Distribution Free UCL Statistics**							
226					**Data appear to follow a Discernible Distribution**							
227												
228					**Nonparametric Distribution Free UCLs**							

229					95% CLT UCL	13.42				95% BCA Bootstrap UCL		16.03
230					95% Standard Bootstrap UCL	13.36				95% Bootstrap-t UCL		18.01
231					95% Hall's Bootstrap UCL	28.19				95% Percentile Bootstrap UCL		13.76
232					90% Chebyshev(Mean, Sd) UCL	16.46				95% Chebyshev(Mean, Sd) UCL		19.51
233					97.5% Chebyshev(Mean, Sd) UCL	23.74				99% Chebyshev(Mean, Sd) UCL		32.04
234												
235					**Suggested UCL to Use**							
236					95% Adjusted Gamma UCL	13						
237												
238	**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**											
239	**Please verify the data were collected from random locations.**											
240	**If the data were collected using judgmental or other non-random methods,**											
241	**then contact a statistician to correctly calculate UCLs.**											
242												
243	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
244	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
245	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
246												
247												
248	**Benzo(a)pyrene (Fill)**											
249												
250					**General Statistics**							
251					Total Number of Observations	36				Number of Distinct Observations		11
252										Number of Missing Observations		2
253					Minimum	0.05				Mean		0.343
254					Maximum	6.5				Median		0.09
255					SD	1.072				Std. Error of Mean		0.179
256					Coefficient of Variation	3.126				Skewness		5.729
257												
258					**Normal GOF Test**							
259					Shapiro Wilk Test Statistic	0.28				**Shapiro Wilk GOF Test**		
260					1% Shapiro Wilk Critical Value	0.912				Data Not Normal at 1% Significance Level		
261					Lilliefors Test Statistic	0.392				**Lilliefors GOF Test**		
262					1% Lilliefors Critical Value	0.17				Data Not Normal at 1% Significance Level		
263					**Data Not Normal at 1% Significance Level**							
264												
265					**Assuming Normal Distribution**							
266					**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
267					95% Student's-t UCL	0.645				95% Adjusted-CLT UCL (Chen-1995)		0.819
268										95% Modified-t UCL (Johnson-1978)		0.673
269												
270					**Gamma GOF Test**							
271					A-D Test Statistic	4.65				**Anderson-Darling Gamma GOF Test**		
272					5% A-D Critical Value	0.804				Data Not Gamma Distributed at 5% Significance Level		
273					K-S Test Statistic	0.277				**Kolmogorov-Smirnov Gamma GOF Test**		
274					5% K-S Critical Value	0.154				Data Not Gamma Distributed at 5% Significance Level		
275					**Data Not Gamma Distributed at 5% Significance Level**							
276												
277					**Gamma Statistics**							
278					k hat (MLE)	0.589				k star (bias corrected MLE)		0.558
279					Theta hat (MLE)	0.582				Theta star (bias corrected MLE)		0.614
280					nu hat (MLE)	42.4				nu star (bias corrected)		40.2
281					MLE Mean (bias corrected)	0.343				MLE Sd (bias corrected)		0.459
282										Approximate Chi Square Value (0.05)		26.67
283					Adjusted Level of Significance	0.0428				Adjusted Chi Square Value		26.17
284												
285					**Assuming Gamma Distribution**							

