Douglas PARTNERS

GROUNDED EXPERTISE

Report on Detailed Site Investigation

Proposed Mixed-Use Development

270 Pacific Hwy, Crows Nest NSW

Prepared for Silvernight (Crows Nest) Landowner Pty Ltd

Project 214296.03

21 May 2025

Douglas Partners Pty Ltd
ABN 75 053 980 117
douglaspartners.com.au
96 Hermitage Road, West Ryde,
NSW 2114
(02) 9809 0666

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature	Date
Author wen-fei yuan	21 May 2025
Reviewer P. Gorman	21 May 2025

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Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

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1. Introduction

Douglas Partners Pty Ltd (Douglas) has been engaged by Silvernight (Crows Nest) Landowner Pty Ltd to prepare this detailed site investigation (DSI) report for a proposed mixed-use development at 270 Pacific Hwy, Crows Nest NSW (the site). The site is shown on Drawing 1, Appendix A.

The investigation was undertaken in accordance with Douglas' proposal dated 16 December 2024.

The objective of the DSI is to assess the suitability of the site for the proposed development and whether further investigation and / or management of contamination is required. It is understood that the report will be used to support the State Significant Development Application (SSDA) for the project and addresses the requirements of Condition 16 of the industry specific Secretary's Environmental Assessment Requirements (SEARs) which states the following:

16. 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.	• Preliminary Site Investigation If required: • Detailed Site Investigation • Remedial Action Plan • Preliminary Long-term Environmental Management Plan

This report must be read in conjunction with all appendices including the notes provided in Appendix B.

The following key guidelines were consulted in the preparation of this report:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013); and
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020).

2. Proposed development

The proposed development comprises a 16-storey mixed use development at 270 Pacific Highway, Crows Nest, comprising 168 build to rent units and non-residential uses in the podium. Specifically, the SSDA seeks development consent for:

- demolition of two existing 5 storey commercial buildings;
- construction of a maximum 16 storey building, including:
  - 2 basement parking levels (with 82 carparks, 8 motorbike spaces and 230 bicycle spaces);
  - 3 podium levels comprising non-residential uses such as medical centre, retail, and residential uses (build to rent units and residential amenity facilities such as a gym and sauna, steam room, outdoor pool, class space, cinema room, coworking space);
  - 13 storeys of residential uses in the tower, comprising build-to-rent units;
  - communal open space;
  - landscaping on Ground, Level 2 – Level 15;
  - rooftop solar panels;
  - internal and external residential amenities space on roof top;
- streetscape upgrades; and
- office and substation along the northwestern boundary.

The concept plans available at the time of reporting are included in Appendix A.

3. Scope of work

The scope of work comprised:

- review of readily available site history information including previous reports prepared by Douglas;
- preparation of Field Work Safety and Environment Plan (FWSEP) and Safe Work Method Statements (SWMS);
- undertook a Before You Dig Australia (BYDA) search and scanning of the test locations for buried services;
- drilled five (5) shallow environmental boreholes using hand tools up to 0.5 m into natural soil or prior refusal;
- collected soil samples from six (6) boreholes drilled for geotechnical investigation purposes, and five (5) environmental boreholes at regular intervals and upon sign of contamination;
- screened all soil samples for Volatile Organic Compounds (VOC) using a photoionisation detector (PID);
- developed and sampled from three groundwater monitoring wells installed as part of the geotechnical investigation;

- dispatched selected soil and groundwater samples to Envirolab Services (ELS), a National Association of Testing Authorities (NATA) accredited laboratory for the following combination of contaminants:
  - heavy metals;
  - total Recoverable Hydrocarbons (TRH);
  - benzene, Toluene, Ethylbenzene, Xylene and Naphthalene (BTEXN);
  - polycyclic aromatic hydrocarbons (PAH);
  - polychlorinated biphenyls (PCB);
  - organochlorine pesticides (OCP);
  - organophosphate pesticides (OPP);
  - phenols;
  - asbestos;
  - volatile organic compounds (VOC);
  - hardness;
  - quality assurance and quality control samples including 2 inter-laboratory replicates, two sets of trip spike and trip blank; and
- preparation of this report.

4. Site information

Site address	270 Pacific Hwy, Crows Nest NSW
Legal description	Lot 22 Deposited Plan 706776
Area	3796 m^2
Zoning	Zone MU1 Mixed Use
Local Council Area	North Sydney Council
Current use	Commercial and office buildings
Surrounding uses	Northeast - Pacific Highway then commercial Southeast – Commercial, Pacific Highway and Bruce Street, then residential and commercial Southwest - Residential then Sinclair Street Northwest - Commercial and fire station

The site boundary is shown on Figure 1.

Figure 1: Site location

5. Environmental setting

5.1 Topography

The NSW elevation contour map indicates that the site is relatively flat with an approximately reduced level (RL) of 96 m relative to the Australian Height Datum (AHD). Regional topography indicates that the site lies on an elevated area, with the elevation sloping downwards in each direction.

5.2 Site geology

Reference to the Sydney 1:100 000 Geological Series Map indicates that the site is underlain by rock of the lower Ashfield Shale formation, overlying the Mittagong Formation which is a transitional unit between the Ashfield Shale and underlying Hawkesbury Sandstone. The lower Ashfield Shale formation typically comprises shale, siltstone and finely laminated sandstone and siltstone (laminite).

The Sydney 1:100 000 Soils Landscape Sheet indicates that the site is underlain by Blacktown soils. The Blacktown soils landscape group comprises deep yellow podzolic soils and soloths on lower slopes and in areas of poor drainage, shallow to moderately deep red and brown podzolic soils on crests, upper slopes and well drained areas.

5.3 Acid sulfate soils

Reference to the 1:25 000 Acid Sulphate Soils (ASS) Risk map indicates that the site is in an area of no known occurrence of acid sulphate soils.

The nearest mapped occurrence of ASS is bottom sediments of Balls Head Bay located at about 1.2 km distance to the southwest of the site.

5.4 Surface water and groundwater

The closest watercourse to the site is Berrys Creek, located approximately 850 m south (down gradient) of the site. With respect to surface water, given the highly urbanised nature of the area, most surface water is anticipated to be collected by the local stormwater network.

Based on the regional topography and the inferred flow direction of nearby water courses, the anticipated flow direction of groundwater beneath the site is to the south-west, towards Balls Head Bay, the likely receiving surface water body for the groundwater flow path, which eventually flows into Parramatta River.

A search of the publicly available registered groundwater bore database indicated that there are no registered groundwater bores within a 1 km radius of the site.

Given the local geology (i.e. Ashfield Shale), the groundwater in the fractured rock beneath the site is anticipated to be saline and very low yield. Accordingly, there would not likely be significant potential beneficial uses of the groundwater in proximity to the site.

6. Summary of previous investigations

6.1 Previous reports

The following previous reports are relevant to the current investigation:

- Douglas *Report on Geotechnical Desktop Assessment,* prepared for Ascent Property Group Pty Ltd (Douglas, 2022); and
- Douglas *Report on Preliminary Site Investigation,* prepared for Ascent Property Group Pty Ltd (Douglas, 2024).

6.1.1 Geotechnical Desktop Assessment (Douglas, 2022)

Douglas was commissioned by Ascent Property Group to conduct a desktop geotechnical assessment for a proposed commercial tower for the site at 270-272 Pacific Hwy, Crows Nest. The assessment comprised a review of the geological and environmental regional mapping and previous investigations on site and within the area to develop a preliminary geotechnical model.

Based on the regional mapping and previous investigation at the site and nearby area, the following geotechnical model was anticipated for the site:

- FILL: Pavement layers and sandy or clayey fill with varying compaction and varying proportions of silt, gravel (base material) to relatively shallow depths; over

- RESIDUAL SOIL: Clay with firm to stiff consistency at first, grading to very stiff to hard consistency below depths of about 1 – 2 m, with possible ironstone gravel / bands; over
- WEATHERED ROCK: Very low to low strength shale below depths of about 3 – 4 m, grading to low and low to medium strength shale / siltstone at depths greater than 7 – 8 m; over
- MEDIUM AND HIGH STRENGTH ROCK: Medium to high strength slightly weathered to fresh sandstone and laminite (Mittagong Formation) and high strength sandstone (Hawkesbury Sandstone) below depths of about 10 – 15 m.

Based on Douglas' experience in the area, groundwater was considered to be likely at depths of about 2 m to 6 m at the site and generally within the Ashfield Shale. It was noted that groundwater levels vary over time due to climactic and human influences and will temporarily rise following prolonged rainfall.

6.1.2 **Preliminary Site Investigation (Contamination) (Douglas, 2024)**

Douglas was engaged by Fitzpatrick + Partners Pty Ltd, acting on behalf of Ascent Property Group Pty Ltd to complete a preliminary site investigation (PSI) for a proposed commercial tower for the site at 270-272 Pacific Hwy, Crows Nest. The scope of works for assessment comprised a review of site history, environs information and online and council records, a site walkover and preparation of a preliminary conceptual site model (CSM), as presented in Section 7.

The site history information suggested that most of the site may have been used for residential purposes at least from 1910 until before the 1930s. Commercial use was from *circa* 1930s to date except for some parts that remained residential until before the 1960s. Some identified known or suspected industrial or commercial uses included property development companies. The historical business activities review indicated the presence of a dry cleaner and motor garages / service station historically located on the site, and a dry cleaner adjacent to the site in the 1970s. The public database of records of contaminated sites notified to the EPA under Section 58 under the CLM Act indicated that the site is not registered.

A site walkover was undertaken by an environmental scientist from Douglas. The site was observed to comprise two, low to medium rise commercial buildings with a shared, single-level basement car park that occupied most of the site. The ground level consisted of retail spaces and medical-related clinics with office spaces on the upper levels.

Plant rooms, an aboveground grease trap and an underground water sump were observed in the basement level. The plant rooms comprised electrical and telecommunication switchboards. The capacity of the grease trap was unknown and anecdotal information from the Senior Facilities Manager indicated the water sump was used for the temporary storage of rainwater overflow.

A review of council records pertaining to the site indicated the intention to install a standby diesel-powered generator on top of the building at the end of 1999. However, the interview with the building manager confirmed that there was no diesel generator or associated structures (i.e. a diesel tank) installed on top of the building.

A preliminary CSM was prepared and is presented in Section 7. It was concluded that the site could be made suitable, from a contamination standpoint, for the proposed commercial development subject to further investigations comprising a DSI and a hazardous building materials assessment prior to demolition.

7. Preliminary conceptual site model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e. it enables an assessment of the potential source – pathway – receptor linkages (complete pathways).

Based on the previous investigation (Section 6.1.2), the following potential sources of contamination and associated contaminants of potential concern (CoPC) have been identified and summarised in Table 1.

Table 1: Summary of potential sources

Potential sources and associated CoPC
S1: Fill of unknown origin: Associated with levelling, demolition of former buildings on the site
CoPC: metals, TRH, BTEXN, PAH, PCB, OCP, OPP and asbestos
S2: Historical site uses and offsite uses (historical dry cleaners and motor garages and service station)
CoPC: metals, TRH, BTEX, PAH and VOC
S3: Former and existing buildings
CoPC: asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB

The following potential human and environmental receptors, along with relevant potential pathways, have been identified and summarised in Table 2.

Table 2: Summary of potential receptors and pathways

Potential human receptors
HR1: Current user [commercial]
HR2: Construction and maintenance workers
HR3: End users [commercial and residential]
HR4: Adjacent site users [residential and commercial]
Potential environmental receptors
ER1: Surface water
ER2: Groundwater
ER3: Terrestrial ecosystems

Potential pathways to human receptors
HP1: Ingestion and dermal contact **HP2:** Inhalation of dust and / or vapours
Potential pathways to environmental receptors
EP1: Surface water run-off **EP2:** Lateral migration of groundwater providing base flow to water bodies **EP3:** Leaching of contaminants and vertical migration into groundwater **EP4:** Inhalation, ingestion and absorption

7.1 Summary of potentially complete exposure pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S3) and receptors are provided in below Table 3.

Table 3: Summary of potentially complete exposure pathways

Potential source and CoPC	Exposure pathway	Receptor	Risk management action
S1: Fill: metals, TRH, BTEXN, PAH, PCB, OCP, OPP, phenols and asbestos **S2:** Historical onsite and offsite activities: metals, TRH, BTEX, PAH and VOC	**HP1:** Ingestion and dermal contact **HP2:** Inhalation of dust and / or vapours	**HR1:** Current users [commercial] **HR2:** Construction and maintenance workers **HR3:** End users [commercial / residential]	An intrusive site investigation is required to identify the presence or otherwise of the identified sources and / or associated contaminants and to assess the potential for source - pathway receptor linkages. This DSI report addresses the risk management action identified.
	HP2: Inhalation of dust and / or vapours	**HR4:** Adjacent site users [commercial / industrial]	
	EP1: Surface water run-off **EP2:** Lateral migration of groundwater providing base flow to water bodies	**ER1:** Surface water	
	EP3: Leaching of contaminants and vertical migration into groundwater	**ER2:** Groundwater	
	EP4: Inhalation, ingestion and absorption	**ER3:** Terrestrial ecosystems	
S4: Existing and historical buildings / structures on site: asbestos, SMF, lead (in paint) and PCB	**HP1:** Ingestion and dermal contact **HP2:** Inhalation of dust and / or vapours	**HR1:** Current users [commercial] **HR2:** Construction and maintenance workers	Undertake a hazardous building materials survey across the site.

8. Sampling and analysis plan

8.1 Data quality objectives

The DSI was devised with reference to the seven-step data quality objectives (DQO) process, which is provided in Appendix B Schedule B2, NEPC (2013). The data quality objective process is outlined in Appendix C.

8.2 Soil sampling and analysis rationale

Based on the CSM and data quality objectives (DQO) the following sampling rationale was adopted.

Table 2 of NSW EPA (2022) recommends a minimum of 11 sampling points for a site of 0.37 ha for site characterisation based on the detection of circular hot spots using a systemic grid sampling pattern. A total of 11 test locations (five contamination, and six geotechnical) were therefore positioned across accessible areas of the site. The test locations are shown on Drawing D.002, Appendix A.

Soil samples were collected from each borehole at depths of approximately 0.1 m (through the fill and soil profile) and changes in lithology or signs of contamination.

The general sampling methods are described in the field work methodology in Appendix D.

Samples were selected for analysis based upon field observations and PID screening results, and to provide lateral and vertical coverage of the site. A minimum of one fill sample from each borehole was selected for analysis, with a focus on samples with higher PID readings. The selected samples were analysed for combinations of the CoPC in the CSM.

8.3 Groundwater sampling and analysis rationale

In order to assess the current groundwater quality at the site and evaluate whether historical, current or off-site land uses have impacted on groundwater, opportunistic sampling from three monitoring wells (BH2, BH4, BH6) installed as part of geotechnical investigation was undertaken.

The groundwater well positions are considered to represent the hydraulic upgradient condition (BH4), and the hydraulic mid-site condition (BH2 and BH6). The well depths were 7.5 m each for BH4 and BH6 and 10.5 m for BH2, with each of the wells screened in siltstone, below the measured groundwater levels.

Given that petroleum hydrocarbons are a CoPC, ideally the well screens should be above and below the measured groundwater levels, given that these contaminants are light non-aqueous phase liquids (LNAPL) which are lighter than water. However, noting the solubility limits for BTEX and TRH contaminants (NEPC (2013)), the potential for undetected petroleum based LNAPL is considered to be highly unlikely, even though the wells screens are positioned below the measured water level. Therefore, it is not considered to materially affect the outcomes of this assessment.

The general sampling methods are described in the field work methodology in Appendix D.

All samples were analysed for the CoPC in the CSM.

9. Site assessment criteria

The site assessment criteria (SAC) applied in the current investigation are informed by the CSM (Section 7) which identified human and environmental receptors to potential contamination on the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The investigation and screening levels applied in the current investigation comprise levels adopted for a generic high density residential and commercial land use scenario. The derivation of the SAC is in Appendix E, and the adopted SAC are listed on the summary analytical results tables in Appendix G.

10. Results

10.1 Field work results

The borehole logs for this assessment are provided in Appendix F. The logs recorded the following general sub-surface profile:

Concrete slab:	In all test locations to depths of between 0.11 m and 0.7 m (BH3A) below ground level (bgl). BH3A was terminated at this depth.
Fill / Sand:	Grey and brown gravelly sand with varying proportions of silt, clay, siltstone at test locations BH1, BH2, BH4, BH7, BH8, BH10, BH11 to depths of between 0.17 m to 0.60 m bgl; underlain by
Fill:	Generally comprising clay with varying proportion of sand, igneous gravel and siltstone gravel at BH1, BH3, BH5, BH10 to depths of 0.45 m to 0.90 m bgl; underlain by
Clay:	Clay in test locations BH1 to BH6 to a maximum depth of 1.0 m; underlain by
Siltstone:	Siltstone in test locations BH1 to BH6 to a maximum depth of 10.80 m bgl. Test locations BH1, BH3, were terminated at this depth.
Sandstone:	Sandstone in test location BH2, BH4, BH5 and BH6 to a maximum termination depth of 15.89 m bgl.

No visual or olfactory evidence (e.g. staining, odours, free phase product) was observed during the investigations to suggest the presence of contamination within the soils or groundwater at the site.

The PID screening recorded values of less than 1 ppm suggesting the absence, or very low concentrations, of VOC in the samples tested.

No free groundwater was observed during drilling of boreholes. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time. Additionally, the use of drilling fluid can often make it difficult to ascertain the presence of groundwater.

Groundwater levels were gauged in the groundwater wells installed on 25 February 2025 using an electronic oil / water interface meter prior to developing the wells and again on 5 March 2025 prior to sampling. The measured water levels prior to sampling are shown in Table 4.

Table 4: Summary of groundwater level measurements on 5 March 2025

Well ID	Ground level * m (AHD)	SWL m (bgl)	SWL m (AHD)
BH2	93.4	1.14	92.26
BH4	93.5	0.41	93.09
BH6	93.3	2.37	90.93

Notes:
* Elevations interpolated from provided survey plan
AHD – Australian Height Datum
SWL – standing water level
bgl – below ground level

Based on the groundwater level measurements, groundwater is interpreted to be flowing to the south and southwest towards Berrys Creek and eventually into Balls Head Bay. This was expected given the topography and the location of the down-gradient expected discharge point.

The stabilised groundwater field parameters recorded prior to sampling are shown on the groundwater field sheets provided in Appendix F and summarised below.

Physical parameters were measured whilst sampling (where possible) and are summarised in Table 5.

Table 5: Summary of field parameters (groundwater and surface water)

Well / Sample ID	Temp. (°C)	DO (ppm)	TDS (ppm)	EC (µS/cm)	pH	Redox (mV)
BH2	22.1	2.66	66	738	4.00	509
BH4	22.2	1.61	370	1883	4.55	370
BH6	21.1	3.84	175	1065	4.39	459

The dissolved oxygen levels indicated generally aerobic conditions. The pH was slightly acidic. The electrical conductivity values are typical of saline water. Redox potential (Eh) indicates slightly oxidising conditions.

No LNAPL or dense non-aqueous phase liquid (DNAPL) was observed whilst sampling.

10.2 Laboratory analytical results

The results of laboratory analysis are summarised in the following tables in Appendix G:

- Table G1: Summary of results of soil analysis;
- Table G2: Summary of results of groundwater analysis; and
- Table G3: Preliminary waste classification assessment.

The laboratory certificate(s) of analysis together with the chain of custody and sample receipt information are provided in Appendix I.

10.3 Data quality assurance and quality control

The data quality assurance and quality control (QA / QC) results are provided in Appendix H. Based on the results of the field QA and field and laboratory QC, and evaluation against the data quality indicators (DQI), it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

11. Discussion

11.1 Soils

The analytical results for all contaminants tested in all samples were below the SAC with the exception of:

- Copper in sample BH10 / 0.15-0.2 m at 120 mg/kg exceeding the ecological investigation levels (EIL) of 65 mg/kg. This exceedance is not, however, considered to be of concern as the calculated 95% upper confidence limit (UCL) of the arithmetic mean (95% H-UCL) for all fill samples was below the SAC at 63.77 mg/kg. The 95% UCL was calculated using USEPA ProUCL and the output is included in Appendix G.

11.2 Groundwater

All results were below the SAC for TRH, BTEX, PAH, OCP. OPP, PCB and VOC. The results exceeded the SAC for the following contaminants:

- Cadmium exceedances of (hardness adjusted) DGV of 0.7 µg/L in samples BH2 at 1.4 µg/L, BH4 at 4.7 µg/L, BH6 at 7.9 µg/L and BD1 (replicate of BH6) at 6.6 µg/L;
- Copper exceedances (DGV of 1.4) in samples BH2 at 49 µg/L, BH4 at 640 µg/L, BH6 at 1100 µg/L and BD1 at 1000 µg/L;
- Nickel exceedances (hardness adjusted DGV of 36.9 µg/L) in samples BH4 at 110 µg/L, BH6 at 330 µg/L and BD1 at 280 µg/L; and
- Zinc exceedances (hardness adjusted DGV of 26.8 µg/L) in samples BH2 at 160 µg/L, BH4 at 670 µg/L, BH6 at 930 µg/L and BD1 at 750 µg/L.

The heavy metal concentrations are likely to be associated with general background conditions in the area, noting similarly elevated concentrations in both BH4 and BH6. It is also possible that the elevated concentrations could be associated with the historical service station, dry cleaners and motor garages on site and/or hydraulic upgradient as described in Section 6.1.2.

It is noted that petroleum hydrocarbon contaminants were not detected above the laboratory PQL and therefore a site specific risk assessment of vapour intrusion is not considered to be necessary.

Overall, whilst some groundwater contamination has been identified, it is not considered to render the site unsuitable for the proposed development. This is based on future site users not expected to be in physical contact with groundwater, and the concentrations of potentially volatile contaminants being low.

The groundwater analyte concentrations will need to be considered in terms of future dewatering, likely to require some form of treatment prior to disposal.

11.3 Preliminary *in-situ* waste classification assessment

The following Table 6 presents the results of the six-step procedure outlined in NSW EPA (2014) for determining the type of waste and the waste classification. This process applies to the fill (including surface soils) at the site, which do not meet the definition of virgin excavated natural material (VENM).

Table 6: Six-step classification procedure

Step	Comments	Rationale
1. Is the waste special waste?	No	No asbestos-containing materials (ACM), clinical or related waste, or waste tyres were observed in the test locations; and Asbestos was not detected by the analytical laboratory.
2. Is the waste liquid waste?	No	The fill comprised a soil matrix.
3. Is the waste 'pre-classified'?	No	The fill is not pre-classified with reference to NSW EPA (2014). The natural soil, if classified as VENM, is pre-classified as general solid waste (non-putrescible).
4. Does the waste possess hazardous waste characteristics?	No	The fill was not observed to contain or considered at risk to contain explosives, gases, flammable solids, oxidising agents, organic peroxides, toxic substances, corrosive substances, coal tar, batteries, lead paint or dangerous goods containers.
5. Determining a wastes classification using chemical assessment?	Conducted	Refer to Table G3 (attached, Appendix G)
6. Is the waste putrescible or non-putrescible?	Non-putrescible	The fill does not contain materials considered to be putrescible[a].

Note: a waste that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials (NSW EPA, 2014).

As shown in the attached Table G3, all contaminant concentrations for the analysed fill samples were below the contaminant thresholds (CT1s) for general soil waste. Therefore, the fill within the site is preliminary classified as general solid waste (non-putrescible).

It is noted that further *in-situ* or *ex-situ* investigations including visual and analytical processes are required to confirm the preliminary waste classification of surplus soils, prior to off-site disposal. These investigations should be undertaken post-demolition of existing structures to enable a visual assessment for potential contaminants including asbestos.

As shown in Table G3, the reported analytical results for natural soils tested within all samples are within the background criteria. As such, the natural soil within the site is preliminary classified as VENM. This classification must be confirmed upon removal of the fill overburden through additional assessment by a suitably qualified environmental consultant prior to or during excavation, to facilitate disposal of natural soils and bedrock.

12. Revised conceptual site model

The data collected for this DSI has generally confirmed that certain potential contaminant sources outlined in the CSM outlined in Section 7 pose a potentially complete pathway to the identified receptor(s) whilst others do not. No other sources of contamination have been identified as a result of the testing results. Groundwater data suggests that some contaminants (i.e. cadmium) likely to be from historical site activities may have migrated to groundwater. However, adverse impacts to adjacent surface water bodies are not anticipated. This is summarised in Table 7.

Table 7: Updated summary of potentially complete exposure pathways

Source and CoPC	Exposure pathway	Receptor	Risk management action
S1: Fill: metals, PAH **S2:** Historical onsite and offsite activities: metals and PAH	**HP1:** Ingestion and dermal contact **HP2:** Inhalation of dust and / or vapours	**HR1:** Current user [commercial] **HR2:** Construction and maintenance workers **HR3:** End users [commercial / residential]	Whilst contaminant concentrations were above the PQL, they were noted to less than the adopted SAC. An unexpected finds protocol implemented during civil and construction works can manage finds not found during the investigation.
	EP4: Inhalation, ingestion and absorption	**ER3:** Terrestrial ecosystems	
S2: Historical onsite and offsite activities: heavy metals	**EP1:** Surface water run-off **EP2:** Lateral migration of groundwater providing base flow to water bodies	**ER1:** Surface water	Whilst an exposure risk to on-site users has not been identified, the contamination status (i.e. quality) of groundwater must be used to inform the dewatering process (including license application). An assessment of groundwater
	EP3: Leaching of contaminants and vertical migration into groundwater	**ER2:** Groundwater	

Source and CoPC	Exposure pathway	Receptor	Risk management action
			quality is recommended to be undertaken as a baseline before a dewatering management plan is prepared.

13. Conclusions and recommendations

The results of the DSI have not identified contaminant concentrations at levels that warrant remediation and/or preparation of a remediation action plan (RAP). It is therefore considered that the site can be made suitable for the proposed residential / commercial development subject to implementation of the following recommendations:

- a hazardous building materials assessment is required for the existing buildings. Hazardous materials, if present, will need to be removed in accordance with relevant legislation and guidelines prior to demolition and managed appropriately in the interim or where buildings are to be retained;
- following demolition of existing site structures, the footprints of the buildings should be inspected by a suitably qualified environmental consultant for signs of contamination and sampled as necessary. If signs of contamination are identified, then further investigation and / or the need for remediation / preparation of a RAP should be considered;
- asbestos has not been identified in the samples analysed during the current investigation. However, given that sporadic pockets of asbestos contamination can sometimes be present amongst demolition debris and noting that intrusive sampling was undertaken using test bores (due to the operational nature of the site and associated access limitations), the potential for undetected and/or sporadic pockets of asbestos contamination cannot be completely ruled out. Therefore, it is recommended that an unexpected finds protocol should be prepared and implemented to address any unexpected contamination identified during the civil and construction phase;
- confirmation of the preliminary waste classification reported herein by a suitably qualified environmental consultant prior to off-site disposal of surplus soils at a licensed receiving facility; and
- the dewatering management plan (DMP) for the site must give adequate consideration to groundwater quality, noting the elevated metals concentrations reported herein. It is likely that groundwater requiring disposal will need to be treated prior to disposal depending on the levels of contaminants in the collected water. Given the inherent variability in groundwater conditions with time, it is recommended that a baseline groundwater quality assessment be undertaken close to the proposed dewatering date and reported as part of the DMP.

14. References

CRC CARE. (2017). *Risk-based Management and Remediation Guidance for Benzo(a)pyrene.* Technical Report no. 39: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

Douglas. (2022). *Report on Geotechnical Desktop Assessment, Proposed Commerical Tower, 270 Pacific Highway, Crows Nest*.

Douglas. (2024). *Report on Preliminary Site Investigation (Contamination), Proposed Commercial Tower, 270-272 Pacific Hwy, Crows Nest prepared for Ascent Property Group Pty Ltd*.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]*. Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (2020). *Guidelines for Consultants Reporting on Contaminated Land*. Contaminated Land Guidelines: NSW Environment Protection Authority.

NSW EPA. (2022). *Contaminated Sites, Sampling Design Guidelines*. NSW Environment Protection Authority.

15. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report (or services) for this project at 270 Pacific Hwy, Crows Nest NSW in line with Douglas' proposal dated 16 December 2024 and acceptance received from Steven Papadopoulos of Silvernight (Crows Nest) Landowner Pty Ltd. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of Silvernight (Crows Nest) Landowner Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report, Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the (environmental / groundwater) components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

Asbestos has not been detected by observation or by laboratory analysis, either on the surface of the site, or in fill materials at the test locations sampled and analysed. Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to parts of the site being inaccessible and not available for inspection / sampling or to vegetation preventing visual inspection and reasonable access. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that asbestos is not present.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. Douglas cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

Appendix A

Drawings

SITE LOCATION

LEGEND

Site Boundary

0 10 20 30 40 50 m

NOTE:
1. Drawing projection in WGS 84, adapted from aerial imagery from "MetroMap"

Douglas PARTNERS	CLIENT: Silvernight (Crows Nest) Landowner P/L	TITLE: **Site Location and Boundary** **Proposed Mixed-Use Development** **270 Pacific Highway, Crows Nest, NSW**	PROJECT: 214296.03
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	SCALE: 1:923 @A3 / DATE: 21 May 2025		REVISION: 0

DP.QGIS.A3LandscapeDrawingLayout.Rev3 -

REV	DESCRIPTION/COMMENT	DATE	DRAWN BY
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SCALE: 0 6 12 18 24 30 m
1:600 @ A3

Douglas PARTNERS
OFFICE: SYDNEY
96-98 Hermitage Rd, West Ryde NSW 2114
(02)9809 0666

CLIENT:
Silvernight (Crows Nest) Landowner Pty Ltd

NOTE:
1: Basemap from Metromap Dated (27.01.2025)

COORDINATE REFERENCE SYSTEM: GDA2020 / MDA zone 56

PROJECT NAME:
Proposed Mixed-Use Development
PROJECT ADDRESS:
270 Pacific Hwy, Crows Nest

DRAWING TITLE:
Borehole Location Plan

PROJECT NO: **214296.03**
DRAWING NO: **2**
REVISION: **0**

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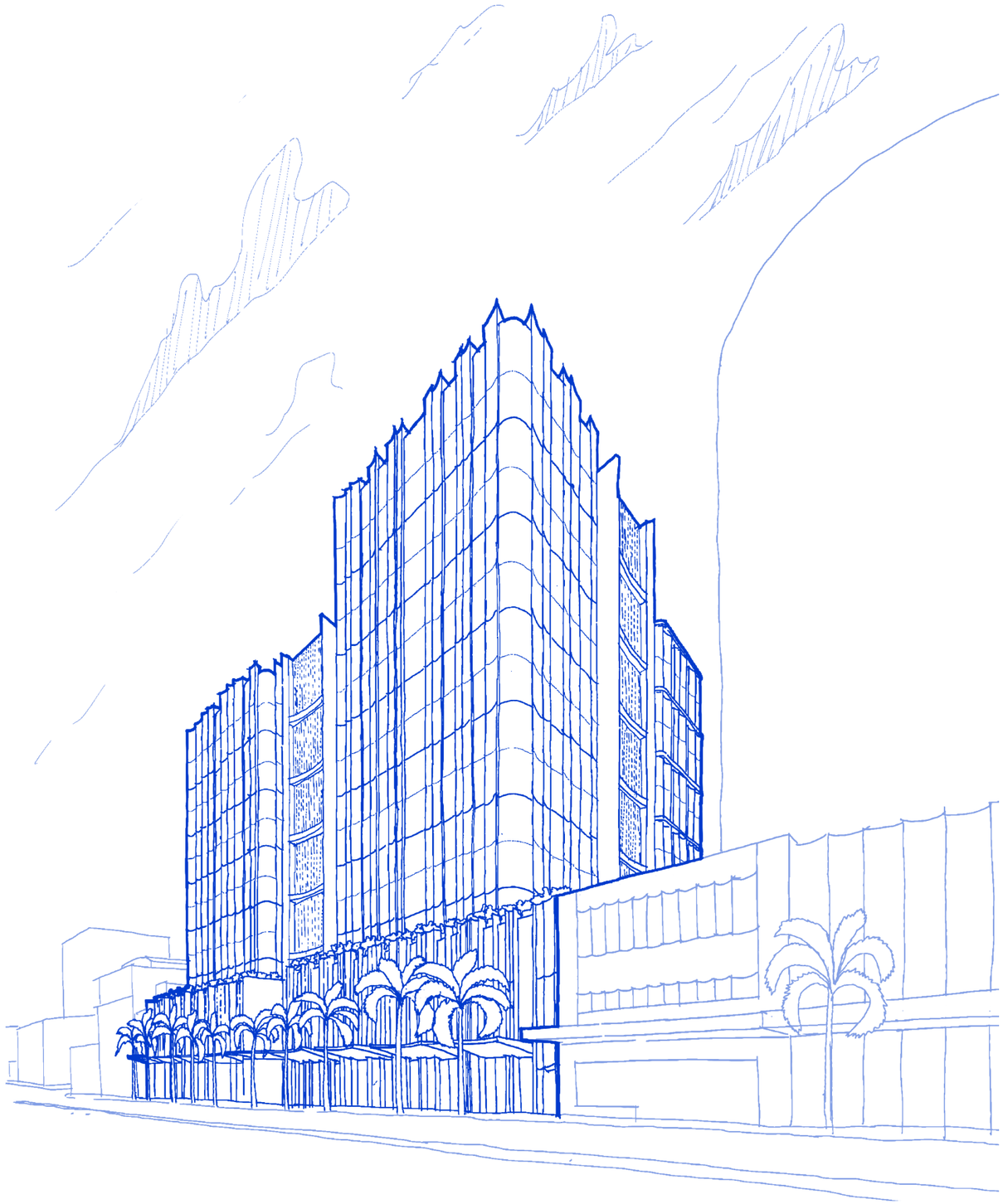

Prepared For
DEVELOPMENT APPLICATION

Client
SILVERNIGHT

Version
02

Development Application

270 Pacific Highway BTR

DRAFT

Issued
4/04/2025

fitzpatrick + partners

Fitzpatrick + Partners acknowledge that we work on the Traditional Lands of the Gadigal people of the Eora Nation.

We pay our respects to Elders past, present and emerging.

Always was, always will be, Aborginal land.

Contents

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w. WWW.FITZPATRICKPARTNERS.COM
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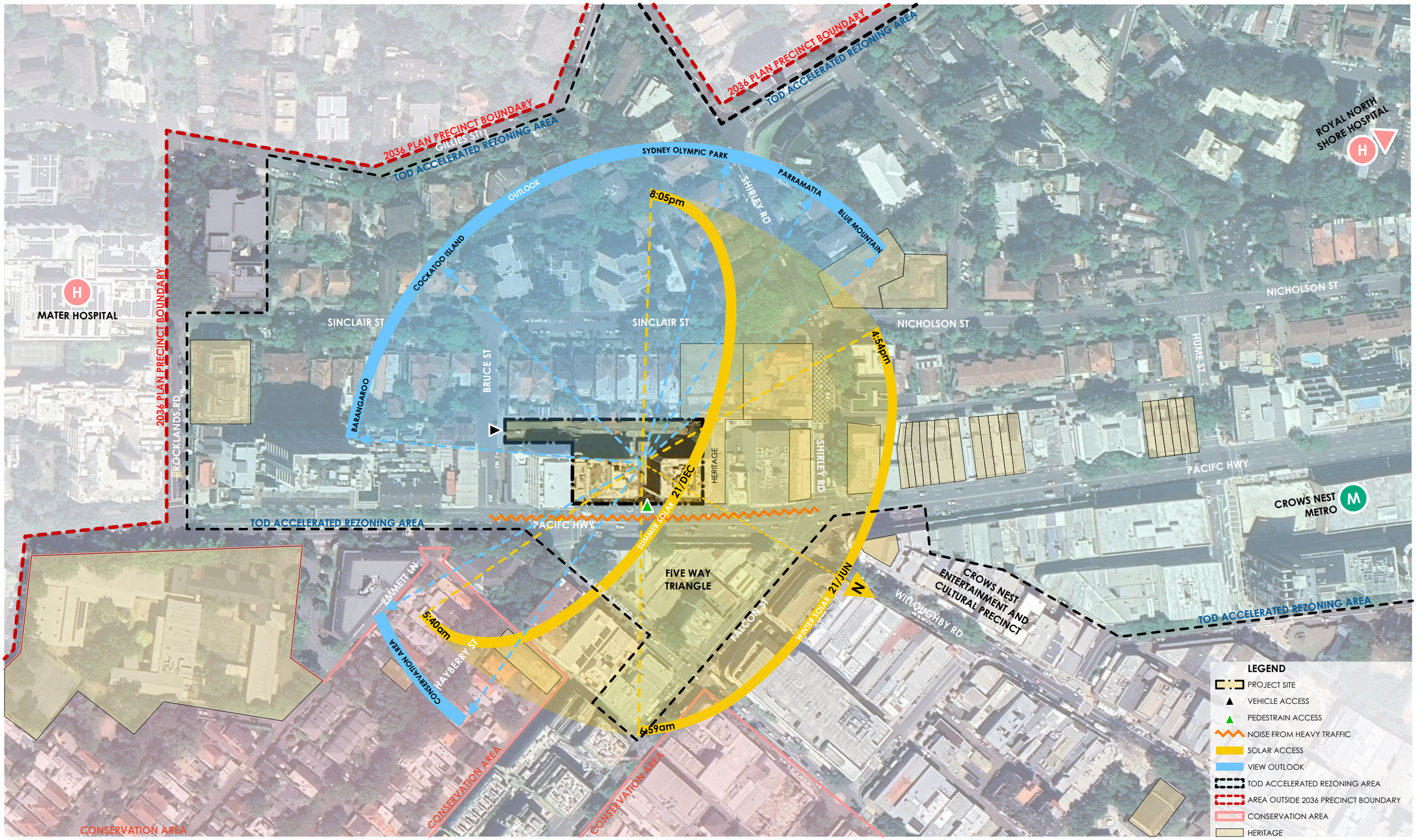

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LOCATION PLAN

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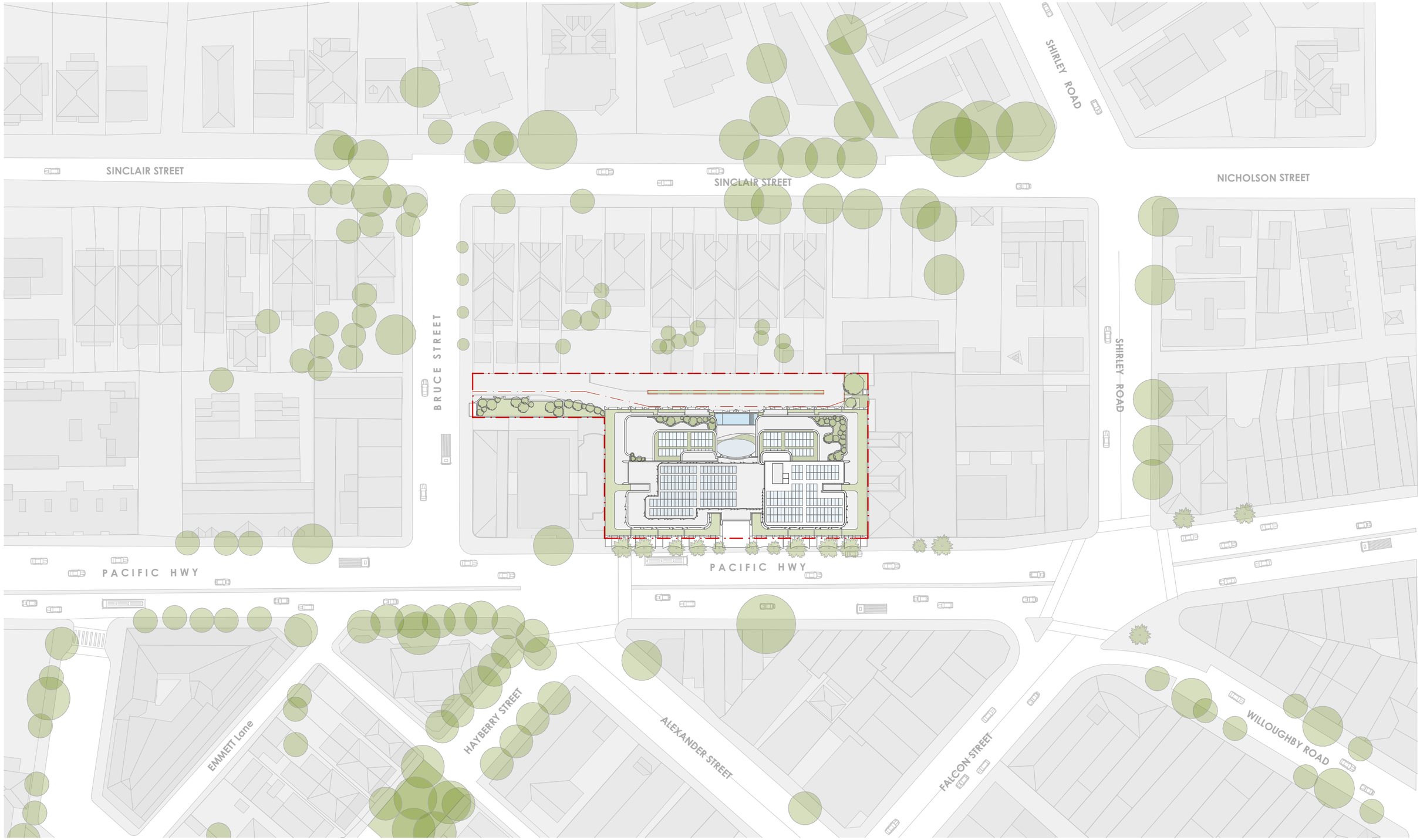
DRAWING NUMBER **DA-01001**
ISSUE **02**



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PROJECT NORTH

CLIENT
SILVERNIGHT
Dorling Park Tower 2, L16, 201 Sussex Street, Sydney
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PACIFIC HIGHWAY

BITUMEN

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No.270 MULTI-STOREY REND. BUILDING CONCRETE ROOF

No.256 MULTI-STOREY REND BUILDING METAL ROOF

No.250 MULTI-STOREY BRICK & REND. BUILDING METAL ROOF

2 STOREY BRICK BUILDING METAL ROOF

S.P.80569

S.P.56120

A
D.P.436219

S.P.49574
3796m²

212
D.P.738187

PLANT

SERVICES CORE

BRICK PAVED AREA

TERRACE

BRICK GARAGES

CONCRETE ROADWAY

FOOTPATH

CONC. ISLAND

SUBSTATION

STAIRS

CONCRETE RAMP

PIT

SEAT

TREE

148°

25'

40" 36.59

328°

109.775

12.215

23'

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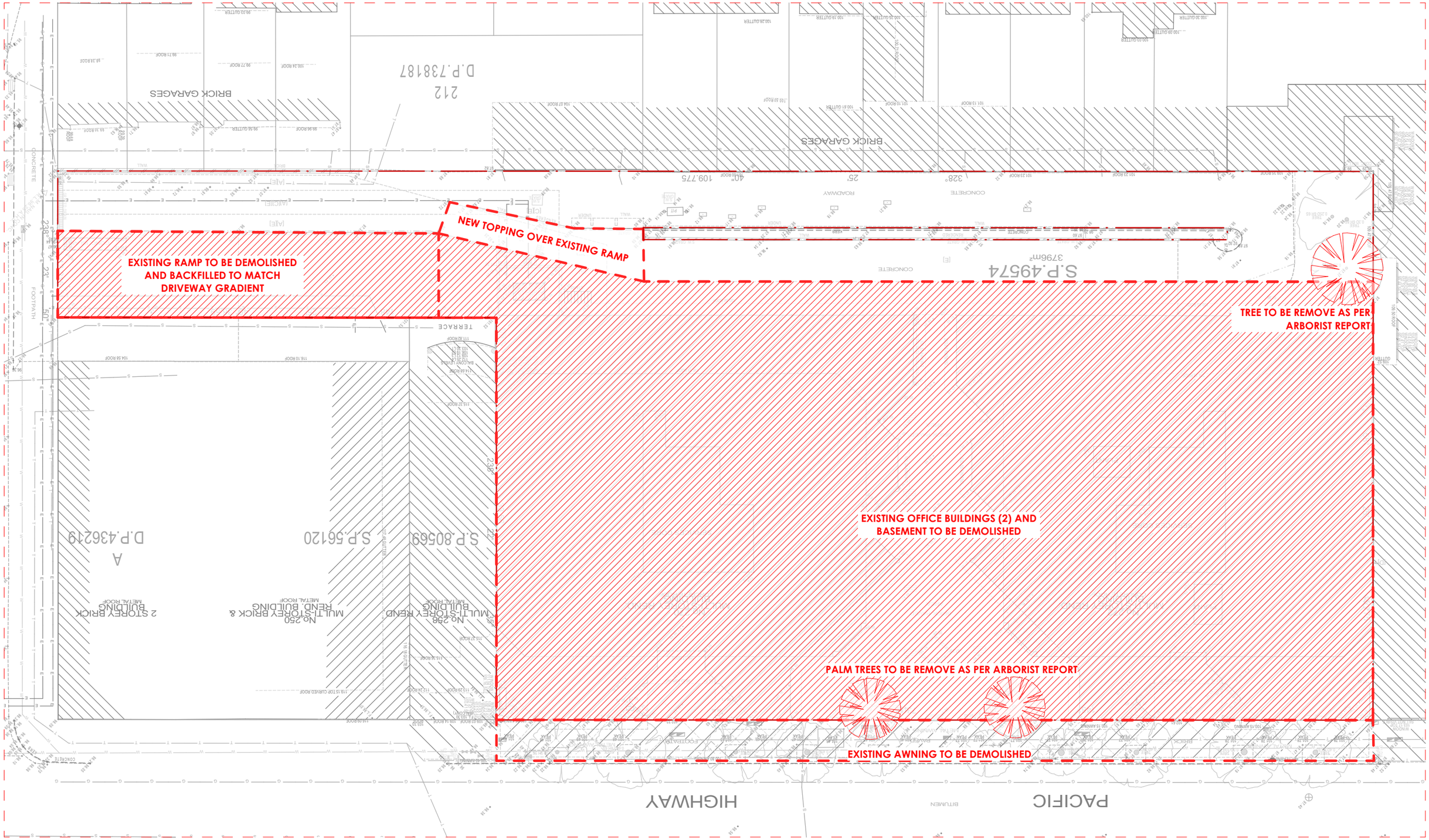
46.675

25'

68'



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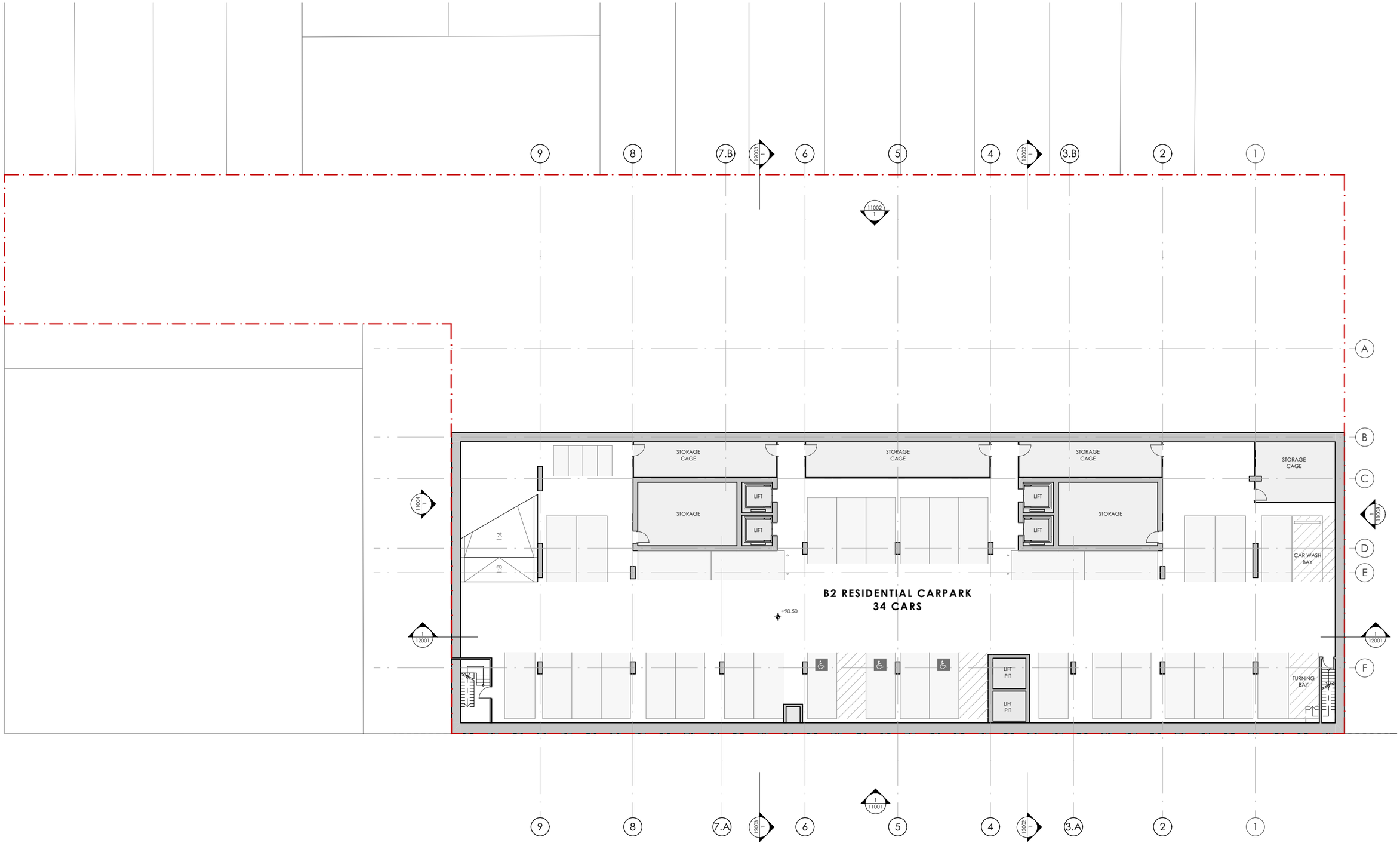

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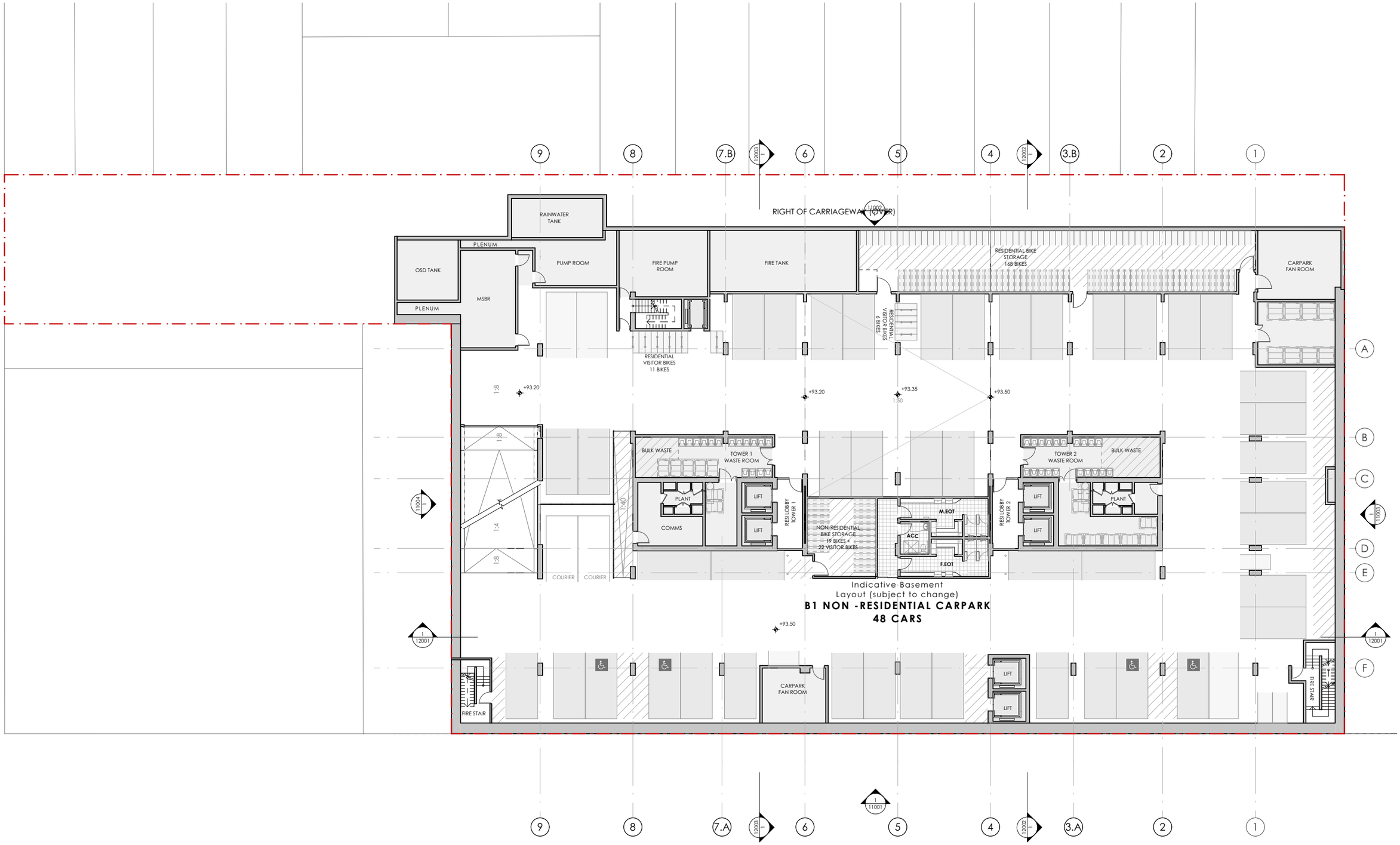

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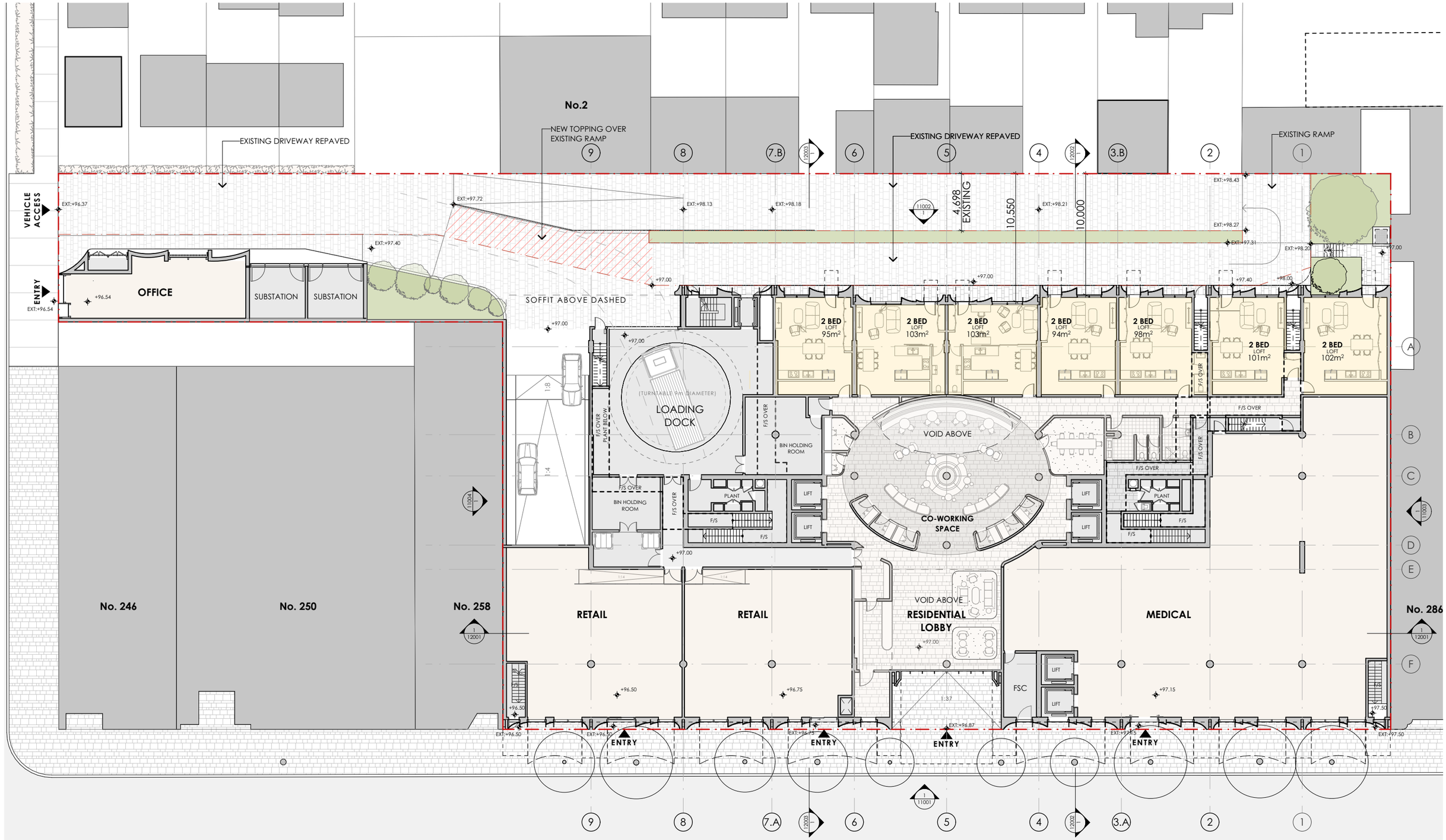

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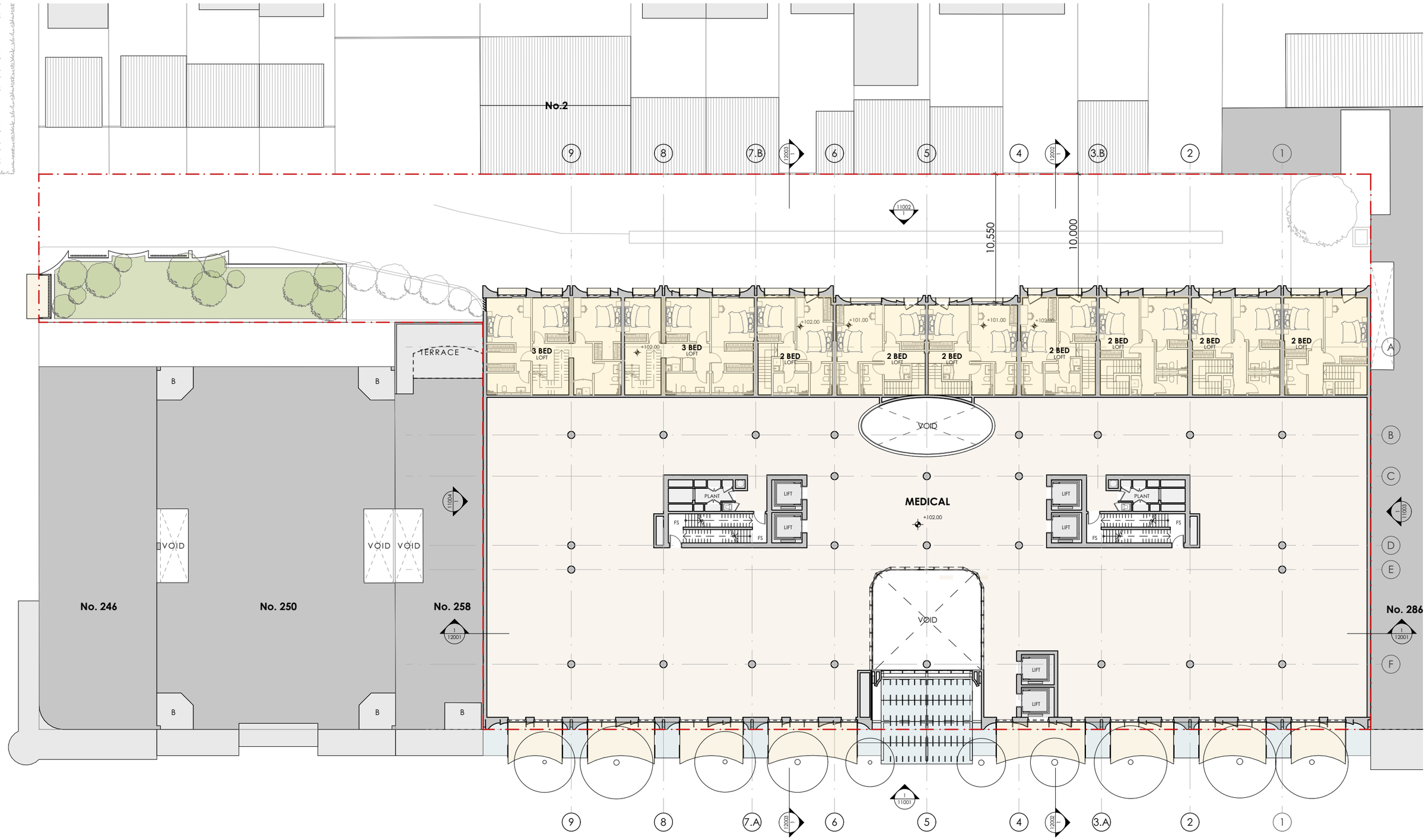

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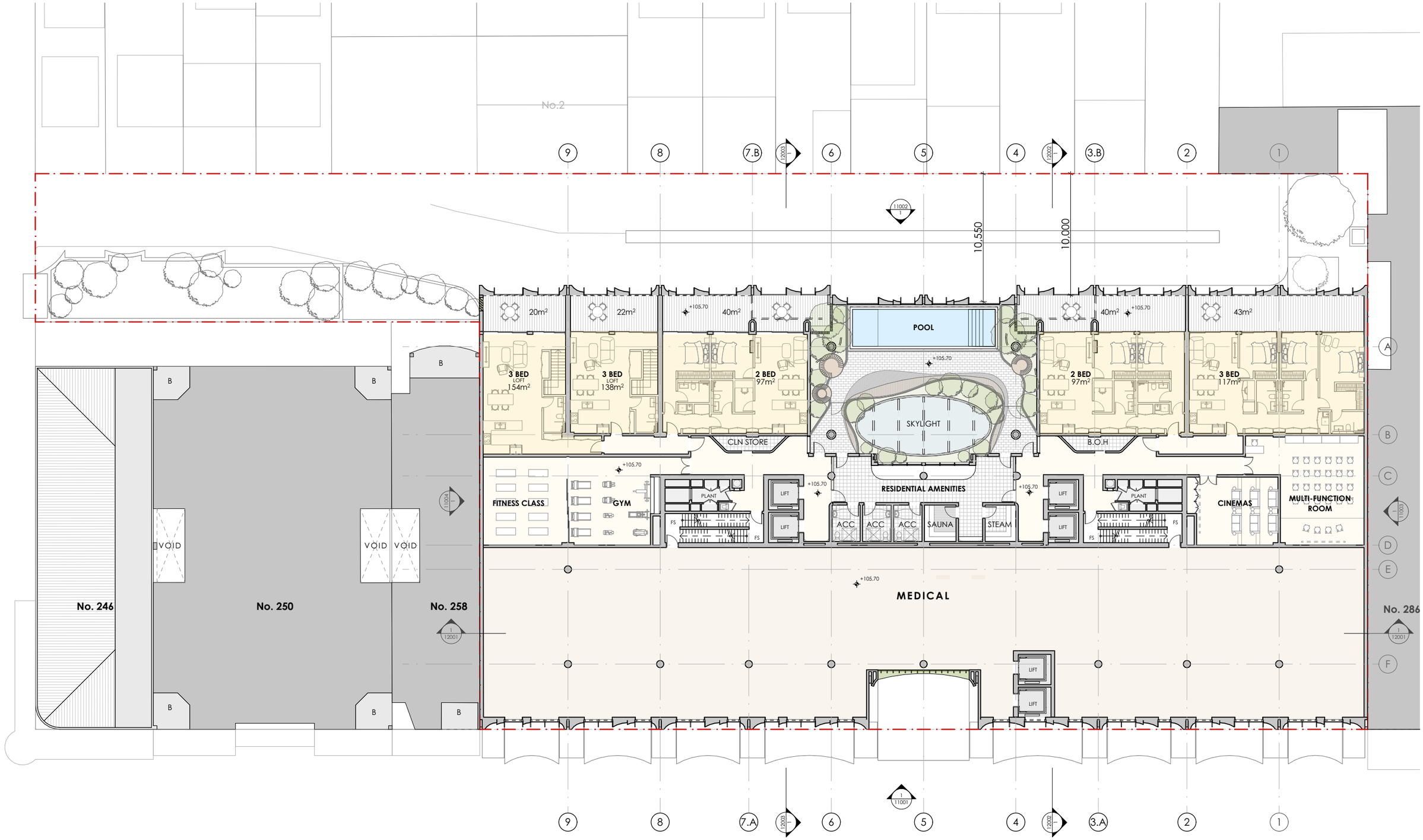

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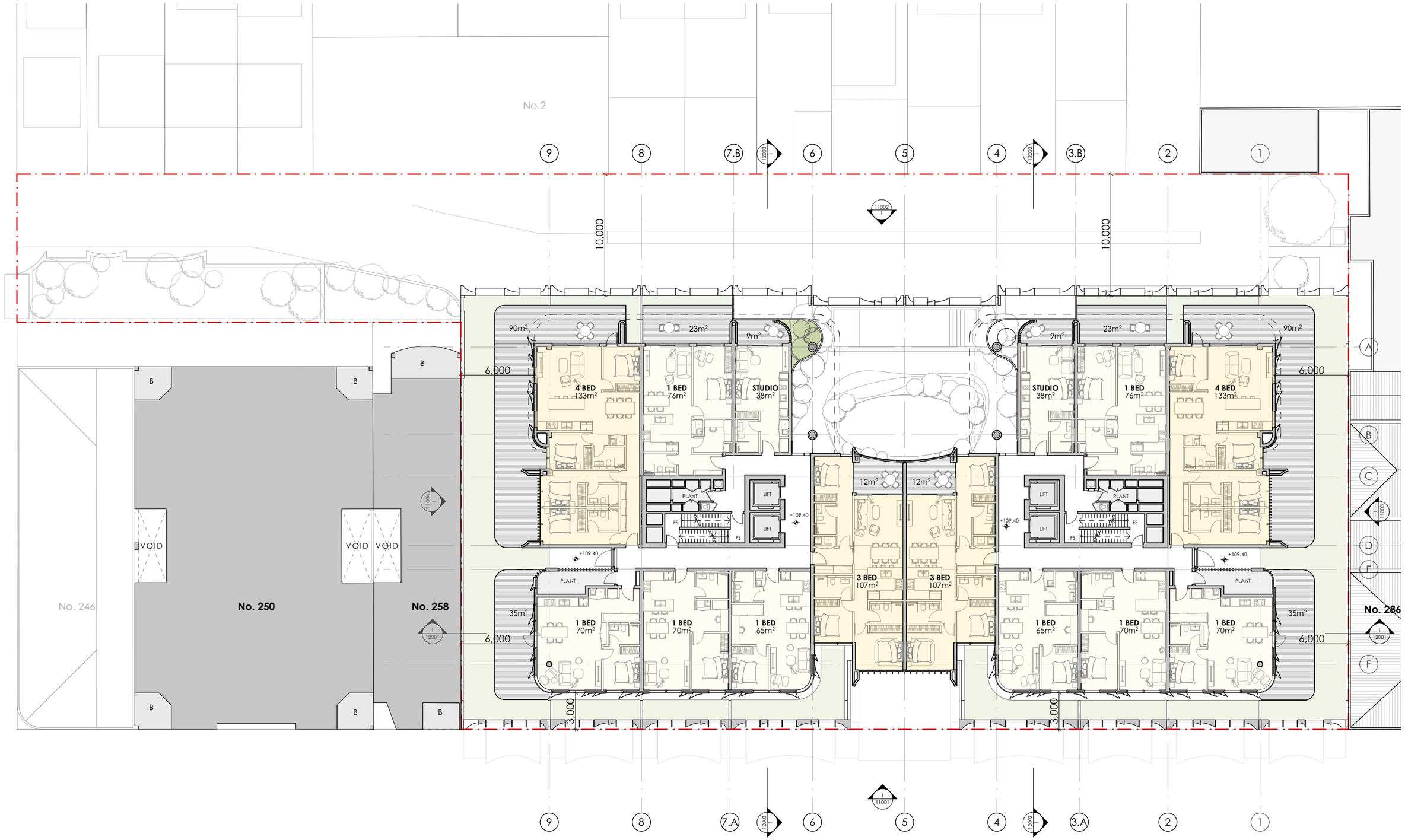

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LEVEL 3 TERRACE

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DRAWING NUMBER **DA-10006**
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AMENDMENTS

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LEVEL 4

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DRAWING
GENERAL ARRANGEMENT PLANS
L5,L7,L9,L11 TYP. RESI FLOOR - WITHOUT TERRACE

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-10008**
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270 PACIFIC HIGHWAY
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PROJECT NORTH

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DRAWING
GENERAL ARRANGEMENT PLANS
L6,L8,L10 TYP. RESI FLOOR - WITH TERRACE

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DRAWING NUMBER **DA-10009**
ISSUE **02**

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE 1:300 @A3
DRAWN BY
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PRINT DATE 4/04/2025

DRAWING
GENERAL ARRANGEMENT PLANS
L12 TOWER 1 ROOF TERRACE

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-10010**
ISSUE **02**

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE 1:300 @A3
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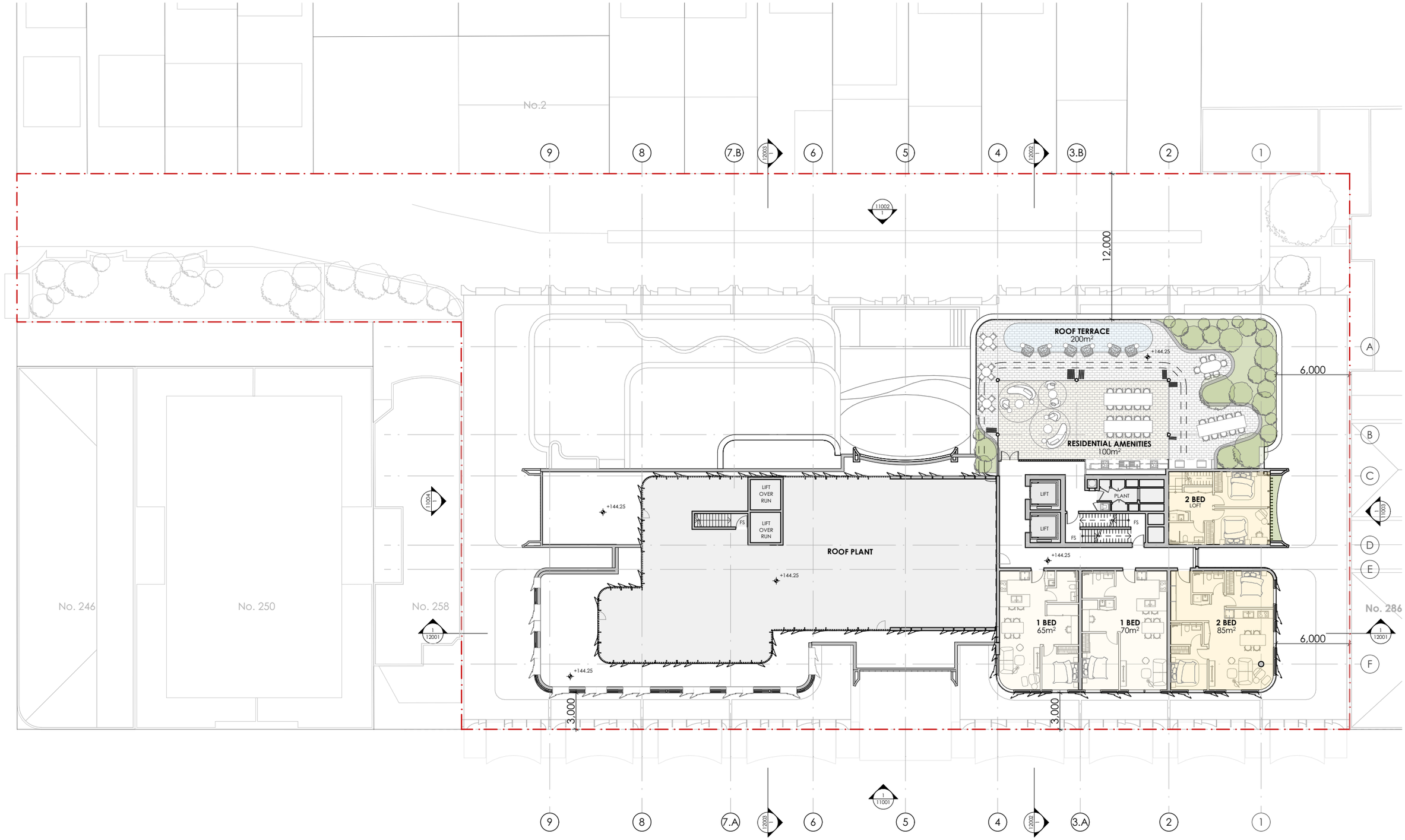
PRINT DATE 4/04/2025

DRAWING
GENERAL ARRANGEMENT PLANS
L13

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-10011**
ISSUE **02**



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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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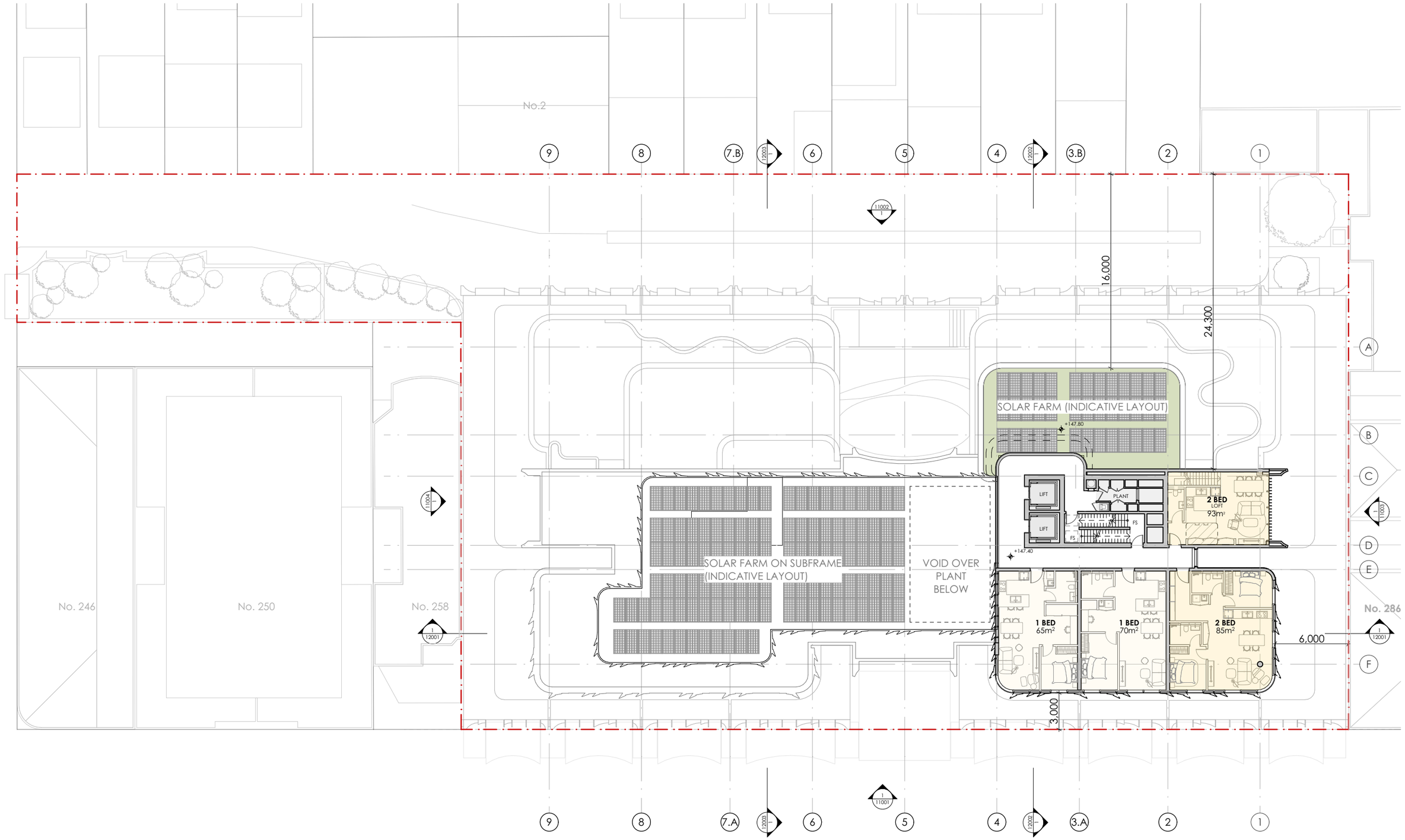
PRINT DATE 4/04/2025

DRAWING
GENERAL ARRANGEMENT PLANS
L14 TOWER 2 ROOF TERRACE/ROOF PLANT

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-10012**
ISSUE **02**



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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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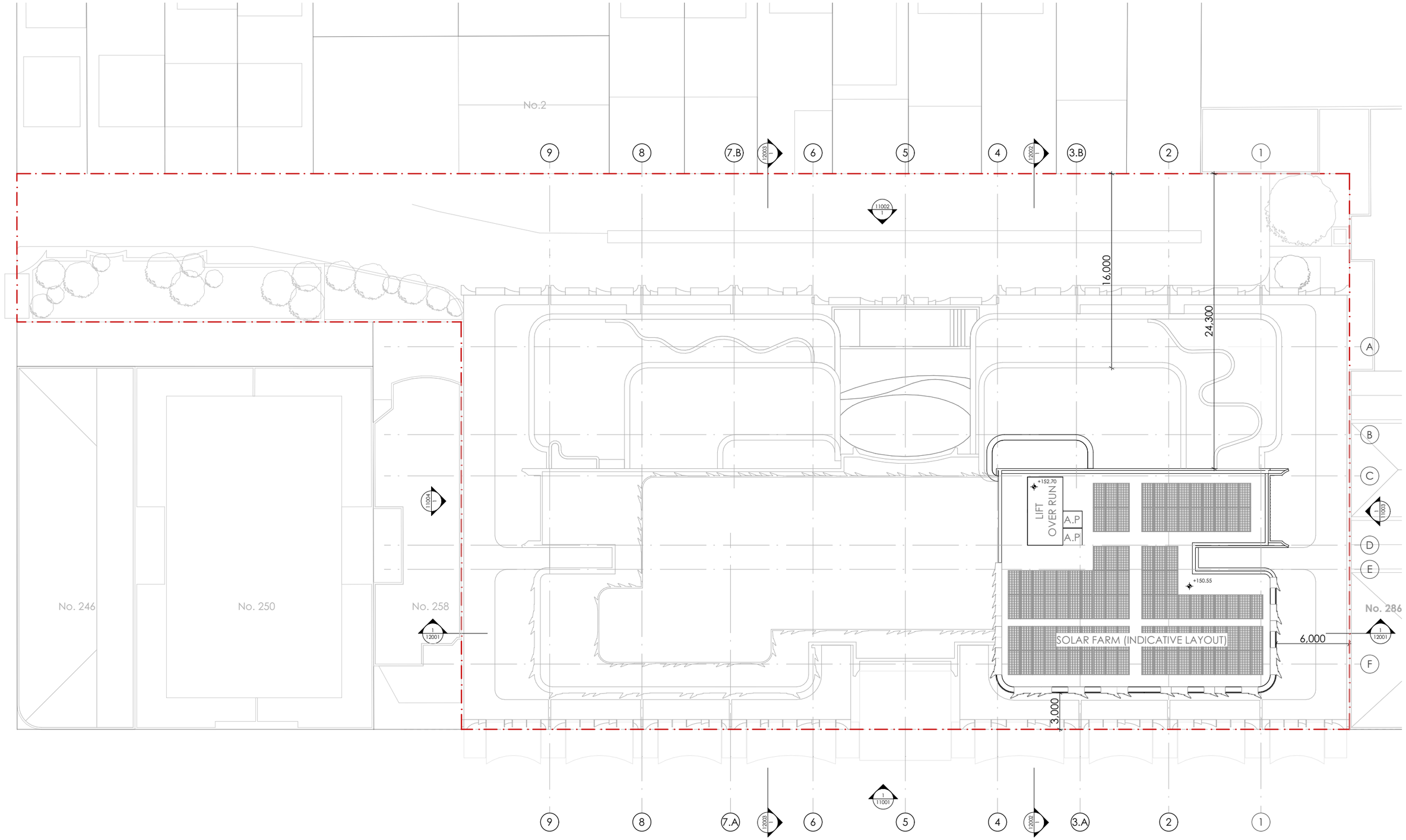
DRAWING
GENERAL ARRANGEMENT PLANS
L15

PROJECT NUMBER	DRAWING NUMBER	ISSUE
22501	**DA-10013**	**02**



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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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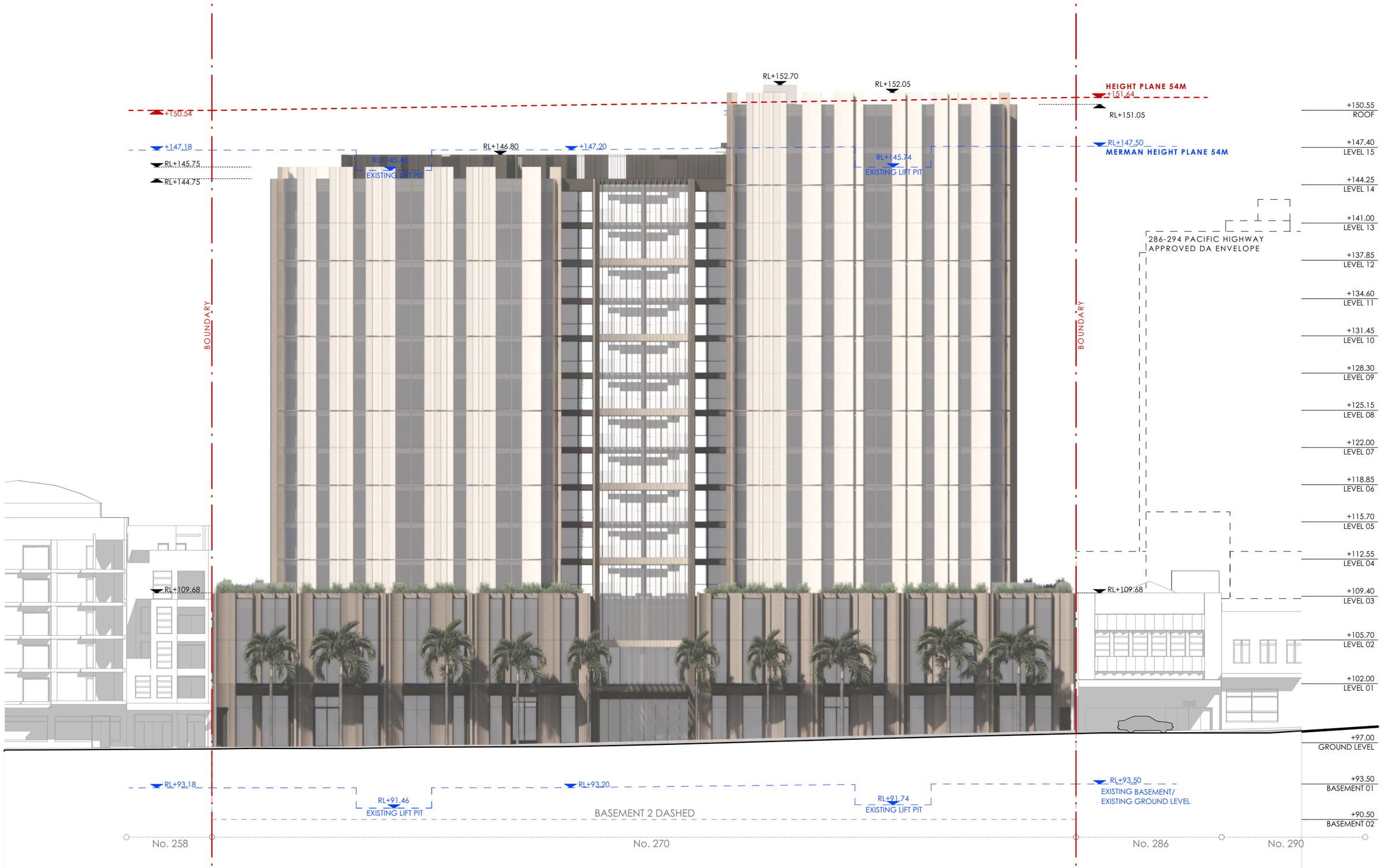
PRINT DATE
4/04/2025

DRAWING
GENERAL ARRANGEMENT PLANS
L16 TOWER 2 ROOF

PROJECT NUMBER
22501

DRAWING NUMBER
DA-10014

ISSUE
02



EAST ELEVATION

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE	DRAWN BY	APPROVED BY
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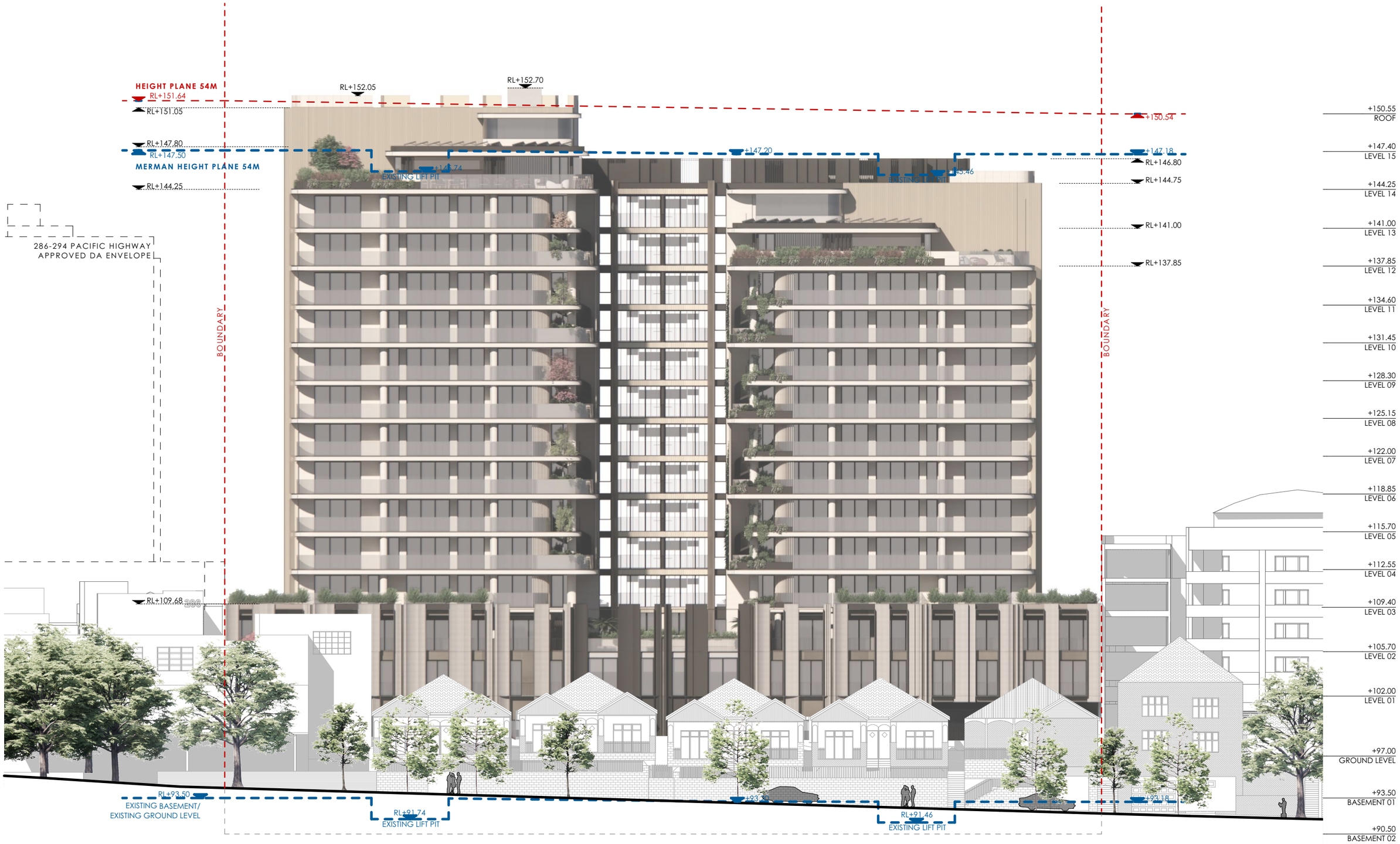
30mm ON ORIGINAL		PRINT DATE 4/04/2025

DRAWING
ELEVATION
ELEVATION - EAST

PROJECT NUMBER	DRAWING NUMBER	ISSUE
22501	**DA-11001**	**02**



WEST ELEVATION

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e. ENQUIRIES@FITZPATRICKPARTNERS.COM
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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney
NSW 2000 Australia

SCALE	DRAWN BY	APPROVED BY
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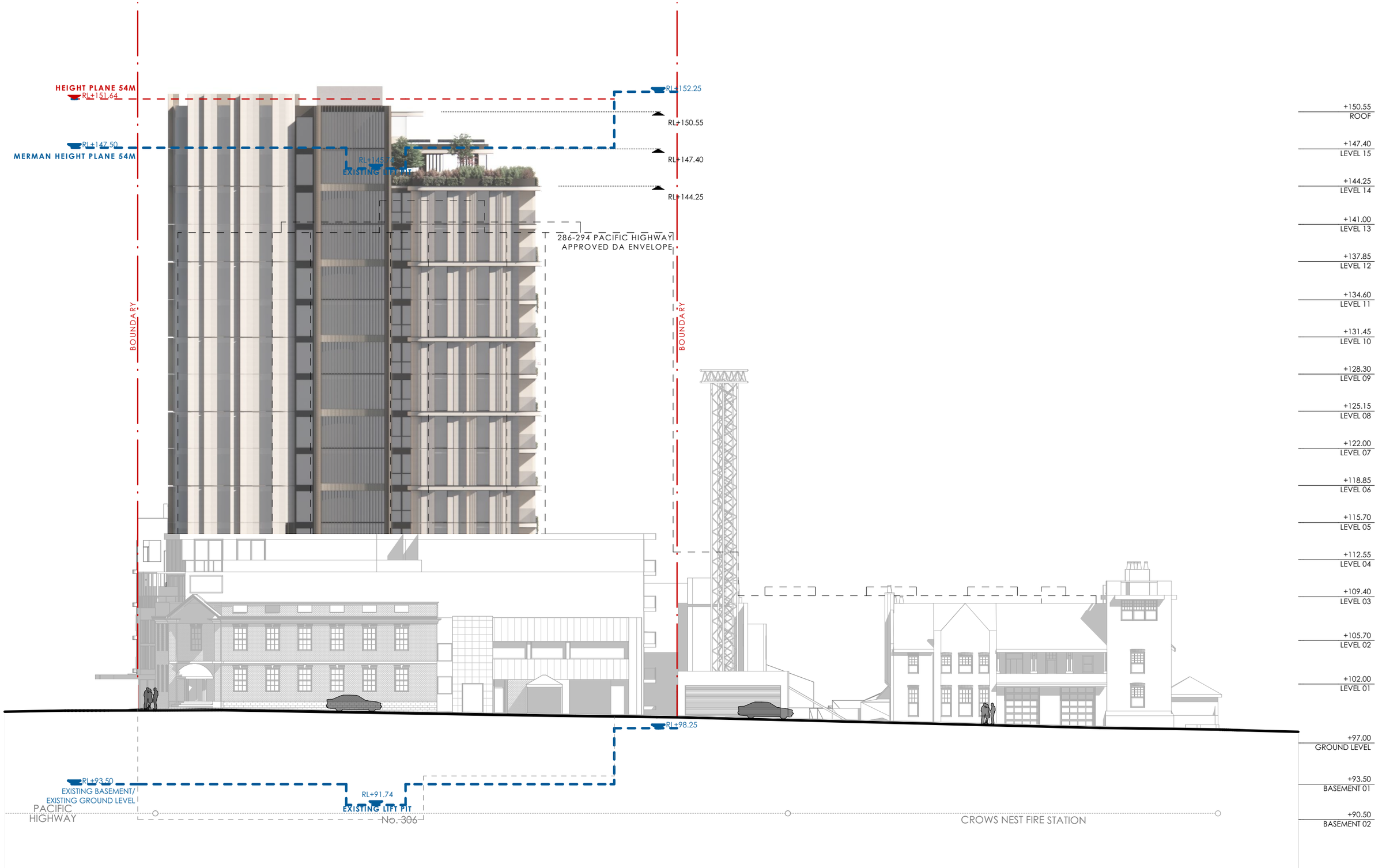
30mm ON ORIGINAL		PRINT DATE 4/04/2025