286			95% Approximate Gamma UCL		0.517				95% Adjusted Gamma UCL		0.527	
287												
288					**Lognormal GOF Test**							
289			Shapiro Wilk Test Statistic		0.784		**Shapiro Wilk Lognormal GOF Test**					
290			10% Shapiro Wilk Critical Value		0.945		Data Not Lognormal at 10% Significance Level					
291			Lilliefors Test Statistic		0.216		**Lilliefors Lognormal GOF Test**					
292			10% Lilliefors Critical Value		0.134		Data Not Lognormal at 10% Significance Level					
293					**Data Not Lognormal at 10% Significance Level**							
294												
295					**Lognormal Statistics**							
296			Minimum of Logged Data		-2.996				Mean of logged Data		-2.123	
297			Maximum of Logged Data		1.872				SD of logged Data		1.113	
298												
299					**Assuming Lognormal Distribution**							
300				95% H-UCL	0.357				90% Chebyshev (MVUE) UCL		0.36	
301			95% Chebyshev (MVUE) UCL		0.425				97.5% Chebyshev (MVUE) UCL		0.515	
302			99% Chebyshev (MVUE) UCL		0.692							
303												
304					**Nonparametric Distribution Free UCL Statistics**							
305					**Data do not follow a Discernible Distribution**							
306												
307					**Nonparametric Distribution Free UCLs**							
308				95% CLT UCL	0.637				95% BCA Bootstrap UCL		0.886	
309			95% Standard Bootstrap UCL		0.628				95% Bootstrap-t UCL		1.843	
310			95% Hall's Bootstrap UCL		1.661				95% Percentile Bootstrap UCL		0.68	
311			90% Chebyshev(Mean, Sd) UCL		0.879				95% Chebyshev(Mean, Sd) UCL		1.121	
312			97.5% Chebyshev(Mean, Sd) UCL		1.458				99% Chebyshev(Mean, Sd) UCL		2.12	
313												
314					**Suggested UCL to Use**							
315				95% Student's-t UCL	0.645							
316												
317					**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**							
318					**Please verify the data were collected from random locations.**							
319					**If the data were collected using judgmental or other non-random methods,**							
320					**then contact a statistician to correctly calculate UCLs.**							
321												
322					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
323					Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.							
324					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
325												
326												
327	**Perfluorooctanoic acid (PFOA) (Fill)**											
328												
329					**General Statistics**							
330			Total Number of Observations		12				Number of Distinct Observations		3	
331									Number of Missing Observations		2	
332				Minimum	1.0000E-4				Mean		2.0000E-4	
333				Maximum	0.001				Median		1.0000E-4	
334				SD	2.5584E-4				Std. Error of Mean		7.3855E-5	
335			Coefficient of Variation		1.279				Skewness		3.283	
336												
337					**Normal GOF Test**							
338			Shapiro Wilk Test Statistic		0.444		**Shapiro Wilk GOF Test**					
339			1% Shapiro Wilk Critical Value		0.805		Data Not Normal at 1% Significance Level					
340			Lilliefors Test Statistic		0.417		**Lilliefors GOF Test**					
341			1% Lilliefors Critical Value		0.281		Data Not Normal at 1% Significance Level					
342					**Data Not Normal at 1% Significance Level**							