DRAWING
ELEVATION
ELEVATION - WEST

PROJECT NUMBER	DRAWING NUMBER	ISSUE
22501	**DA-11002**	**02**



NORTH ELEVATION

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e. ENQUIRIES@FITZPATRICKPARTNERS.COM
w. WWW.FITZPATRICKPARTNERS.COM
a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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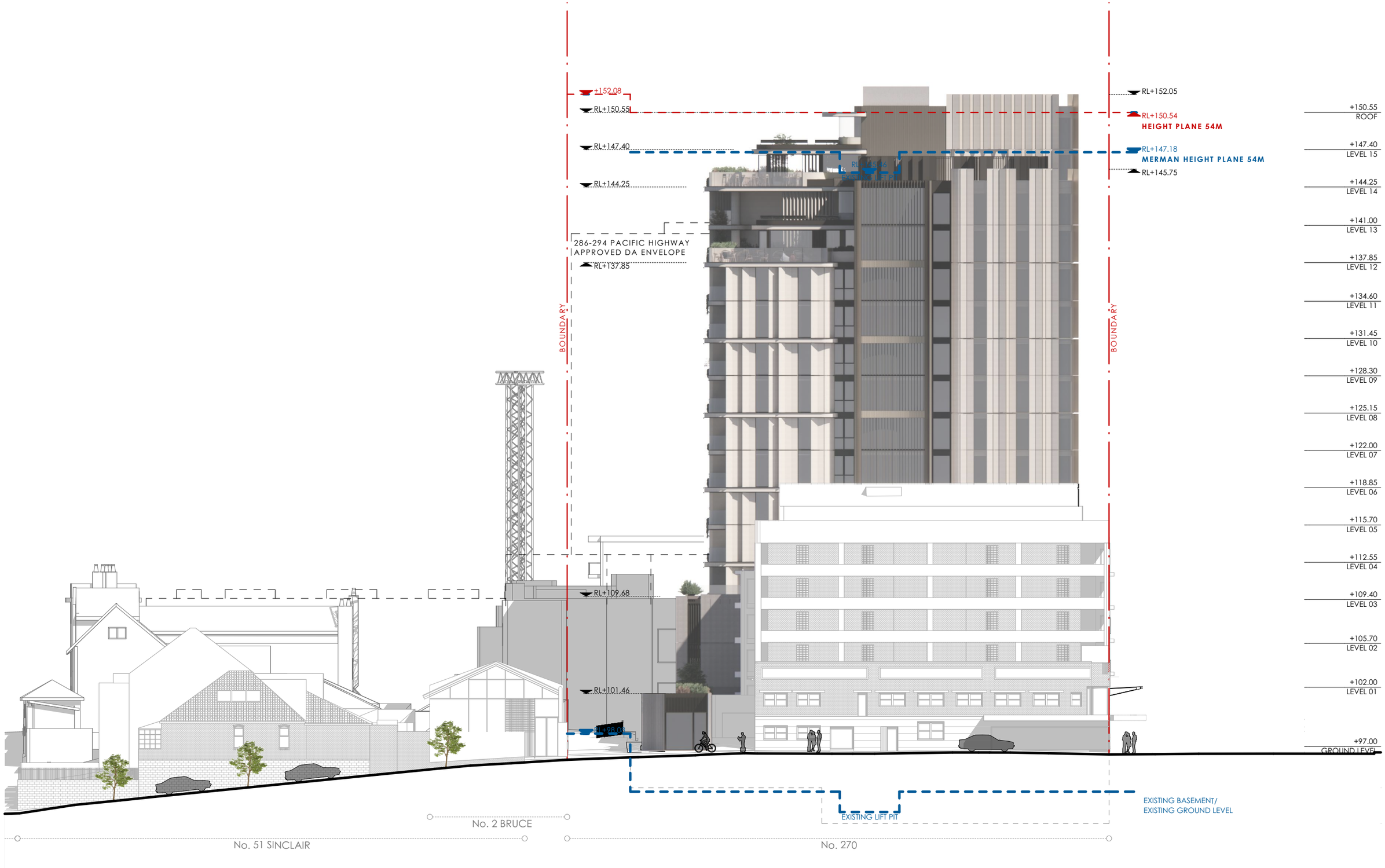
DRAWING
ELEVATION
ELEVATION - NORTH

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-11003**
ISSUE **02**



SOUTH ELEVATION

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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney
NSW 2000 Australia

SCALE	DRAWN BY	APPROVED BY
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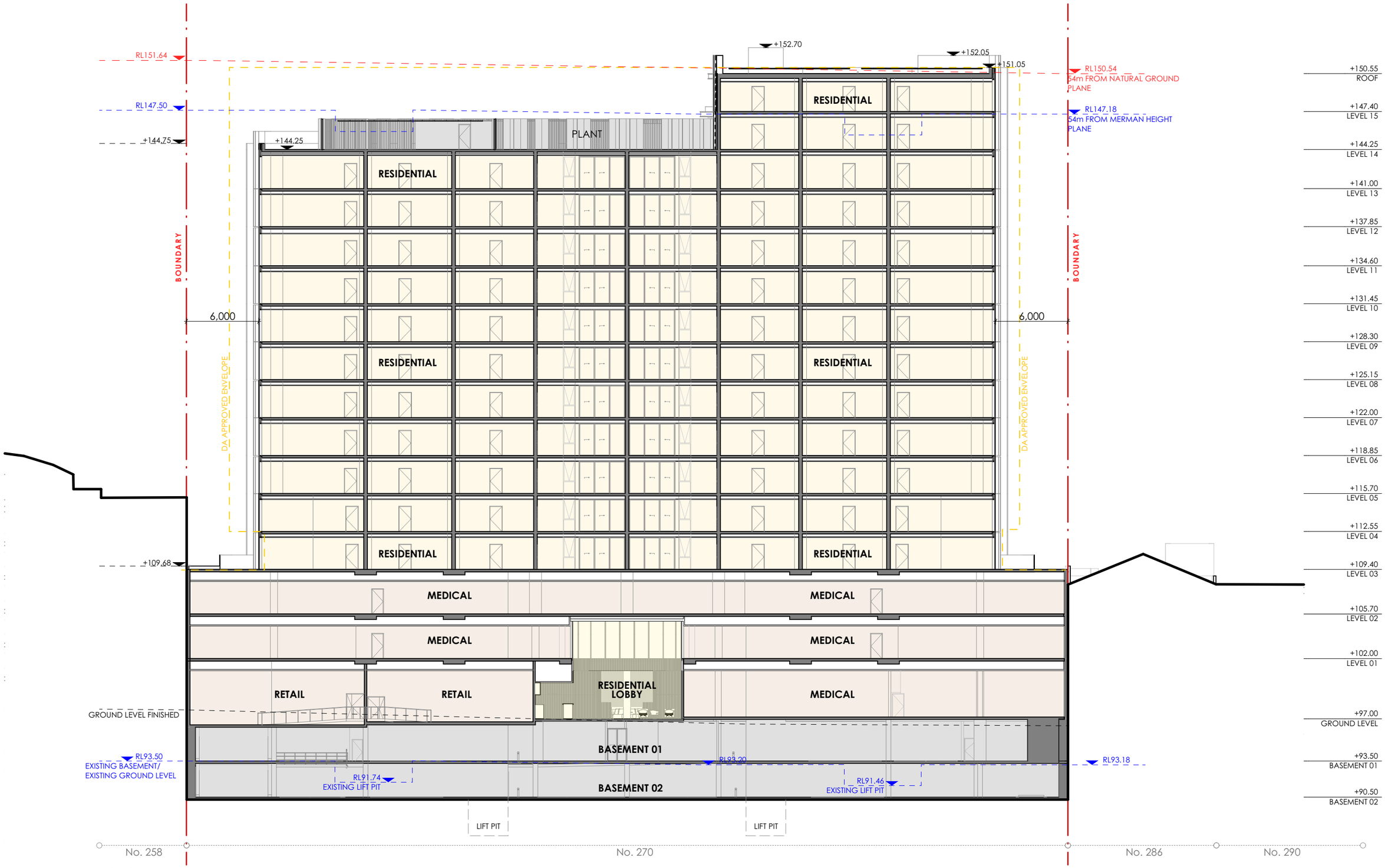
30mm ON ORIGINAL		PRINT DATE 4/04/2025

DRAWING
ELEVATION
ELEVATION - SOUTH

PROJECT NUMBER	DRAWING NUMBER	ISSUE
22501	**DA-11004**	**02**



NORTH/SOUTH SECTION

1:300

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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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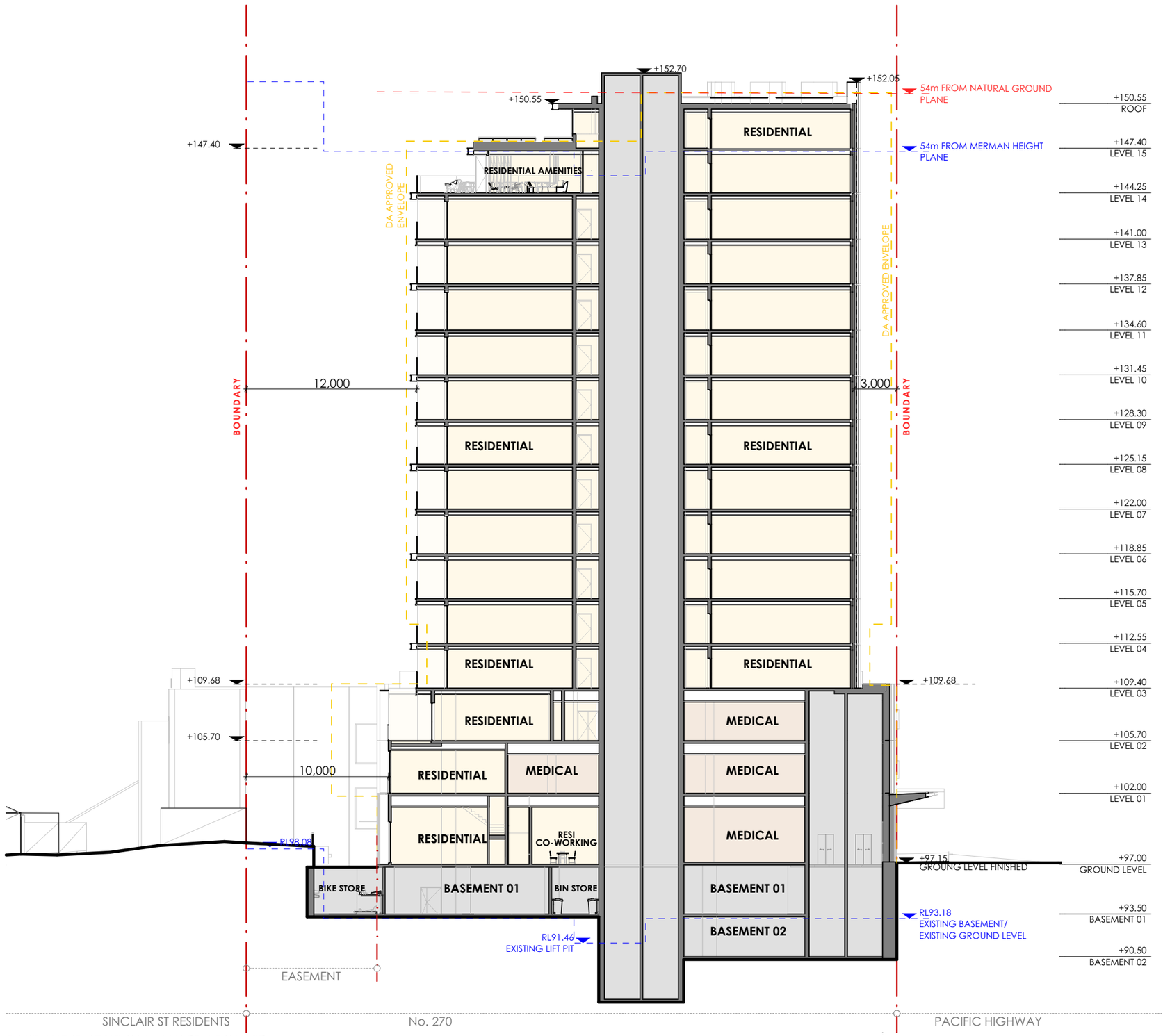
DRAWING
GENERAL ARRANGEMENT SECTIONS
SECTION - NS

PROJECT NUMBER	DRAWING NUMBER	ISSUE
22501	**DA-12001**	**02**



EAST/WEST SECTION - NORTH TOWER
1:300

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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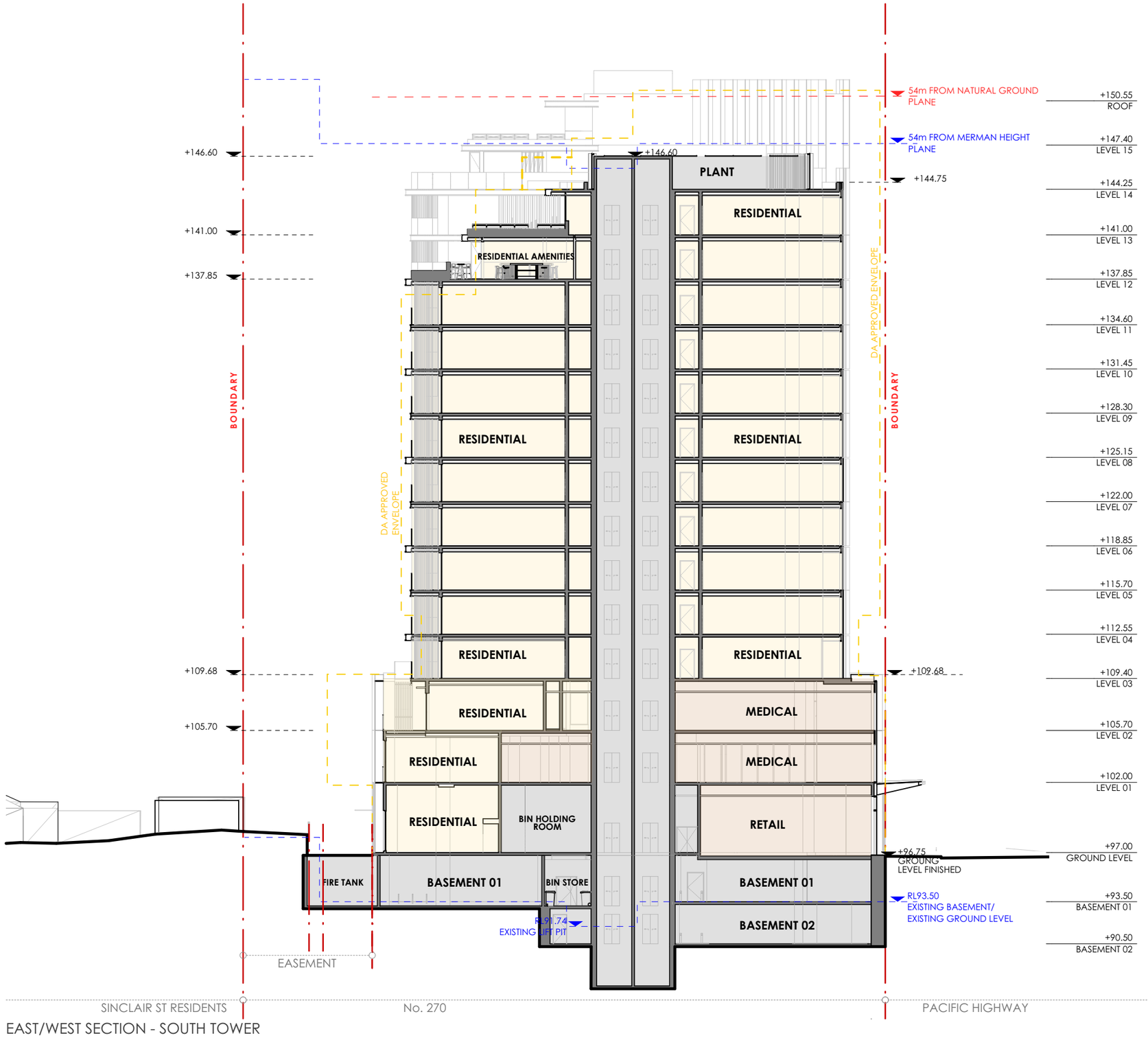
DRAWING
GENERAL ARRANGEMENT SECTIONS
SECTION - EW - NORTH TOWER

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-12002**
ISSUE **02**



EAST/WEST SECTION - SOUTH TOWER

1:300

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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/20 25		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE	DRAWN BY	APPROVED BY
1:300 @A3		
30mm ON ORIGINAL		PRINT DATE 4/04/2025

DRAWING
GENERAL ARRANGEMENT SECTIONS
SECTION - EW - SOUTH TOWER

PROJECT NUMBER	DRAWING NUMBER	ISSUE
22501	**DA-12003**	**02**

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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
01	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE
1:100 @A3

30mm ON ORIGINAL

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APPROVED BY

PRINT DATE
4/04/2025

DRAWING
FACADE SETOUT
BAY STREET SCAPE FACADE (1 of 2)

PROJECT NUMBER
22501

DRAWING NUMBER
DA-25001

ISSUE
01

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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
01	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE
1:100 @A3

30mm ON ORIGINAL

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PRINT DATE
4/04/2025

DRAWING
FACADE SETOUT
BAY STREET SCAPE FACADE (2 of 2)

PROJECT NUMBER
22501

DRAWING NUMBER
DA-25002

ISSUE
01

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AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
01	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney
NSW 2000 Australia

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PRINT DATE 4/04/2025

DRAWING
FACADE SETOUT
MEW STREET SCAPE FACADE (1 of 2)

PROJECT NUMBER **22501**

DRAWING NUMBER **DA-25003**

ISSUE **01**

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
01	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE
1:100 @A3

30mm ON ORIGINAL

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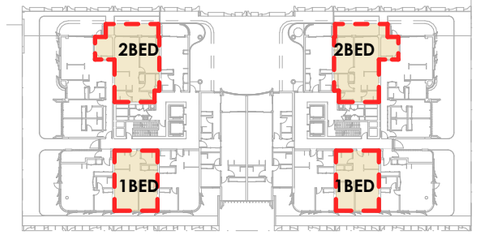
PRINT DATE
4/04/2025

DRAWING
FACADE SETOUT
MEW STREET SCAPE FACADE (2 of 2)

PROJECT NUMBER
22501

DRAWING NUMBER
DA-25004

ISSUE
01



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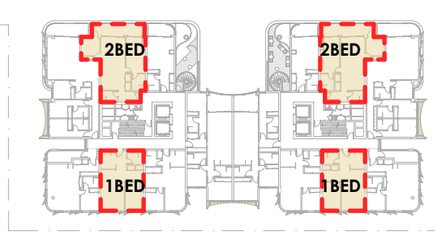

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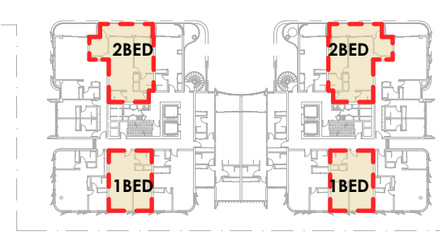

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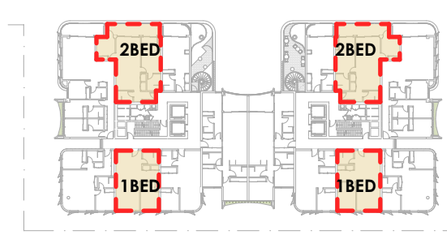

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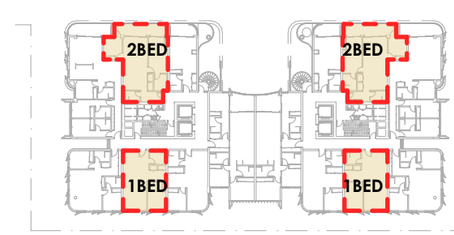

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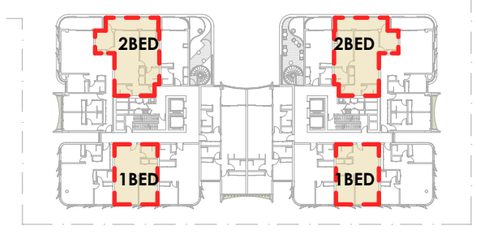

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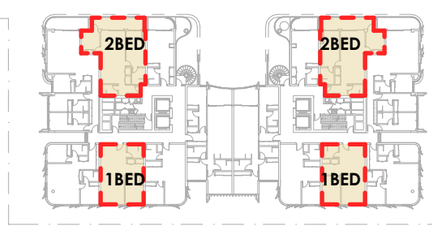

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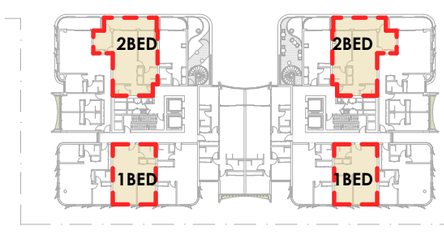

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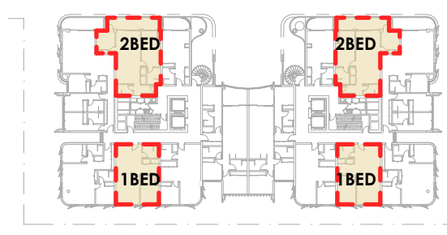
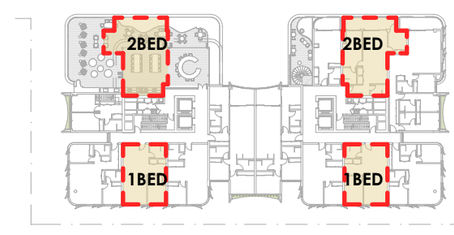


LEVEL 11



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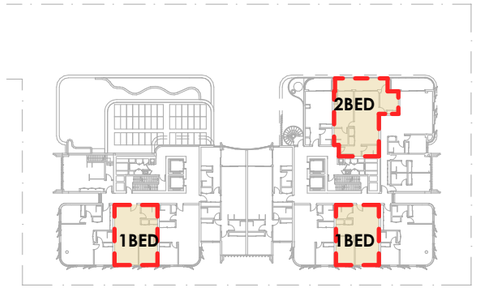

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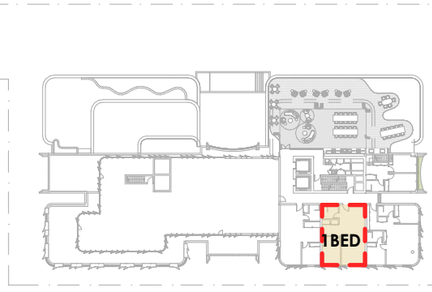
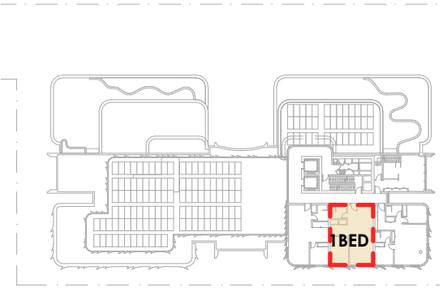


LEVEL 14



LEVEL 15

SUMMARY:	
ADAPTABLE 2 BEDS:	20 UNITS (12%)
ADAPTABLE 1 BEDS:	24 UNITS (14%)
TOTAL ADAPTABLE APARTMENTS:	44 UNITS (24%)

ADAPTABLE UNITS

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
01	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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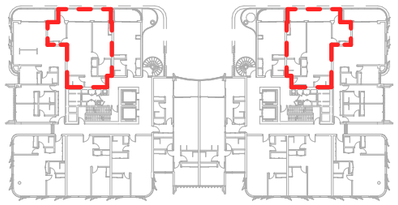
PRINT DATE 4/04/2025

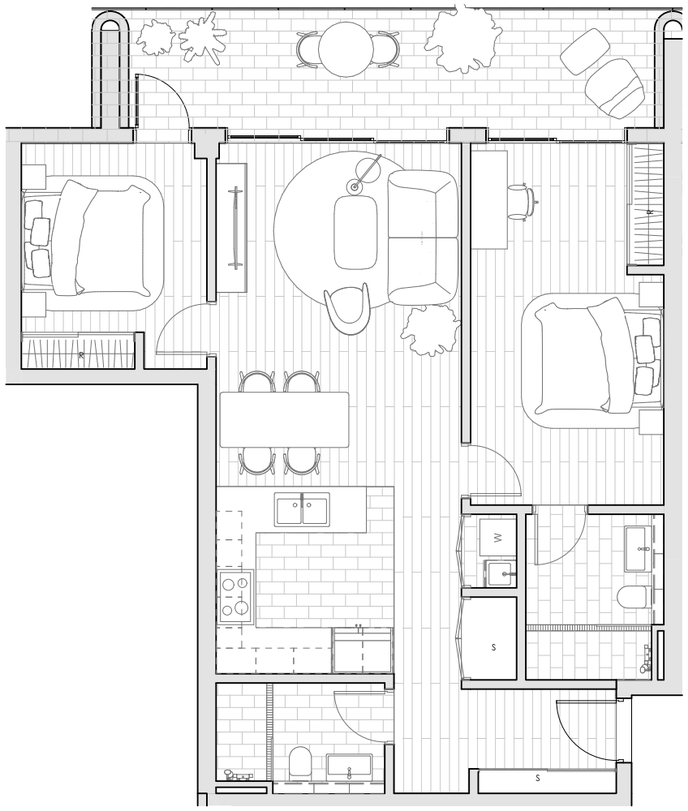
DRAWING
TYPICAL APARTMENT LAYOUT PLANS
TYPICAL APARTMENT LAYOUT PLANS

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-30001**
ISSUE **01**



KEYPLAN

ADAPTABLE UNITS



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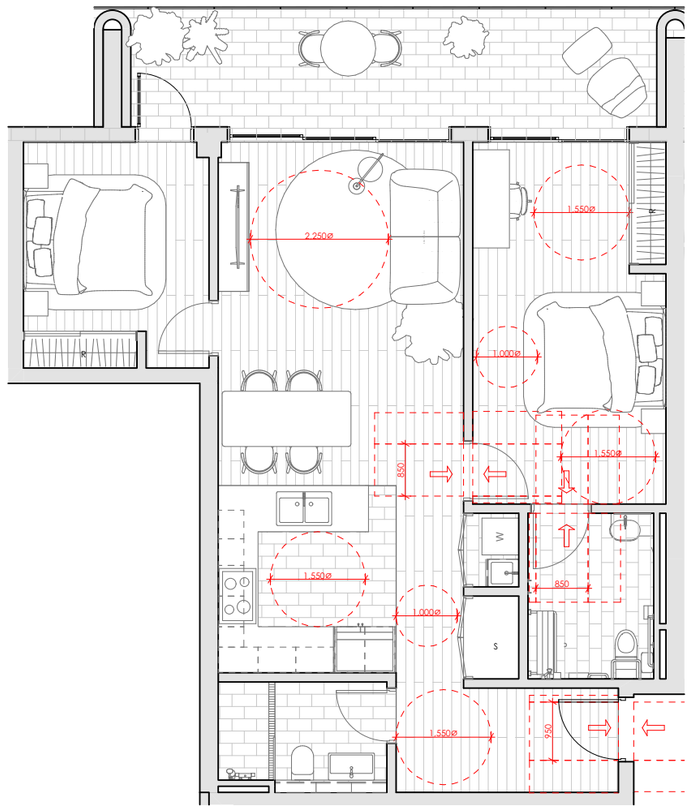

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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
01	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE 1:100 @A3
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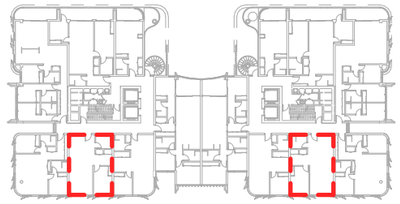
DRAWING
TYPICAL APARTMENT LAYOUT PLANS
ADAPTABLE APARTMENT LAYOUT

PROJECT NUMBER **22501**
DRAWING NUMBER **DA-30002**
ISSUE **01**



KEYPLAN

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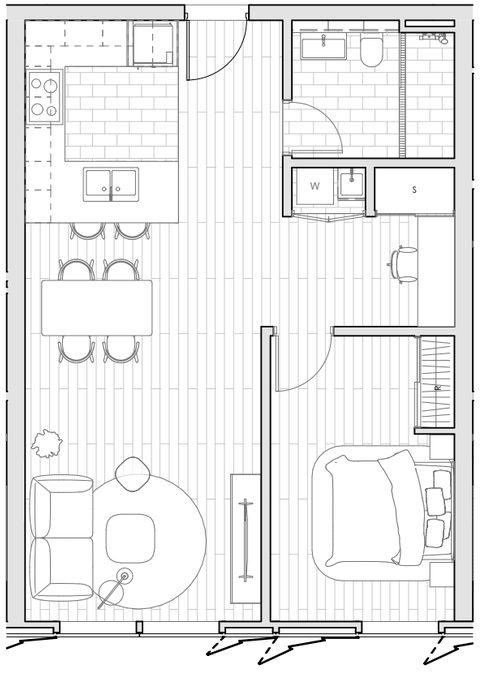

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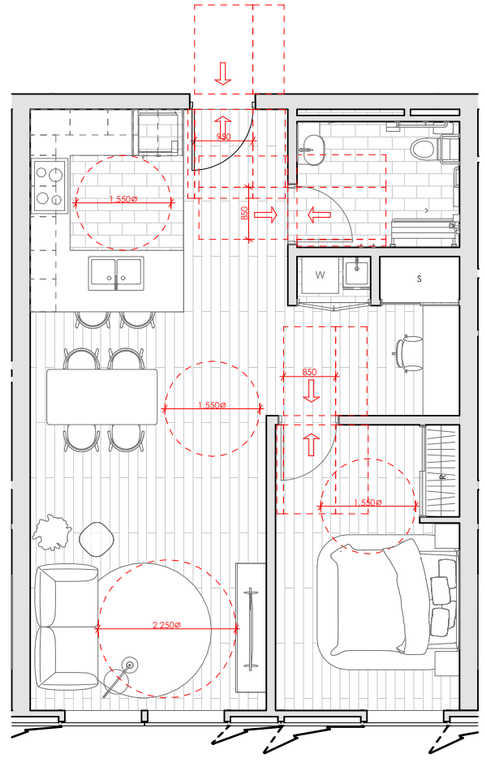

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AMENDMENTS

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PROJECT NUMBER
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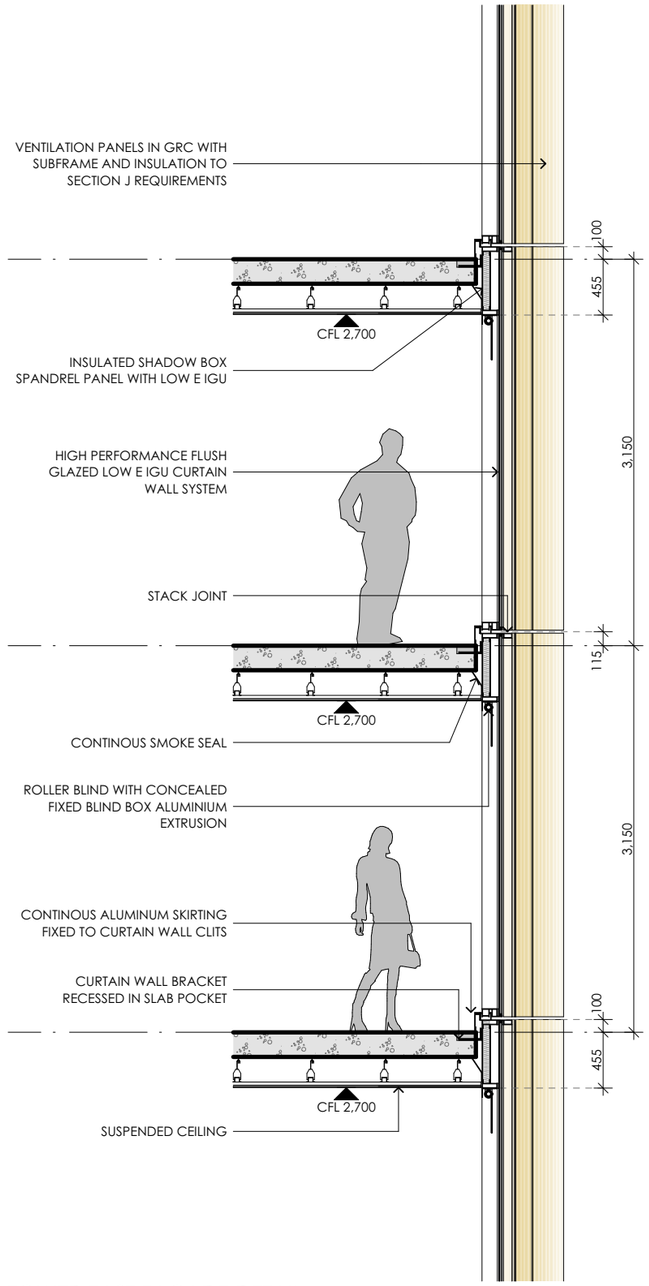
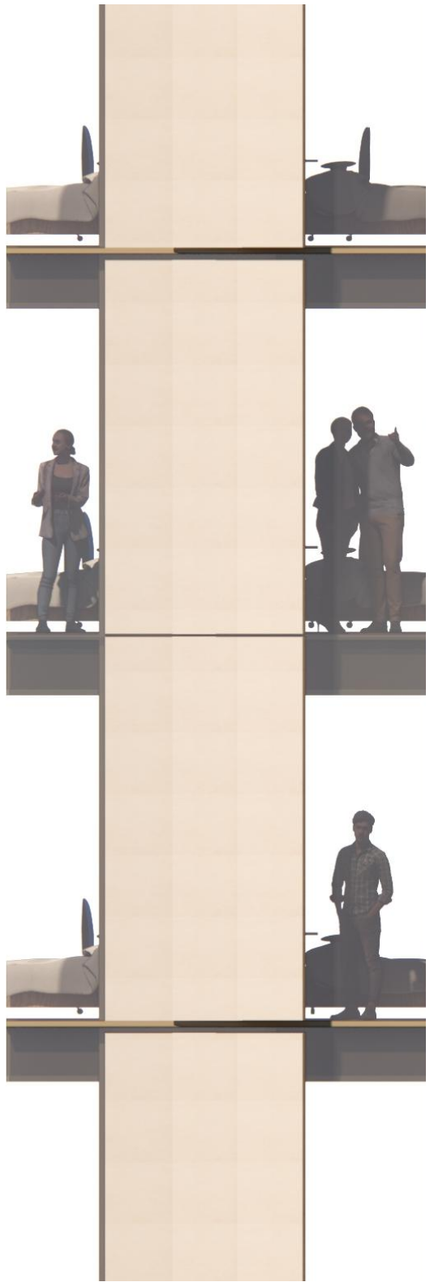
ISSUE
01





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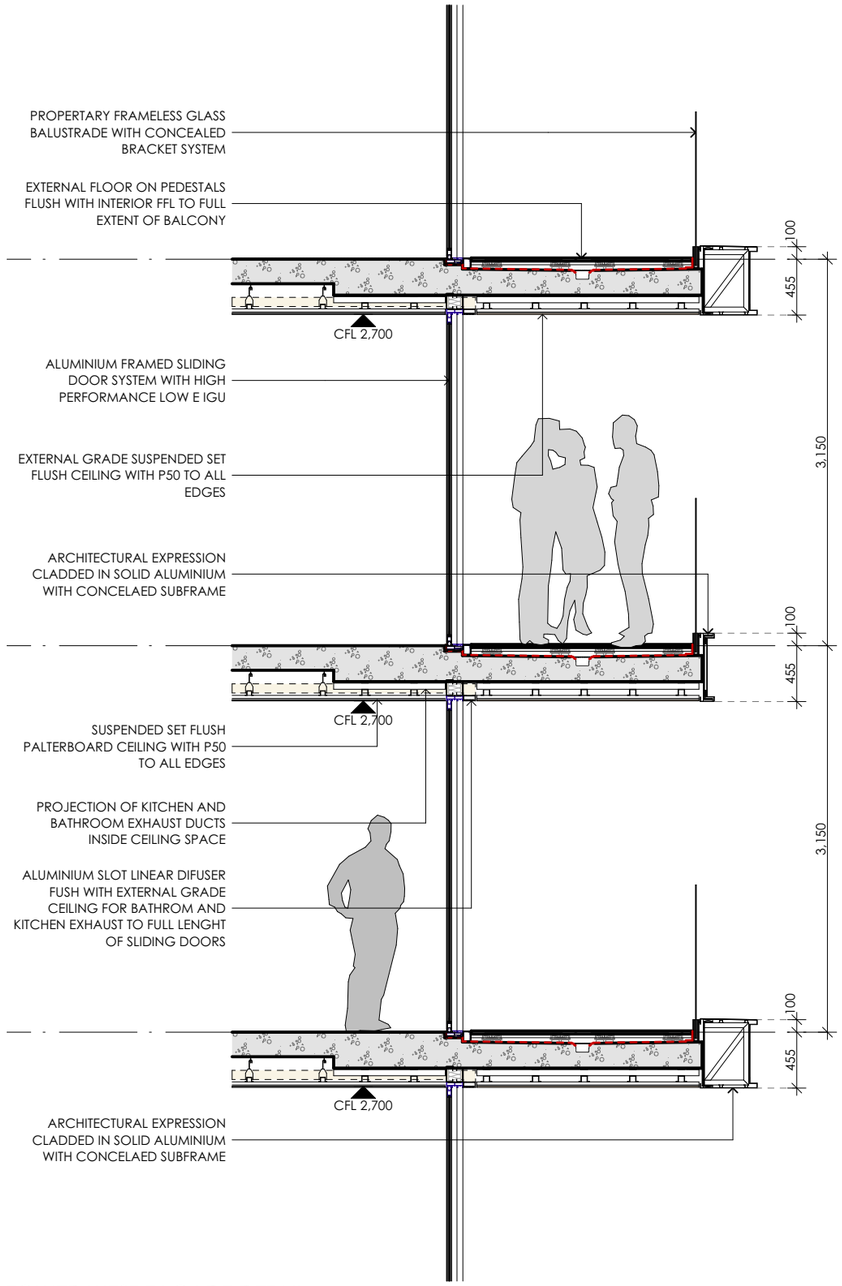

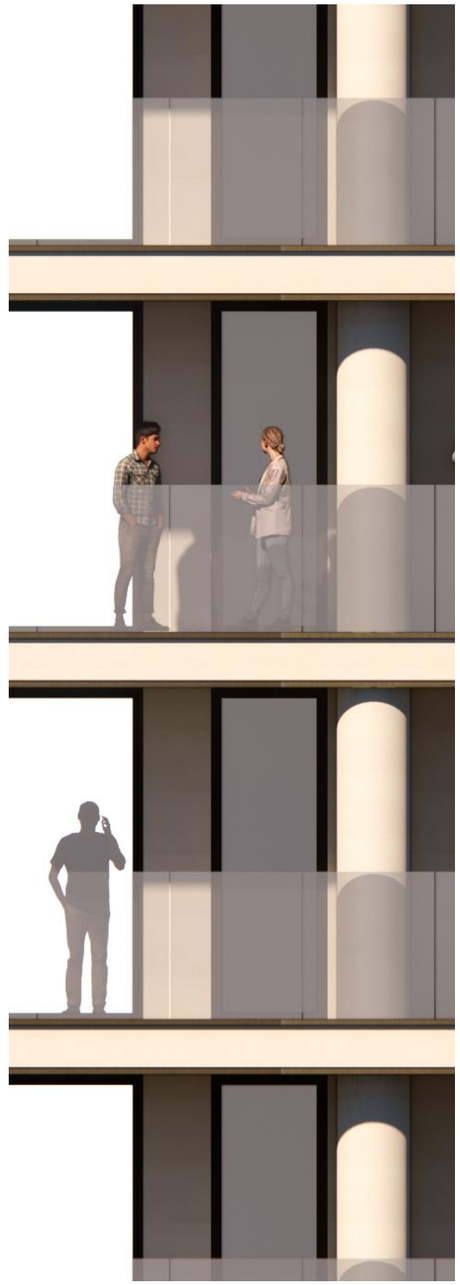

TOWER WEST FACADE DETAIL
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a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

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FACADE DETAIL
FACADE DETAILS

PROJECT NUMBER
22501

DRAWING NUMBER
DA-65001

ISSUE
01

Area Schedule - BTR SCHEME (draft)

Project Title / Address	**270-272 Pacific Highway, Crows Nest**

Document	
Issue	N
Date	4/04/2025
Prepared by	QY
Checked by	PR

Site	
Site Area	3,796m²
Allowable FSR	5.60
Proposed FSR Excl. Basement GFA	**5.60:1**
Residential FSR	*4.6:1*
Non-Residential FSR	*1:1*
Allowable GFA	21,258m²
Proposed Total GFA	**21,258m²**
Proposed Height	16 Storeys
Total height above ground	53.55m

Affordable Housing	
Affordable Housing 3% Residential GFA	526m²

Apartments	
Total Apartment Numbers	168 Apts
Total Adaptable Apartments	44 Apts

Parking		
Cars Req Commercial (1/400sqm)	1 spaces	
Cars Req BTR (0.2/Dewlling)	34 spaces	*as per Section 74 (d)(i)*
Cars Req Medical(1/70sqm) by TTPP	45 spaces	
Courier Parking	2 spaces	

Bikes			
Residential			
Bike	(1/1 Dwelling)- Residential	168	*Level B Security*
Visitor Bikes	(1/10 Residential Dwellings)	17	*Level C Security*
Non - Residential Bikes			
Bike	(1/150sqm)- Commercial	1	*Level B Security*
	(1/5 Practitioners)Medical	16	*Practitioner assumption* 80
	(1/250m2)- Retail Service	2	
Visitor Bikes	(1/400sqm)commerical	1	*Level C Security*
	(1/200sqm)medical	16	
	(2+1/100m² over 100m²) Retail	5	
Non-Residential EOT Shower (1/10 Bikes)		4	
Motorcycle Parking (1/10 Carspace)		8	

Level	Use	RL (m)	Floor-to-Floor (m)	GBA (sqm)	Non-Residential GFA* (sqm)	Non-Residential NSA/NLA (sqm)	Residential GFA* (sqm)	Residential NSA/NLA (sqm)	GFA/GBA (%)	NLA/GFA (%)	Resi-Communal (GFA) Internal Amenities (sqm)	Resi-Communal Outdoor Terrace (sqm)
roof	Lift over run/Solar Farn	150.55	2.00									
Level 15	Residential	147.40	3.15	430			333	264	77%	79%		
Level 14	Residential/Plant/Communal Terrace	144.25	3.15	545			435	269	80%	62%	100	200
Level 13	Residential	141.00	3.25	1,362			1,103	945	81%	86%		
Level 12	Residential/Communal Terrace	137.85	3.15	1,510			1,205	950	80%	79%	100	235
Level 11	Residential	134.60	3.25	1,613			1,313	1,148	81%	87%		
Level 10	Residential	131.45	3.15	1,672			1,313	1,148	79%	87%		76
Level 9	Residential	128.30	3.15	1,613			1,313	1,148	81%	87%		
Level 8	Residential	125.15	3.15	1,672			1,313	1,148	79%	87%		76
Level 7	Residential	122.00	3.15	1,613			1,313	1,148	81%	87%		
Level 6	Residential	118.85	3.15	1,672			1,313	1,148	79%	87%		76
Level 5	Residential	115.70	3.15	1,613			1,313	1,148	81%	87%		
Level 4	Residential	112.55	3.15	1,672			1,289	1,118	77%	87%		76
Level 3	Residential / Plant/Communal Terrace	109.40	3.15	1,608			1,289	1,118	80%	87%		
Level 2	Non-Residential	105.70	3.70	2,375	969	953	925	430	80%	73%	427	225
Level 1	Non-Residential	102.00	3.70	2,416	1,601	1,581	520	506	88%	98%		
Ground	Resi-Lobby/Loading/Non-Residential	97.00	5.00	2,623	1,023	968	944	363	75%	68%	425	
Basement 1	Parking Bike/Store/EOT	94.00	3.00	3,087	128	-	303	-			-	-
Basement 2	Parking/Store	91.00	3.00	1,803								
Cars	82 spaces		53.6m	30,899m²	**3,721m²**	**3,502m²**	**17,537m²**	**13,999m²**	69%	82%	**1,052m²**	**964m²**
Motorcycles	8 spaces											
Bikes	226 spaces											

Total GFA	**21,258m²**
Total NLA	**17,501m²**

% Site Area	**53.11%**
Area/Dwelling	**12m²**

Apartment Typology

TYPOLOGY STUDIO	1 BED	2 BED	3 BED	4 BED	#APARTMENTS	ADAPTABLE APTS
	2	2	-		4	1
	2	1	-		3	1
1	4	4	3		12	3
1	4	3	3		11	3
2	4	4	4		14	4
2	4	4	4		14	4
2	4	4	4		14	4
2	4	4	4		14	4
2	4	4	4		14	4
2	4	4	4		14	4
2	4	4	4		14	4
2	6	2	4		14	4
2	8	-	2	2	14	4
		2	3		5	
		6	1		7	
APARTMENT NUMBER					**TOTAL APTS**	TOTAL ADAPTABLE
20	54	48	44	2	**168 Apts**	44 Apts
APARTMENT MIX						
12%	32%	29%	26%	1%	100%	26%

Car Space

	Retail (sqm)	Office (sqm)	Medical (sqm)	Residential (Apts)
				4
				3
				12
				11
				14
				14
				14
				14
				14
				14
				14
				14
				14
			969	5
			1,601	
	396	65	562	7
Total Area	396m²	65m²	3,132m²	
Total Apartment	-		-	168 Apts
Cars	1 cars		45 cars	34 cars

Notes

1) Area schedule is a draft and subject to review and update with design development

2) GBA for basement levels not included in the overall calculations

Definitions

Gross Floor Area

GFA is typically defined by the relevant Planning Authority for a project.