343												
344						**Assuming Normal Distribution**							
345				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
346				95% Student's-t UCL	3.3263E-4				95% Adjusted-CLT UCL (Chen-1995)	3.9628E-4		
347									95% Modified-t UCL (Johnson-1978)	3.4430E-4		
348												
349						**Gamma GOF Test**							
350				A-D Test Statistic	2.356				**Anderson-Darling Gamma GOF Test**			
351				5% A-D Critical Value	0.744				Data Not Gamma Distributed at 5% Significance Level			
352				K-S Test Statistic	0.369				**Kolmogorov-Smirnov Gamma GOF Test**			
353				5% K-S Critical Value	0.249				Data Not Gamma Distributed at 5% Significance Level			
354				**Data Not Gamma Distributed at 5% Significance Level**								
355												
356						**Gamma Statistics**							
357				k hat (MLE)	1.672				k star (bias corrected MLE)	1.309		
358				Theta hat (MLE)	1.1964E-4				Theta star (bias corrected MLE)	1.5275E-4		
359				nu hat (MLE)	40.12				nu star (bias corrected)	31.42		
360				MLE Mean (bias corrected)	2.0000E-4				MLE Sd (bias corrected)	1.7478E-4		
361									Approximate Chi Square Value (0.05)	19.62		
362				Adjusted Level of Significance	0.029				Adjusted Chi Square Value	18.2		
363												
364						**Assuming Gamma Distribution**							
365				95% Approximate Gamma UCL	3.2039E-4				95% Adjusted Gamma UCL	3.4525E-4		
366												
367						**Lognormal GOF Test**							
368				Shapiro Wilk Test Statistic	0.605				**Shapiro Wilk Lognormal GOF Test**			
369				10% Shapiro Wilk Critical Value	0.883				Data Not Lognormal at 10% Significance Level			
370				Lilliefors Test Statistic	0.37				**Lilliefors Lognormal GOF Test**			
371				10% Lilliefors Critical Value	0.223				Data Not Lognormal at 10% Significance Level			
372				**Data Not Lognormal at 10% Significance Level**								
373												
374						**Lognormal Statistics**							
375				Minimum of Logged Data	-9.21				Mean of logged Data	-8.845		
376				Maximum of Logged Data	-6.908				SD of logged Data	0.684		
377												
378						**Assuming Lognormal Distribution**							
379				95% H-UCL	2.9792E-4				90% Chebyshev (MVUE) UCL	2.8750E-4		
380				95% Chebyshev (MVUE) UCL	3.3715E-4				97.5% Chebyshev (MVUE) UCL	4.0606E-4		
381				99% Chebyshev (MVUE) UCL	5.4141E-4							
382												
383						**Nonparametric Distribution Free UCL Statistics**							
384						**Data do not follow a Discernible Distribution**							
385												
386						**Nonparametric Distribution Free UCLs**							
387				95% CLT UCL	3.2148E-4				95% BCA Bootstrap UCL	N/A		
388				95% Standard Bootstrap UCL	N/A				95% Bootstrap-t UCL	N/A		
389				95% Hall's Bootstrap UCL	N/A				95% Percentile Bootstrap UCL	N/A		
390				90% Chebyshev(Mean, Sd) UCL	4.2156E-4				95% Chebyshev(Mean, Sd) UCL	5.2193E-4		
391				97.5% Chebyshev(Mean, Sd) UCL	6.6122E-4				99% Chebyshev(Mean, Sd) UCL	9.3485E-4		
392												
393						**Suggested UCL to Use**							
394				95% Student's-t UCL	3.3263E-4							
395												
396						**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**							
397						**Please verify the data were collected from random locations.**							
398						**If the data were collected using judgmental or other non-random methods,**							
399						**then contact a statistician to correctly calculate UCLs.**							

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Sum of PFHxS and PFOS (Fill)

General Statistics

Total Number of Observations	12	Number of Distinct Observations	8
		Number of Missing Observations	2
Minimum	1.0000E-4	Mean	6.1667E-4
Maximum	0.0021	Median	3.0000E-4
SD	7.1711E-4	Std. Error of Mean	2.0701E-4
Coefficient of Variation	1.163	Skewness	1.395

Normal GOF Test

Shapiro Wilk Test Statistic	0.755	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.805	Data Not Normal at 1% Significance Level
Lilliefors Test Statistic	0.236	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.281	Data appear Normal at 1% Significance Level

Data appear Approximate Normal at 1% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.8843E-4	95% Adjusted-CLT UCL (Chen-1995)	0.00105
		95% Modified-t UCL (Johnson-1978)	0.001

Gamma GOF Test

A-D Test Statistic	0.8	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.76	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.245	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.253	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.899	k star (bias corrected MLE)	0.73
Theta hat (MLE)	6.8624E-4	Theta star (bias corrected MLE)	8.4530E-4
nu hat (MLE)	21.57	nu star (bias corrected)	17.51
MLE Mean (bias corrected)	6.1667E-4	MLE Sd (bias corrected)	7.2199E-4
		Approximate Chi Square Value (0.05)	9.037
Adjusted Level of Significance	0.029	Adjusted Chi Square Value	8.123

Assuming Gamma Distribution

95% Approximate Gamma UCL	0.00119	95% Adjusted Gamma UCL	0.00133

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.845	**Shapiro Wilk Lognormal GOF Test**
10% Shapiro Wilk Critical Value	0.883	Data Not Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.25	**Lilliefors Lognormal GOF Test**
10% Lilliefors Critical Value	0.223	Data Not Lognormal at 10% Significance Level