GFA is measured from the internal face of external walls or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor.

Net Lettable Area

NLA as defined by PCA Method of Measurement 2008

NLA means the sum of its whole floor lettable area, which is measured by the internal finished surfaces of permanent internal walls and the internal finished surfaces of dominant portions of the permanent outer building walls.

i.e
included dividing wall between sole-occupancy units for the apartment floors
stairs within the sole occupancy units are measureded on both floors

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w. WWW.FITZPATRICKPARTNERS.COM
a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

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AUSTRALIA

PHASE: Development Application

PROJECT NORTH

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SILVERNIGHT
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SCALE @A3
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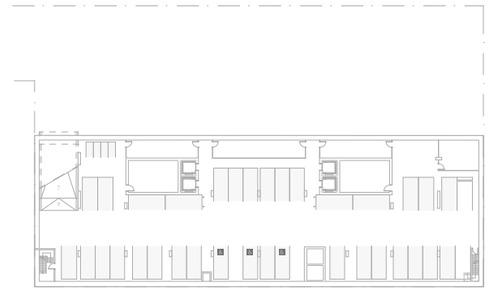
DRAWING
AREA SCHEDULES
AREA SCHEDULE SUMMARY

PROJECT NUMBER **22501**

DRAWING NUMBER **DA-92001**

ISSUE **02**



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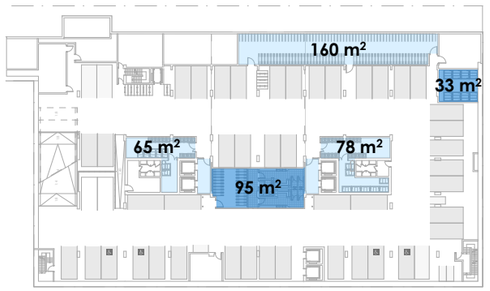

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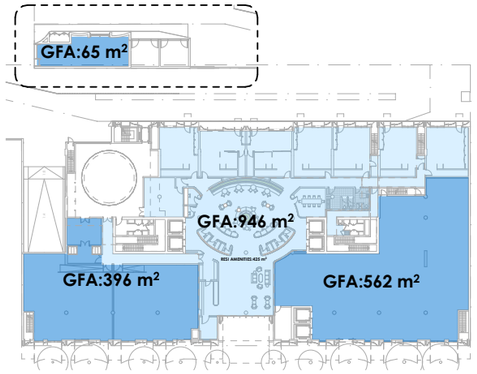

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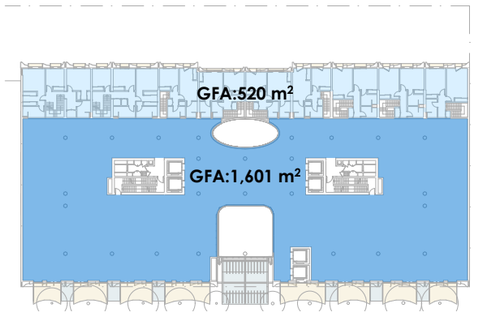

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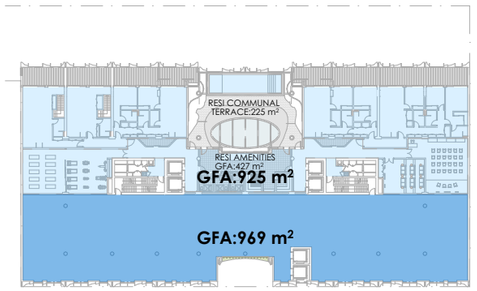

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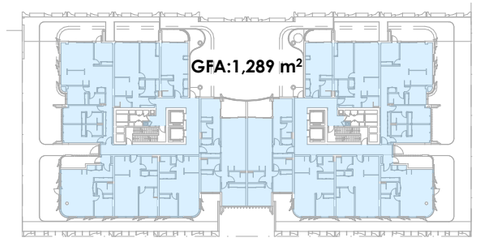

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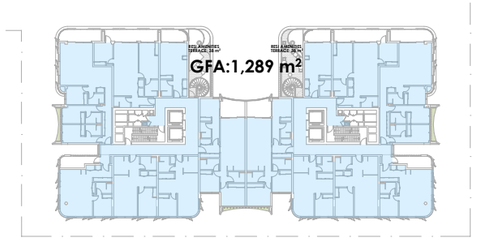

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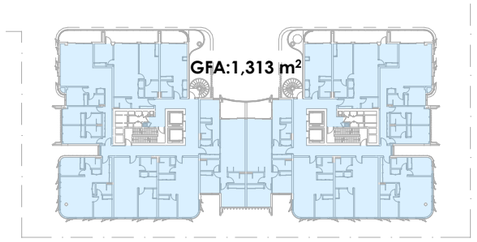

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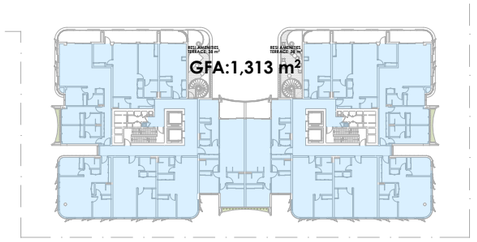

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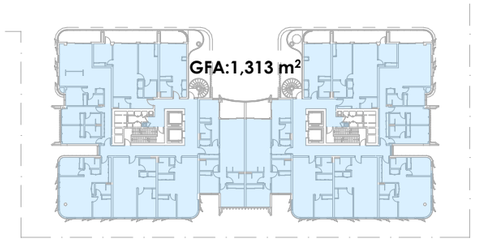

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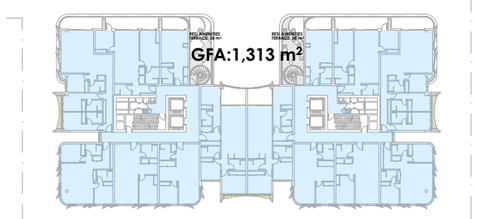

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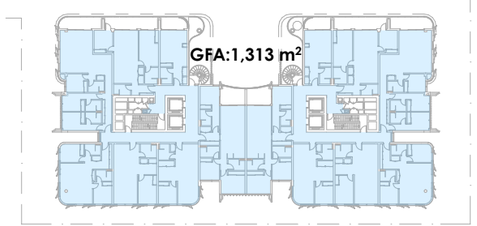

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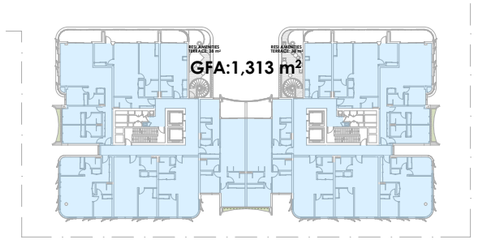

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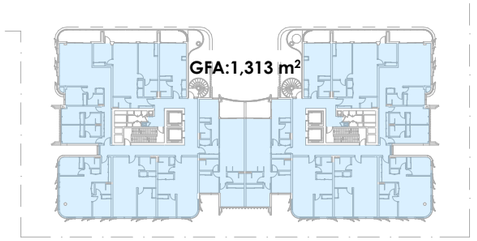

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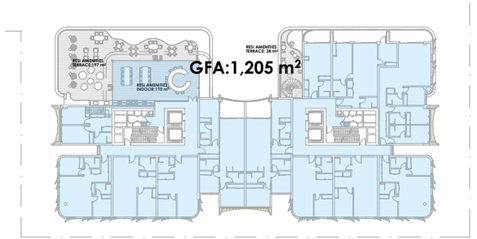

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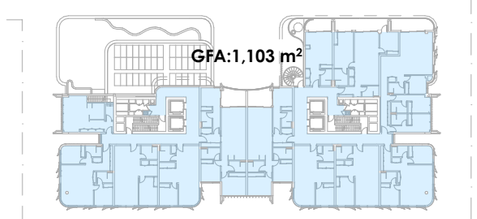

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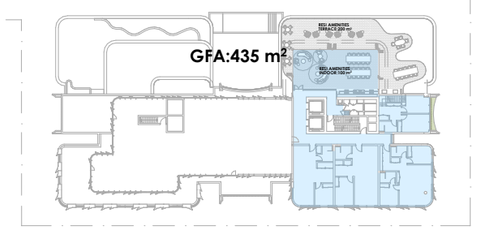

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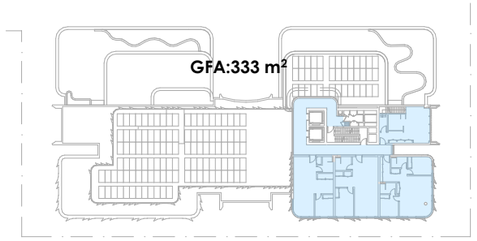

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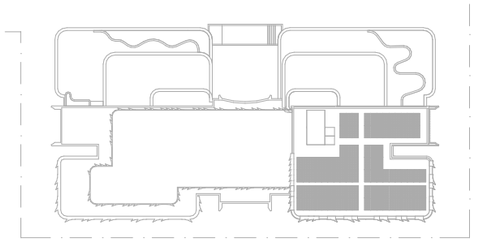

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DRAWING
AREA SCHEDULES
AREA SCHEDULE - GFA

PROJECT NUMBER	DRAWING NUMBER	ISSUE
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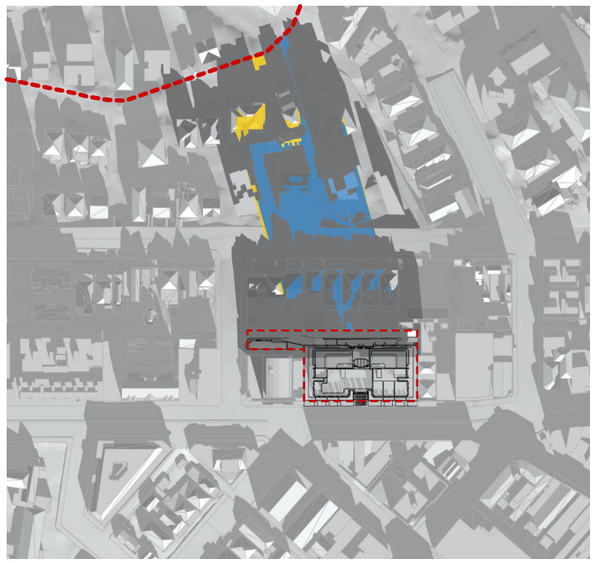

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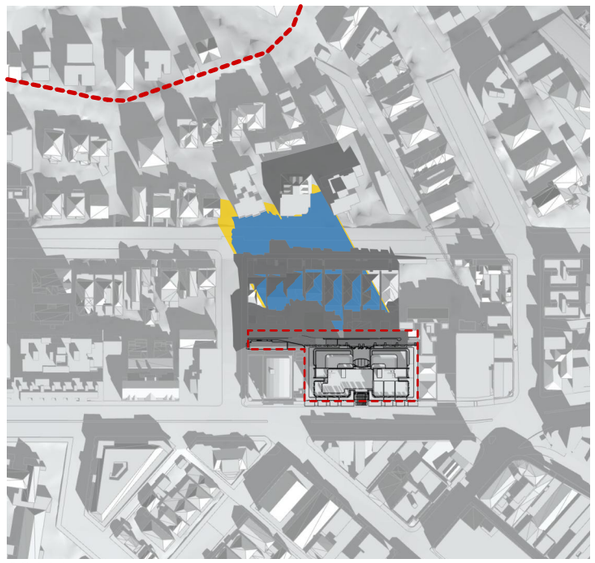
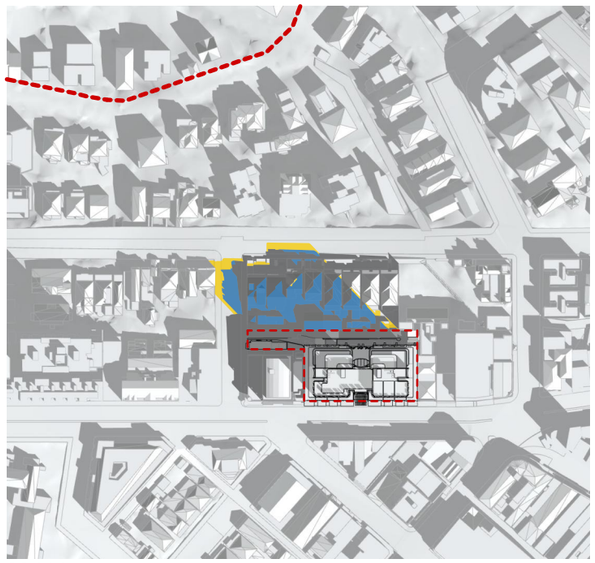


10AM



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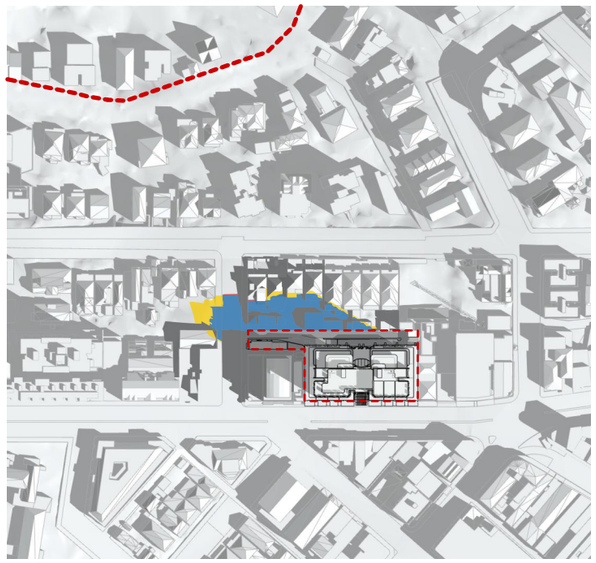

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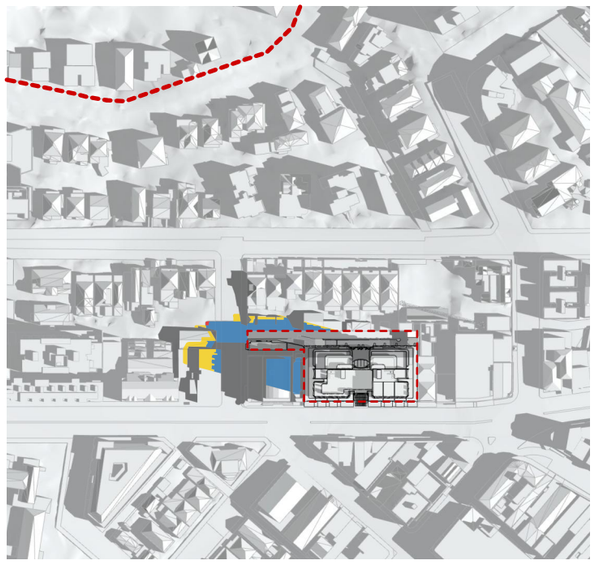

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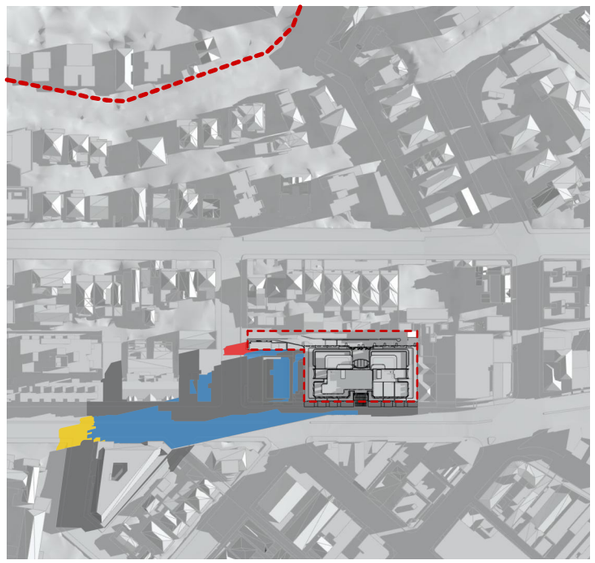
2PM



3PM

PRECINCT BOUNDARY

EXISTING SHADOW

SHADOW BY PROPOSED BTR AND APPROVED DA SCHEME

ADDED SHADOW BY PROPOSED BTR SCHEME COMPARE TO APPROVED DA SCHEME

ADDITIONAL SOLAR ACCESS COMPARE TO APPROVED DA SCHEME

fitzpatrick +partners

p. +61 (0)2 82748200
e. ENQUIRIES@FITZPATRICKPARTNERS.COM
w. WWW.FITZPATRICKPARTNERS.COM
a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION	CHK
02	4/04/2025		

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE @A3

DRAWN BY

APPROVED BY

30mm ON ORIGINAL

PRINT DATE 4/04/2025

DRAWING
APPENDIX
SHADOW DIAGRAM

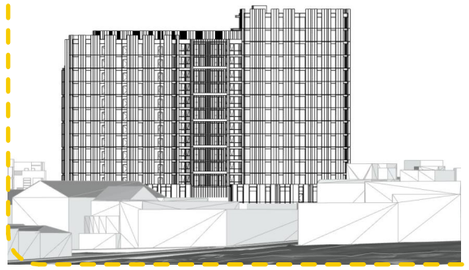
PROJECT NUMBER **22501**

DRAWING NUMBER **DA-94001**

ISSUE **02**

OUTSIDE ADG SOLAR ACCESS TIME FRAME

WITHIN ADG SOLAR ACCESS TIME FRAME



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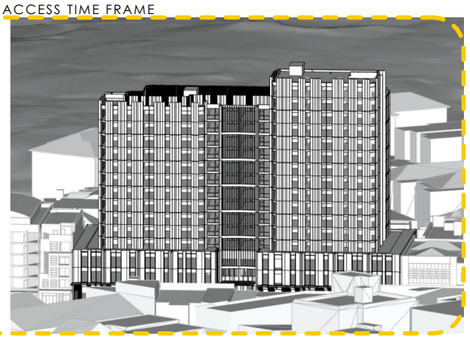

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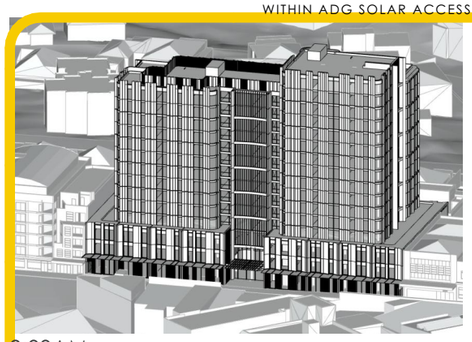

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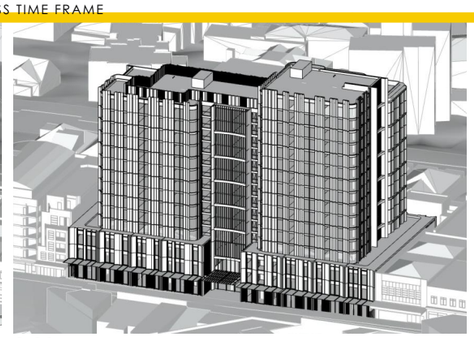

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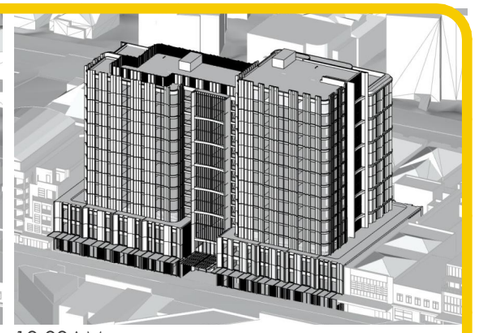

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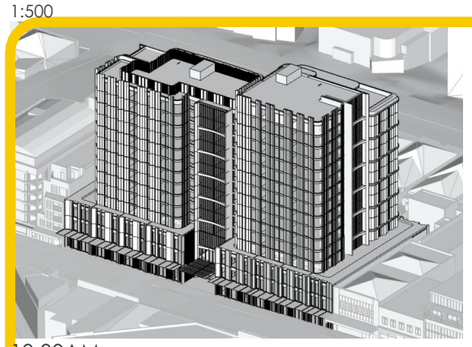

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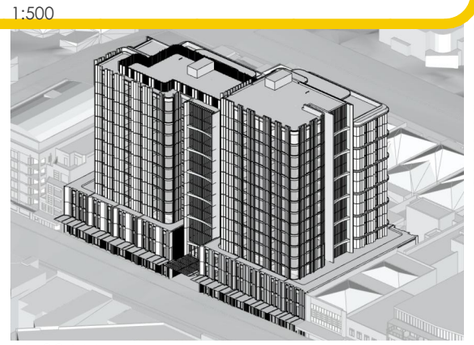

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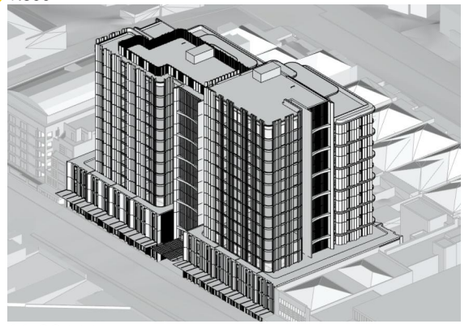

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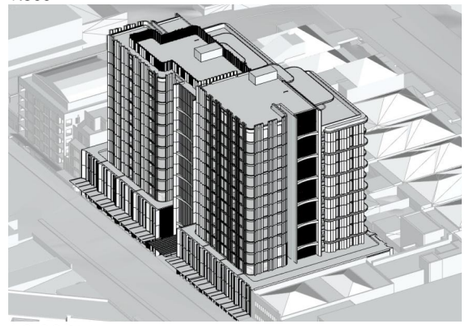

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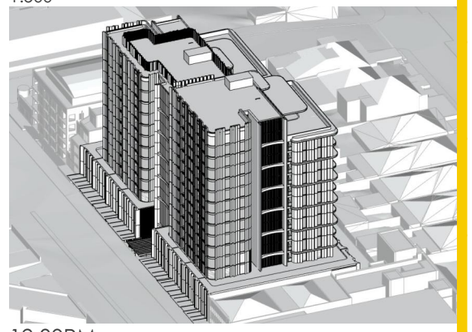

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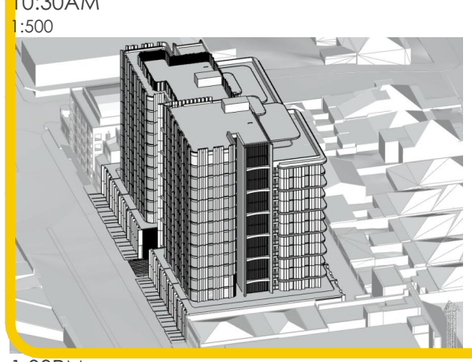

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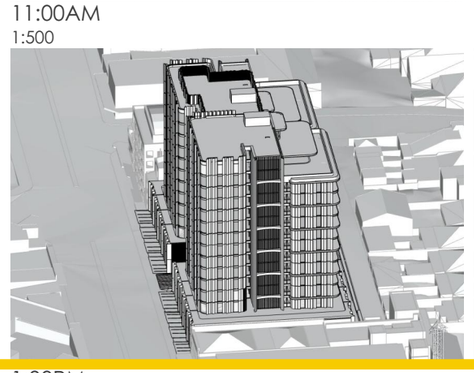

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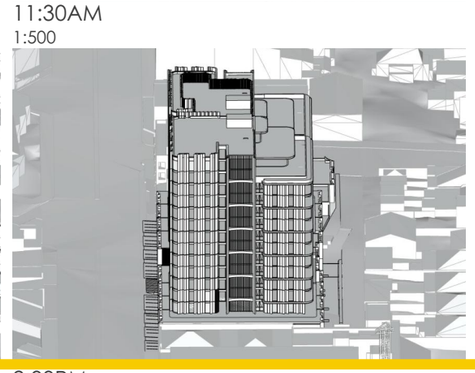

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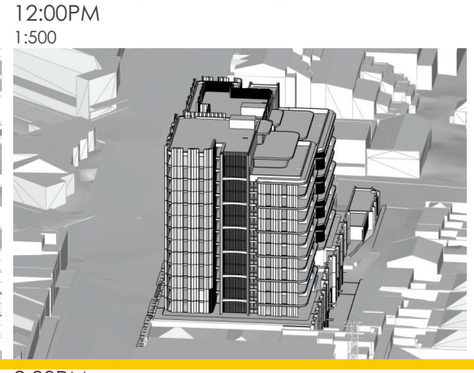

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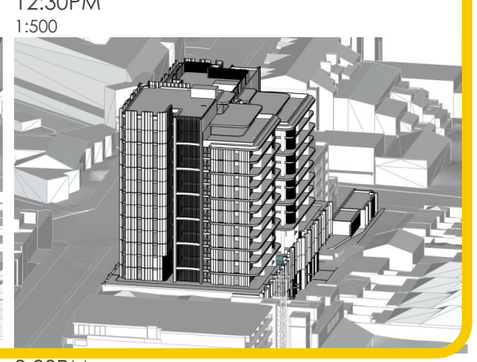

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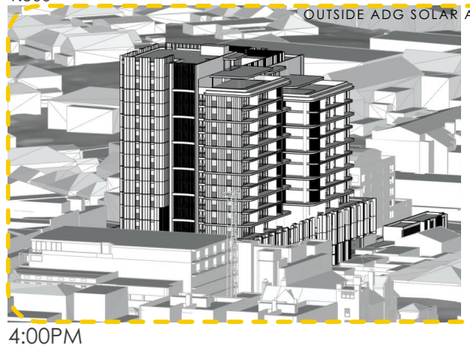
OUTSIDE ADG SOLAR ACCESS TIME FRAME



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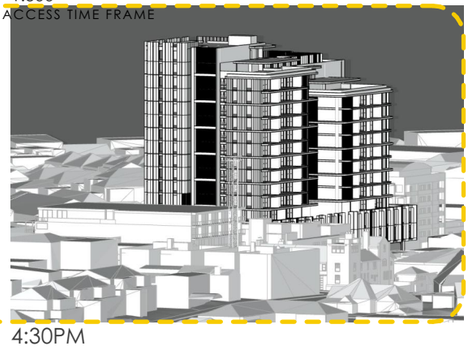

4:30PM
1:500

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p. +61 (0)2 82748200
e. ENQUIRIES@FITZPATRICKPARTNERS.COM
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AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
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SCALE
1:500 @A3

30mm ON ORIGINAL

DRAWN BY

APPROVED BY

PRINT DATE
4/04/2025

DRAWING
APPENDIX
SUN EYE VIEW - EXISTING CONDITION

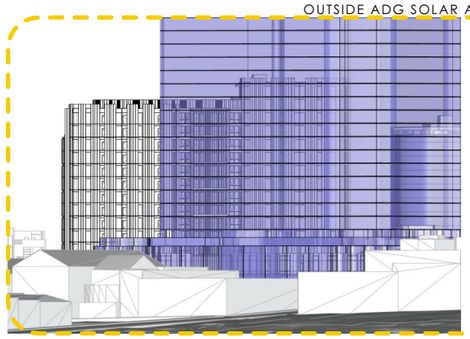
PROJECT NUMBER
22501

DRAWING NUMBER
DA-94002

ISSUE
02

OUTSIDE ADG SOLAR ACCESS TIME FRAME

WITHIN ADG SOLAR ACCESS TIME FRAME



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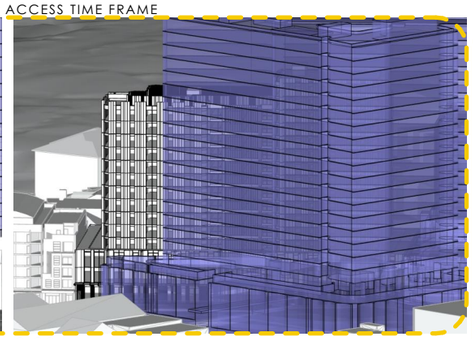

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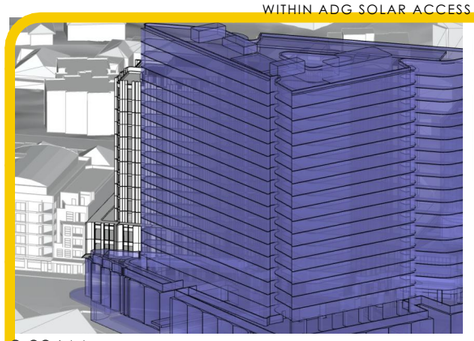

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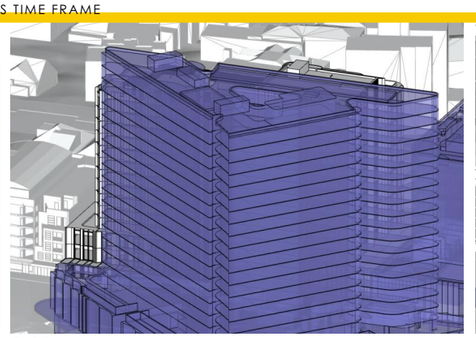

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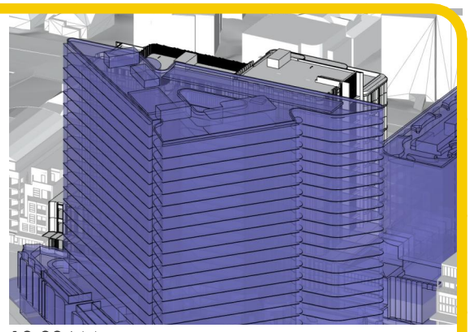

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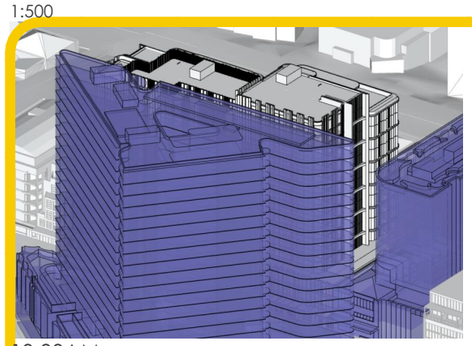

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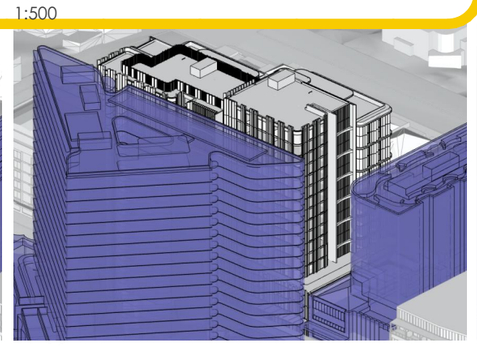

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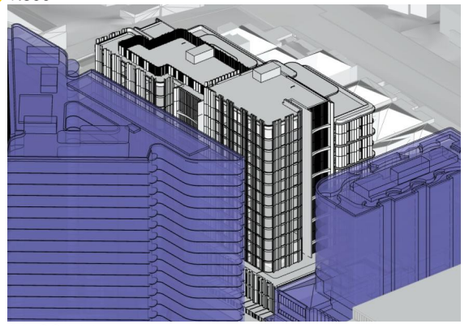

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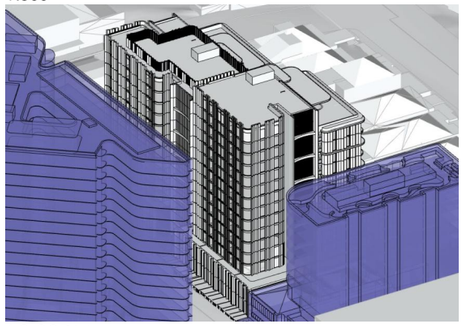

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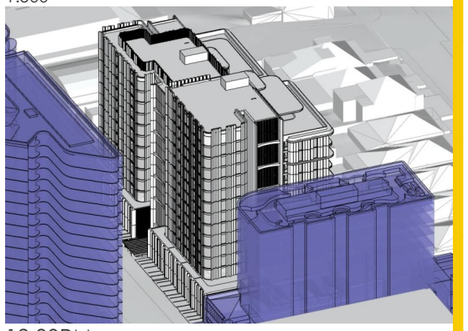

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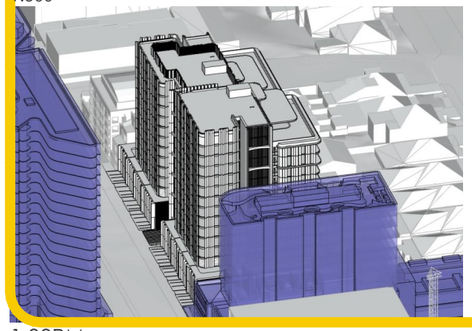

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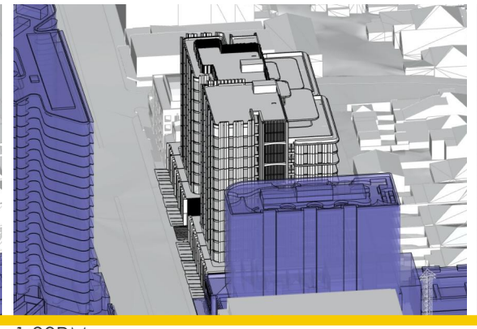

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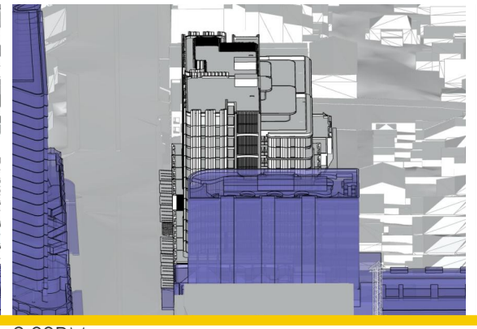

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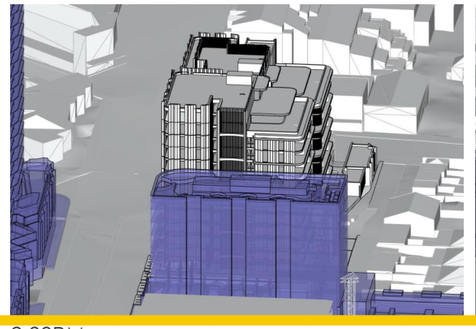

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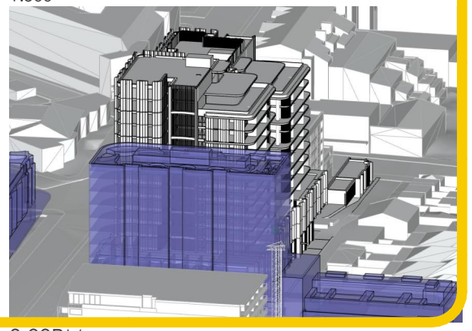

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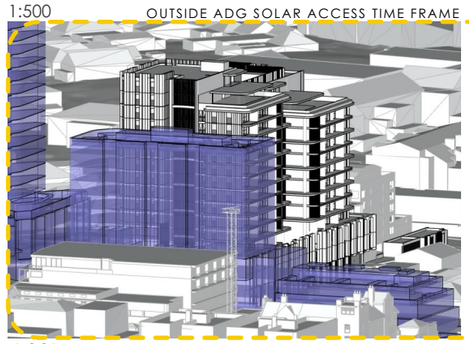
OUTSIDE ADG SOLAR ACCESS TIME FRAME



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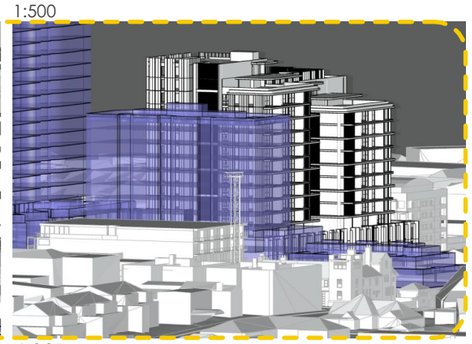

4:30PM
1:500

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SCALE
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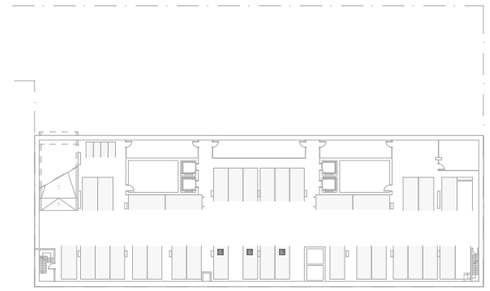
DRAWING
APPENDIX
SUN EYE VIEW - WITH FUTURE DA

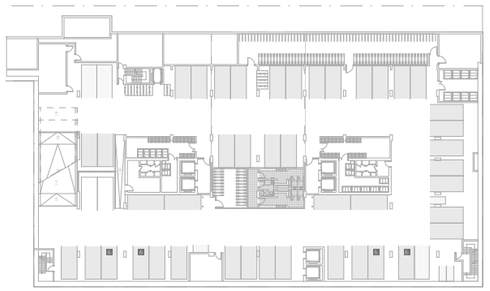
PROJECT NUMBER
22501

DRAWING NUMBER
DA-94003

ISSUE
02



BASEMENT 02



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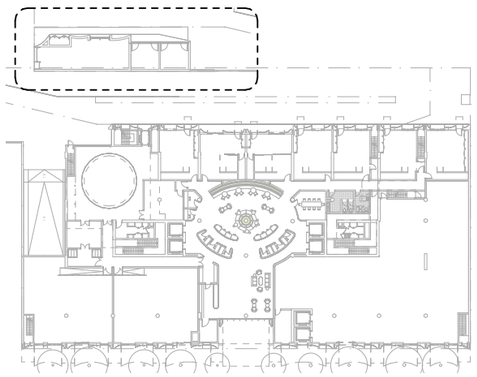
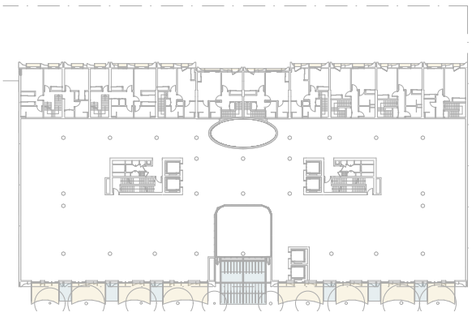


GROUND LEVEL



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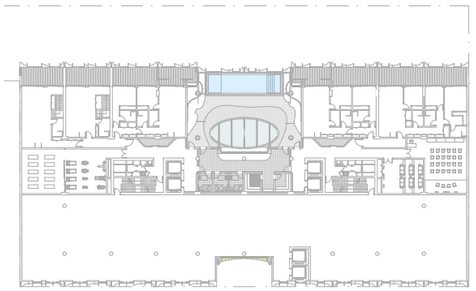

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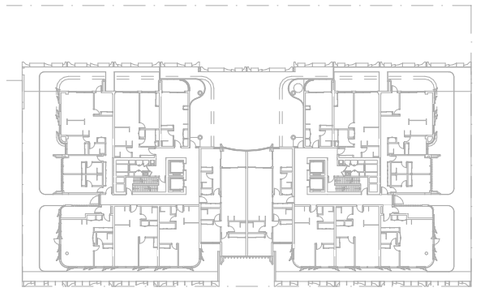

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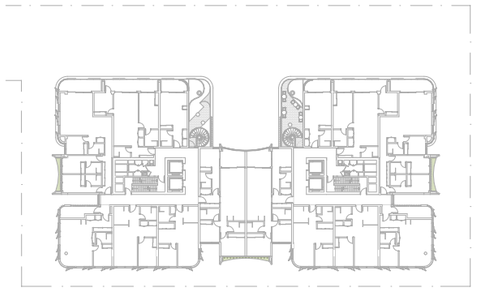

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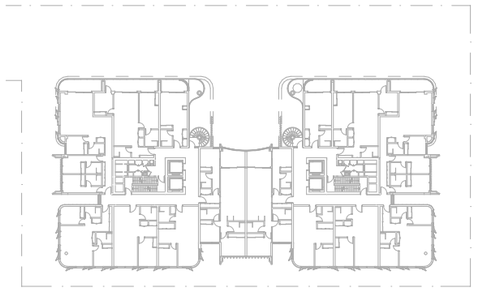

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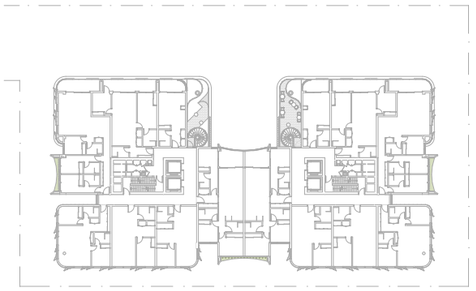

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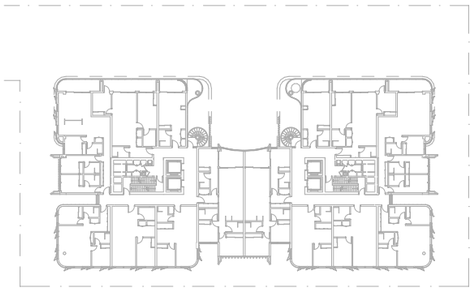

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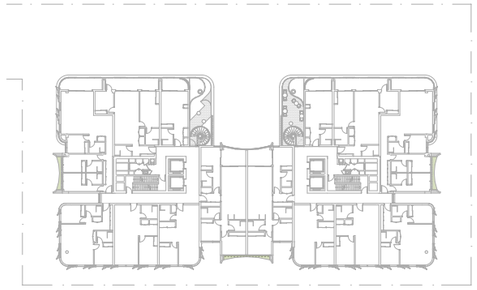

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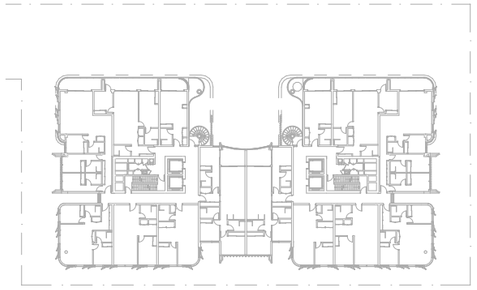

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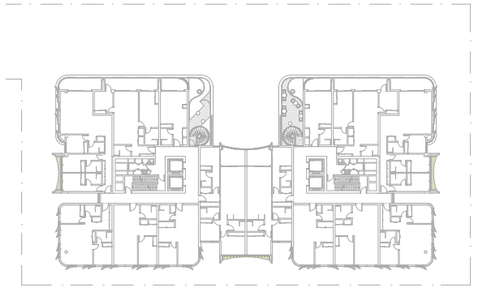

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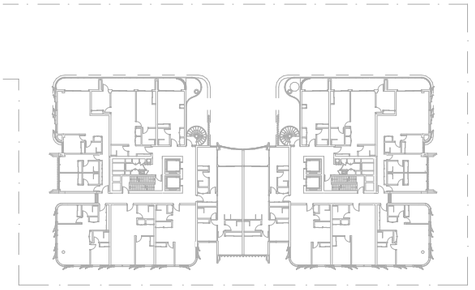

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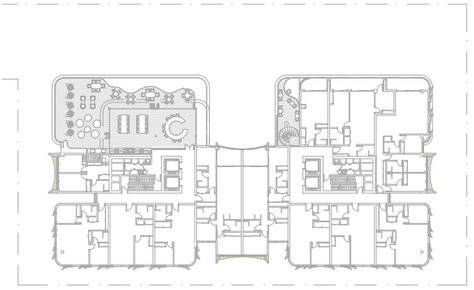

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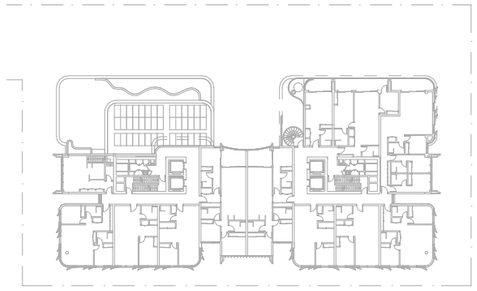

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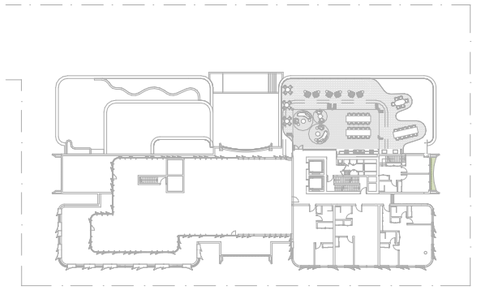

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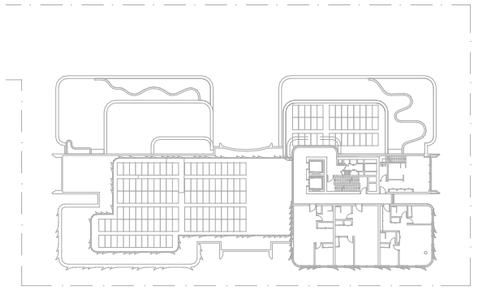

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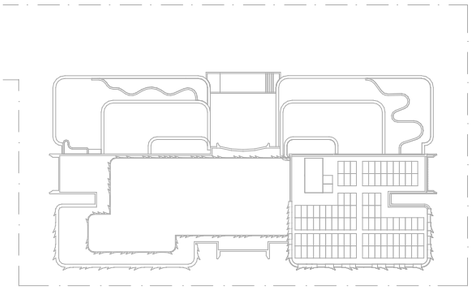

ROOF

fitzpatrick +partners

p. +61 (0)2 8274800
e. ENQUIRIES@FITZPATRICKPARTNERS.COM
w. WWW.FITZPATRICKPARTNERS.COM
a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION
01	4/04/2025	

CHK

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE @A3

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DRAWN BY

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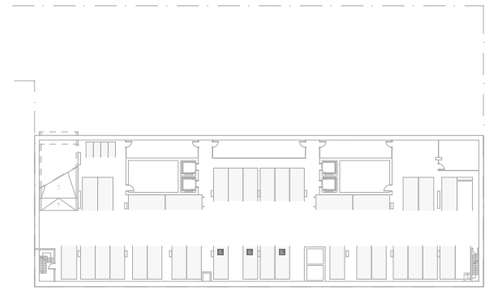
PRINT DATE 4/04/2025

DRAWING
APPENDIX
ADG DIAGRAMS - SOLAR ACCESS

PROJECT NUMBER **22501**

DRAWING NUMBER **DA-94004**

ISSUE **01**



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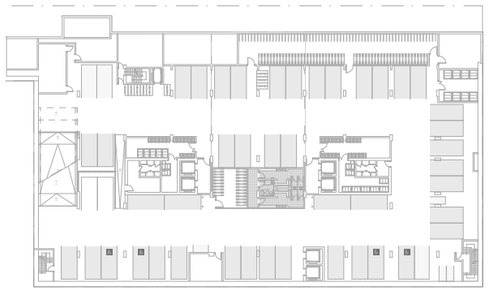

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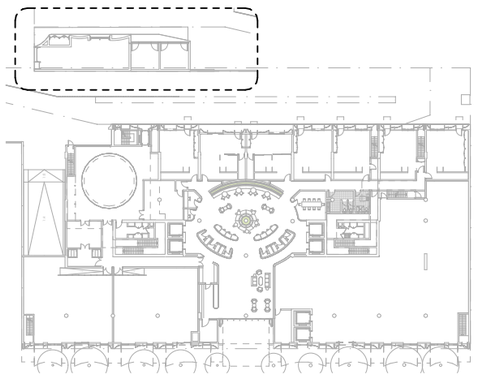

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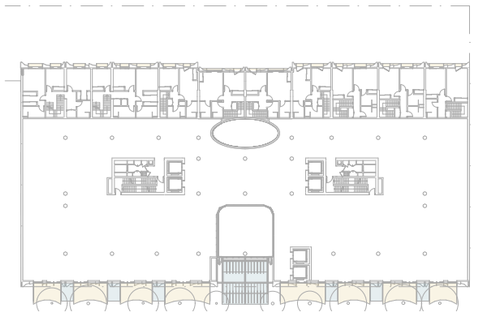

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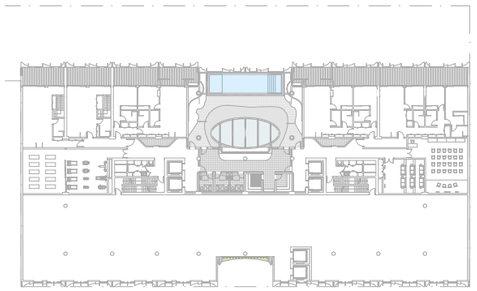

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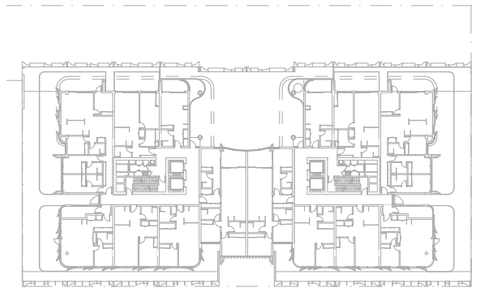

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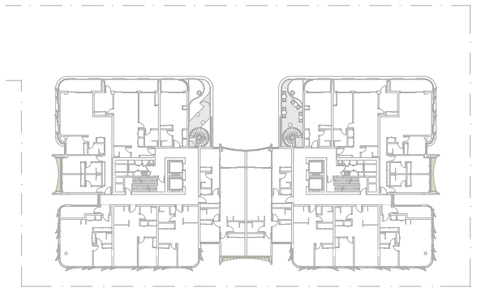

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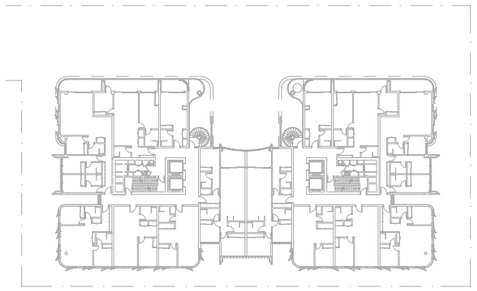

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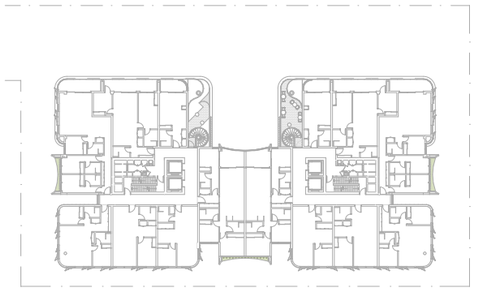

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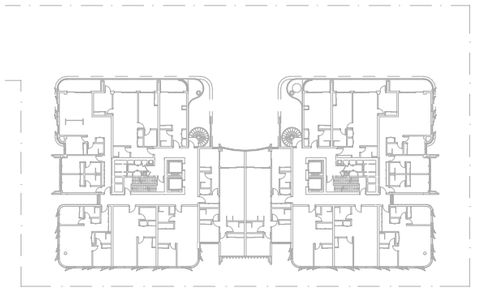

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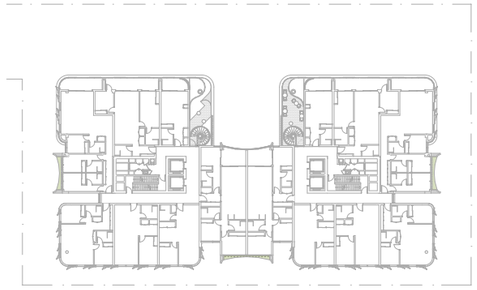

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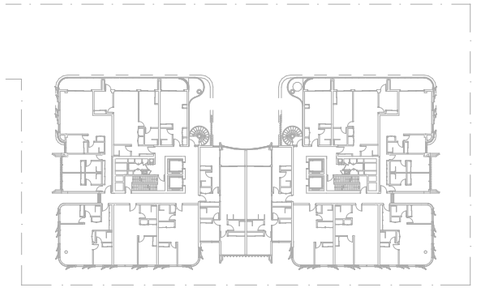

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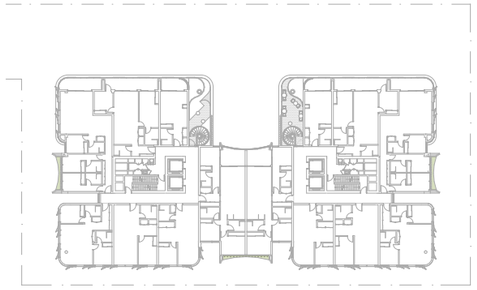

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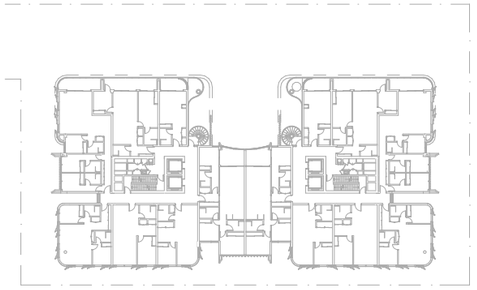

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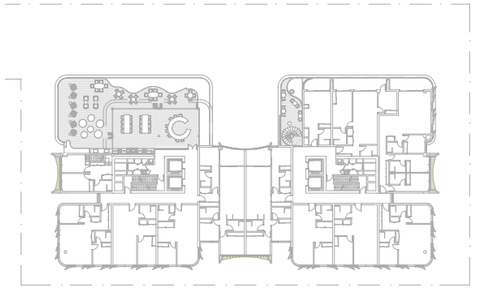

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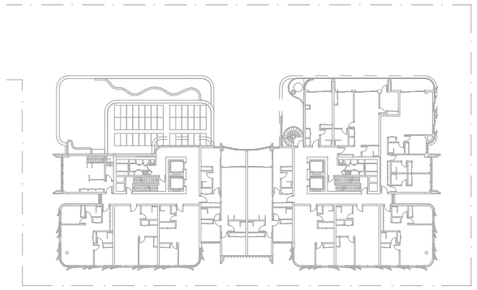

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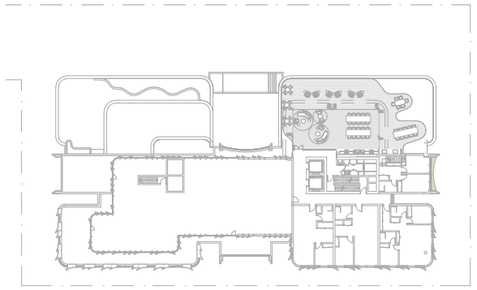

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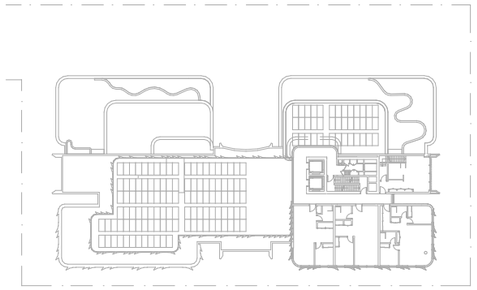

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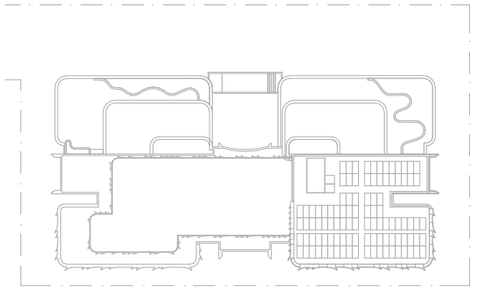

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AMENDMENTS

REV.	DATE	DESCRIPTION
01	4/04/2025	

CHK

PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE @A3

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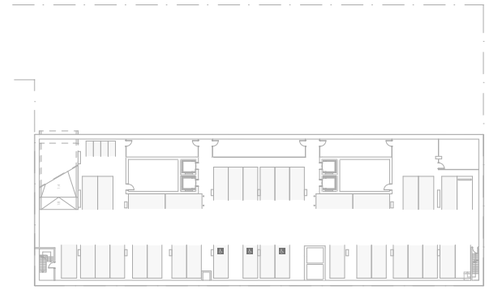
PRINT DATE 4/04/2025

DRAWING
APPENDIX
ADG DIAGRAMS - CROSS VENTILATION

PROJECT NUMBER **22501**

DRAWING NUMBER **DA-94005**

ISSUE **01**



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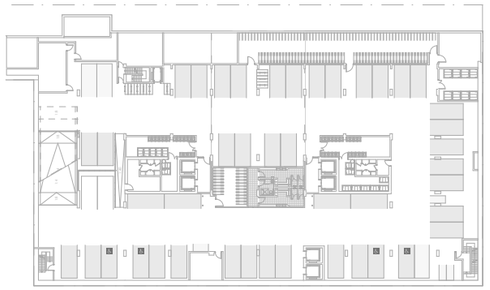

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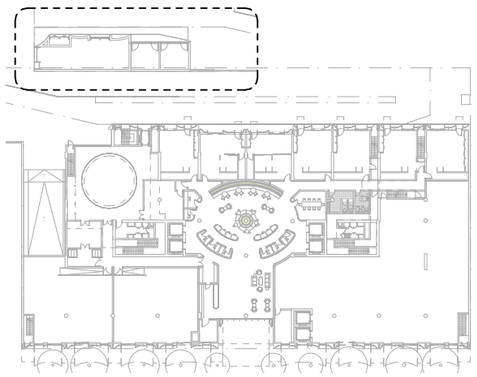

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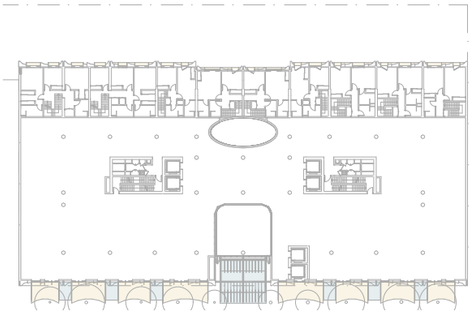

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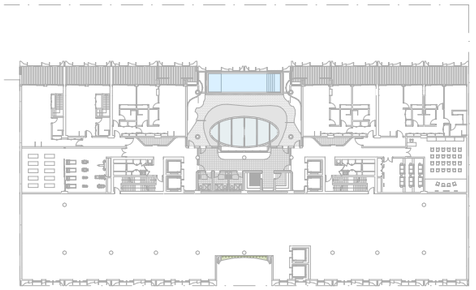

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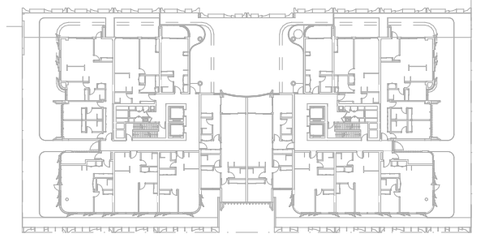

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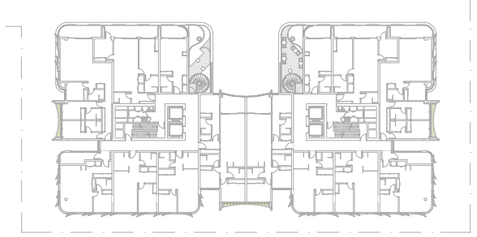

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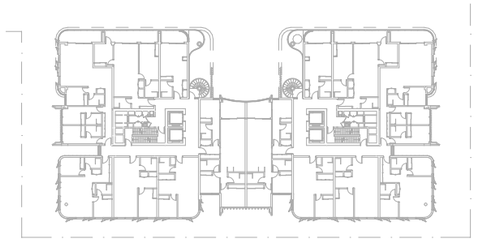

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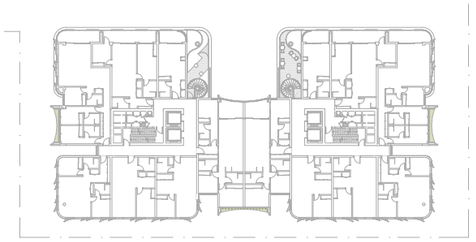

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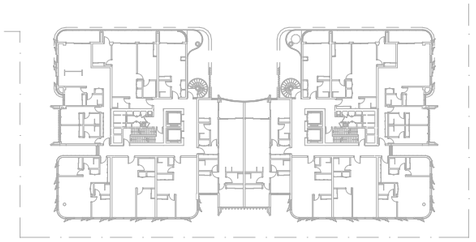

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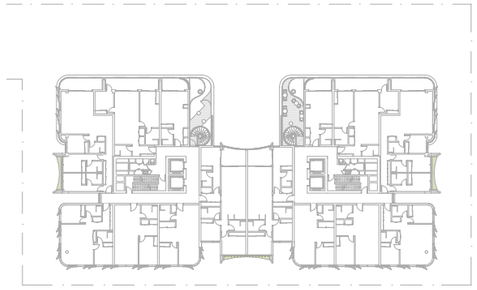

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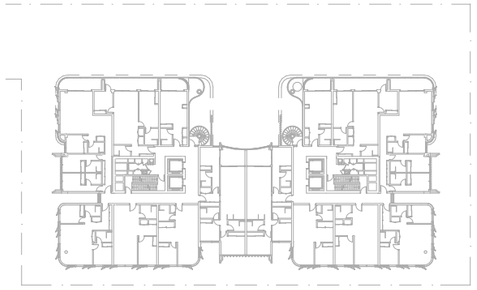

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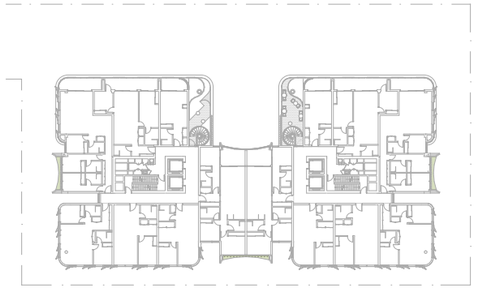

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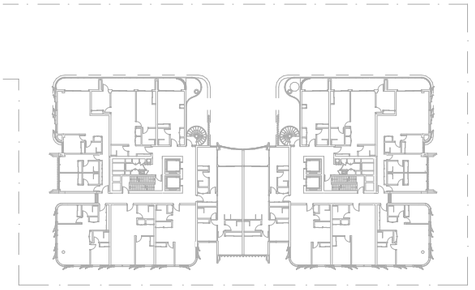

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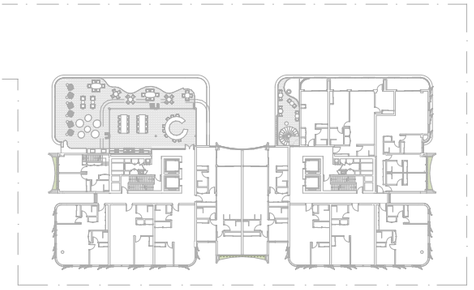

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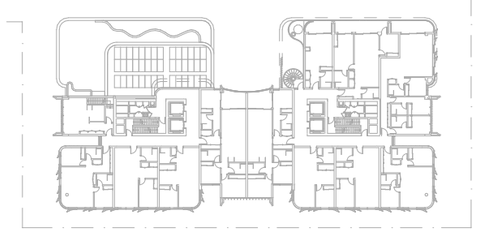

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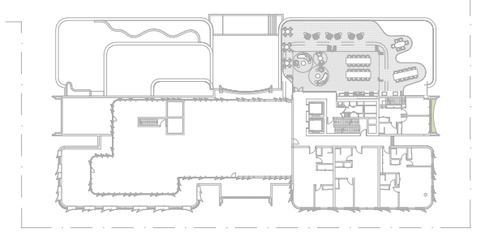

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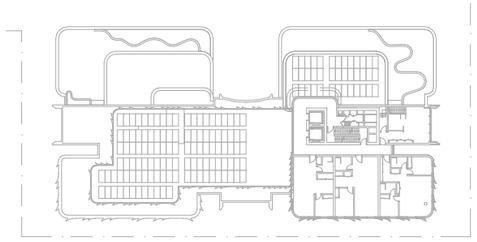

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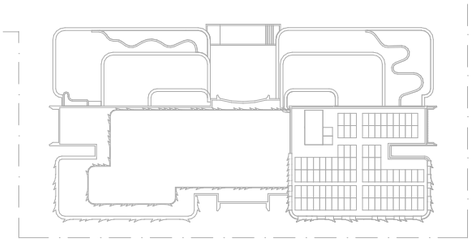

ROOF

fitzpatrick +partners

p. +61 (0)2 8274820

e. ENQUIRIES@FITZPATRICKPARTNERS.COM

w. WWW.FITZPATRICKPARTNERS.COM

a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

REV.	DATE	DESCRIPTION
01	4/04/2025	

CHK

PROJECT
270 PACIFIC HWY BTR
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PHASE: Development Application

PROJECT NORTH

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SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

SCALE @A3

30mm ON ORIGINAL

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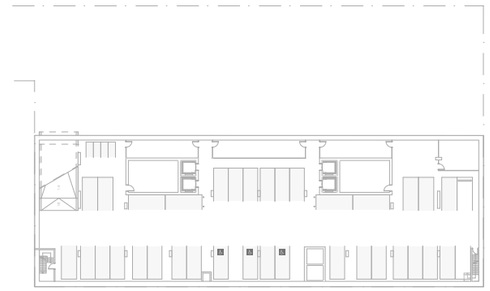
PRINT DATE 4/04/2025

DRAWING
APPENDIX
ADG DIAGRAMS - STORAGE

PROJECT NUMBER **22501**

DRAWING NUMBER **DA-94006**

ISSUE **01**



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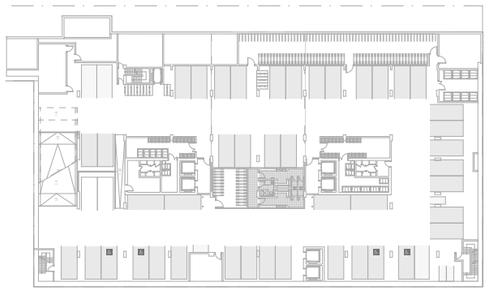

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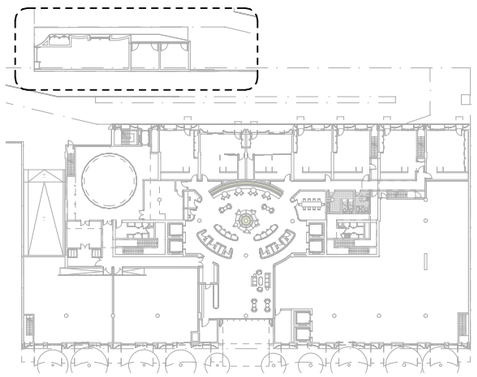

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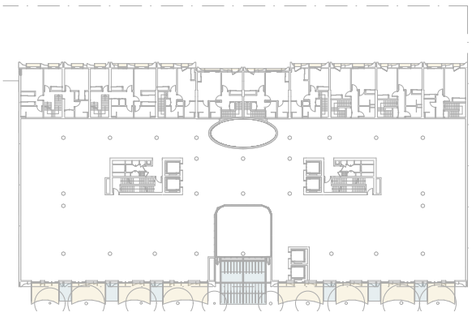

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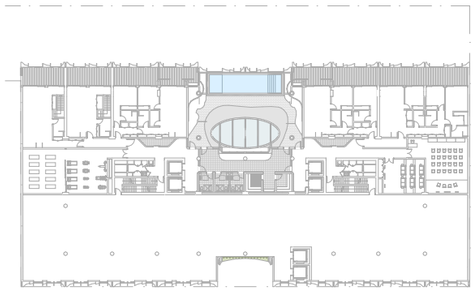

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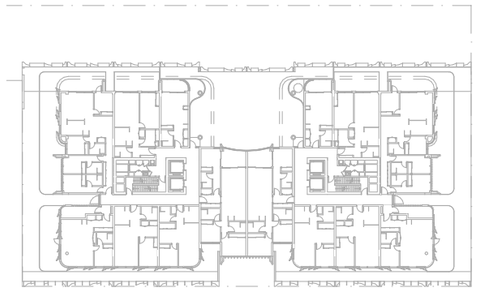

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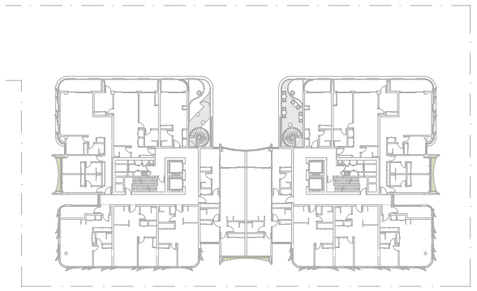

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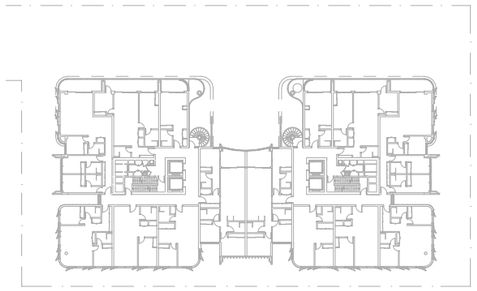

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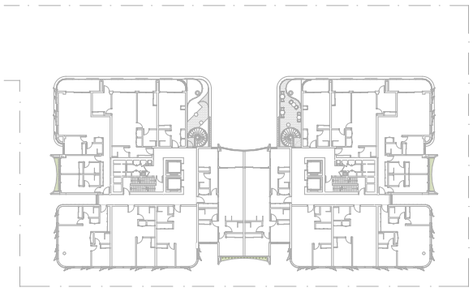

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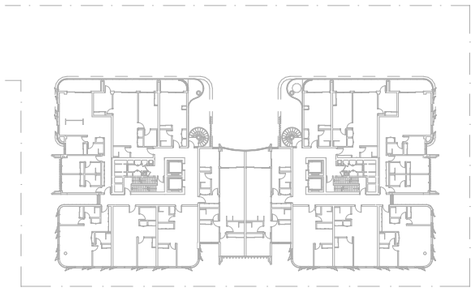

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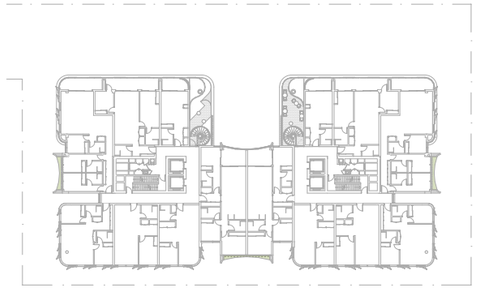

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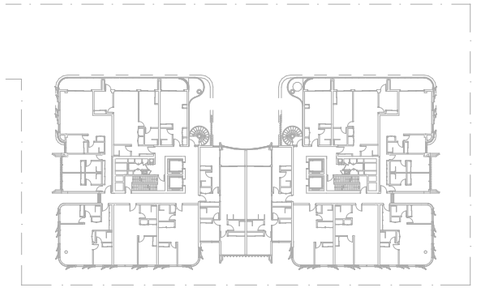

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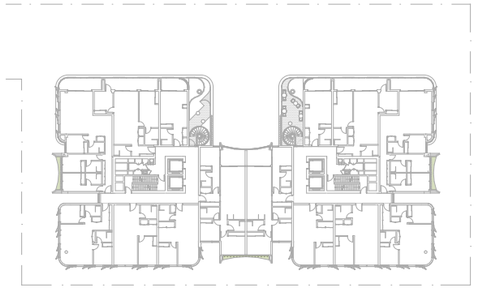

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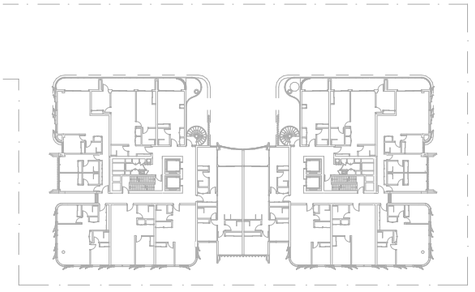

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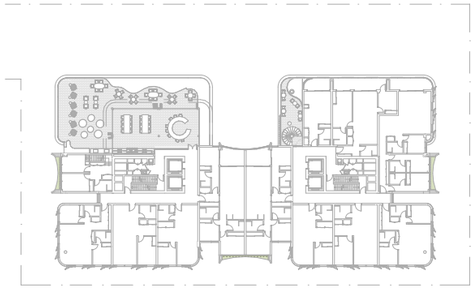

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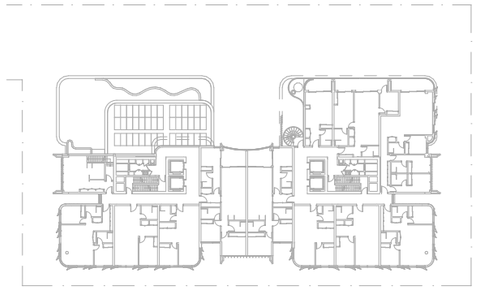

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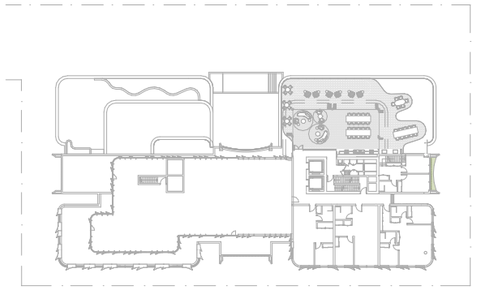

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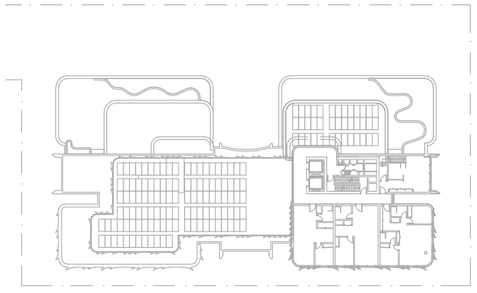

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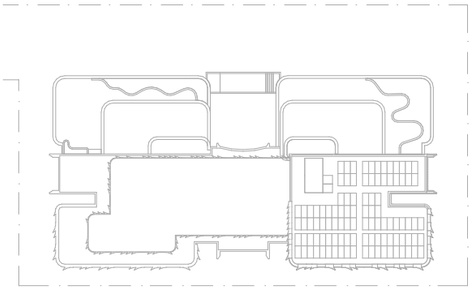

ROOF

fitzpatrick +partners

p. +61 (0)2 8274820
e. ENQUIRIES@FITZPATRICKPARTNERS.COM
w. WWW.FITZPATRICKPARTNERS.COM
a. LEVEL 6, 9 CASTLEREAGH STREET, SYDNEY 2000, AUSTRALIA

AMENDMENTS

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PROJECT
270 PACIFIC HWY BTR
270 PACIFIC HIGHWAY
CROWS NEST NSW 2064
AUSTRALIA

PHASE: Development Application

PROJECT NORTH

CLIENT
SILVERNIGHT
Darling Park Tower 2, L16, 201 Sussex Street, Sydney NSW 2000 Australia

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Appendix B

About This Report

About this Report

November 2023

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

continued next page

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

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Appendix C

Data Quality Objectives

1. Data quality objectives

The DSI has been devised broadly in accordance with the seven-step data quality objectives (DQO) process which is provided in Appendix B, Schedule B2 of NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).

Table 1: Data quality objectives

Step	Summary
1: State the problem	The objective of the investigation is to assess the contamination status of the site with respect to the proposed land use. The report is being undertaken as the site is to be redeveloped. A preliminary conceptual site model (CSM) has been prepared (Section 7) for the proposed development. The project team consisted of experienced environmental engineers and scientists working in the roles of Project Principal, Project Reviewer, Project Manager and field staff.
2: Identify the decisions / goal of the study	The site history has identified possible contaminating previous uses which are identified in the CSM (Section 7). The CSM identifies the associated contaminants of potential concern (CoPC) and the likely impacted media. The site assessment criteria (SAC) for each of the CoPC are detailed in Appendix E. The decision is to establish whether or not the results fall below the SAC. On this basis, an assessment of the site's suitability from a contamination perspective will be derived and a decision made on whether (or not) further assessment and/or remediation will be required.
3: Identify the information inputs	Inputs will be the analytical results for the CoPC and media (identified in the CSM, Section 7) from NATA accredited laboratories and methods, where possible. The SAC for each of the CoPC are detailed in Appendix E. Field results and observations such as photoionisation detector (PID) and field observations of building debris, ash, odours, staining etc will be used to inform sample selection for laboratory analysis.
4: Define the study boundaries	The lateral boundaries of the investigation area are shown on Drawing 1, Appendix A. The vertical boundaries are to the extent of borehole drilling as reported herein. The assessment is limited to the timeframe over which the field works were undertaken. Constraints to the assessment are identified and discussed in the conclusions of the report, Section 13.
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with the SAC (Appendix E, based on NEPC (2013)). Where guideline values are absent, other sources of guideline values accepted by NEPC (2013) shall be adopted where available and warranted. Where a sample result exceeds the adopted criterion, a further site-specific assessment will be made or recommended as to the risk posed by the presence of that contaminant(s).

Step	Summary
	Initial comparisons will be with individual results then, where required, summary statistics (including mean, standard deviation and 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL)) to assess potential risks posed by the site contamination. Quality control results are to be assessed according to their relative percent difference (RPD) values. For field duplicates, triplicates and laboratory results, RPD values should generally be below 30%; for field blanks and rinsates, results should be at or less than the limits of reporting (NEPC, 2013). The field and laboratory quality assurance assessment is included in Appendix H.
6: Specify the performance or acceptance criteria	Baseline condition: Contaminants at the site exceed the human health and environmental SAC and pose a potentially unacceptable risk to receptors (null hypothesis). Alternative condition: Contaminants at the site comply with the human health and environmental SAC and therefore, do not pose a potentially unacceptable risk to receptors (alternative hypothesis). Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true.
7: Optimise the design for obtaining data	As the purpose of the investigation is to assess the contamination status of the site, the sampling program is reliant on professional judgement to identify and sample the potentially affected areas. Further details regarding the proposed sampling plan are presented in Section 8.

2. References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

Appendix D

Fieldwork Methodology

1. Guidelines

The following key guidelines were consulted for the field work methodology:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).

2. Soil sampling

Soil sampling is carried out in accordance with Douglas' standard operating procedures. The general sampling and sample management procedures comprise:

- collect near surface samples using hand tools and deeper samples directly from the auger head, avoiding soils in contact with the auger head;
- transfer samples in laboratory-prepared glass jars with Teflon lined lids by hand, capping immediately and minimising headspace within the sample jar;
- collect replicate samples in zip-lock bags for photoionisation detector (PID) screening;
- collect ~500 ml samples for fibrous asbestos and asbestos fines (FA and AF) analysis;
- wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- collect 10% replicate samples for quality control (QC) purposes;
- label sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable);
- place samples into a cooled, insulated and sealed container for transport to the laboratory; and
- use chain of custody documentation.

2.1 Field testing

Field testing is carried out in accordance with Douglas' standard operating procedures. The general sampling and sample management procedures comprise:

- calibrate the PID with isobutylene gas at 100 ppm and with fresh air prior to commencement of each successive day's field work;
- allow the headspace in the PID zip-lock bag samples to equilibrate; and
- screen using the PID.

3. Groundwater sampling

3.1 Monitoring well installation

Monitoring wells are constructed using class 18 uPVC machine slotted screen and blank sections with screw threaded joints. The screened section of each well is backfilled with a washed sand filter pack to approximately 0.5 m above the screened interval. Each well is completed with a hydrated bentonite plug of at least 0.5 m thick and then bentonite to the surface, finished with a cast-iron rod box flushed on the surface.

3.2 Monitoring well development

Groundwater monitoring wells are developed as soon as practicable following well installation. The purpose of well development is to remove sediments and/or drilling fluid introduced to the well during drilling and to facilitate connection of the monitoring well to the aquifer. The wells are developed by pumping / bailing to remove a minimum of five well volumes, or until dry.

3.3 Groundwater sampling

Groundwater sampling is carried out in accordance with Douglas' standard operating procedures. Groundwater samples are collected using a low flow peristaltic pump via the micro-purge (minimal drawdown) method. The sampling method is described as follows:

- measure the static water level using an electronic interface probe and record the thickness of LNAPL (if encountered);
- decontaminate the interface probe and cable between monitoring wells by rinsing in a diluted Decon-90 solution and then rinsing in demineralised water;
- lower the well-dedicated tubing into the well then clamped at a level estimated to be 1 m below the top of the water column (provided the depth of the pump is within the screened section) or to the approximate mid-point of the well screen;
- set the pump at the lowest rate possible to minimise drawdown of the water column;
- measure physical parameters by continuously passing the purged water through a flow cell; and
- following stabilisation of the field parameters, collect samples in laboratory-prepared bottles minimising headspace within the sample bottle and cap immediately.

The general groundwater sample handling and management procedures comprise:

- collect 10% replicate samples for QC purposes;
- label sample containers with individual and unique identification details, including project number and sample location;
- place the sample jars into a cooled, insulated and sealed container for transport to the laboratory; and
- use chain of custody documentation.

4. References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]*. Australian Government Publishing Services Canberra: National Environment Protection Council.

Appendix E

Site Assessment Criteria

1. Introduction

1.1 Guidelines

The following key guidelines were consulted for deriving the site assessment criteria (SAC):

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).
- ANZG *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018).
- ANZECC *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC, 2000).

1.2 General

The SAC applied in the current investigation are informed by the CSM which identified human and environmental receptors to potential contamination at the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The following inputs are relevant to the selection and/or derivation of the SAC:

- land use: residential / commercial:
  - corresponding to land use category 'B', residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats. Applicable to the whole of the site.
  - corresponding to land use category 'D', commercial such as shops and offices. Applicable for health screening levels for volatile contaminants in the proposed building footprint.
- soil type: clay.

2. Soils

2.1 Health investigation and screening levels

The generic health investigation levels (HIL) and health screening levels (HSL) are considered to be appropriate for the assessment of human health risk via all relevant pathways of exposure associated with contamination at the site. The adopted soil HIL and HSL for the contaminants of concern are in Table 1 and Table 2.

Health screening levels (HSLs) for vapour intrusion are used to assess selected petroleum compounds and fractions to assess the risk to human health via inhalation. Given the land uses noted in Section 1.2, HSL B and HSL D for vapour intrusion have been considered as an initial screen. However, it is noted that the proposed basement excavation is likely to intercept

groundwater at the site, in which case the generic HSLs do not apply, and NEPC (2013) recommends a site specific risk assessment be undertaken to assess a vapour intrusion risk.

Table 1: Health investigation levels (mg/kg)

Contaminant	HIL-B
Metals	
Arsenic	500
Cadmium	150
Chromium (VI)	500
Copper	30 000
Lead	1200
Mercury (inorganic)	120
Nickel	1200
Zinc	60 000
PAH	
B(a)P TEQ	4
Total PAH	400
Phenols	
Phenol	45 000
Pentachlorophenol	130
OCP	
DDT+DDE+DDD	600
Aldrin and dieldrin	10
Chlordane	90
Endosulfan	400
Endrin	20
Heptachlor	10
HCB	15
Methoxychlor	500
OPP	
Chlorpyrifos	340
PCB	
PCB	1
VOC (various analytes)	-

Table 2: Health screening levels (mg/kg)

Contaminant	HSL-B	HSL-D
CLAY	**2 m to <4 m**	**2 m to <4 m**
Benzene	2	9
Toluene	NL	NL
Ethylbenzene	NL	NL
Xylenes	NL	NL
Naphthalene	NL	NL
TRH F1	150	NL
TRH F2	NL	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

2.2 Asbestos in soil

The HSL for asbestos in soil are based on likely exposure levels for different scenarios published in NEPC (2013) for the following forms of asbestos:

- bonded asbestos containing material (ACM); and
- fibrous asbestos and asbestos fines (FA and AF).

The HSL are in Table 3.

Table 3: Health screening levels for asbestos

Form of asbestos	HSL-B
ACM	0.04%
FA and AF	0.001%
FA and AF and ACM	No visible asbestos for surface soil *

Notes: Surface soils defined as top 10 cm.
* Based on site observations at the sampling points and the analytical results of surface samples.

2.3 Ecological investigation levels

Ecological investigation levels (EIL) and added contaminant limits (ACL), where appropriate, have been derived in NEPC (2013) for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene. The adopted EIL, derived using the interactive (excel) calculation spreadsheet on the NEPM toolbox website are shown in Table 5, with inputs into their derivation shown in Table 4.

Table 4: Inputs to the derivation of the ecological investigation levels

Variable	Input	Rationale
Age of contaminants	"Aged" (>2 years)	No new known sources of contamination
pH	4.0	Assumed
CEC	6.6 $cmol_c/kg$	Average calculated from laboratory results
Clay content	10 %	Assumed
Traffic volumes	high	High traffic area
State / Territory	NSW	–

Table 5: Ecological investigation levels (mg/kg)

Contaminant	EIL-A-B-C
Metals	
Arsenic	100
Copper	65
Nickel	65
Chromium III	410
Lead	1100
Zinc	210
PAH	
Naphthalene	170
OCP	
DDT	180

Notes: EIL-A-B-C urban residential and public open space

2.4 Ecological screening levels

Ecological screening levels (ESL) are used to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene to terrestrial ecosystems. The adopted ESL are shown in Table 6.

Table 6: Ecological screening levels (mg/kg)

Contaminant	Soil type	ESL-B
Benzene	Coarse	50
Toluene	Coarse	85
Ethylbenzene	Coarse	70
Xylenes	Coarse	105
TRH F1	Coarse/ Fine	180*
TRH F2	Coarse/ Fine	120*
TRH F3	Coarse	300
TRH F4	Coarse	2800
B(a)P	Coarse	0.7

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene

3. Groundwater

3.1 Introduction

The groundwater investigation levels (GIL) used for interpretation of the groundwater data (as a Tier 1 assessment) have been selected based on the potential risks posed from contamination sourced from the site to receptors at or down-gradient of the site, as identified by the conceptual site model (CSM). The receptors, exposure points and pathways are summarised in Table 7.

Table 7: Summary of potential receptors and potential risks

Receptor	Location	Exposure point	Exposure pathway
Surface water aquatic ecosystem	Down-gradient from site.	Receiving surface water body at the groundwater discharge point.	Exposure to contaminants.
Occupants of buildings	On site and down-gradient from site.	Enclosed buildings (existing and proposed).	Inhalation of VOC (including TRH and BTEX) overlying VOC impacted groundwater via the vapour intrusion pathway. In the event of the basement intercepting groundwater, exposure may be through seepage into the basement, rather than through vapour intrusion.

The rationale for the selection of GIL is in Table 8.

Table 8: Groundwater investigation level rationale

Receptor / beneficial use	GIL	Source	Comments / rationale
Aquatic ecosystem	DGV	ANZG (2018)	Freshwater 99% LOP for bioaccumulative contaminants 95% LOP for non-bioaccumulative contaminants Hardness adjustment of metal compounds (Cd, Cr, Pb, Ni and Zn) based on average hardness as per recommendations and method outlined in Warne et al. (2018)
Aquatic ecosystem	DGV	HEPA (2020)	Freshwater 99% LOP as recommended for potential bioaccumulation
Building occupants (vapour intrusion)	HSL	NEPC (2013)	Initial screen based on a groundwater depth below basement of 2 m to <4 m (refer note below)

Notes: DGV default guideline value
% LOP percentage level of protection of species
HSL health screening level

NOTE: Based on measured standing water levels in the monitoring wells, and the proposal for a two level basement, it is likely that the proposed basement excavation will be close to (less than 2 m) or below the standing water line. Under such a scenario, NEPC (2013) recommends undertaking soil vapour or indoor air measurements as an alternative, and/or conducting a site specific risk of vapour intrusion, which may be generated through seepage water.

The HSL for the 2 m to < 4 m is used as an initial screen. Should the results exceed those criteria, further assessment will be recommended once design details are finalised.

3.2 Groundwater investigation levels for aquatic ecosystems

The DGV for the protection of aquatic ecosystems derived from ANZG (2018) are in Table 9.

Table 9: Groundwater investigation levels for protection of aquatic ecosystems (µg/L)

Contaminant	Freshwater DGV 95% LOP	Notes
Metals / metalloids		
Arsenic	24 / 13	Levels provided for As III / As IV respectively. Moderate reliability.
Cadmium	0.7	Very high reliability, hardness adjusted.
Chromium (VI)	10.6	Chromium VI levels adopted as initial screen for total chromium. Very high reliability, hardness adjusted.
Copper	1.4	Very high reliability.
Lead	20.8	Moderate reliability, hardness adjusted.

Contaminant	Freshwater DGV 95% LOP	Notes
Mercury (inorganic)	0.06	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Nickel	36.9	Low reliability, hardness adjusted.
Zinc	26.8	Very high reliability, hardness adjusted.
BTEX		
Benzene	950	Moderate reliability.
Ethylbenzene	80	Unknown reliability.
m-Xylene	75	Unknown reliability.
o-xylene	350	Low reliability.
p-Xylene	200	Low reliability.
Toluene	180	Unknown reliability.
PAH		
Anthracene	0.01	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Benzo(a)pyrene	0.1	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Fluoranthene	1	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Naphthalene	16	Low reliability.
Phenanthrene	0.6	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
OCP		
Aldrin	0.001	Unknown reliability and LOP.
Chlordane	0.03	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
DDT	0.006	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Dieldrin	0.01	Unknown reliability and LOP.
Endosulfan	0.03	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Endrin	0.01	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Heptachlor	0.01	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Methoxychlor	0.005	Unknown reliability and LOP.

Contaminant	Freshwater DGV 95% LOP	Notes
OPP		
Chlorpyrifos	0.01	Moderate reliability.
Diazinon	0.01	Moderate reliability.
Dimethoate	0.15	Low reliability.
Fenitrothion	0.2	Moderate reliability.
Malathion	0.05	Moderate reliability.
Parathion	0.004	Moderate reliability.
PCB		
Aroclor 1242	0.3	99% LOP adopted as recommended due to potential for bioaccumulation. Low reliability.
Aroclor 1254	0.01	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
VOC		
Tetrachloroethene (PCE)	70	Unknown reliability.
Trichloroethene (TCE)	330	Unknown reliability.
cis-1,2-dichloroethene (DCE)	700	Unknown reliability.
Chloroethene (vinyl chloride / VC)	100	Unknown reliability.
Tetrachloromethane (carbon tetrachloride / CT)	240	Unknown reliability.
Trichloromethane (chloroform / TCM)	370	99% LOP adopted as recommended to protect key species from chronic toxicity. Unknown reliability.
Inorganics		
Ammonia	900	Very high reliability.

Notes: 95% LOP for non-bioaccumulative contaminants
99% LOP for bioaccumulative contaminants

3.3 Health screening levels for vapour intrusion

The HSL to evaluate potential vapour intrusion risks derived from NEPC (2013) are in Table 10. It is noted that groundwater HSLs do not apply if the basement intercepts groundwater, which is anticipated based on current groundwater levels. As such, the presence of petroleum compounds in the groundwater may trigger a recommendation for a site specific risk assessment.

Table 10: Groundwater health screening levels for vapour intrusion (µg/L)

Contaminant	HSL-B	HSL-D
CLAY	**2 m to <4 m**	**2 m to <4 m**
Benzene	5000	30 000
Toluene	NL	NL
Ethylbenzene	NL	NL
Xylenes	NL	NL
Naphthalene	NL	NL
TRH F1	NL	NL
TRH F2	NL	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
HSL B – applicable to areas of the site outside of the proposed building footprint
HSL D – applicable to the proposed building footprint

4. References

ANZECC. (2000). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Australia and New Zealand Environment and Conservation Council.