Data Not Lognormal at 10% Significance Level

Lognormal Statistics

Minimum of Logged Data	-9.21	Mean of logged Data	-8.042
Maximum of Logged Data	-6.166	SD of logged Data	1.209

457	**Assuming Lognormal Distribution**											
458					95% H-UCL	0.00223				90% Chebyshev (MVUE) UCL		0.0013
459				95% Chebyshev (MVUE) UCL		0.00162				97.5% Chebyshev (MVUE) UCL		0.00205
460				99% Chebyshev (MVUE) UCL		0.00291						
461												
462	**Nonparametric Distribution Free UCL Statistics**											
463	**Data appear to follow a Discernible Distribution**											
464												
465	**Nonparametric Distribution Free UCLs**											
466					95% CLT UCL	9.5717E-4				95% BCA Bootstrap UCL		0.00102
467				95% Standard Bootstrap UCL		9.3765E-4				95% Bootstrap-t UCL		0.00125
468				95% Hall's Bootstrap UCL		0.0012				95% Percentile Bootstrap UCL		9.5000E-4
469				90% Chebyshev(Mean, Sd) UCL		0.00124				95% Chebyshev(Mean, Sd) UCL		0.00152
470				97.5% Chebyshev(Mean, Sd) UCL		0.00191				99% Chebyshev(Mean, Sd) UCL		0.00268
471												
472	**Suggested UCL to Use**											
473				95% Student's-t UCL		9.8843E-4						
474												
475	**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**											
476	**Please verify the data were collected from random locations.**											
477	**If the data were collected using judgmental or other non-random methods,**											
478	**then contact a statistician to correctly calculate UCLs.**											
479												
480	When a data set follows an approximate distribution passing only one of the GOF tests,											
481	it is suggested to use a UCL based upon a distribution passing both GOF tests in ProUCL											
482												
483	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
484	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
485	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
486												

Table 3: Groundwater Gauging Data
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

Well Information	Survey Data			Gauging Data						
Well ID	Easting (MGA)	Northing (MGA)	Top of Casing (m AHD)	Date Gauged	Time Gauged	Depth to Water (m bTOC)	Total Well Depth (m bTOC)	Depth to Product (m bTOC)	Product Thickness (m)	Groundwater Elevation (m AHD)
MW01	328657.943	6257257.11	48.620	21/11/2024	12:53:12:000	8.700	9.00	-	-	39.920
MW02	328635.286	6257098.845	37.935	21/11/2024	08:15:08:000	1.900	7.97	-	-	36.035
MW03	328697.695	6257104.719	37.994	21/11/2024	09:33:03:000	3.120	7.93	-	-	34.874
MW04	328737.109	6257161.521	37.779	21/11/2024	10:50:56:000	1.430	7.98	-	-	36.349
MW05	328756.358	6257241.788	41.620	21/11/2024	11:40:10:000	3.940	7.93	-	-	37.680

Notes
MGA = Map Grid Australia
m AHD = meters Australian Height Datum
ppm = parts per million
m bTOC = metres below top of casing

Table 4: Groundwater Geochemical Parameters
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

Monitoring Well Information		Water Quality Stabilised Results										
Well ID	Sample Date	DO (mg/L) ±10%	EC (µS/cm) ±3%	TDS* (mg/L)	pH ±0.05	ORP (Er) (mV)	Redox (mV) ±10mV	Temp (°C) ±10%	Colour	Sheen	Odour	Turbidity
MW01	21/11/2024	4.58	876	569.4	6.37	116.7	321.7	22.1	colourless	no sheen	no odour	Non-turbid
MW02	21/11/2024	5.40	716	465.4	4.75	102.9	307.9	18.6	colourless	no sheen	no odour	Non-turbid
MW03	21/11/2024	1.96	506	328.9	4.35	124.6	329.6	19.5	colourless	no sheen	no odour	Non-turbid
MW04	21/11/2024	4.64	486	315.9	5.20	135.7	340.7	21.7	colourless	no sheen	chemical odour	Non-turbid
MW05	21/11/2024	4.48	429	278.8	5.42	128.5	333.5	20.2	colourless	no sheen	no odour	Non-turbid