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Canberra, ACT: Australian and New Zealand Governments and Australian state and territory governments.

CRC CARE. (2011). *Health screening levels for petroleum hydrocarbons in soil and groundwater.* Parts 1 to 3, Technical Report No. 10: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

Warne, M., Batley, G., van Dam, R., Chapman, J., Fox, D., Hickey, C., & Stauber, J. (2018). *Revised Method for Deriving Australian and New Zealand Water Quality Guideline Values for Toxicants.* Canberra: Australian Government Department of Agriculture and Water Resources.

Appendix F

Field Notes: Logs and Field Sheets

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333516.0, N:6255426.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH1
PROJECT No: 214296.02
DATE: 24/02/25
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	ROCK FRACTURE SPACING (m)	ROCK DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
18/02/25 NFGWO whilst augering	93	0.14	CONCRETE SLAB			NA	NA									A/ES		0.14	PID	0.3ppm
		0.20	FILL / Gravelly SAND: dark grey-brown; fine to coarse.		FILL	(VC)	M											0.20		(B) 25/90mm
	92		FILL / Clayey GRAVEL, with sand: grey-brown; fine to coarse, rounded, river stone.													A/ES		0.40	PID	0.1ppm
		0.70																0.50		
			FILL / Sandy CLAY: pink-brown with dark grey mottling; medium to high plasticity.		FILL		w=PL									A		0.70	PID	0.1ppm
		0.90			RS	(H)	w<PL									A/ES		0.80	PID	0.0ppm
	1																	0.90		
		1.17	CLAY (CI-CH), trace sand: brown; medium to high plasticity.						1.17							A		1.00	PID	0.0ppm
			SILTSTONE: grey-brown; 5-10% fine sandstone laminations, distinct bedding at 0-5°. Ashfield Shale					MW		VL - L	100	0		1.58m: JT, 45°, PR, CN, SM				1.10		
	92	2												2.16m: JT, 45°, PR, SN Fe, RF 2.25m: JT, 20°, PR, SN Fe, RF 2.41m: JT, 30°, PR, SN Fe, RF 2.51-2.75m: JT, 90°, PR, SN Fe, SM				2	PLT	PL(A)=0.09MPa
	91								2.80	L										
		3						SW			90	48		3.02m: JT, 45°, PR, VNR Clay, SM 3.18m: JT, 45°, PR, VNR Clay, SM				3	PLT	PL(A)=0.12MPa
									3.27	SEAM			SEAM	3.27-3.53m: JT, 90°, PR, CT Clay 5mm, SM						
	90	3.53	CORE LOSS: 210 mm						3.53											
		3.74	SILTSTONE: dark grey; 5-10% fine sandstone laminations, distinct bedding at 0-5°. Ashfield Shale					SW	4.10									4	PLT	PL(A)=0.15MPa
	89	4									100	100								
		5						FR		L				5.25-5.35m: JT, 80-90°, CU, CN, SM 5.35m: DS, 40mm 5.42m: JT, 45°, PR, CN, SM				5	PLT	PL(A)=0.13MPa
	88																			
		5.90	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale								100	76		5.93-6.11m: JT, 70-90°, CU, CN, SM 6.25m: JT, 30°, CU, CN, SM 6.44m: JT, 0-30°, CU, CN, SM 6.53m: B, 0°, PR, CT Clay 2mm, SM 6.58m: JT, 20°, PR, CN, SM 6.60-6.69m: JT, 70°, PR, CN, SM 6.72m: DS, 90mm 7.01-7.34m: JT, 80°, PR, CN, SM				6	PLT	PL(A)=0.10MPa
	87	6							6.72	SEAM			SEAM							
									6.81											
		7						SW		L	82	73		7.22m: B, 0°, PR, CT Clay 5mm, SM 7.42m: F, 50mm				7	PLT	PL(A)=0.15MPa
	86													7.47-7.67m: JT, 90°, PR, CN, SM						
		7.67	CORE LOSS: 250 mm																	
		7.92							7.92		93	77							PLT	PL(A)=0.13MPa

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Combined Log

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.14 m, HA to 1.17 m, NMLC to 10.00 m
CASING: PVC to 0.45m
REMARKS: BH backfilled with drilling spoil. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333516.0, N:6255426.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH1
PROJECT No: 214296.02
DATE: 24/02/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING	
				SOIL			ROCK																
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(†) DENSITY.(†)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	85	0	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					SW			93	77		8.03m: JT, 60-80°, CU, CN, SM 8.05m: F, 10mm 8.20m: JT, 80°, PR, CN, SM 8.47m: JT, 10°, PR, CN, SM 8.55m: DS, 50mm				9	PLT	PL(A)=0.11MPa
		8.83	CORE LOSS: 220 mm						9.05											
	84	9.05	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					SW			81	55		9.22m: JT, 30°, PR, CN, SM 9.46m: JT, 40°, PR, CN, SM 9.58m: JT, 60°, PR, CN, SM 9.61m: JT, 60°, PR, CN, SM 9.68m: DS, 20mm 9.73-9.84m: JT, 60°, PR, CN, SM 9.84m: DS, 100mm					PLT	PL(A)=0.16MPa
									9.84 9.94	SEAM			SEAM							
	10	10	Borehole discontinued at 10.00m depth. Target depth reached.																	
		11																		
		12																		
		13																		
		14																		
		15																		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (†)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.14 m, HA to 1.17 m, NMLC to 10.00 m
CASING: PVC to 0.45m
REMARKS: BH backfilled with drilling spoil. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333516.0, N:6255426.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH1
PROJECT No: 214296.02
DATE: 24/02/25
SHEET: 1 of 1

1.17-5.00 m depth

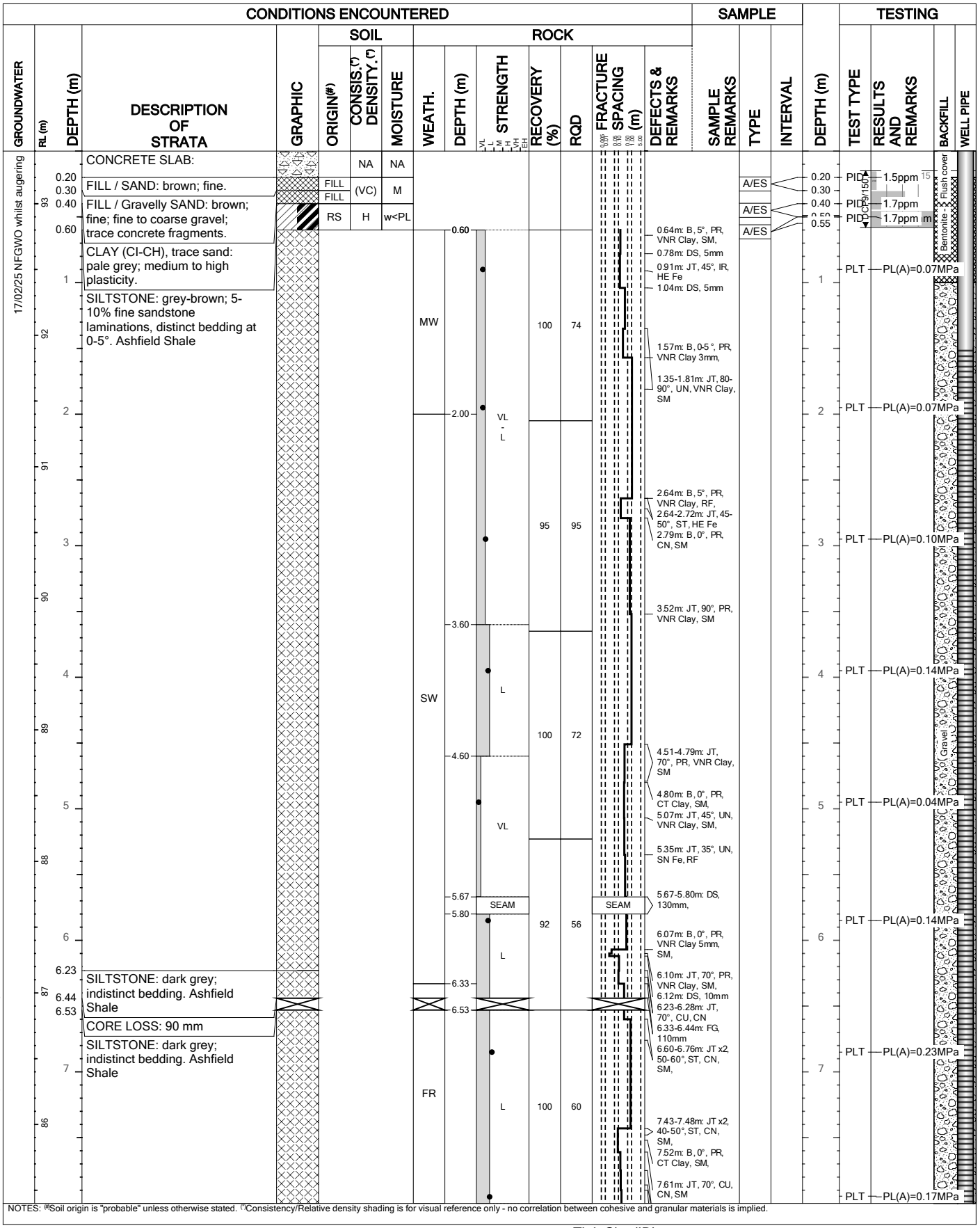
5.00-10.00 m depth

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333536.0, N:6255397.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH2
PROJECT No: 214296.02
DATE: 17/02/25
SHEET: 1 of 2



NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: D. Pham/J. Miller
METHOD: 150 mm Ø DT to 0.20 m, HA to 0.60 m, NMLC to 12.37 m
CASING: PVC to 0.55m
REMARKS: 7.5 m monitoring well installed. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333536.0, N:6255397.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH2
PROJECT No: 214296.02
DATE: 17/02/25
SHEET: 2 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL: ORIGIN(#)	SOIL: CONSIS.(*) DENSITY.(*)	SOIL: MOISTURE	ROCK: WEATH.	ROCK: DEPTH (m)	ROCK: STRENGTH (VL L M H VH EH)	ROCK: RECOVERY (%)	ROCK: RQD	ROCK: FRACTURE SPACING (m)	ROCK: DEFECTS & REMARKS	SAMPLE: SAMPLE REMARKS	SAMPLE: TYPE	SAMPLE: INTERVAL	DEPTH (m)	TESTING: TEST TYPE	TESTING: RESULTS AND REMARKS	BACKFILL	WELL PIPE
	85		[CONT] SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					FR		L	100	60		7.75-7.86m: B x3, 10-30°, PR, CN, SM, 7.90m: B, 25°, CU, CN, RF, 8.07m: JT, 70°, CU, CN, SM, 8.24m: JT, 60°, CN, SM 8.40-8.68m: JT, 90°, SN, SM								
		9									77	55		8.90-9.15m: FG, 250mm				9	PLT	PL(A)=0.18MPa		
		9.23	CORE LOSS: 310 mm											9.15-9.23m: DS, 88 mm							Gravel	
	84	9.54	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale						9.54					9.69m: B, 10°, CU, VNR Clay, SM 9.87m: B, 10°, PR, CT Clay 1mm, SM 9.90m: DS, 20mm								
		10								VL - L	100	56		9.94-10.27m: JT x5, 40°, PR, CN, SM				10	PLT	PL(A)=0.08MPa		
	83													10.15m: DS, 20mm 10.33-10.44m: JT, 90°, ST, CT Clay 5mm, SM 10.44m: DS, 20mm								
		10.80							10.80					10.54-10.90m: FG, 360mm								
		11	SANDSTONE: grey, fine to medium grained; indistinct to distinct bedding at 0-10°. Mittagong Formation					SW		L	100	90		10.67-10.77m: DS, 100mm				11	PLT	PL(A)=0.16MPa	Bentonite	
	82								11.55	VL				11.55m: B, 5°, PR, CT Clay 5mm, SM								
		12							12.00	L				11.90-11.91m: DS, 10mm				12	PLT	PL(A)=0.06MPa		
														12.30-12.37m: DS, 70mm								
			Borehole discontinued at 12.37m depth. Target depth reached.																			
		13																				
		14																				
		15																				

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: D. Pham/J. Miller
METHOD: 150 mm Ø DT to 0.20 m, HA to 0.60 m, NMLC to 12.37 m
CASING: PVC to 0.55m
REMARKS: 7.5 m monitoring well installed. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

CORE PHOTO LOG

CLIENT:	Silvernight (Crows Nest) Landowner Pty Ltd	**SURFACE LEVEL:**	93.4 AHD	**LOCATION ID:**	BH2
PROJECT:	Proposed Mixed-Use Development	**COORDINATE:**	E:333536.0, N:6255397.0	**PROJECT No:**	214296.02
LOCATION:	270 Pacific Hwy, Crows Nest, NSW	**DATUM/GRID:**	MGA2020 Zone 56	**DATE:**	17/02/25
		DIP/AZIMUTH:	90°/---°	**SHEET:**	1 of 2

0.60-5.00 m depth

5.00-10.00 m depth

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333536.0, N:6255397.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH2
PROJECT No: 214296.02
DATE: 17/02/25
SHEET: 2 of 2

10.00-12.37 m depth

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.2 AHD
COORDINATE: E:333549.0, N:6255369.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH3
PROJECT No: 214296.02
DATE: 18/02/25
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
21/02/25 NFGWO whilst augering	93	0.20	CONCRETE SLAB			NA	NA											0.20	PID	2.9ppm
		0.30	FILL / Sandy CLAY, with gravel: yellow-brown; medium to high plasticity; fine to medium, sandstone gravel.		FILL	(PC)	w<PL									A/ES		0.30	PID	2.3ppm
		0.45			RS	H			0.45	M				0.59m: B, 0-5 °, PR, CT Clay 1mm, RF		A/ES		0.40		
			CLAY (CI-CH), trace gravel: purple-brown; medium to high plasticity; fine, angular, ironstone gravel.											0.81m: B, 0-5 °, PR, CT Clay 1mm, RF					PLT	PL(A)=0.69MPa
	92	1	SILTSTONE: purple and pale grey; Iron indurated through shrink/swell fractures , 5-10% fine to medium disaggregated shale. Ashfield Shale											0.83m: DS, 40mm 0.90m: JT, 45°, ST, SN Fe, RF 1.03m: B, 20°, PR, VNR Clay, RF 1.19m: JT, 30°, CU, CT Clay 3mm, RF 1.28m: JT, 40°, PR, CT Clay 5mm, RF 1.36m: DS, 100mm 1.64m: B, 0°, PR, CT Clay 1mm, RF			1		
									1.36	SEAM	100	76	SEAM							
									1.46	M										
	91	2												2.12m: , 27mm, clast 2.28m: DS, 210mm				2	PLT	PL(A)=0.40MPa
									2.28	SEAM			SEAM							
									2.49	L	100	60		2.67m: B, 5°, PR, CT Clay 2mm, RF 2.75m: 70mm, clast 2.93m: B, 20°, IR, SN Fe, RF 3.00m: DS, 200mm						
	90	3						HW	3.00	SEAM			SEAM					3	PLT	PL(A)=0.19MPa
									3.20	M				3.20m: FG, 40mm 3.33m: B, 0-10°, CU, CT Clay 5mm, RF 3.48m: 60mm, clast 3.63m: DS, 50mm						
														3.84m: , 8mm, clast						
		4							3.97	SEAM			SEAM	3.97m: DS, 90mm				4	PLT	PL(A)=0.40MPa
	89								4.08	VL	100	46		4.18m: DS, 80mm 4.40m: JT, 50°, PR, SN Fe, RF 4.75m: JT, 60°, PR, CT Clay 5mm, SM						
		5							4.85	VL - L								5	PLT	PL(A)=0.11MPa
	88	5.35	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					MW						5.59m: B, 0-5 °, PR, CT Clay 3mm, SM						
								SW	5.59	VL	100	99		5.90m: JT, 60°, PR, CN, RF					PLT	PL(A)=0.06MPa
		6							6.00					6.11m: B, 0-5 °, PR, CT Clay 3mm, SM 6.22m: DS, 20mm				6		
	87													6.36-6.51m: JT, 70°, CU, INF Clay 5mm, SM					PLT	PL(A)=0.11MPa
														6.51m: B, 5°, PR, CT Clay 5mm, SM 6.85m: B, 5°, PR, CT Clay 5mm, SM						
		7						FR		VL - L								7		
	86										100	98		7.59m: JT, 60°, PR, CN, SM						
									7.74	VL				7.74m: FG, 30mm 7.86m: B, 0-5 °, PR, CT Clay 5mm, SM					PLT	PL(A)=0.06MPa

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Combined Log

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.20 m, HA to 0.45 m, NMLC to 10.00 m
CASING: PVC to 0.44m
REMARKS: BH backfilled with drilling spoil. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.2 AHD
COORDINATE: E:333549.0, N:6255369.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH3
PROJECT No: 214296.02
DATE: 18/02/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING	
				SOIL			ROCK																
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH (VL L M H VH EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (0.05 0.06 0.10 0.60 5.00)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	85		[CONT] SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					FR	8.10	VL	100	98								
								MW	8.47		100	83		8.20-8.42m: JT, 70°, ST, VNR Clay, SM 8.52m: DS, 30mm 8.60m: DS, 20mm 8.69m: DS, 10mm						
		9							8.69									9	PLT	PL(A)=0.16MPa
	84							SW		L	100	81								
		9.77	SANDSTONE: grey, fine grained; indistinct to distinct bedding at 0-10°. Mittagong Formation					HW	9.77	VL - L				9.55-9.64m: JT, 90°, PR, CN, SM 9.95m: DS, 50mm					PLT	PL(A)=0.07MPa
		10	Borehole discontinued at 10.00m depth. Target depth reached.																	
		11																		
		12																		
		13																		
		14																		
		15																		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.20 m, HA to 0.45 m, NMLC to 10.00 m
CASING: PVC to 0.44m
REMARKS: BH backfilled with drilling spoil. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.2 AHD
COORDINATE: E:333549.0, N:6255369.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH3
PROJECT No: 214296.02
DATE: 18/02/25
SHEET: 1 of 1

0.45-5.00 m depth

5.00-10.00 m depth

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.2 AHD
COORDINATE: E:333550.0, N:6255366.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH3A
PROJECT No: 214296.02
DATE: 12/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	93	0	CONCRETE: 30-40% 20 mm angular to sub-angular aggregate, 3 mm voids 0.32m: 30 mm Ø rebar 0.45m: 30 mm Ø rebar										
	92	1	Borehole discontinued at 0.70m depth.										
	91	2											
	90	3											
	89	4											

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: 150 mm Ø DT to 0.70 m
REMARKS: BH discontinued due to depth of concrete. Located 1.5 m SE of BH3

OPERATOR: Douglas (IH)

LOGGED: I. Howsam
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333494.0, N:6255412.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH4
PROJECT No: 214296.02
DATE: 20/02/25
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
20/02/25 NFGWO whilst augering	93	0.11	CONCRETE SLAB			NA	NA											0.15	PID	0.1ppm	Bentonite	
		0.40	FILL / Gravelly SAND, with silt: grey-brown; fine to coarse; fine to medium, drainage gravel.		FILL	(VC)	M									A/ES		0.30			Flush cover	
		0.47	CLAY (CI-CH): dark grey; medium to high plasticity.		RS	H	w<PL		0.47							A/ES		0.45	PID	0.3ppm		
	92	1	SILTSTONE: grey-brown; 5-10% fine sandstone laminations, distinct bedding at 0-5°. Ashfield Shale					MW	0.90	VL				0.60-0.66m: B, 5°, PR, SN Fe, RF, x4				1	PLT	PL(A)=0.07MPa		
								SW			100	28		1.08m: JT, 45°, PR, CT Clay 1mm, SM								
									1.60					1.27-1.45m: JT, 70°, PR, VNR Clay, SM								
														1.52-1.61m: JT, 60°, IR, VNR Clay, SM								
		2												1.89m: B, 0°, PR, CT Clay 3mm, SM				2	PLT	PL(A)=0.17MPa		
	91										100	98		2.13m: JT, 20°, CU, VNR Clay, SM								
										L				2.56m: B, 5°, PR, CT Clay 1mm, SM								
		3	3.10m: becoming dark grey											3.04m: JT, 45°, PR, CN, SM				3	PLT	PL(A)=0.18MPa		
	90													3.14m: JT, 40°, PR, CN, SM								
														3.16m: JT, 30°, PR, CN, SM								
														3.27m: B, 0-5°, PR, CT Clay 1mm, SM								
								FR	3.50					3.37m: FG, 10mm								
										VL - L				3.51m: JT, 10°, PR, CN, SM								
		4							4.18					4.18m: JT, 40°, PR, CT Clay 1mm, SM				4	PLT	PL(A)=0.09MPa		
	89										100	95										
		4.90												4.79-4.86m: JT, 70-80°, CU, CN, SM								
		5	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale											4.87m: JT, 30°, PR, CN, SM								
	88													5.29-5.53m: JT, 70-90°, CU, CN, SM				5	PLT	PL(A)=0.12MPa		
									5.60		100	79		5.55m: JT, 30°, PR, CN, SM								
														5.62m: JT, 30°, PR, CN, SM								
		6								L				5.66m: DS, 10mm								
														5.82m: FG, 20mm								
											100	64		5.86m: JT, 20°, PR, CN, SM				6	PLT	PL(A)=0.14MPa		
	87													5.89m: FG, 50mm								
														6.14m: JT, 45°, PR, CN, SM								
								SW						6.17-6.21m: JT, 70°, PR, VNR Clay, SM								
														6.22m: DS, 10mm								
		7												6.24m: DS, 10mm				7	PLT	PL(A)=0.15MPa		
											100	84		6.29m: DS, 10mm								
	86													6.61m: JT, 45°, PR, CN, SM								
														6.79m: JT, 45°, PR, CN, SM								
														6.87-7.10m: JT, 80°, PR, CN, SM								
														7.10m: B, 5°, PR, CT Clay 3mm, SM								
														7.27m: FG, 30mm								
									7.70					7.35-7.42m: JT, 90°, ST, CN, SM								
								FR			100	100		7.57m: B, 0°, PR,								

CONDITIONS ENCOUNTERED | SAMPLE | TESTING

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.11 m, HA to 0.47 m, NMLC to 15.00 m
CASING: PVC to 0.47m
REMARKS: 7.5 m monitoring well installed. Elevations interpolated from provided survey plan.. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Combined Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333494.0, N:6255412.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH4
PROJECT No: 214296.02
DATE: 20/02/25
SHEET: 2 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL: ORIGIN(#)	SOIL: CONSIS.(*) DENSITY.(*)	SOIL: MOISTURE	ROCK: WEATH.	ROCK: DEPTH (m)	ROCK: STRENGTH	ROCK: RECOVERY (%)	ROCK: RQD	ROCK: FRACTURE SPACING (m)	ROCK: DEFECTS & REMARKS	SAMPLE: SAMPLE REMARKS	SAMPLE: TYPE	SAMPLE: INTERVAL	DEPTH (m)	TESTING: TEST TYPE	TESTING: RESULTS AND REMARKS	BACKFILL	WELL PIPE
	85		[CONT] SILTSTONE: dark grey; indistinct bedding. Ashfield Shale											CT Clay 3mm, SM 7.64m: DS, 10mm 8.37m: JT, 50°, PR, CN, SM 8.64m: JT, 20°, PR, CN, SM 8.86m: JT, 20°, PR, CN, SM 8.96m: B, 0-5 °, PR, CT Clay 2mm, SM 9.07m: JT, 30°, PR, CN, SM 9.38m: JT, 30°, PR, CN, SM 9.47m: JT, 40°, PR, CN, SM 9.48-9.50m: JT, 80°, PR, CN, SM 9.66m: JT, 40°, PR, CN, SM 9.78m: JT, 20°, PR, CN, SM 10.36m: JT, 45°, PR, CN, SM 10.39m: B, 0°, PR, VNR Clay, SM 10.45-10.51m: JT, 90°, IR, CT Clay 5mm, SM 11.39m: B, 0°, PR, VNR Clay, RF 11.41m: B, 5°, PR, VNR Clay, RF 11.70m: DS, 10mm 12.19m: B, 0°, PR, SN Fe, RF 12.70m: DS, 10mm 12.75m: DS, 20mm 12.79m: DS, 10mm 12.91m: DS, 10mm							
	84	9						FR		L	100	100						9	PLT	PL(A)=0.15MPa		
	83	10									100	86						10	PLT	PL(A)=0.11MPa		
	82	10.79 11	SANDSTONE: grey, fine to medium grained; 5-10 % brown siltstone clasts and laminations, indistinct to distinct bedding at 0-10°. Mittagong Formation						10.79		100	92						11	PLT	PL(A)=0.11MPa	Bentonite	
	81	12							11.80									12	PLT	PL(A)=0.42MPa		
	80	13						SW		M	100	91						13	PLT	PL(A)=0.46MPa		
	79	14 14.50							13.95	L - M								14	PLT	PL(A)=0.26MPa		
		15	SANDSTONE: grey and pale grey, fine to coarse grained; 5-10 % siltstone clasts and laminations, indistinct to distinct bedding at 0-10°. Hawkesbury Sandstone Borehole discontinued at 15.00m depth. Target depth reached.						14.50	M	100	100							PLT	PL(A)=0.63MPa		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.11 m, HA to 0.47 m, NMLC to 15.00 m
CASING: PVC to 0.47m
REMARKS: 7.5 m monitoring well installed. Elevations interpolated from provided survey plan.. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333494.0, N:6255412.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH4
PROJECT No: 214296.02
DATE: 20/02/25
SHEET: 1 of 2

0.47-5.00 m depth

5.00-10.00 m depth

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.5 AHD
COORDINATE: E:333494.0, N:6255412.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH4
PROJECT No: 214296.02
DATE: 20/02/25
SHEET: 2 of 2

10.00-15.00 m depth

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333510.0, N:6255382.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH5
PROJECT No: 214296.02
DATE: 21/02/25
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
21/02/25 NFGWO whilst augering	93	0.23	CONCRETE SLAB			NA	NA													
		0.28	FILL / Gravelly CLAY: brown; medium to high plasticity; coarse, sandstone gravel.		RS	H	w<PL NDF									A/ES A		0.23 0.28 0.35	PID DCP 150	6/70 0.1ppm 21 25/130mm
		0.59	CLAY (CI-CH): dark grey; medium to high plasticity.						0.59											
	92	1	SILTSTONE: grey-brown; 5-10% fine sandstone laminations, distinct bedding at 0-5°. Ashfield Shale					MW		VL L	100	0		0.44m: DS, 60mm 0.51m: FG, SN Fe 20mm 0.56m: B, 0°, PR, SN Fe, RF 0.64m: B, 0°, PR, SN Fe, RF 0.95-1.09m: JT, 60°, PR, SN Fe, RF 1.20m: DS, 10mm 1.31m: FG, 20mm 1.24-1.47m: JT, 80°, IR, CT Clay 1mm, RF 1.44m: DS, 30mm 1.69m: B, 0-5 °, PR, SN CBS, RF 1.79-1.95m: JT, 80°, CU, SN Fe, RF			1	PLT	PL(A)=0.06MPa
	91	2												2.42m: JT, 40°, PR, VNR Clay, SM 2.48m: DS, 20mm				2	PLT	PL(A)=0.06MPa
	90	3	3.10m: becoming dark grey					SW	2.50		100	43						3	PLT	PL(A)=0.15MPa
	89	4						FR	3.10	L	100	82		4.30m: B, 5°, PR, CT Clay 1mm, SM 4.33m: JT, 30°, PR, CN, SM 4.50m: JT, 40°, PR, CN, SM 4.60m: B, 5°, PR, CT Clay 5mm, SM 4.70-4.80m: JT, 80°, PR, CN, SM 4.79m: DS, 10mm 4.85m: DS, 10mm			4	PLT	PL(A)=0.15MPa
	88	5																5	PLT	PL(A)=0.16MPa
	87	6						HW	5.20	VL	94	0		5.22m: JT, 70°, CU, SN Fe, RF 5.25m: DS, 50mm 5.35-5.52m: JT, 90°, CU, SN Fe, RF 5.52m: B, 5°, PR, SN Fe, RF 5.70m: JT, 10°, PR, SN Fe, RF 5.87-6.05m: JT, 60-80°, CU, VNR Clay, SM 6.13m: DS, 10mm 6.18m: FG, 20mm 6.32m: JT, 70-90°, CU, CN, SM 6.44-6.59m: JT, 70-90°, IR, CN, SM			6	PLT	PL(A)=0.05MPa
		6.10	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale						6.10	VL - L									PLT	PL(A)=0.10MPa
		6.75							6.59	SEAM			SEAM	6.59-6.75m: CS, 160mm						
		6.84	CORE LOSS: 90 mm						6.75 6.84											
	86	7	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					HW		SEAM			SEAM	6.84-7.30m: FG, 460mm				7	PLT	PL(A)=0.10MPa
								SW	7.30	L	100	65		7.45-7.54m: JT, 60-90°, IR, CN, SM 7.54m: DS, 20mm					PLT	PL(A)=0.17MPa

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.23 m, HA to 0.44 m, NMLC to 15.89 m
CASING: PVC to 0.44m
REMARKS: BH backfilled with drilling spoil. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Combined Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333510.0, N:6255382.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH5
PROJECT No: 214296.02
DATE: 21/02/25
SHEET: 2 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL: ORIGIN(#)	SOIL: CONSIS.(*) DENSITY.(*)	SOIL: MOISTURE	ROCK: WEATH.	ROCK: DEPTH (m)	ROCK: STRENGTH	ROCK: RECOVERY (%)	ROCK: RQD	ROCK: FRACTURE SPACING (m)	ROCK: DEFECTS & REMARKS	SAMPLE: SAMPLE REMARKS	SAMPLE: TYPE	SAMPLE: INTERVAL	DEPTH (m)	TESTING: TEST TYPE	TESTING: RESULTS AND REMARKS
	85		[CONT] SILTSTONE: dark grey; indistinct bedding. Ashfield Shale																	
	84	9						SW		L	100	65		8.68m: DS, 10mm 8.22-9.18m: JT, 70-90°, CU, CN, SM				9	PLT	PL(A)=0.13MPa
	83	10							9.80		100	83		8.76m: B, 5°, ST, CN, SM 9.25m: DS, 10mm 9.26-9.35m: JT, 80-°, IR, CN, SM 9.51m: DS, 10mm 9.52-9.76m: JT, 60-90°, IR, CN, SM 9.84m: FG, 50mm 9.89-10.13m: JT, 90°, IR, CN, SM				10	PLT	PL(A)=0.09MPa
								HW		VL	100	0		10.27m: JT, 30°, PR, CT Clay 1mm, SM 10.40m: DS, 50mm					PLT	PL(A)=0.07MPa
	82	11	10.80 SANDSTONE: grey, fine to medium grained; indistinct to distinct bedding at 0-10°. Mittagong Formation											10.79m: DS, 40mm 10.91m: FG, 40mm				11	PLT	PL(A)=0.08MPa
									11.60											
	81	12	12.29 SANDSTONE: pale grey, medium to coarse grained; indistinct to distinct bedding at 0-10°. Hawkesbury Sandstone								100	69		11.61m: JT, 30°, CU, CT Clay 1mm, SM 11.64m: B, 0-5°, PR, SN CBS, RF 11.69m: B, 0-5°, PR, SN CBS, RF 11.74m: B, 0-5°, PR, SN CBS, RF 11.78m: B, 0-5°, PR, SN CBS, RF 12.10m: DS, 40mm 12.18m: DS, 100 mm				12	PLT	PL(A)=0.13MPa
										L										
	80	13	13.70m-13.78m: siltstone bed, dark grey					SW						12.53m: DS, 40mm 12.59m: DS, 30mm 12.71m: B, 0°, PR, CT Clay 3mm, RF 12.81m: B, 0°, PR, CT Clay 3mm, RF 13.05m: DS, 10mm 13.06-13.12m: JT, 90°, PR, CN Clay, RF				13	PLT	PL(A)=0.25MPa
									13.35											
	79	14	14.50m: becoming distinctly cross bedded at 0-30°							M	100	53		13.12m: B, 0°, PR, CT Clay 1mm, RF 13.23m: DS, 90mm 13.43m: DS, 20mm 13.70m: B, 5°, PR, CT Clay 1mm, RF 13.78m: DS, 10mm 13.90m: B, 0°, PR, CN, RF 14.00m: DS, 20mm 14.02m: B, 0°, PR, CN, RF 14.02-14.10m: JT, 90°, PR, CN, RF 14.06m: B, 0°, PR, CN, RF 14.62m: B, 5-10°, CU, VNR Clay, RF				14	PLT	PL(A)=0.76MPa
									14.03											
	78	15	Borehole discontinued at 15.89m depth. Target depth reached.					FR		H	100	99		15.12m: JT, 40°, PR, CN, RF 15.13m: JT, 30°, PR, CN, RF 15.34m: B, 0-5°, UN, CT Clay 1mm, RF 15.64m: B, 5°, PR, SN CBS, RF				15	PLT	PL(A)=1.5MPa
																			PLT	PL(A)=1.1MPa

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.23 m, HA to 0.44 m, NMLC to 15.89 m
CASING: PVC to 0.44m
REMARKS: BH backfilled with drilling spoil. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Combined Log

Douglas PARTNERS

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333510.0, N:6255382.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH5
PROJECT No: 214296.02
DATE: 21/02/25
SHEET: 1 of 2

0.44-5.00 m depth

5.00-10.00 m depth

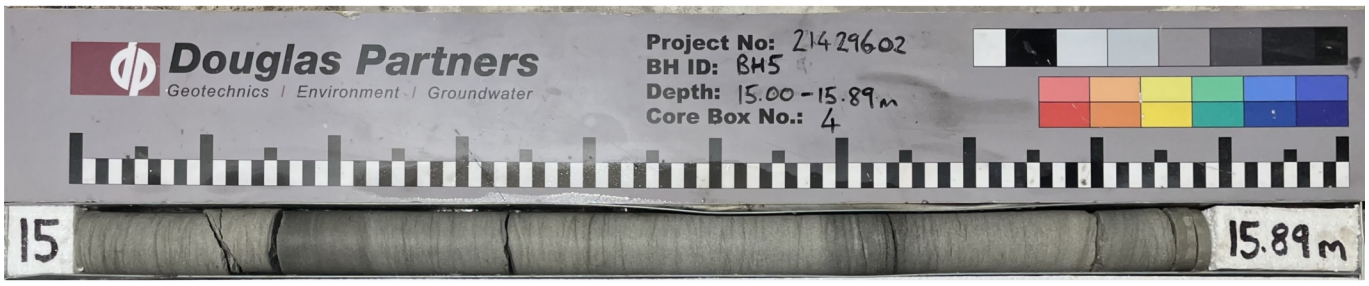
CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.4 AHD
COORDINATE: E:333510.0, N:6255382.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH5
PROJECT No: 214296.02
DATE: 21/02/25
SHEET: 2 of 2

10.00-15.00 m depth



15.00-15.89 m depth

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.3 AHD
COORDINATE: E:333521.0, N:6255365.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH6
PROJECT No: 214296.02
DATE: 19/02/25
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	ROCK FRACTURE SPACING (m)	ROCK DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
18/02/25 NFGWO whilst augering	93	0.20	CONCRETE SLAB			NA	NA															
		0.37	CLAY (CI-CH): purple-brown; medium to high plasticity.		RS	VSt	w<PL									A/ES A		0.30	PID DCP 0/150	0.2ppm	Bentonite Flush cover	
	92	1	SILTSTONE: grey-brown; 5-10% fine sandstone laminations, distinct bedding at 0-5°. Ashfield Shale					MW	0.37 0.91 1.13	VL SEAM	100	0	SEAM	0.47m: DS, 10mm 0.62m: B, 5-10°, PR, CT Clay 5mm, SM 0.64m: DS, 50mm 0.91-1.13m: DS, 220mm				1	PLT	PL(A)=0.05MPa		
	91	2	2.25m: becoming dark grey						2.25		100	0		1.38-1.52m: JT, 70°, IR, CT Clay 2mm, SM 2.24m: B, 5°, PR, CT Clay, SM 2.36m: B, 5°, PR, CT Clay 1mm, SM				2	PLT	PL(A)=0.08MPa		
	90	3								VL	100	0		2.92m: B, 10°, PR, CN Clay 1mm, SM 3.39m: DS, 10mm				3	PLT	PL(A)=0.07MPa		
	89	4									100	0						4	PLT	PL(A)=0.07MPa	Gravel	
	88	5.00	SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					SW	4.83	VL - L	100	8		4.83-4.93m: JT, 60°, PR, CN, SM 5.28m: B, 0°, PR, CT Clay 2mm, SM 5.29m: B, 0°, PR, CT Clay 2mm, SM 5.30m: B, 0°, PR, CT Clay 2mm, SM 5.78m: JT, 45°, PR, CT Clay 3mm, SM				5	PLT	PL(A)=0.09MPa		
	87	6							6.40 6.48	SEAM L	100	99	SEAM	6.35m: DS, 50mm 6.40m: FG, 80mm				6	PLT	PL(A)=0.09MPa		
	86	7												7.11-7.66m: JT, 60°, PR, CN, SM 7.59m: DS, 10mm				7	PLT	PL(A)=0.15MPa		
											100	97							PLT	PL(A)=0.16MPa	Bentonite	

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Combined Log

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.20 m, HA to 0.37 m, NMLC to 10.00 m
CASING: PVC to 0.37m
REMARKS: 7.5 m monitoring well installed. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.3 AHD
COORDINATE: E:333521.0, N:6255365.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH6
PROJECT No: 214296.02
DATE: 19/02/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING			
				SOIL			ROCK																		
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	85		[CONT] SILTSTONE: dark grey; indistinct bedding. Ashfield Shale					SW		L	100	97		8.68m: JT, 45°, PR, CN, SM								
		9							9.18	SEAM				9.18m: DS, 90mm				9	PLT	PL(A)=0.13MPa	Bentonite	
	84							HW	9.27	L												
									9.48	VL	100	70		9.50m: DS, 50mm								
		9.65	SANDSTONE: grey, fine to medium grained; indistinct to distinct bedding at 0-10°. Mittagong Formation					MW	9.65	L				9.62m: DS, 30mm								
		10	Borehole discontinued at 10.00m depth. Target depth reached.											9.85m: DS, 20mm					PLT	PL(A)=0.16MPa		
		11																				
		12																				
		13																				
		14																				
		15																				

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools and proline
OPERATOR: TightSite (ID)
LOGGED: J. Miller
METHOD: 150 mm Ø DT to 0.20 m, HA to 0.37 m, NMLC to 10.00 m
CASING: PVC to 0.37m
REMARKS: 7.5 m monitoring well installed. Elevations interpolated from provided survey plan. Coordinates inferred from georeferenced aerial imagery.

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

CORE PHOTO LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW

SURFACE LEVEL: 93.3 AHD
COORDINATE: E:333521.0, N:6255365.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH6
PROJECT No: 214296.02
DATE: 19/02/25
SHEET: 1 of 1

0.37-5.00 m depth

5.00-10.00 m depth

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW 2065

SURFACE LEVEL:
COORDINATE:
DATUM/GRID:
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH7
DATE: 12/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
12/02/25 No free groundwater observed during augering			CONCRETE SLAB: 170mm.			ND	NA						
		0.17	FILL / Gravelly SAND, with silt: grey and brown; medium to coarse; sub-angular gravel.		FILL		M		ES		0.17 0.18	PID	<1ppm
			Borehole discontinued at 0.18m depth. Refusal on inferred siltstone .										

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: 150mm diameter diatube to 0.17m, HA to 0.18m
REMARKS: NA

OPERATOR: A1 Concrete

LOGGED: I Riaz
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW 2065

SURFACE LEVEL:
COORDINATE:
DATUM/GRID:
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH8
DATE: 12/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(^) DENSITY.(^)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
12/02/25 No free groundwater observed during augering		CONCRETE SLAB: 110 mm.				NA						
	0.11	FILL / Gravelly SAND, with clay, trace sandstone, siltstone, timber; medium to coarse; angular to sub-angular (up to 5mm) gravel.		FILL	ND	M		* ES		0.11	PID	<1ppm
								ES		0.25	PID	<1ppm
	0.30	SILTSTONE: grey-brown.				D						
		Borehole discontinued at 0.35m depth. Refusal on inferred siltstone .										

NOTES: (#)Soil origin is "probable" unless otherwise stated. (^)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: 150mm diameter diatube to 0.11m, HA to 0.35m
REMARKS: *Replicate sample BD2 taken from 0.11-0.13 depth.

OPERATOR: A1 Concrete

LOGGED: I Riaz
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW 2065

SURFACE LEVEL:
COORDINATE:
DATUM/GRID:
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH9
DATE: 12/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed during augering		CONCRETE SLAB: 150 mm.			ND	NA						
	0.15	Sandy CLAY (CI-CH): pale brown and grey; medium to high plasticity; medium to coarse sand.		RS		NDF	0.2	ES		0.15	PID	<1ppm
12/02/25		Borehole discontinued at 0.21m depth. Refusal on inferred siltstone or hard clay.										

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: 150mm diameter diatube to 0.15m, HA to 0.21m
REMARKS: NA

OPERATOR: A1 Concrete

LOGGED: I Riaz
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW 2065

SURFACE LEVEL:
COORDINATE:
DATUM/GRID:
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH10
DATE: 12/02/25
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
12/02/25 No free groundwater observed during augering		0.15	CONCRETE SLAB: 150mm thick.				NA				0.15		
			FILL / Silty Gravelly SAND: pale brown; fine to coarse; low to medium plasticity silt; igneous and sandstone gravel.		FILL		NDF		ES		0.20	PID	<1ppm
		0.25	FILL / Sandy CLAY, trace gravel: pale-brown and dark grey-brown; medium to high plasticity; fine to coarse sand; sandstone gravel.		FILL	ND	w<PL		ES		0.30	PID	<1ppm
											0.40		
									ES		0.70	PID	<1ppm
		0.90	CLAY (CI-CH): dark grey; medium to high plasticity.		RS						0.90		
		1									1		
									* ES		1.20	PID	<1ppm
			Borehole discontinued at 1.30m depth. Target depth reached.								1.30		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: 150mm diameter diatube to 0.15m, HA to 1.3m
REMARKS: * Replicate sample BD1 taken at 1.2-1.3m depth

OPERATOR: A1 Concrete

LOGGED: I Riaz
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Silvernight (Crows Nest) Landowner Pty Ltd
PROJECT: Proposed Mixed-Use Development
LOCATION: 270 Pacific Hwy, Crows Nest, NSW 2065

SURFACE LEVEL:
COORDINATE:
DATUM/GRID:
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH11
DATE: 12/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
12/02/25 No free groundwater observed during augering		CONCRETE SLAB: 220 mm thick.			ND	NA						
	0.22	FILL / Gravelly SAND, with silt, trace siltstone: grey and brown; medium to coarse.		FILL		M		ES		0.22	PID	<1ppm
	0.25	SILTSTONE: grey-brown.				D				0.24		
		Borehole discontinued at 0.26m depth. Refusal on inferred siltstone .										

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: 150mm diameter diatube to 0.22m, HA to 0.26m
REMARKS: NA

OPERATOR: A1 Concrete

LOGGED: I Riaz
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Terminology, Symbols and Abbreviations

November 2023

Introduction to Terminology, Symbols and Abbreviations

Douglas Partners' reports, investigation logs, and other correspondence may use terminology which has quantitative or qualitative connotations. To remove ambiguity or uncertainty surrounding the use of such terms, the following sets of notes pages may be attached Douglas Partners' reports, depending on the work performed and conditions encountered:

- Soil Descriptions;
- Rock Descriptions; and
- Sampling, insitu testing, and drilling methodologies

In addition to these pages, the following notes generally apply to most documents.

Abbreviation Codes

Site conditions may also be presented in a number of different formats, such as investigation logs, field mapping, or as a written summary. In some of these formats textual or symbolic terminology may be presented using textual abbreviation codes or graphic symbols, and, where commonly used, these are listed alongside the terminology definition. For ease of identification in these note pages, textual codes are presented in these notes in the following style XW. Code usage conforms with the following guidelines:

- Textual codes are case insensitive, although herein they are generally presented in upper case; and
- Textual codes are contextual (i.e. the same or similar combinations of characters may be used in different contexts with different meanings (for example `PL` is used for plastic limit in the context of soil moisture condition, as well as in `PL(A)` for point load test result in the testing results column)).

Data Integrity Codes

Subsurface investigation data recorded by Douglas Partners is generally managed in a highly structured database environment, where records "span" between a top and bottom depth interval. Depth interval "gaps" between records are considered to introduce ambiguity, and, where appropriate, our practice guidelines may require contiguous data sets. Recording meaningful data is not always appropriate (for example assigning a "strength" to a concrete pavement) and the following codes may be used to maintain contiguity in such circumstances.

Term	Description	Abbreviation Code
Core loss	No core recovery	KL
Unknown	Information was not available to allow classification of the property. For example, when auguring in loose, saturated sand auger cuttings may not be returned.	UK
No data	Information required to allow classification of the property was not available. For example if drilling is commenced from the base of a hole predrilled by others	ND
Not Applicable	Derivation of the properties not appropriate or beyond the scope of the investigation. For example providing a description of the strength of a concrete pavement	NA

Graphic Symbols

Douglas Partners' logs contain a "graphic" column which provides a pictorial representation of the basic composition of the material. The symbols used are directly representing the material name stated in the adjacent "Description of Strata" column, and as such no specific graphic symbology legend has been provided in these notes.

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Soil Descriptions

Terminology
Symbols
Abbreviations

March 2024

Introduction

All materials which are not considered to be "in-situ rock" are described in general accordance with the soil description model of AS 1726-2017 Part 6.1.3, and can be broken down into the following description structure:

The "classification" comprises a two character "group symbol" providing a general summary of dominant soil characteristics. The "name" summarises the particle sizes within the soil which most influence its behaviour. The detailed description presents more information about composition, condition, structure, and origin of the soil.

Classification, naming and description of soils require the relative proportion of particles of different sizes within the whole soil mixture to be considered.

Particle size designation and Behaviour Model

Solid particles within a soil are differentiated on the basis of size.

The engineering behaviour properties of a soil can subsequently be modelled to be either "fine grained" (also known as "cohesive" behaviour) or "coarse grained" ("non cohesive" behaviour), depending on the relative proportion of fine or coarse fractions in the soil mixture.

Particle Size Designation	Particle Size (mm)	Behaviour Model	
		Behaviour	Approximate Dry Mass
Boulder	>200	Excluded from particle behaviour model as "oversize"	
Cobble	63 - 200		
Gravel[1]	2.36 - 63	Coarse	>65%
Sand[1]	0.075 - 2.36		
Silt	0.002 - 0.075	Fine	>35%
Clay	<0.002		

[1] – refer grain size subdivision descriptions below

The behaviour model boundaries defined above are not precise, and the material behaviour should be assumed from the name given to the material (which considers the particle fraction which dominates the behaviour, refer "component proportions" below), rather than strict observance of the proportions of particle sizes. For example, if a material is named a "Sandy CLAY", this is indicative that the material exhibits fine grained behaviour, even if the dry mass of coarse grained material may exceed 65%.

Component proportions

The relative proportion of the dry mass of each particle size fraction is assessed to be a "primary", "secondary", or "minor" component of the soil mixture, depending on its influence over the soil behaviour.

Component Proportion Designation	Definition[1]	Relative Proportion	
		In Fine Grained Soil	In Coarse Grained Soil
Primary	The component (particle size designation, refer above) which dominates the engineering behaviour of the soil	The clay/silt component with the greater proportion	The sand/gravel component with the greater proportion
Secondary	Any component which is not the primary, but is significant to the engineering properties of the soil	Any component with greater than 30% proportion	Any granular component with greater than 30%; or Any fine component with greater than 12%
Minor[2]	Present in the soil, but not significant to its engineering properties	All other components	All other components

[1] As defined in AS1726-2017 6.1.4.4

[2] In the detailed material description, minor components are split into two further sub-categories. Refer "identification of minor components" below.

Composite Materials

In certain situations, a lithology description may describe more than one material, for example, collectively describing a layer of interbedded sand and clay. In such a scenario, the two materials would be described independently, with the names preceded or followed by a statement describing the arrangement by which the materials co-exist. For example, "INTERBEDDED Silty CLAY AND SAND".

Classification

The soil classification comprises a two character group symbol. The first character identifies the primary component. The second character identifies either the grading or presence of fines in a coarse grained soil, or the plasticity in a fine grained soil. Refer AS1726-2017 6.1.6 for further clarification.

Soil Name

For most soils, the name is derived with the primary component included as the noun (in upper case), preceded by any secondary components stated in an adjective form. In this way, the soil name also describes the general composition and indicates the dominant behaviour of the material.

Component [1]	Prominence in Soil Name
Primary	Noun (eg "CLAY")
Secondary	Adjective modifier (eg "Sandy")
Minor	No influence

[1] – for determination of component proportions, refer component proportions on previous page

For materials which cannot be disaggregated, or which are not comprised of rock or mineral fragments, the names "ORGANIC MATTER" or "ARTIFICIAL MATERIAL" may be used, in accordance with AS1726-2017 Table 14.

Commercial or colloquial names are not used for the soil name where a component derived name is possible (for example "Gravelly SAND" rather than "CRACKER DUST").

Materials of "fill" or "topsoil" origin are generally assigned a name derived from the primary/secondary component (where appropriate). In log descriptions this is preceded by uppercase "FILL" or "TOPSOIL". Origin uncertainty is indicated in the description by the characters (?), with the degree of uncertainty described (using the terms "probably" or "possibly" in the origin column, or at the end of the description).

Identification of minor components

Minor components are identified in the soil description immediately following the soil name. The minor component fraction is usually preceded with a term indicating the relative proportion of the component.

Minor Component Proportion Term	Relative Proportion	
	In Fine Grained Soil	In Coarse Grained Soil
With	All fractions: 15-30%	Clay/silt: 5-12% sand/gravel: 15-30%
Trace	All fractions: 0-15%	Clay/silt: 0-5% sand/gravel: 0-15%

The terms "with" and "trace" generally apply only to gravel or fine particle fractions. Where cobbles/boulders are encountered in minor proportions (generally less than about 12%) the term "occasional" may be used. This term describes the sporadic distribution of the material within the confines of the investigation excavation only, and there may be considerable variation in proportion over a wider area which is difficult to factually characterise due to the relative size of the particles and the investigation methods.

Soil Composition

Plasticity

Descriptive Term	Laboratory liquid limit range	
	Silt	Clay
Non-plastic materials	Not applicable	Not applicable
Low plasticity	≤50	≤35
Medium plasticity	Not applicable	>35 and ≤50
High plasticity	>50	>50

Note, Plasticity descriptions generally describe the plasticity behaviour of the whole of the fine grained soil, not individual fine grained fractions.

Grain Size

Type		Particle size (mm)
Gravel	Coarse	19 - 63
	Medium	6.7 - 19
	Fine	2.36 – 6.7
Sand	Coarse	0.6 - 2.36
	Medium	0.21 - 0.6
	Fine	0.075 - 0.21

Grading

Grading Term	Particle size (mm)
Well	A good representation of all particle sizes
Poorly	An excess or deficiency of particular sizes within the specified range
Uniformly	Essentially of one size
Gap	A deficiency of a particular size or size range within the total range

Note, AS1726-2017 provides terminology for additional attributes not listed here.

Soil Condition

Moisture

The moisture condition of soils is assessed relative to the plastic limit for fine grained soils, while for coarse grained soils it is assessed based on the appearance and feel of the material. The moisture condition of a material is considered to be independent of stratigraphy (although commonly these are related), and this data is presented in its own column on logs.

Applicability	Term	Tactile Assessment	Abbreviation code
Fine	Dry of plastic limit	Hard and friable or powdery	w<PL
	Near plastic limit	Can be moulded	w=PL
	Wet of plastic limit	Water residue remains on hands when handling	w>PL
	Near liquid limit	"oozes" when agitated	w=LL
	Wet of liquid limit	"oozes"	w>LL
Coarse	Dry	Non-cohesive and free running	D
	Moist	Feels cool, darkened in colour, particles may stick together	M
	Wet	Feels cool, darkened in colour, particles may stick together, free water forms when handling	W

The abbreviation code NDF, meaning "not-assessable due to drilling fluid use" may also be used.

Note, observations relating to free ground water or drilling fluids are provided independent of soil moisture condition.

Consistency/Density/Compaction/Cementation/Extremely Weathered Material

These concepts give an indication of how the material may respond to applied forces (when considered in conjunction with other attributes of the soil). This behaviour can vary independent of the composition of the material, and on logs these are described in an independent column and are generally mutually exclusive (i.e it is inappropriate to describe both consistency and compaction at the same time). The method by which the behaviour is described depends on the behaviour model and other characteristics of the soil as follows:

- In fine grained soils, the "consistency" describes the ease with which the soil can be remoulded, and is generally correlated against the materials undrained shear strength;
- In granular materials, the relative density describes how tightly packed the particles are, and is generally correlated against the density index;
- In anthropogenically modified materials, the compaction of the material is described qualitatively;
- In cemented soils (both natural and anthropogenic), the cemented "strength" is described qualitatively, relative to the difficulty with which the material is disaggregated; and
- In soils of extremely weathered material origin, the engineering behaviour may be governed by relic rock features, and expected behaviour needs to be assessed based the overall material description.

Quantitative engineering performance of these materials may be determined by laboratory testing or estimated by correlated field tests (for example penetration or shear vane testing). In some cases, performance may be assessed by tactile or other subjective methods, in which case investigation logs will show the estimated value enclosed in round brackets, for example (VS).

Consistency (fine grained soils)

Consistency Term	Tactile Assessment	Undrained Shear Strength (kPa)	Abbreviation Code
Very soft	Extrudes between fingers when squeezed	<12	VS
Soft	Mouldable with light finger pressure	>12 - ≤25	S
Firm	Mouldable with strong finger pressure	>25 - ≤50	F
Stiff	Cannot be moulded by fingers	>50 - ≤100	St
Very stiff	Indented by thumbnail	>100 - ≤200	VSt
Hard	Indented by thumbnail with difficulty	>200	H
Friable	Easily crumbled or broken into small pieces by hand	-	Fr

Relative Density (coarse grained soils)

Relative Density Term	Density Index	Abbreviation Code
Very loose	<15	VL
Loose	>15 - ≤35	L
Medium dense	>35 - ≤65	MD
Dense	>65 - ≤85	D
Very dense	>85	VD

Note, tactile assessment of relative density is difficult, and generally requires penetration testing, hence a tactile assessment guide is not provided.

Compaction (anthropogenically modified soil)

Compaction Term	Abbreviation Code
Well compacted	WC
Poorly compacted	PC
Moderately compacted	MC
Variably compacted	VC

Cementation (natural and anthropogenic)

Cementation Term	Abbreviation Code
Moderately cemented	MOD
Weakly cemented	WEK

Extremely Weathered Material

AS1726-2017 considers weathered material to be soil if the unconfined compressive strength is less than 0.6 MPa (i.e. less than very low strength rock). These materials may be identified as "extremely weathered material" in reports and by the abbreviation code XWM on log sheets. This identification is not correlated to any specific qualitative or quantitative behaviour, and the engineering properties of this material must therefore be assessed according to engineering principles with reference to any relic rock structure, fabric, or texture described in the description.

Soil Origin

Term	Description	Abbreviation Code
Residual	Derived from in-situ weathering of the underlying rock	RS
Extremely weathered material	Formed from in-situ weathering of geological formations. Has strength of less than 'very low' as per as1726 but retains the structure or fabric of the parent rock.	XWM
Alluvial	Deposited by streams and rivers	ALV
Fluvial	Deposited by channel fill and overbank (natural levee, crevasse splay or flood basin)	FLV
Estuarine	Deposited in coastal estuaries	EST
Marine	Deposited in a marine environment	MAR
Lacustrine	Deposited in freshwater lakes	LAC
Aeolian	Carried and deposited by wind	AEO
Colluvial	Soil and rock debris transported down slopes by gravity	COL
Slopewash	Thin layers of soil and rock debris gradually and slowly deposited by gravity and possibly water	SW
Topsoil	Mantle of surface soil, often with high levels of organic material	TOP
Fill	Any material which has been moved by man	FILL
Littoral	Deposited on the lake or seashore	LIT
Unidentifiable	Not able to be identified	UID

Cobbles and Boulders

The presence of particles considered to be "oversize" may be described using one of the following strategies:

- Oversize encountered in a minor proportion (when considered relative to the wider area) are noted in the soil description; or
- Where a significant proportion of oversize is encountered, the cobbles/boulders are described independent of the soil description, in a similar manner to composite soils (described above) but qualified with "MIXTURE OF".

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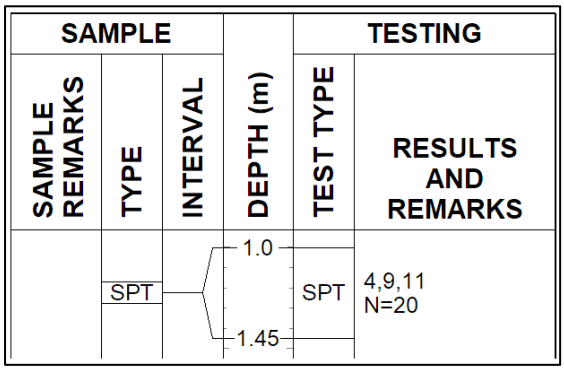
Sampling and Testing

A record of samples retained, and field testing performed is usually shown on a Douglas Partners' log with samples appearing to the left of a depth scale, and selected field and laboratory testing (including results, where relevant) appearing to the right of the scale, as illustrated below:



Sampling

The type or intended purpose for which a sample was taken is indicated by the following abbreviation codes.

Sample Type	Code
Auger sample	A
Acid Sulfate sample	ASS
Bulk sample	B
Core sample	C
Disturbed sample	D
Environmental sample	ES
Driven Tube sample	DT
Gas sample	G
Piston sample	P
Sample from SPT test	SPT
Undisturbed tube sample	U[1]
Water sample	W
Material Sample	MT
Core sample for unconfined compressive strength testing	UCS

[1] – numeric suffixes indicate tube diameter/width in mm

The above codes only indicate that a sample was retained, and not that testing was scheduled or performed.

Field and Laboratory Testing

A record that field and laboratory testing was performed is indicated by the following abbreviation codes.

Test Type	Code
Pocket penetrometer (kPa)	PP
Photo ionisation detector (ppm)	PID
Standard Penetration Test x/y =*x* blows for *y* mm penetration HB = hammer bouncing HW = fell under weight of hammer	SPT
Shear vane (kPa)	V
Unconfined compressive strength, (MPa)	UCS
Point load test, (MPa), axial (A), diametric (D), irregular (I)	PLT(_)
Dynamic cone penetrometer, followed by blow count penetration increment in mm (cone tip, generally in accordance with AS1289.6.3.2)	DCP9/150
Perth sand penetrometer, followed by blow count penetration increment in mm (flat tip, generally in accordance with AS1289.6.3.3)	PSP/150
Dynamic probe super heavy, followed by blow count penetration increment in mm	DPSH/100

Groundwater Observations

	water seepage/inflow
	water seepage/outflow
	standing or observed water level
NFGWO	no free groundwater observed
OBS	observations obscured by drilling fluids

Drilling or Excavation Methods/Tools

The drilling/excavation methods used to perform the investigation may be shown either in a dedicated column down the left-hand edge of the log, or stated in the log footer. In some circumstances abbreviation codes may be used.

Method	Abbreviation Code
Direct Push	DP
Solid flight auger. Suffixes: /T = tungsten carbide tip, /V = v-shaped tip	AD[1]
Air Track	AT
Diatube	DT[1]
Hand auger	HA[1]
Hand tools (unspecified)	HAND
Existing exposure	X
Hollow flight auger	HSA[1]
HQ coring	HQ3
HMLC series coring	HMLC
NMLC series coring	NMLC
NQ coring	NQ3
PQ coring	PQ3
Predrilled	PD
Push tube	PT[1]
Ripping tyne/ripper	R
Rock roller	RR[1]
Rock breaker/hydraulic hammer	EH
Sonic drilling	SON[1]
Mud/blade bucket	MB[1]
Toothed bucket	TB[1]
Vibrocore	VC[1]
Vacuum excavation	VE
Wash bore (unspecified bit type)	WB[1]

[1] – numeric suffixes indicate tool diameter/width in mm

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Groundwater (GW) Field Sheet

Project and Bore Installation Details						
Project Name / Site Location	Cows nest.				Project Number	
Well Construction Details	Well ID	BH2	Drilling Method		Hole Diameter (m)~	
	Well Depth (m bgl)		Screened (m bgl)		Stick Up (m)	
Survey Information	Easting		Northing		Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	25/2/25			Purged By	IR
Purge Method / Equipment	Twister Pump				
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)	Y	
GW Level (pre-purge)	1.37	m bgl	Observed Well Depth	10.58	m bgl
Height of Water Column (H)	9.21	m bgl	Estimated Bore Volume*	25.78	L
GW Level (post-purge)	wet/dry	m bgl	Total Volume Purged**		L
Appearance/Comments	pale brown, silty towards the end				

Sampling Details					
Date / Time / Weather Conditions	5/3/24			Sampled By	IR
Sampling Method / Equipment	Reri Pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-micropurge)	1.14	m bgl	Observed Well Depth	10.78	m bgl
Height of Water Column		m bgl	Estimated Bore Volume*		L
GW Level (post sample)		m bgl	Total Volume of Micro-Purged		L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
1	2	22.1	3.21	789	3.92	500.5	37.73
2	5	22.1	2.99	743	3.93	504.6	29.07
3	10	22.1	2.76	789	3.96	508.9	32.32
4	15	22.1	2.73	726	4.01	509.7	35.63
5	20	22.1	2.66	738	4.00	509.4	66.04
6							
Notes:	# Considered stabilised if three DO values are less than 0.5 mg/L			^ Considered stabilised if three Turbidity values are less than 5 NTU			

Sample Details						
Sampling Depth (rationale)	5	m bgl,	mid water column.			
Sample Observations (e.g. colour, sediment, sheen, odour)	BH2					
Sample ID						
QAQC Samples	Replicate		Triplicate		Other	
Sample Containers Quantity / Preservation / Filtration	Amber glass	✓	Plastic	✓	PFAS (no teflon)	
	Metals (F/UF) (HNO3)	✓	Phenols/COD/NH3 (H2SO4)		Vials (HCl)	✓
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

Groundwater (GW) Field Sheet

Project and Bore Installation Details	Crows Nest					
Project Name / Site Location					Project Number	
Well Construction Details	Well ID	BH4	Drilling Method		Hole Diameter (m)~	
	Well Depth (m bgl)		Screened (m bgl)		Stick Up (m)	
Survey Information	Easting		Northing		Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details	25/2/25				
Date / Time / Weather Conditions	Indoor - overcast/rainy			Purged By	IR
Purge Method / Equipment	Twister pump.				
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-purge)	1.25	m bgl	Observed Well Depth	7.82	m bgl
Height of Water Column (H)	6.57	m bgl	Estimated Bore Volume*	18.4	L
GW Level (post-purge)	Well dry	m bgl	Total Volume Purged**	~20	L
Appearance/Comments	pale brown, no odour.				

Sampling Details	5/3/25				
Date / Time / Weather Conditions				Sampled By	IR
Sampling Method / Equipment	peri pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-micropurge)	0.41	m bgl	Observed Well Depth	7.78	m bgl
Height of Water Column		m bgl	Estimated Bore Volume*		L
GW Level (post sample)	2.73	m bgl	Total Volume of Micro-Purged		L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
1	2	23.1	6.34	1878	4.20	397.1	39.12
2	5	22.2	1.56	1905	4.61	430.3	38.41
3	10	22.6	1.70	1912	4.83	422.5	80.52
4	15	22.2	1.63	1884	4.50	424.7	37.10
5	20	22.2	1.61	1883	4.55	4208	370.17

Notes: # Considered stabilised if three DO values are less than 0.5 mg/L ^ Considered stabilised if three Turbidity values are less than 5 NTU

Sample Details						
Sampling Depth (rationale)	3	m bgl,				
Sample Observations (e.g. colour, sediment, sheen, odour)	BH4 / clear.					
Sample ID	↳					
QAQC Samples	Replicate		Triplicate		Other	
Sample Containers Quantity / Preservation / Filtration	Amber glass	✓	Plastic	✓	PFAS (no teflon)	
	Metals (F/UF) (HNO3)	✓	Phenols/COD/NH3 (H2SO4)		Vials (HCl)	✓
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

2.8
× 6.57

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Groundwater (GW) Field Sheet

Project and Bore Installation Details	Crows Nest					
Project Name / Site Location	BH6				Project Number	
Well Construction Details	Well ID		Drilling Method		Hole Diameter (m)	
	Well Depth (m bgl)		Screened (m bgl)		Stick Up (m)	
Survey Information	Easting		Northing		Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	25/12/25			Purged By	IR
Purge Method / Equipment	Twister pump.				
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-purge)	3.28	m bgl	Observed Well Depth	7.77	m bgl
Height of Water Column (H)	4.49	m bgl	Estimated Bore Volume*	12.6	L
GW Level (post-purge)	welldry	m bgl	Total Volume Purged**	~20L	L
Appearance/Comments	well pale brown, turning clear, no odour.				

Sampling Details					
Date / Time / Weather Conditions	5/3/25			Sampled By	IR
Sampling Method / Equipment	Peri pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-micropurge)	2.37	m bgl	Observed Well Depth	7.79	m bgl
Height of Water Column		m bgl	Estimated Bore Volume*		L
GW Level (post sample)	5.22	m bgl	Total Volume of Micro-Purged		L

Water Quality Parameters pale brown, turning clear - no odour

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
1	2	20.5	3.23	974	4.37	437.5	10.21
2	5	20.7	3.17	1061	4.52	447.9	10.57
3	10	21.0	3.54	1051	4.61	449.1	49.19
4	15	21.1	3.92	1057	4.45	445.5	12.84
5	20	21.1	3.84	1065	4.39	458.7	115.12
Notes:	# Considered stabilised if three DO values are less than 0.5 mg/L			^ Considered stabilised if three Turbidity values are less than 5 NTU			

Sample Details						
Sampling Depth (rationale)	5	m bgl,	mid.			
Sample Observations (e.g. colour, sediment, sheen, odour)	clear.					
Sample ID	BH6 (BD)					
QAQC Samples	Replicate	✓	Triplicate		Other	
Sample Containers Quantity / Preservation / Filtration	Amber glass	✓	Plastic	✓	PFAS (no teflon)	
	Metals (F/UF) (HNO3)	✓	Phenols/COD/NH3 (H2SO4)		Vials (HCl)	✓
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

Appendix G

Summary Results Tables

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Table G1: Summary of Laboratory Results – Soil

			Priority metals								Priority PAH				PAH												Priority TRH					
			Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10) - BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34- C40)
HIL B			500	150	500	30 000	1200	120	1200	60 000			4	400																		
HSL B (2 m to <4 m)											NL																		150	NL		
HSL D (2 m to <4 m)											NL																		NL	NL		
EIL			100		410	65	1100		65	210	170																					
ESL												0.7																	180	120	300	2800
		PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	25	50	25	50	100	100
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH8	0.11 - 0.13 m	12/02/25	<4	<0.4	**6**	**5**	**5**	**0.1**	**5**	**23**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BD2	0 m	12/02/25	<4	<0.4	**6**	**5**	**4**	<0.1	**6**	**16**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH8	0.25 - 0.3 m	12/02/25	<4	<0.4	**8**	**6**	**7**	<0.1	**8**	**22**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH11	0.22 - 0.24 m	12/02/25	<4	<0.4	**7**	**59**	**6**	**0.2**	**12**	**19**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH10	0.15 - 0.2 m	12/02/25	<4	<0.4	**7**	**120**	**4**	**0.2**	**14**	**16**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH10	0.3 - 0.4 m	12/02/25	<4	<0.4	**8**	**3**	**13**	<0.1	**2**	**14**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH10	0.7 - 0.9 m	12/02/25	<4	<0.4	**5**	**1**	**11**	<0.1	<1	**8**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH10	1.2 - 1.3 m	12/02/25	<4	<0.4	**5**	**1**	**12**	<0.1	**1**	**8**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BD1	0 m	12/02/25	<4	<0.4	**7**	**2**	**12**	<0.1	<1	**5**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH9	0.15 - 0.2 m	12/02/25	<4	<0.4	**10**	**10**	**7**	<0.1	**13**	**21**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH7	0.17 - 0.18 m	12/02/25	<4	<0.4	**7**	**57**	**5**	**0.7**	**21**	**29**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH1	0.14 - 0.2 m	24/02/25	<4	<0.4	**6**	**12**	**4**	<0.1	**8**	**15**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH1	0.8 - 0.9 m	24/02/25	<4	<0.4	**7**	**3**	**9**	<0.1	**2**	**15**	<1	**0.06**	<0.5	**0.4**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	**0.2**	<25	<50	<25	<50	<100	<100
BH2	0.2 - 0.3 m	17/02/25	**5**	<0.4	**4**	**2**	**1**	<0.1	**3**	**3**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH2	0.4 - 0.5 m	17/02/25	**4**	<0.4	**8**	**3**	**5**	<0.1	**4**	**11**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH3	0.15 - 0.2 m	17/02/25	<4	<0.4	**9**	**8**	**10**	<0.1	**4**	**23**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH3	0.3 - 0.4 m	17/02/25	**15**	<0.4	**45**	**1**	**15**	**0.2**	<1	**3**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH4	0.11 - 0.3 m	18/02/25	<4	<0.4	**7**	**12**	**4**	<0.1	**14**	**20**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH5	0.2 - 0.3 m	21/02/25	**6**	<0.4	**8**	**7**	**11**	<0.1	**4**	**28**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH6	0.2 - 0.25 m	18/02/25	**13**	<0.4	**10**	**6**	**15**	<0.1	<1	**2**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH6	0.4 - 0.45 m	18/02/25	<4	<0.4	**7**	**20**	**7**	<0.1	**11**	**7**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100
BH1 - [TRIPLICATE]	0.14 - 0.2 m	24/02/25	<4	<0.4	**5**	**14**	**4**	<0.1	**8**	**13**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

270 Pacific Hwy, crows nest, NSW, 2065

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Table G1: Summary of Laboratc

			TRH		BTEX				VOC	Priority phenols	OCP										OPP		PCB				
			TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	All VOC	Total Phenolics	DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	All other OCP	Chlorpyriphos	All other OPP	Total PCB	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation
HIL B										45 000	600	10	90	400	20	10	15	500			340		1			
HSL B (2 m to <4 m)					2	NL	NL	NL																0.04		0.001
HSL D (2 m to <4 m)					9	NL	NL	NL																0.05		0.001
EIL																										
ESL					50	85	70	105																		
		PQL	25	50	0.2	0.5	1	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.01		0.001
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%(w/w)	g	%(w/w)
BH8	0.11 - 0.13 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.001
BD2	0 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8	0.25 - 0.3 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.22 - 0.24 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.001
BH10	0.15 - 0.2 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.001
BH10	0.3 - 0.4 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
BH10	0.7 - 0.9 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
BH10	1.2 - 1.3 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD1	0 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9	0.15 - 0.2 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.001
BH7	0.17 - 0.18 m	12/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-
BH1	0.14 - 0.2 m	24/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	-	<0.001
BH1	0.8 - 0.9 m	24/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2	0.2 - 0.3 m	17/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	-	<0.001
BH2	0.4 - 0.5 m	17/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<0.001
BH3	0.15 - 0.2 m	17/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	-	<0.001
BH3	0.3 - 0.4 m	17/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4	0.11 - 0.3 m	18/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	-	<0.001
BH5	0.2 - 0.3 m	21/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	-	<0.001
BH6	0.2 - 0.25 m	18/02/25	<25	<50	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	-	<0.001
BH6	0.4 - 0.45 m	18/02/25	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1 - [TRIPLICATE]	0.14 - 0.2 m	24/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

a QA/QC replicate of sample listed di

b Naphthalene reported as highest c

c EIL criteria applies to DDT only

270 Pacific Hwy, crows nest, NSW, 2065

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Table G2: Summary of Laboratory Results – Groundwater

		Metals - Dissolved								TRH				BTEX						PAH															
		Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Naphthalene	Benzo(a)pyrene (BaP)	Benzo(b+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Sum of detected PAH
	PQL	1	0.1	1	1	1	0.05	1	1	10	50	100	100	1	1	1	1	2	1	0.1	0.1	0.1	0.1	1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPC (2013) HSL B (2-4m)										NL	NL			5000	NL	NL			NL					NL											
NEPC (2013) HSL D (2-4m)										NL	NL			30 000	NL	NL			NL					NL											
ANZG (2018) 95% LOP Fresh (Hardness adjusted)		13	0.7	10.6	1.4	20.8	0.06	36.9	26.8					950	180	80	350	75				0.01		16	0.1					1			0.6		
Sample ID	Sample Date	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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH2	5/03/2025	<1	**1.4**	<1	**49**	<1	<0.05	**17**	**160**	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH4	5/03/2025	**2**	**4.7**	<1	**640**	**1**	<0.05	**110**	**670**	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH6	5/03/2025	**1**	**7.9**	<1	**1,100**	**1**	<0.05	**330**	**930**	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BD1	5/03/2025	**1**	**6.6**	<1	**1000**	<1	<0.05	**280**	**750**	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

- No criterion / not defined / not tested / not applicable
* QA/QC replicate of sample listed directly below the primary sample
NL Not limiting
PQL Practical quantitation limit
Shaded cell is exceedance of guideline value
Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m
ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

270 Pacific Hwy, crows nest, NSW, 2065

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Table G2: Summary of Labora

		OCP																					OPP																			
		DDE	DDT	DDD	Aldrin	Dieldrin	Aldrin + Dieldrin (calculated)	alpha-chlordane	gamma-Chlordane	Endosulfan I	Endosulfan II	Endosulfan Sulphate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	alpha-BHC	beta-BHC	delta-BHC	Lindane	Sum of detected OCP	Azinphos methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Ronnel (fenchlorphos)	Fenitrothion	Fenthion	Malathion	Parathion	Parathion-methyl	Methidathion	Fenamiphos	Sum of detected OPP
	PQL	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.02	0.05	0.009	0.05	0.01	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.004	0.05	0.05	0.05	0.004
NEPC (2013) HSL B (2-4m)																																									
NEPC (2013) HSL D (2-4m)																																									
ANZG (2018) 95% LOP Fresh (Hardness adjusted)			0.006		0.001	0.01							0.01		0.01			0.005								0.01		0.01		0.15			0.2		0.05	0.004					
Sample ID	Sample Date	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	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
BH2	5/03/2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004
BH4	5/03/2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004
BH6	5/03/2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004
BD1	5/03/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not test
* QA/QC replicate of sample listed di
NL Not limiting
PQL Practical quantitation limit
Shaded cell is exceedance of guide
Where one or more guideline value
NEPC (2013) National Environment
ANZG (2018) Australian and New Ze
ANZG (2018) Australian and New Ze
Underlining of ANZG (2018) criteria
ANZG (2018) DGV adopted for most
ANZG (2018) DGV adopted for alum
ANZG (2018) Ammonia DGV is pH a

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Table G2: Summary of Labora

		PCB								VOC			
		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Sum of detected PCB	Bromodichloromethane	Chloroform	All other VOC	Sum of detected VOC
	PQL	2	2	2	2	2	2	2	2	1	1		1
NEPC (2013) HSL B (2-4m)													
NEPC (2013) HSL D (2-4m)													
ANZG (2018) 95% LOP Fresh (Hardness adjusted)					0.3		0.01				770		
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH2	5/03/2025	<2	<2	<2	<2	<2	<2	<2	<2	<1	**1**	<PQL	**1**
BH4	5/03/2025	<2	<2	<2	<2	<2	<2	<2	<2	<1	**1**	<PQL	**1**
BH6	5/03/2025	<2	<2	<2	<2	<2	<2	<2	<2	**1**	**5**	<PQL	**6**
BD1	5/03/2025	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not test
- * QA/QC replicate of sample listed di
- NL Not limiting
- PQL Practical quantitation limit
- Shaded cell is exceedance of guide
- Where one or more guideline value
- NEPC (2013) National Environment
- ANZG (2018) Australian and New Ze
- ANZG (2018) Australian and New Ze
- Underlining of ANZG (2018) criteria
- ANZG (2018) DGV adopted for most
- ANZG (2018) DGV adopted for alum
- ANZG (2018) Ammonia DGV is pH a

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Table G3: Summary of Laboratory Results – Waste Classification Assessment

			Metals						TRH		BTEX				PAH		Phenols	OCP				OPP	PCB	VOC																Asbestos				
			Total Arsenic	Cadmium	Total Chromium	Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (BaP)	Total PAH	Total Phenolics	Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed OPP	Total PCB	carbon tetrachloride	Monochlorobenzene	Chloroform	1,2-dichlorobenzene	1,4-dichlorobenzene	1,2-dichloroethane	1,1-Dichloroethene	Styrene (Vinylbenzene)	1,1,1,2-tetrachloroethane	1,1,2,2-tetrachloroethane	Tetrachloroethene	1,1,1-trichloroethane	1,1,2-trichloroethane	1,1,2-trichloroethylene	Vinyl Chloride	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)
		PQL	4	0.4	1	1	0.1	1	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	-	-
BH8	0.11 - 0.13 m	12/02/25	<4	<0.4	**6**	**5**	**0.1**	**5**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	NAD	NAD	NAD
BD2	0 m	12/02/25	<4	<0.4	**6**	**4**	<0.1	**6**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8	0.25 - 0.3 m	12/02/25	<4	<0.4	**8**	**7**	<0.1	**8**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	-	-
BH11	0.22 - 0.24 m	12/02/25	<4	<0.4	**7**	**6**	**0.2**	**12**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	NAD	NAD	NAD
BH10	0.15 - 0.2 m	12/02/25	<4	<0.4	**7**	**4**	**0.2**	**14**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH10	0.3 - 0.4 m	12/02/25	<4	<0.4	**8**	**13**	<0.1	**2**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH10	0.7 - 0.9 m	12/02/25	<4	<0.4	**5**	**11**	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH10	1.2 - 1.3 m	12/02/25	<4	<0.4	**5**	**12**	<0.1	**1**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD1	0 m	12/02/25	<4	<0.4	**7**	**12**	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9	0.15 - 0.2 m	12/02/25	<4	<0.4	**10**	**7**	<0.1	**13**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	NAD	NAD	NAD
BH7	0.17 - 0.18 m	12/02/25	<4	<0.4	**7**	**5**	**0.7**	**21**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	-	-
BH1	0.14 - 0.2 m	24/02/25	<4	<0.4	**6**	**4**	<0.1	**8**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH1	0.8 - 0.9 m	24/02/25	<4	<0.4	**7**	**9**	<0.1	**2**	<25	<50	<0.2	<0.5	<1	<1	**0.06**	**0.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2	0.2 - 0.3 m	17/02/25	**5**	<0.4	**4**	**1**	<0.1	**3**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH2	0.4 - 0.5 m	17/02/25	**4**	<0.4	**8**	**5**	<0.1	**4**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH3	0.15 - 0.2 m	17/02/25	<4	<0.4	**9**	**10**	<0.1	**4**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH3	0.3 - 0.4 m	17/02/25	**15**	<0.4	**45**	**15**	**0.2**	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4	0.11 - 0.3 m	18/02/25	<4	<0.4	**7**	**4**	<0.1	**14**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH5	0.2 - 0.3 m	21/02/25	**6**	<0.4	**8**	**11**	<0.1	**4**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH6	0.2 - 0.25 m	18/02/25	**13**	<0.4	**10**	**15**	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
BH6	0.4 - 0.45 m	18/02/25	<4	<0.4	**7**	**7**	<0.1	**11**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1 - [TRIPLICATE]	0.14 - 0.2 m	24/02/25	<4	<0.4	**5**	**4**	<0.1	**8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste Classification Criteria [f]																																											
CT1			100	20	100	100	4	40	-	10,000	10	288	600	1000	0.8	200	288	<50	60	-	-	4	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCC1			500	100	1,900	1,500	50	1,050	-	10,000	18	518	1,080	1,800	10	200	518	<50	108	-	-	7.5	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TCLP1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT2			400	80	400	400	16	160	-	40,000	40	1,152	2,400	4,000	3.2	800	1,152	<50	240	-	-	16	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCC2			2,000	400	7,600	6,000	200	4,200	-	40,000	72	2,073	4,320	7,200	23	800	2,073	<50	432	-	-	30	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TCLP2			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

□ CT1 exceedance ▒ TCLP1 and/or SCC1 exceedance □ CT2 exceedance ▒ TCLP2 and/or SCC2 exceedance ■ Asbestos detection

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste

PQL Practical quantitation limit

CT1 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

270 Pacific Hwy, crows nest, NSW, 2065

1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.2 16/03/2025 11:35:15 AM										
5	From File	WorkSheet.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**Copper**											
12												
13	**General Statistics**											
14	Total Number of Observations			16			Number of Distinct Observations				12	
15							Number of Missing Observations				0	
16	Minimum			1			Mean				19.31	
17	Maximum			120			Median				6.5	
18	SD			32.41			Std. Error of Mean				8.103	
19	Coefficient of Variation			1.678			Skewness				2.453	
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic			0.598			**Shapiro Wilk GOF Test**					
23	1% Shapiro Wilk Critical Value			0.844			Data Not Normal at 1% Significance Level					
24	Lilliefors Test Statistic			0.402			**Lilliefors GOF Test**					
25	1% Lilliefors Critical Value			0.248			Data Not Normal at 1% Significance Level					
26	**Data Not Normal at 1% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL			33.52			95% Adjusted-CLT UCL (Chen-1995)				37.95	
31							95% Modified-t UCL (Johnson-1978)				34.35	
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic			1.102			**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value			0.786			Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic			0.277			**Kolmogorov-Smirnov Gamma GOF Test**					
37	5% K-S Critical Value			0.225			Data Not Gamma Distributed at 5% Significance Level					
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)			0.623			k star (bias corrected MLE)				0.548	
42	Theta hat (MLE)			30.99			Theta star (bias corrected MLE)				35.24	
43	nu hat (MLE)			19.94			nu star (bias corrected)				17.54	
44	MLE Mean (bias corrected)			19.31			MLE Sd (bias corrected)				26.09	
45							Approximate Chi Square Value (0.05)				9.056	
46	Adjusted Level of Significance			0.0335			Adjusted Chi Square Value				8.369	
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL			37.4			95% Adjusted Gamma UCL				40.47	
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic			0.937			**Shapiro Wilk Lognormal GOF Test**					

53				10% Shapiro Wilk Critical Value		0.906	Data appear Lognormal at 10% Significance Level					
54				Lilliefors Test Statistic		0.17	**Lilliefors Lognormal GOF Test**					
55				10% Lilliefors Critical Value		0.196	Data appear Lognormal at 10% Significance Level					
56	**Data appear Lognormal at 10% Significance Level**											
57												
58	**Lognormal Statistics**											
59				Minimum of Logged Data		0	Mean of logged Data					1.975
60				Maximum of Logged Data		4.787	SD of logged Data					1.394
61												
62	**Assuming Lognormal Distribution**											
63				95% H-UCL		63.77	90% Chebyshev (MVUE) UCL					37.71
64				95% Chebyshev (MVUE) UCL		47.02	97.5% Chebyshev (MVUE) UCL					59.93
65				99% Chebyshev (MVUE) UCL		85.31						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution**											
69												
70	**Nonparametric Distribution Free UCLs**											
71				95% CLT UCL		32.64	95% BCA Bootstrap UCL					38
72				95% Standard Bootstrap UCL		32.47	95% Bootstrap-t UCL					46.46
73				95% Hall's Bootstrap UCL		34.1	95% Percentile Bootstrap UCL					33.5
74				90% Chebyshev(Mean, Sd) UCL		43.62	95% Chebyshev(Mean, Sd) UCL					54.63
75				97.5% Chebyshev(Mean, Sd) UCL		69.91	99% Chebyshev(Mean, Sd) UCL					99.93
76												
77	**Suggested UCL to Use**											
78				95% H-UCL		63.77						
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												

Appendix H

Quality Assurance and Quality Control

1. Field and laboratory data quality assurance and quality control

The field and laboratory data quality assurance and quality control (QA / QC) procedures and results are summarised in the following Table 1. Reference should be made to the field work methodology and the laboratory results / certificates of analysis for further details. The relative percentage difference (RPD) results, along with the other field QC samples are included at the end of this appendix.

Table 1: Field and laboratory quality control

Item	Evaluation / acceptance criteria	Compliance
Analytical laboratories used	NATA accreditation	C
Holding times	Various based on type of analysis	C
Intra-laboratory replicates	10% of primary samples; <30% RPD	C PC
Trip spikes	1 per sampling event; 60-140% recovery	C
Trip blanks	1 per sampling event; <PQL	C
Laboratory / reagent blanks	1 per batch; <PQL	C
Laboratory duplicate	1 per lab batch; as laboratory certificate	C
Matrix spikes	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Surrogate spikes	All organics analysis; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Control samples	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Standard operating procedures (SOP)	Adopting SOP for all aspects of the sampling field work	C

Notes:
C = compliance; PC = partial compliance; NC = non-compliance

The RPD results were all within the acceptable range, with the exception of those indicated in Tables QA1 and QA4 (results in bold). The exceedances are not, however, considered to be of concern given that:

- the actual differences in the concentrations of the replicate pairs where RPD exceedances occurred were typically low;
- the replicate pairs were collected from fill soils which by its nature are heterogeneous;
- replicates, rather than homogenised duplicates, were used to minimise risk of volatile loss, hence greater analytical variability between replicate pairs can be expected;
- the majority of RPD results from a replicate pair were within the acceptable limits; and

- all other QA / QC parameters met the data quality indicators.

In summary, the QC data is determined to be of sufficient quality to be considered acceptable for the assessment.

2. Data quality indicators

The reliability of field procedures and analytical results was assessed against the following data quality indicators (DQI) as outlined in NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013):

- completeness: a measure of the amount of usable data from a data collection activity;
- comparability: the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event;
- representativeness: the confidence (qualitative) of data representativeness of media present on-site;
- precision: a measure of variability or reproducibility of data; and
- accuracy: a measure of closeness of the data to the 'true' value.

The results of the assessment are summarised in Table 2.

Table 2: Data quality indicators

Data quality indicator	Method(s) of achievement
Completeness	Preparation of borehole logs, sample location plan and chain of custody records.
	Preparation of field groundwater sampling sheets.
	Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody.
	Samples analysed for contaminants of potential concern (CoPC) identified in the conceptual site model (CSM).
	Completion of chain of custody documentation.
	NATA accredited laboratory results certificates provided by the laboratory.
	Satisfactory frequency and results for field and laboratory quality control (QC) samples as discussed in Section 1.
Comparability	Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project.
	Experienced sampler(s) used.
	Use of NATA registered laboratories, with test methods the same or similar between laboratories.
	Satisfactory results for field and laboratory QC samples.
Representativeness	Target media sampled.

Data quality indicator	Method(s) of achievement
	Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQO.
	Samples were extracted and analysed within holding times.
	Samples were analysed in accordance with the chain of custody.
Precision	Field staff followed standard operating procedures.
	Acceptable RPD between original samples and replicates.
	Satisfactory results for all other field and laboratory QC samples.
Accuracy	Field staff followed standard operating procedures.
	Satisfactory results for all field and laboratory QC samples.

Based on the above, it is considered that the DQI have been complied with.