Comments

Values presented are those after stabilisation. In accordance with EPA Publication 669, the parameters were considered stable when three consecutive readings (obtained several minutes apart) were within the specified parameters.
DO = Dissolved Oxygen
EC = Electrical Conductivity.
TDS = Total Dissolved Solids
* = TDS calculated by EC multiplied by 0.65
ORP = Oxidation Reduction Potential as millivolts (mV). Field values (Er values, mV) taken with redox probe with a platinum electrode and silver/silver chloride reference electrode. For interpretation of the Er results can be converted to Eh values using the following conversion: Eh (mV) = Er (mV) + 205.

Table 5: Groundwater Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

					Metals								BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							PAHs
					Arsenic (filtered)	Cadmium (filtered)	Chromium (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total Xylene	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)	C6-C10 Fraction	C6-C10 Fraction minus BTEX (F1)	>C10-C16 Fraction	>C10-C16 Fraction minus naphthalene (F2)	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Sum)	Naphthalene (VOC)
Unit					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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.001	0.0001	0.001	0.001	0.001	0.00005	0.001	0.001	1	1	1	2	1	2	10	50	100	50	50	10	10	50	50	100	100	50	1
Groundwater HSLs - NEPM Setting 'D' - Commercial / Industrial - Default Screen													5,000[#1]	NL [#1]	NL [#1]			NL [#1]							6,000[#1]		NL [#1]				
Aquatic ecosystems DGV - slightly to moderately disturbed (95%) - marine						0.0007[#2]	0.0044[#3]	0.0013[#4]	0.0044[#4]	0.0001[#2]	0.007[#2]	0.008[#4]	500[#2]	180[#4]	80[#4]		350[#5]							640[#6]		640[#6]	640[#7]	640[#8]		
Recreational Water - Health					**0.1[#10]**	**0.02[#10]**	**0.5[#11]**	**20[#10]**	**0.1[#10]**	**0.01[#10]**	**0.2[#10]**	**60[#12]**	**10[#10]**	**8,000[#10]**	**3,000[#10]**			**6,000[#10]**							**900[#13]**		**900[#13]**	**900[#14]**	**900[#14]**		
Location	**Field ID**	**Date**	**Sample Type**	**Lab Report**																											
MW01	MW01	21/11/2024	Normal	367014	0.004	0.0002	<0.001	0.001	<0.001	<0.00005	0.041	0.34	<1	<1	<1	<2	<1	-	<10	100	100	<100	200	<10	<10	120	120	<100	<100	120	<1
MW02	MW02	21/11/2024	Normal	367014	<0.001	<0.0001	0.001	0.006	0.003	<0.00005	0.019	0.062	<1	<1	<1	<2	<1	-	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<1
MW02	QC206	21/11/2024	Interlab_D	ES2438247	<0.001	<0.0001	0.001	0.006	0.002	<0.0001	0.021	0.064	<1	<2	<2	<2	<2	<2	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100	<5
MW03	MW03	21/11/2024	Normal	367014	<0.001	<0.0001	<0.001	0.004	0.004	<0.00005	0.005	0.024	<1	<1	<1	<2	<1	-	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<1
MW04	MW04	21/11/2024	Normal	367014	<0.001	<0.0001	<0.001	0.003	<0.001	<0.00005	0.01	0.036	<1	6	<1	<2	<1	-	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<1
MW05	MW05	21/11/2024	Normal	367014	<0.001	<0.0001	<0.001	0.002	<0.001	<0.00005	0.01	0.039	<1	1	<1	<2	<1	-	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<1

Table 5: Groundwater Analytical Results
12 Mars Road Lane Cove West
Goodman Property Services (Aust) Pty Ltd
S22013

			MAH									Halogenated Benzenes									Halogenated Hydrocarbons			
	Arsenic (filtered)	Cadmium (filtered)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Isopropylbenzene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	tert-Butylbenzene	Styrene	1,2,3-Trichlorobenzene	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,3-Dichlorobenzene	2-Chlorotoluene	1,4-Dichlorobenzene	4-Chlorotoluene	Bromobenzene	Chlorobenzene	1,2-Dibromoethane	Bromomethane	Dichlorodifluoromethane	Trichlorofluoromethane
Unit	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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.001	0.0001	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	10	10
Groundwater HSLs - NEPM Setting 'D' - Commercial / Industrial - Default Screen																								
Aquatic ecosystems DGV - slightly to moderately disturbed (95%) - marine		0.0007[#2]			30[#4]							3[#5]	160[#5]	20[#2]	260[#5]		60[#5]			55[#4]				
Recreational Water - Health	**0.1[#10]**	**0.02[#10]**	**560[#12]**	**600[#12]**	**4,500[#12]**	**10,000[#12]**	**6,600[#12]**		**20,000[#12]**	**6,900[#12]**	**300[#10]**	**300[#15]**	**15,000[#10]**	**300[#15]**		**2,400[#12]**	**400[#10]**	**2,500[#12]**	**620[#12]**	**3,000[#10]**	**10[#10]**	**10[#10]**	**2,000[#12]**	**52,000[#12]**
Location	**Field ID**	**Date**	**Sample Type**	**Lab Report**																				
MW01	MW01	21/11/2024	Normal	367014	0.004	0.0002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<10
MW02	MW02	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<10
MW02	QC206	21/11/2024	Interlab_D	ES2438247	<0.001	<0.0001	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50
MW03	MW03	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<10
MW04	MW04	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<10
MW05	MW05	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<10

Table 5: Groundwater Analytical Results
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				Chlorinated Hydrocarbons																				
	Arsenic (filtered)	Cadmium (filtered)	1,1-Dichloropropene	1,1-Dichloroethane	1,1-Dichloroethene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,2-Dibromo-3-chloropropane	1,1,2-Trichloroethane	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	1,2-Dichloroethane	1,3-Dichloropropane	1,2-Dichloropropane	2,2-Dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane
Unit	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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.001	0.0001	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	1	10
Groundwater HSLs - NEPM Setting 'D' - Commercial / Industrial - Default Screen																							
Aquatic ecosystems DGV - slightly to moderately disturbed (95%) - marine		0.0007[#2]			700[#4]		270[#4]		1,900[#4]	400[#4]		1,900[#4]	1,100[#4]	900[#4]					240[#4]			370[#2]	
Recreational Water - Health	**0.1[#10]**	**0.02[#10]**		**28[#12]**	**300[#10]**	**5.7[#12]**	**80,000[#12]**	**10[#16]**	**2.8[#12]**	**0.76[#12]**	**0.0075[#12]**	**30[#10]**	**3,700[#12]**	**400[#17]**		**830[#12]**	**600[#16]**	**1,000[#16]**	**30[#10]**	**1,000[#16]**	**83,000[#12]**	**3,000[#16]**	**1,900[#12]**
Location	**Field ID**	**Date**	**Sample Type**	**Lab Report**																				
MW01	MW01	21/11/2024	Normal	367014	0.004	0.0002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<10
MW02	MW02	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<10
MW02	QC206	21/11/2024	Interlab_D	ES2438247	<0.001	<0.0001	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<50	<5	<50
MW03	MW03	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<10
MW04	MW04	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<10
MW05	MW05	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<10

Table 5: Groundwater Analytical Results
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Goodman Property Services (Aust) Pty Ltd
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			Chlorinated Hydrocarbons									(n:2) Fluorotelomer Sulfonic Acids		Perfluoroalkane Carboxylic Acids	Perfluoroalkane Sulfonic Acids				PFAS	
	Arsenic (filtered)	Cadmium (filtered)	cis-1,2-Dichloroethene	Dibromomethane	cis-1,3-Dichloropropene	Hexachlorobutadiene	Tetrachloroethene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Vinyl Chloride	Cyclohexane	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorooctanoic acid (PFOA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorobutane sulfonic acid (PFBS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	Sum of PFAS
Unit	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	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.001	0.0001	1	1	1	1	1	1	1	10	1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Groundwater HSLs - NEPM Setting 'D' - Commercial / Industrial - Default Screen																				
Aquatic ecosystems DGV - slightly to moderately disturbed (95%) - marine		0.0007[#2]					70[#4]			100[#4]				19[#9]	0.00023[#9]					
Recreational Water - Health	**0.1[#10]**	**0.02[#10]**	**600[#18]**	**83[#12]**		**7[#10]**	**500[#10]**	**600[#18]**		**3[#10]**	**130,000[#12]**			**10[#19]**	**2[#19]**	**2[#19]**		**2[#19]**		

Location	Field ID	Date	Sample Type	Lab Report																		
MW01	MW01	21/11/2024	Normal	367014	0.004	0.0002	<1	<1	<1	<1	<1	<1	<1	<10	<1	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW02	MW02	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<10	<1	<0.01	<0.02	<0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01
MW02	QC206	21/11/2024	Interlab_D	ES2438247	<0.001	<0.0001	<5	<5	<5	<5	<5	<5	<5	<50	-	<0.05	<0.05	<0.01	<0.01	<0.01	<0.02	<0.01	-	<0.01
MW03	MW03	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<10	<1	<0.01	<0.02	<0.01	<0.01	0.04	<0.01	0.04	<0.01	0.04
MW04	MW04	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<10	<1	<0.01	<0.02	0.01	<0.01	0.02	<0.01	0.02	0.01	0.03
MW05	MW05	21/11/2024	Normal	367014	<0.001	<0.0001	<1	<1	<1	<1	<1	<1	<1	<10	<1	<0.01	<0.02	<0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01

Comments

#1 Value for shallow (2-4 m bgl) sand aquifer adopted for initial screening.
#2 ANZG (2018). Higher species protection level adopted as recommended
#3 ANZG (2018). The more conservative value (Chromium CrVI) out of the available chromium species was adopted for initial screening purposes.
#4 ANZG (2018)
#5 ANZG (2018). Freshwater DGV adopted as an unknown reliability value as recommended
#6 CRWB (2019). Lowest of values for gasoline (C4-C12) and diesel (C8-C21) range hydrocarbons.
#7 CRWB (2019). Value for diesel (C8-C21) mixture.
#8 CRWB (2019). Value for diesel (C8-C21) mixture. No value derived for TPH >C21 as not considered soluble; diesel value used for screening.
#9 PFAS National Environmental Management Plan (HEPA 2020). Higher species protection level adopted as recommended
#10 NHMRC (2011) - Health. Multiplied by a factor of x10
#11 NHMRC (2011) - Health. Guideline for Cr (VI) conservatively adopted for comparision to total chromium. Speciated analysis should be undertaken where guideline is exceeded. Multiplied by a factor of x10
#12 USEPA Tap Water RSL (TR=1E-06; THQ=0.1) - May 2024. Multiplied by a factor of x10
#13 WHO (2008). Lowest derived value for aliphatic and aromatic fractions in this range. Multiplied by a factor of x10
#14 Lowest derived value for aliphatic and aromatic fractions in this range (90 ug/L). Multiplied by a factor of x10
#15 NHMRC (2011) - Health. Value is for total TCBs but applies to individual isomers also. Multiplied by a factor of x10
#16 WHO Guidelines for drinking-water quality. Multiplied by a factor of x10
#17 WHO Guidelines for drinking-water quality. Provisional guideline due to uncertainties in the health database. Multiplied by a factor of x10
#18 NHMRC (2011) - Health. Value is for total 1,2-DCE but also applied to individual isomers. Multiplied by a factor of x10
#19 NHMRC (2019) Guidance on PFAS in Recreational Waters

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