3. Conclusion

Based on the results of the field QA and field and laboratory QC, and evaluation against the DQI it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

4. References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

Douglas PARTNERS

Table QA1: Relative Percentage Difference Results – Soil Sampling

Lab Report No	Sample ID	Depth	Sample Date	Sample Type	Units	Priority metals								Priority PAH				PAH														Priority TRH						TRH		BTEX				
						Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ (BaP) TEQ	Total PAH	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10) - BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes
372860	BH8	0.11 - 0.13 m	12/02/25	Soil	mg/kg	<4	<0.4	**6**	**5**	**5**	**0.1**	**5**	**23**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1
372860	BD2	0 m	12/02/25	Soil	mg/kg	<4	<0.4	**6**	**5**	**4**	<0.1	**6**	**16**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1
			Difference		mg/kg	-	-	0	0	1	0	1	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			RPD		%	-	-	0%	0%	22%	0%	18%	**36%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
372860	BH10	1.2 - 1.3 m	12/02/25	Soil	mg/kg	<4	<0.4	**5**	**1**	**12**	<0.1	**1**	**8**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1
372860	BD1	0 m	12/02/25	Soil	mg/kg	<4	<0.4	**7**	**2**	**12**	<0.1	<1	**5**	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1
			Difference		mg/kg	-	-	2	1	0	-	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			RPD		%	-	-	**33%**	**67%**	0%	-	0%	**46%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table QA2: Trip Blank Results - Soil Sampling

Sample ID	Sample Date	Media Being Sampled	Sample Type	Units	Priority PAH	Priority TRH		TRH	BTEX				Lab Report No
					Naphthalene [b]	TRH C6 - C10	F1 ((C6-C10)-BTEX)	TRH C6 - C9	Benzene	Toluene	Ethylbenzene	Total Xylenes	
TB	12/02/25	Soil	Soil	mg/kg	<1	<25	<25	<25	<0.2	<0.5	<1	<1	372860

Table QA3: Trip Spike Results – Soil Sampling (% Recovery)

Sample ID	Sample Date	Media Being Sampled	Sample Type	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Lab Report No
TS	12/02/25	Soil	Soil	99	101	101	100	101	372860

Table QA4: Relative Percentage Difference Results – Water Sampling

Lab Report No	Sample ID	Sample Date	Sample Type	Units	Metals - Dissolved								TRH				BTEX						PAH																
					Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Naphthalene	Benzo(a)pyrene (BaP)(+)	Benzo(b+j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Sum of detected PAH
374754	BH6		Water	µg/L	**1**	**7.9**	<1	**1,100**	**1**	<0.05	**330**	**930**	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
374754	BD1		Water	µg/L	**1**	**6.6**	<1	**1000**	<1	<0.05	**280**	**750**	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Difference		µg/L	0	1.3	-	100	0	-	50	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RPD		%	0%	18%	-	10%	0%	-	16%	21%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table QA5: Trip Blank Results - Water Sampling

Sample ID	Sample Date	Media Being Sampled	Sample Type	Units	TRH	BTEX						PAH		Lab Report No
					F1 ((C6-C10)-BTEX)	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Naphthalene	Sum of detected PAH	
TB	5/03/2025	Water	Water	µg/L	<10	<1	<1	<1	<1	<2	<1	<1	<1	374754

Table QA6: Trip Spike Results – Water Sampling (% Recovery)

Sample ID	Sample Date	Media Being Sampled	Sample Type	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Lab Report No
TS	5/03/2025	Water	Water	103	101	104	107	106	374754

Appendix I

Laboratory Certificate(s) of Analysis

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 372860

Client Details

Client	Douglas Partners Pty Ltd
Attention	Wen-Fei Yuan
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**214296.03 Crows Nest**
Number of Samples	13 Soil
Date samples received	13/02/2025
Date completed instructions received	13/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	20/02/2025
Date of Issue	20/02/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Giovanni Agosti, Group Technical Manager
Liam Timmins, Organics Supervisor
Lucy Zhu, Asbestos Supervisor
Steven Luong, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in soil				
Our Reference		372860-1	372860-4	372860-10
Your Reference	UNITS	BH8	BH11	BH9
Depth		0.11-0.13	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil
Date Extracted	-	14/02/2025	14/02/2025	14/02/2025
Date Analysed	-	15/02/2025	15/02/2025	15/02/2025
Dichlorodifluoromethane	mg/kg	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1
trans-1,2-Dichloroethene	mg/kg	<1	<1	<1
1,1-Dichloroethane	mg/kg	<1	<1	<1
cis-1,2-Dichloroethene	mg/kg	<1	<1	<1
Bromochloromethane	mg/kg	<1	<1	<1
Chloroform	mg/kg	<1	<1	<1
2,2-Dichloropropane	mg/kg	<1	<1	<1
1,2-Dichloroethane	mg/kg	<1	<1	<1
1,1,1-Trichloroethane	mg/kg	<1	<1	<1
1,1-Dichloropropene	mg/kg	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1
Carbon Tetrachloride	mg/kg	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2
Dibromomethane	mg/kg	<1	<1	<1
1,2-Dichloropropane	mg/kg	<1	<1	<1
Trichloroethene	mg/kg	<1	<1	<1
Bromodichloromethane	mg/kg	<1	<1	<1
trans-1,3-Dichloropropene	mg/kg	<1	<1	<1
cis-1,3-Dichloropropene	mg/kg	<1	<1	<1
1,1,2-Trichloroethane	mg/kg	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5
1,3-Dichloropropane	mg/kg	<1	<1	<1
Dibromochloromethane	mg/kg	<1	<1	<1
1,2-Dibromoethane	mg/kg	<1	<1	<1
Tetrachloroethene	mg/kg	<1	<1	<1
1,1,1,2-Tetrachloroethane	mg/kg	<1	<1	<1
Chlorobenzene	mg/kg	<1	<1	<1

VOCs in soil				
Our Reference		372860-1	372860-4	372860-10
Your Reference	UNITS	BH8	BH11	BH9
Depth		0.11-0.13	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1
Bromoform	mg/kg	<1	<1	<1
m+p-Xylene	mg/kg	<2	<2	<2
Styrene	mg/kg	<1	<1	<1
1,1,2,2-Tetrachloroethane	mg/kg	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1
1,2,3-Trichloropropane	mg/kg	<1	<1	<1
Isopropylbenzene	mg/kg	<1	<1	<1
Bromobenzene	mg/kg	<1	<1	<1
n-Propylbenzene	mg/kg	<1	<1	<1
2-Chlorotoluene	mg/kg	<1	<1	<1
4-Chlorotoluene	mg/kg	<1	<1	<1
1,3,5-Trimethylbenzene	mg/kg	<1	<1	<1
tert-Butylbenzene	mg/kg	<1	<1	<1
1,2,4-Trimethylbenzene	mg/kg	<1	<1	<1
1,3-Dichlorobenzene	mg/kg	<1	<1	<1
sec-Butylbenzene	mg/kg	<1	<1	<1
1,4-Dichlorobenzene	mg/kg	<1	<1	<1
4-Isopropyltoluene	mg/kg	<1	<1	<1
1,2-Dichlorobenzene	mg/kg	<1	<1	<1
n-Butylbenzene	mg/kg	<1	<1	<1
1,2-Dibromo-3-chloropropane	mg/kg	<1	<1	<1
1,2,4-Trichlorobenzene	mg/kg	<1	<1	<1
Hexachlorobutadiene	mg/kg	<1	<1	<1
1,2,3-Trichlorobenzene	mg/kg	<1	<1	<1
Surrogate Dibromofluoromethane	%	117	107	119
Surrogate aaa-Trifluorotoluene	%	133	113	114
Surrogate Toluene-d_8	%	110	111	110
Surrogate 4-Bromofluorobenzene	%	110	110	110

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		372860-1	372860-2	372860-3	372860-4	372860-5
Your Reference	UNITS	BH8	BH8	BD2	BH11	BH10
Depth		0.11-0.13	0.25-0.3	-	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	15/02/2025	15/02/2025	15/02/2025	15/02/2025	15/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	133	117	129	113	115

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		372860-6	372860-7	372860-8	372860-9	372860-10
Your Reference	UNITS	BH10	BH10	BH10	BD1	BH9
Depth		0.3-0.4	0.7-0.9	1.2-1.3	-	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	15/02/2025	15/02/2025	15/02/2025	15/02/2025	15/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	114	111	87	127	114

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		372860-11	372860-12	372860-13
Your Reference	UNITS	BH7	TB	TS
Depth		0.17-0.18	-	-
Date Sampled		12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	15/02/2025	15/02/2025	15/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	[NA]
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	99%
Toluene	mg/kg	<0.5	<0.5	101%
Ethylbenzene	mg/kg	<1	<1	101%
m+p-xylene	mg/kg	<2	<2	101%
o-Xylene	mg/kg	<1	<1	100%
Naphthalene	mg/kg	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<1	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	111	108	110

svTRH (C10-C40) in Soil						
Our Reference		372860-1	372860-2	372860-3	372860-4	372860-5
Your Reference	UNITS	BH8	BH8	BD2	BH11	BH10
Depth		0.11-0.13	0.25-0.3	-	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	15/02/2025	15/02/2025	15/02/2025	15/02/2025	15/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	74	82	76	81	81

svTRH (C10-C40) in Soil						
Our Reference		372860-6	372860-7	372860-8	372860-9	372860-10
Your Reference	UNITS	BH10	BH10	BH10	BD1	BH9
Depth		0.3-0.4	0.7-0.9	1.2-1.3	-	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	15/02/2025	15/02/2025	15/02/2025	15/02/2025	15/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	95	83	79	80	82

svTRH (C10-C40) in Soil		
Our Reference		372860-11
Your Reference	UNITS	BH7
Depth		0.17-0.18
Date Sampled		12/02/2025
Type of sample		Soil
Date extracted	-	14/02/2025
Date analysed	-	15/02/2025
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	80

PAHs in Soil						
Our Reference		372860-1	372860-2	372860-3	372860-4	372860-5
Your Reference	UNITS	BH8	BH8	BD2	BH11	BH10
Depth		0.11-0.13	0.25-0.3	-	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	113	105	102	102	115

PAHs in Soil						
Our Reference		372860-6	372860-7	372860-8	372860-9	372860-10
Your Reference	UNITS	BH10	BH10	BH10	BD1	BH9
Depth		0.3-0.4	0.7-0.9	1.2-1.3	-	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	77	115	105	112

PAHs in Soil		
Our Reference		372860-11
Your Reference	UNITS	BH7
Depth		0.17-0.18
Date Sampled		12/02/2025
Type of sample		Soil
Date extracted	-	14/02/2025
Date analysed	-	18/02/2025
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	112

Organochlorine Pesticides in soil						
Our Reference		372860-1	372860-4	372860-5	372860-10	372860-11
Your Reference	UNITS	BH8	BH11	BH10	BH9	BH7
Depth		0.11-0.13	0.22-0.24	0.15-0.2	0.15-0.2	0.17-0.18
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	82	62	65	65	76

Organophosphorus Pesticides in Soil						
Our Reference		372860-1	372860-4	372860-5	372860-10	372860-11
Your Reference	UNITS	BH8	BH11	BH10	BH9	BH7
Depth		0.11-0.13	0.22-0.24	0.15-0.2	0.15-0.2	0.17-0.18
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	82	62	65	65	76

PCBs in Soil						
Our Reference		372860-1	372860-4	372860-5	372860-10	372860-11
Your Reference	UNITS	BH8	BH11	BH10	BH9	BH7
Depth		0.11-0.13	0.22-0.24	0.15-0.2	0.15-0.2	0.17-0.18
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	85	95	87	76	78

Acid Extractable metals in soil						
Our Reference		372860-1	372860-2	372860-3	372860-4	372860-5
Your Reference	UNITS	BH8	BH8	BD2	BH11	BH10
Depth		0.11-0.13	0.25-0.3	-	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	8	6	7	7
Copper	mg/kg	5	6	5	59	120
Lead	mg/kg	5	7	4	6	4
Mercury	mg/kg	0.1	<0.1	<0.1	0.2	0.2
Nickel	mg/kg	5	8	6	12	14
Zinc	mg/kg	23	22	16	19	16

Acid Extractable metals in soil						
Our Reference		372860-6	372860-7	372860-8	372860-9	372860-10
Your Reference	UNITS	BH10	BH10	BH10	BD1	BH9
Depth		0.3-0.4	0.7-0.9	1.2-1.3	-	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	5	5	7	10
Copper	mg/kg	3	1	1	2	10
Lead	mg/kg	13	11	12	12	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	1	<1	13
Zinc	mg/kg	14	8	8	5	21

Acid Extractable metals in soil		
Our Reference		372860-11
Your Reference	UNITS	BH7
Depth		0.17-0.18
Date Sampled		12/02/2025
Type of sample		Soil
Date prepared	-	14/02/2025
Date analysed	-	18/02/2025
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	7
Copper	mg/kg	57
Lead	mg/kg	5
Mercury	mg/kg	0.7
Nickel	mg/kg	21
Zinc	mg/kg	29

Misc Soil - Inorg						
Our Reference		372860-1	372860-4	372860-5	372860-10	372860-11
Your Reference	UNITS	BH8	BH11	BH10	BH9	BH7
Depth		0.11-0.13	0.22-0.24	0.15-0.2	0.15-0.2	0.17-0.18
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Moisture						
Our Reference		372860-1	372860-2	372860-3	372860-4	372860-5
Your Reference	UNITS	BH8	BH8	BD2	BH11	BH10
Depth		0.11-0.13	0.25-0.3	-	0.22-0.24	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Moisture	%	7.7	11	8.3	16	6.4

Moisture						
Our Reference		372860-6	372860-7	372860-8	372860-9	372860-10
Your Reference	UNITS	BH10	BH10	BH10	BD1	BH9
Depth		0.3-0.4	0.7-0.9	1.2-1.3	-	0.15-0.2
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/02/2025	14/02/2025	14/02/2025	14/02/2025	14/02/2025
Date analysed	-	17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Moisture	%	14	26	14	14	14

Moisture		
Our Reference		372860-11
Your Reference	UNITS	BH7
Depth		0.17-0.18
Date Sampled		12/02/2025
Type of sample		Soil
Date prepared	-	14/02/2025
Date analysed	-	17/02/2025
Moisture	%	12

Asbestos ID - soils NEPM						
Our Reference		372860-1	372860-4	372860-5	372860-6	372860-7
Your Reference	UNITS	BH8	BH11	BH10	BH10	BH10
Depth		0.11-0.13	0.22-0.24	0.15-0.2	0.3-0.4	0.7-0.9
Date Sampled		12/02/2025	12/02/2025	12/02/2025	12/02/2025	12/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Sample mass tested	g	916.44	745.74	983.79	1,081.21	920.36
Sample Description	-	Beige sandy soil	Beige coarse-grained soil & rocks	Beige sandy soil	Beige coarse-grained soil & rocks	Beige coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM		
Our Reference		372860-10
Your Reference	UNITS	BH9
Depth		0.15-0.2
Date Sampled		12/02/2025
Type of sample		Soil
Date analysed	-	17/02/2025
Sample mass tested	g	819.22
Sample Description	-	Beige fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
FA and AF Estimation*#2	%(w/w)	<0.001
Asbestos comments	-	Nil

Asbestos ID - soils			
Our Reference		372860-2	372860-11
Your Reference	UNITS	BH8	BH7
Depth		0.25-0.3	0.17-0.18
Date Sampled		12/02/2025	12/02/2025
Type of sample		Soil	Soil
Date analysed	-	18/02/2025	18/02/2025
Sample mass tested	g	Approx. 40g	Approx. 40g
Sample Description	-	Beige coarse-grained soil & rocks	Beige coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate).
Metals-021	Determination of Mercury by Cold Vapour AAS.

Method ID	Methodology Summary
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date Extracted	-			18/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date Analysed	-			19/02/2025	1	15/02/2025	15/02/2025		15/02/2025	15/02/2025
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	122	124
cis-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	<1	1	<1	<1	0	127	125
2,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	116	137
1,1,1-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	116	136
1,1-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	108	123
Dibromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	77	113
Bromodichloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	118	129
trans-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	125	121
1,3-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	122	118
1,2-Dibromoethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	98	126
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	97	88
Bromoform	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	92	84
Styrene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	99	90
1,2,3-Trichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	99	1	117	113	3	116	116
Surrogate aaa-Trifluorotoluene	%		Org-023	84	1	133	130	2	125	118
Surrogate Toluene-d_8	%		Org-023	98	1	110	111	1	117	116
Surrogate 4-Bromofluorobenzene	%		Org-023	102	1	110	107	3	111	110

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date Extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date Analysed	-			[NT]	10	15/02/2025	15/02/2025		[NT]	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
cis-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
2,2-Dichloropropane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1,1-Trichloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1-Dichloropropene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	10	<0.2	<0.2	0	[NT]	[NT]
Dibromomethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Bromodichloromethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
trans-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	10	<0.5	<0.5	0	[NT]	[NT]
1,3-Dichloropropane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2-Dibromoethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Bromoform	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	[NT]	10	<2	<2	0	[NT]	[NT]
Styrene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2,3-Trichloropropane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	10	119	101	16	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	10	114	111	3	[NT]	[NT]
Surrogate Toluene-d_8	%		Org-023	[NT]	10	110	112	2	[NT]	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	10	110	110	0	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date extracted	-			18/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			19/02/2025	1	15/02/2025	15/02/2025		15/02/2025	15/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	103	100
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	103	100
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	108	123
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	125	121
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	97	88
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	92	84
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	99	90
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	84	1	133	130	2	125	118

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	15/02/2025	15/02/2025		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	10	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	10	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	10	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	10	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	10	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	10	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	10	114	111	3	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date extracted	-			14/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			15/02/2025	1	15/02/2025	15/02/2025		15/02/2025	15/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	113	96
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	101	82
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	84
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	113	96
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	101	82
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	84
Surrogate o-Terphenyl	%		Org-020	85	1	74	76	3	132	112

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	15/02/2025	15/02/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	10	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	10	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	10	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	10	82	81	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date extracted	-			14/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	78
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	76
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	78
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	126	104
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	102
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	102
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	94
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	86	76
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	109	1	113	109	4	118	104

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	18/02/2025	18/02/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	10	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	10	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	10	112	138	21	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date extracted	-			14/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	#
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	83
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	94
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	130	102
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	130	101
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	86
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	130	101
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	103
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	130	93
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	#
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	76	1	82	82	0	85	92

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	18/02/2025	18/02/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	10	65	74	13	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date extracted	-			14/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	72
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	93
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	134	108
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	#
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	86
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	103
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	101
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	76	1	82	82	0	85	92

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	18/02/2025	18/02/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	10	65	74	13	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date extracted	-			14/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	133	100
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	109	1	85	77	10	95	85

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	18/02/2025	18/02/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	10	76	84	10	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	372860-4
Date prepared	-			14/02/2025	1	14/02/2025	14/02/2025		14/02/2025	14/02/2025
Date analysed	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	99
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	87
Chromium	mg/kg	1	Metals-020	<1	1	6	6	0	101	96
Copper	mg/kg	1	Metals-020	<1	1	5	5	0	101	106
Lead	mg/kg	1	Metals-020	<1	1	5	5	0	99	92
Mercury	mg/kg	0.1	Metals-021	<0.1	1	0.1	<0.1	0	101	96
Nickel	mg/kg	1	Metals-020	<1	1	5	5	0	97	91
Zinc	mg/kg	1	Metals-020	<1	1	23	20	14	96	89

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	10	14/02/2025	14/02/2025		[NT]	[NT]
Date analysed	-			[NT]	10	18/02/2025	18/02/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	10	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	10	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	10	10	7	35	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	10	10	8	22	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	10	7	6	15	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	10	13	11	17	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	10	21	20	5	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			14/02/2025	[NT]	[NT]	[NT]	[NT]	14/02/2025	[NT]
Date analysed	-			14/02/2025	[NT]	[NT]	[NT]	[NT]	14/02/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	83	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.
Note: Samples 372860-2 & 11 were sub-sampled from jars provided by the client.

OC's in Soil - # Percent recovery for the surrogate/matrix spike is not possible to report due to interference from analytes (other than those being tested) in sample/s 372860-4ms.
OP's in Soil - # Percent recovery for the surrogate/matrix spike is not possible to report due to interference from analytes (other than those being tested) in sample/s 372860-4ms.

COC 13/2/25, 1050

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	214296.03	**Suburb:**	crows nest	**To:**	Envirolab Services
Project Manager:	Wen-Fei Yuan	**Order Number:**		**Sampler:** IR/JH	12 Ashley St, Chatswood NSW 2067
Email:	WenFei.Yuan@douglaspartners.com.au, irha.riaz@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.cor
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☑ Yes	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: combo 8a NEPM	combo 3	VOC	combo3a nepm	TRH/BTEX							Notes/ Preservation/ Additional Requirements
1	BH8	0.11	0.13	12.2.25	S	G/P	x		x									
2	BH8	0.25	0.3	12.2.25	S	G				x								
3	BD2	-	-	12.2.25	S	G		x										
4	BH11	0.22	0.24	12.2.25	S	G/P	x		x									
5	BH10	0.15	0.2	12.2.25	S	G/P	x											
6	BH10	0.3	0.4	12.2.25	S	G/P				x								
7	BH10	0.7	0.9	12.2.25	S	G/P				x								
8	BH10	1.2	1.3	12.2.25	S	G		x										
9	BD1	-	-	12.2.25	S	G		x										
10	BH9	0.15	0.2	12.2.25	S	G/P	x		x									
11	BH7	0.17	0.18	12.2.25	S	G	x											jar only, no AF/FA bag
12	TB											x						
13	TS											x						

ENVIROLAB Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 372860
Date Received: 12.02.25
Time Received: 1405
Received By: TTr
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**	
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:**	372860
Send results to:	Douglas Partners Pty Ltd	**Received by:**	Tony T
Address:	96 Hermitage Road, West Ryde NSW 211	**Phone:** (02) 9809 0666	**Date & Tim** 12.02.25 1405
Relinquished by:	**Date:**	**Signed:**	**Signed:** TTr

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Wen-Fei Yuan

Sample Login Details

Your reference	214296.03 Crows Nest
Envirolab Reference	372860
Date Sample Received	13/02/2025
Date Instructions Received	13/02/2025
Date Results Expected to be Reported	20/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	13 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

#11- Cannot perfrom NEPM analysis. Changed to ID

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in soil	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM	Asbestos ID - soils
BH8-0.11-0.13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH8-0.25-0.3		✓	✓	✓				✓		✓	
BD2		✓	✓	✓				✓			
BH11-0.22-0.24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH10-0.15-0.2		✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH10-0.3-0.4		✓	✓	✓				✓		✓	
BH10-0.7-0.9		✓	✓	✓				✓		✓	
BH10-1.2-1.3		✓	✓	✓				✓			
BD1		✓	✓	✓				✓			
BH9-0.15-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH7-0.17-0.18		✓	✓	✓	✓	✓	✓	✓	✓		✓
TB		✓									
TS		✓									

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 374153

Client Details

Client	Douglas Partners Pty Ltd
Attention	Wen Fei-Yan
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**214296.03, Crows Nest**
Number of Samples	13 Soil
Date samples received	26/02/2025
Date completed instructions received	26/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	05/03/2025
Date of Issue	04/03/2025

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Dragana Tomas, Senior Chemist
Jack Wallis, Senior Chemist
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor
Nick Sarlamis, Assistant Operation Manager
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		374153-1	374153-3	374153-4	374153-5	374153-7
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.14-0.2	0.8-0.9	0.2-0.3	0.4-0.5	0.15-0.2
Date Sampled		24/02/2025	24/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	02/03/2025	02/03/2025	02/03/2025	02/03/2025	02/03/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	83	83	88	80	79

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		374153-8	374153-9	374153-11	374153-12	374153-13
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH6
Depth		0.3-0.4	0.11-0.3	0.2-0.3	0.2-0.25	0.4-0.45
Date Sampled		17/02/2025	18/02/2025	21/02/2025	18/02/2025	18/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	02/03/2025	02/03/2025	02/03/2025	02/03/2025	02/03/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	82	84	84	80	84

svTRH (C10-C40) in Soil						
Our Reference		374153-1	374153-3	374153-4	374153-5	374153-7
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.14-0.2	0.8-0.9	0.2-0.3	0.4-0.5	0.15-0.2
Date Sampled		24/02/2025	24/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	80	78	78	77	78

svTRH (C10-C40) in Soil						
Our Reference		374153-8	374153-9	374153-11	374153-12	374153-13
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH6
Depth		0.3-0.4	0.11-0.3	0.2-0.3	0.2-0.25	0.4-0.45
Date Sampled		17/02/2025	18/02/2025	21/02/2025	18/02/2025	18/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	78	78	78	79

PAHs in Soil						
Our Reference		374153-1	374153-3	374153-4	374153-5	374153-7
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.14-0.2	0.8-0.9	0.2-0.3	0.4-0.5	0.15-0.2
Date Sampled		24/02/2025	24/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	03/03/2025	28/02/2025	03/03/2025	28/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.06	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.4	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	95	103	96	104	92

PAHs in Soil						
Our Reference		374153-8	374153-9	374153-11	374153-12	374153-13
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH6
Depth		0.3-0.4	0.11-0.3	0.2-0.3	0.2-0.25	0.4-0.45
Date Sampled		17/02/2025	18/02/2025	21/02/2025	18/02/2025	18/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	03/03/2025	28/02/2025	28/02/2025	28/02/2025	03/03/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	106	94	94	91	104

Organochlorine Pesticides in soil						
Our Reference		374153-1	374153-4	374153-7	374153-9	374153-11
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.14-0.2	0.2-0.3	0.15-0.2	0.11-0.3	0.2-0.3
Date Sampled		24/02/2025	17/02/2025	17/02/2025	18/02/2025	21/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	100	100	101	101	103

Organochlorine Pesticides in soil		
Our Reference		374153-12
Your Reference	UNITS	BH6
Depth		0.2-0.25
Date Sampled		18/02/2025
Type of sample		Soil
Date extracted	-	27/02/2025
Date analysed	-	28/02/2025
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	99

Organophosphorus Pesticides in Soil						
Our Reference		374153-1	374153-4	374153-7	374153-9	374153-11
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.14-0.2	0.2-0.3	0.15-0.2	0.11-0.3	0.2-0.3
Date Sampled		24/02/2025	17/02/2025	17/02/2025	18/02/2025	21/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	100	100	101	101	103

Organophosphorus Pesticides in Soil		
Our Reference		374153-12
Your Reference	UNITS	BH6
Depth		0.2-0.25
Date Sampled		18/02/2025
Type of sample		Soil
Date extracted	-	27/02/2025
Date analysed	-	28/02/2025
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	99

PCBs in Soil						
Our Reference		374153-1	374153-4	374153-7	374153-9	374153-11
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.14-0.2	0.2-0.3	0.15-0.2	0.11-0.3	0.2-0.3
Date Sampled		24/02/2025	17/02/2025	17/02/2025	18/02/2025	21/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	94	96	94	94	96

PCBs in Soil		
Our Reference		374153-12
Your Reference	UNITS	BH6
Depth		0.2-0.25
Date Sampled		18/02/2025
Type of sample		Soil
Date extracted	-	27/02/2025
Date analysed	-	28/02/2025
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	94

Misc Soil - Inorg						
Our Reference		374153-1	374153-4	374153-7	374153-9	374153-11
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.14-0.2	0.2-0.3	0.15-0.2	0.11-0.3	0.2-0.3
Date Sampled		24/02/2025	17/02/2025	17/02/2025	18/02/2025	21/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg		
Our Reference		374153-12
Your Reference	UNITS	BH6
Depth		0.2-0.25
Date Sampled		18/02/2025
Type of sample		Soil
Date prepared	-	27/02/2025
Date analysed	-	27/02/2025
Total Phenolics (as Phenol)	mg/kg	<5

Acid Extractable metals in soil						
Our Reference		374153-1	374153-3	374153-4	374153-5	374153-7
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.14-0.2	0.8-0.9	0.2-0.3	0.4-0.5	0.15-0.2
Date Sampled		24/02/2025	24/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	03/03/2025	03/03/2025	03/03/2025	03/03/2025	03/03/2025
Arsenic	mg/kg	<4	<4	5	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	7	4	8	9
Copper	mg/kg	12	3	2	3	8
Lead	mg/kg	4	9	1	5	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	2	3	4	4
Zinc	mg/kg	15	15	3	11	23

Acid Extractable metals in soil						
Our Reference		374153-8	374153-9	374153-11	374153-12	374153-13
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH6
Depth		0.3-0.4	0.11-0.3	0.2-0.3	0.2-0.25	0.4-0.45
Date Sampled		17/02/2025	18/02/2025	21/02/2025	18/02/2025	18/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	03/03/2025	03/03/2025	03/03/2025	03/03/2025	03/03/2025
Arsenic	mg/kg	15	<4	6	13	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	45	7	8	10	7
Copper	mg/kg	1	12	7	6	20
Lead	mg/kg	15	4	11	15	7
Mercury	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	14	4	<1	11
Zinc	mg/kg	3	20	28	2	7

Acid Extractable metals in soil		
Our Reference		374153-14
Your Reference	UNITS	BH1 - [TRIPLICATE]
Depth		0.14-0.2
Date Sampled		24/02/2025
Type of sample		Soil
Date prepared	-	27/02/2025
Date analysed	-	03/03/2025
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	5
Copper	mg/kg	14
Lead	mg/kg	4
Mercury	mg/kg	<0.1
Nickel	mg/kg	8
Zinc	mg/kg	13

Moisture						
Our Reference		374153-1	374153-3	374153-4	374153-5	374153-7
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.14-0.2	0.8-0.9	0.2-0.3	0.4-0.5	0.15-0.2
Date Sampled		24/02/2025	24/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Moisture	%	13	14	6.1	9.6	17

Moisture						
Our Reference		374153-8	374153-9	374153-11	374153-12	374153-13
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH6
Depth		0.3-0.4	0.11-0.3	0.2-0.3	0.2-0.25	0.4-0.45
Date Sampled		17/02/2025	18/02/2025	21/02/2025	18/02/2025	18/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Moisture	%	9.7	8.7	6.7	17	14

Asbestos ID - soils NEPM - ASB-001						
Our Reference		374153-1	374153-4	374153-5	374153-7	374153-9
Your Reference	UNITS	BH1	BH2	BH2	BH3	BH4
Depth		0.14-0.2	0.2-0.3	0.4-0.5	0.15-0.2	0.11-0.3
Date Sampled		24/02/2025	17/02/2025	17/02/2025	17/02/2025	18/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	03/03/2025	03/03/2025	03/03/2025	03/03/2025	03/03/2025
Sample mass tested	g	611.72	795.72	709.92	678.91	838.18
Sample Description	-	Beige fine-grained soil & rocks	Beige fine-grained soil & rocks	Beige fine-grained soil & rocks	Beige coarse-grained soil & rocks	Beige fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001			
Our Reference		374153-11	374153-12
Your Reference	UNITS	BH5	BH6
Depth		0.2-0.3	0.2-0.25
Date Sampled		21/02/2025	18/02/2025
Type of sample		Soil	Soil
Date analysed	-	03/03/2025	03/03/2025
Sample mass tested	g	696.34	732.73
Sample Description	-	Beige coarse-grained soil & rocks	Beige coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–
FA and AF Estimation*	g	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001
Asbestos comments	-	Nil	Nil

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date extracted	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			02/03/2025	1	02/03/2025	02/03/2025		02/03/2025	02/03/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	92	85
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	92	85
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	74	68
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	83	77
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	97
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	99	91
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	108	99
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	90	1	83	85	2	86	83

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date extracted	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		28/02/2025	28/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	116	104
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	106	95
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	106	102
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	116	104
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	106	95
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	106	102
Surrogate o-Terphenyl	%		Org-020	80	1	80	79	1	94	78

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date extracted	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		28/02/2025	28/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	84
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	86
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	84
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	84
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	84
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	86
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	74
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	108	100
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	100	1	95	94	1	103	98

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date extracted	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		28/02/2025	28/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	86
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	94
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	88
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	76
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	96
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	88
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	96
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	84
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	100
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	100
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	111	1	100	102	2	111	104

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date extracted	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		28/02/2025	28/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	102
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	92
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	102
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	112
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	102
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	94
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	106
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	111	1	100	102	2	111	104

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date extracted	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		28/02/2025	28/02/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	95	80
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	103	1	94	95	1	105	93

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			28/02/2025	1	27/02/2025	27/02/2025		28/02/2025	[NT]
Date analysed	-			28/02/2025	1	27/02/2025	27/02/2025		28/02/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	95	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	374153-4
Date prepared	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
Date analysed	-			03/03/2025	1	03/03/2025	03/03/2025		03/03/2025	03/03/2025
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	110	106
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	100	91
Chromium	mg/kg	1	Metals-020	<1	1	6	5	18	102	98
Copper	mg/kg	1	Metals-020	<1	1	12	19	45	104	107
Lead	mg/kg	1	Metals-020	<1	1	4	4	0	102	97
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	94	100
Nickel	mg/kg	1	Metals-020	<1	1	8	13	48	103	97
Zinc	mg/kg	1	Metals-020	<1	1	15	16	6	98	89

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

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Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 374153-1 for Cu & Ni. Therefore a triplicate result has been issued as laboratory sample number 374153-14.

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 374153-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Irha Riaz
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**214296.03, Crows Nest**
Number of Samples	Additional analysis 2 samples
Date samples received	26/02/2025
Date completed instructions received	07/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	14/03/2025
Date of Issue	14/03/2025

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Giovanni Agosti, Group Technical Manager

Authorised By
Nancy Zhang, Laboratory Manager

CEC			
Our Reference		374153-A-4	374153-A-9
Your Reference	UNITS	BH2	BH4
Depth		0.2-0.3	0.11-0.3
Date Sampled		17/02/2025	18/02/2025
Type of sample		Soil	Soil
Date prepared	-	13/03/2025	13/03/2025
Date analysed	-	13/03/2025	13/03/2025
Exchangeable Ca	meq/100g	5.1	7.4
Exchangeable K	meq/100g	<0.1	0.2
Exchangeable Mg	meq/100g	0.3	0.1
Exchangeable Na	meq/100g	<0.1	0.1
Cation Exchange Capacity	meq/100g	5.4	7.9

Method ID	Methodology Summary
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			13/03/2025	[NT]	[NT]	[NT]	[NT]	13/03/2025	[NT]
Date analysed	-			13/03/2025	[NT]	[NT]	[NT]	[NT]	13/03/2025	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	123	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]

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Anna Bui

From: Nancy Zhang
Sent: Friday, 7 March 2025 11:55 AM
To: Irha Riaz
Cc: Anna Bui; Envirolab Sydney Sample Receipt
Subject: RE: Results for Registration 374153 214296.03, Crows Nest

No problem, will get that organized for you.

ELS REF: 374153-A
TAT: STANDARD
DUE: 14/3/25
AB

Kind Regards,

Nancy Zhang | Laboratory Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E NZhang@envirolab.com.au | W www.envirolab.com.au

Follow us on: LinkedIn | Facebook | Twitter

From: Irha Riaz <irha.riaz@douglaspartners.com.au>
Sent: Friday, March 7, 2025 11:49 AM
To: Nancy Zhang <NZhang@envirolab.com.au>
Cc: Anna Bui <ABui@envirolab.com.au>; Envirolab Sydney Sample Receipt <Samplereceipt@envirolab.com.au>
Subject: RE: Results for Registration 374153 214296.03, Crows Nest

Happy to test just for CEC.

Thank you

Irha Riaz | Environmental Scientist

02 9809 0666 +61 477952237 Irha.Riaz@douglaspartners.com.au

www.douglaspartners.com.au 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

Douglas PARTNERS | GROUNDED EXPERTISE

From: Nancy Zhang <NZhang@envirolab.com.au>
Sent: Friday, 7 March 2025 11:47 AM
To: Irha Riaz <irha.riaz@douglaspartners.com.au>
Cc: Anna Bui <ABui@envirolab.com.au>; Envirolab Sydney Sample Receipt <Samplereceipt@envirolab.com.au>
Subject: RE: Results for Registration 374153 214296.03, Crows Nest

Hi Irha,

Samples are within the holding time for CEC but not PH, please let me know how would you like us to go ahead.

Kind Regards,

Nancy Zhang | Laboratory Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E NZhang@envirolab.com.au | W www.envirolab.com.au

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Samples will be analysed per our T&C's.

From: Irha Riaz <irha.riaz@douglaspartners.com.au>
Sent: Friday, March 7, 2025 11:41 AM
To: Nancy Zhang <NZhang@envirolab.com.au>
Subject: RE: Results for Registration 374153 214296.03, Crows Nest

Hi Nancy,

I was wondering if these samples are within the holding time to test for pH and CEC?

If they are, can we do pH and CEC analysis for:

4 - BH2 0.2-0.3
9 - BH4 0.11-0.3

Please let me know.

Kind regards

Irha Riaz | Environmental Scientist

02 9809 0666 +61 477952237 Irha.Riaz@douglaspartners.com.au

www.douglaspartners.com.au 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

Douglas PARTNERS | GROUNDED EXPERTISE

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From: Nancy Zhang <NZhang@envirolab.com.au>
Sent: Tuesday, 4 March 2025 5:43 PM
To: Wen-Fei Yuan <WenFei.Yuan@douglaspartners.com.au>; Irha Riaz <irha.riaz@douglaspartners.com.au>
Subject: Results for Registration 374153 214296.03, Crows Nest

Douglas PARTNERS | GROUNDED EXPERTISE

Coc 26/2/25 a46

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	214296.03	**Suburb:**	crows nest	**To:**	Envirolab Services
Project Manager:	Wen-Fei Yuan	**Order Number:**		**Sampler:** JM	12 Ashley St, Chatswood NSW 2067
Email:	WenFei.Yuan@douglaspartners.com.au, irha.riaz@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.cor
Prior Storage:	☑ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: combo8a	combo3a	combo3								Notes/ Preservation/ Additional Requirements
1	BH1	0.14	0.2	24.02.25	S	g/p	x										
2	BH1	0.4	0.5	24.02.25	S	g											hold
3	BH1	0.8	0.9	24.02.25	S	g			x								
4	BH2	0.2	0.3	17.02.25	S	g/p	x										
5	BH2	0.4	0.5	17.02.25	S	G/P		x									
6	BH2	0.5	0.55	17.02.25	S	G											hold
7	BH3	0.15	0.2	17.02.25	S	g/p	x										
8	BH3	0.3	0.4	17.02.25	S	G			x								
9	BH4	0.11	0.3	18.02.25	S	g/p	x										
10	BH4	0.4	0.45	18.02.25	S	P											hold
11	BH5	0.2	0.3	21.02.25	S	g/p	x										
12	BH6	0.2	0.25	18.02.25	S	G/P	x										
13	BH6	0.4	0.45	18.02.25	S	G			x								

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 374153
Date Received: 26/02/25
Time Received: 1635
Received By: DLM
Temp: Cool/Ambient
Cooling: Ice/Icepack 10°c
Security: Intact/Broken/None

Metals to analyse:			**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**		**Lab Ref. No:** 374153
Send results to:	Douglas Partners Pty Ltd		**Received by:** 26/02/25 Dani LM
Address:	96 Hermitage Road, West Ryde NSW 211	**Phone:** (02) 9809 0666	**Date & Tim** 26/02/25 1635
Relinquished by:	**Date:**	**Signed:**	**Signed:**

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Wen Fei-Yan

Sample Login Details

Your reference	214296.03, Crows Nest
Envirolab Reference	374153
Date Sample Received	26/02/2025
Date Instructions Received	26/02/2025
Date Results Expected to be Reported	05/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	13 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	On Hold
BH1-0.14-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH1-0.4-0.5										✓
BH1-0.8-0.9	✓	✓	✓					✓		
BH2-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH2-0.4-0.5	✓	✓	✓					✓	✓	
BH2-0.5-0.55										✓
BH3-0.15-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH3-0.3-0.4	✓	✓	✓					✓		
BH4-0.11-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH4-0.4-0.45										✓
BH5-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH6-0.2-0.25	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH6-0.4-0.45	✓	✓	✓					✓		

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 374754

Client Details

Client	Douglas Partners Pty Ltd
Attention	Wen-Fei Yuan
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**214296.03, Crows Nest**
Number of Samples	6 Water
Date samples received	05/03/2025
Date completed instructions received	05/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	12/03/2025
Date of Issue	11/03/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in water				
Our Reference		374754-1	374754-2	374754-3
Your Reference	UNITS	BH2	BH4	BH6
Type of sample		Water	Water	Water
Date Extracted	-	09/03/2025	09/03/2025	09/03/2025
Date Analysed	-	10/03/2025	10/03/2025	10/03/2025
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	1	1	5
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1
Bromoform	µg/L	<1	<1	<1

VOCs in water				
Our Reference		374754-1	374754-2	374754-3
Your Reference	UNITS	BH2	BH4	BH6
Type of sample		Water	Water	Water
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	103	101	102
Surrogate Toluene-d8	%	101	100	101
Surrogate 4-Bromofluorobenzene	%	100	97	98

vTRH(C6-C10)/BTEXN in Water						
Our Reference		374754-1	374754-2	374754-3	374754-4	374754-5
Your Reference	UNITS	BH2	BH4	BH6	BD1	TB
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	09/03/2025	09/03/2025	09/03/2025	09/03/2025	09/03/2025
Date analysed	-	10/03/2025	10/03/2025	10/03/2025	10/03/2025	10/03/2025
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	103	101	102	102	102
Surrogate Toluene-d8	%	101	100	101	101	101
Surrogate 4-Bromofluorobenzene	%	100	97	98	98	100

vTRH(C6-C10)/BTEXN in Water		
Our Reference		374754-6
Your Reference	UNITS	TS
Type of sample		Water
Date extracted	-	09/03/2025
Date analysed	-	10/03/2025
Benzene	µg/L	103%
Toluene	µg/L	101%
Ethylbenzene	µg/L	104%
m+p-xylene	µg/L	106%
o-xylene	µg/L	107%
Surrogate Dibromofluoromethane	%	101
Surrogate Toluene-d8	%	99
Surrogate 4-Bromofluorobenzene	%	99

svTRH (C10-C40) in Water					
Our Reference		374754-1	374754-2	374754-3	374754-4
Your Reference	UNITS	BH2	BH4	BH6	BD1
Type of sample		Water	Water	Water	Water
Date extracted	-	06/03/2025	06/03/2025	06/03/2025	06/03/2025
Date analysed	-	07/03/2025	07/03/2025	07/03/2025	07/03/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	<50	<50
Surrogate o-Terphenyl	%	92	92	66	91

PAHs in Water					
Our Reference		374754-1	374754-2	374754-3	374754-4
Your Reference	UNITS	BH2	BH4	BH6	BD1
Type of sample		Water	Water	Water	Water
Date extracted	-	06/03/2025	06/03/2025	06/03/2025	06/03/2025
Date analysed	-	07/03/2025	07/03/2025	07/03/2025	07/03/2025
Naphthalene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	118	109	118	97

OCPs in Water - Trace Level				
Our Reference	UNITS	374754-1	374754-2	374754-3
Your Reference		BH2	BH4	BH6
Type of sample		Water	Water	Water
Date extracted	-	06/03/2025	06/03/2025	06/03/2025
Date analysed	-	10/03/2025	10/03/2025	10/03/2025
alpha-BHC	µg/L	<0.001	<0.001	<0.001
HCB	µg/L	<0.001	<0.001	<0.001
beta-BHC	µg/L	<0.001	<0.001	<0.001
gamma-BHC	µg/L	<0.001	<0.001	<0.001
Heptachlor	µg/L	<0.001	<0.001	<0.001
delta-BHC	µg/L	<0.001	<0.001	<0.001
Aldrin	µg/L	<0.001	<0.001	<0.001
Heptachlor Epoxide	µg/L	<0.001	<0.001	<0.001
gamma-Chlordane	µg/L	<0.001	<0.001	<0.001
alpha-Chlordane	µg/L	<0.001	<0.001	<0.001
Endosulfan I	µg/L	<0.002	<0.002	<0.002
pp-DDE	µg/L	<0.001	<0.001	<0.001
Dieldrin	µg/L	<0.001	<0.001	<0.001
Endrin	µg/L	<0.001	<0.001	<0.001
Endosulfan II	µg/L	<0.002	<0.002	<0.002
pp-DDD	µg/L	<0.001	<0.001	<0.001
Endrin Aldehyde	µg/L	<0.001	<0.001	<0.001
pp-DDT	µg/L	<0.001	<0.001	<0.001
Endosulfan Sulphate	µg/L	<0.001	<0.001	<0.001
Methoxychlor	µg/L	<0.001	<0.001	<0.001
Surrogate 4-Chloro-3-NBTF	%	113	118	104

OP in water LL ANZECCF/ADWG				
Our Reference	UNITS	374754-1	374754-2	374754-3
Your Reference		BH2	BH4	BH6
Type of sample		Water	Water	Water
Date extracted	-	06/03/2025	06/03/2025	06/03/2025
Date analysed	-	10/03/2025	10/03/2025	10/03/2025
Dichlorvos	µg/L	<0.05	<0.05	<0.05
Mevinphos	µg/L	<0.05	<0.05	<0.05
Phorate	µg/L	<0.05	<0.05	<0.05
Dimethoate	µg/L	<0.1	<0.1	<0.1
Diazinon	µg/L	<0.01	<0.01	<0.01
Disulfoton	µg/L	<0.05	<0.05	<0.05
Chlorpyriphos-methyl	µg/L	<0.05	<0.05	<0.05
Parathion-Methyl	µg/L	<0.05	<0.05	<0.05
Ronnel	µg/L	<0.05	<0.05	<0.05
Fenitrothion	µg/L	<0.05	<0.05	<0.05
Malathion	µg/L	<0.05	<0.05	<0.05
Chlorpyriphos	µg/L	<0.009	<0.009	<0.009
Fenthion	µg/L	<0.05	<0.05	<0.05
Parathion	µg/L	<0.004	<0.004	<0.004
Bromophos ethyl	µg/L	<0.05	<0.05	<0.05
Methidathion	µg/L	<0.05	<0.05	<0.05
Fenamiphos	µg/L	<0.05	<0.05	<0.05
Ethion	µg/L	<0.05	<0.05	<0.05
Phosalone	µg/L	<0.05	<0.05	<0.05
Azinphos-methyl (Guthion)	µg/L	<0.02	<0.02	<0.02
Coumaphos	µg/L	<0.05	<0.05	<0.05
Surrogate 4-Chloro-3-NBTF	%	113	118	104

PCBs in Water				
Our Reference		374754-1	374754-2	374754-3
Your Reference	UNITS	BH2	BH4	BH6
Type of sample		Water	Water	Water
Date extracted	-	06/03/2025	06/03/2025	06/03/2025
Date analysed	-	10/03/2025	10/03/2025	10/03/2025
Aroclor 1016	µg/L	<2	<2	<2
Aroclor 1221	µg/L	<2	<2	<2
Aroclor 1232	µg/L	<2	<2	<2
Aroclor 1242	µg/L	<2	<2	<2
Aroclor 1248	µg/L	<2	<2	<2
Aroclor 1254	µg/L	<2	<2	<2
Aroclor 1260	µg/L	<2	<2	<2
Surrogate 2-Fluorobiphenyl	%	103	98	95

Total Phenolics in Water				
Our Reference		374754-1	374754-2	374754-3
Your Reference	UNITS	BH2	BH4	BH6
Type of sample		Water	Water	Water
Date extracted	-	07/03/2025	07/03/2025	07/03/2025
Date analysed	-	07/03/2025	07/03/2025	07/03/2025
Total Phenolics (as Phenol)	mg/L	<0.05	<0.05	<0.05

HM in water - dissolved					
Our Reference		374754-1	374754-2	374754-3	374754-4
Your Reference	UNITS	BH2	BH4	BH6	BD1
Type of sample		Water	Water	Water	Water
Date prepared	-	06/03/2025	06/03/2025	06/03/2025	06/03/2025
Date analysed	-	06/03/2025	06/03/2025	06/03/2025	06/03/2025
Arsenic-Dissolved	µg/L	<1	2	1	1
Cadmium-Dissolved	µg/L	1.4	4.7	7.9	6.6
Chromium-Dissolved	µg/L	<1	<1	<1	<1
Copper-Dissolved	µg/L	49	640	1,100	1,000
Lead-Dissolved	µg/L	<1	1	1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	17	110	330	280
Zinc-Dissolved	µg/L	160	670	930	750

Method ID	Methodology Summary
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date Extracted	-			09/03/2025	3	09/03/2025	10/03/2025		09/03/2025	[NT]
Date Analysed	-			10/03/2025	3	10/03/2025	11/03/2025		10/03/2025	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	3	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	3	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	3	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	3	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	3	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	3	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	3	<1	<1	0	106	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	3	5	5	0	103	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	3	<1	<1	0	100	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	3	<1	<1	0	104	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	3	<1	<1	0	104	[NT]
Dibromomethane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	3	<1	<1	0	97	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	3	1	1	0	102	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	3	<1	<1	0	102	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	3	<1	<1	0	97	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	3	<1	<1	0	100	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	3	<1	<1	0	99	[NT]
Bromoform	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	3	<2	<2	0	99	[NT]
Styrene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
o-xylene	µg/L	1	Org-023	<1	3	<1	<1	0	98	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	3	102	100	2	102	[NT]
Surrogate Toluene-d8	%		Org-023	101	3	101	99	2	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	100	3	98	97	1	102	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			09/03/2025	3	09/03/2025	10/03/2025		09/03/2025	[NT]
Date analysed	-			10/03/2025	3	10/03/2025	11/03/2025		10/03/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	3	<10	<10	0	101	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	3	<10	<10	0	101	[NT]
Benzene	µg/L	1	Org-023	<1	3	<1	<1	0	104	[NT]
Toluene	µg/L	1	Org-023	<1	3	<1	<1	0	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	3	<1	<1	0	99	[NT]
m+p-xylene	µg/L	2	Org-023	<2	3	<2	<2	0	99	[NT]
o-xylene	µg/L	1	Org-023	<1	3	<1	<1	0	98	[NT]
Naphthalene	µg/L	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	3	102	100	2	102	[NT]
Surrogate Toluene-d8	%		Org-023	101	3	101	99	2	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	100	3	98	97	1	102	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date extracted	-			06/03/2025	[NT]	[NT]	[NT]	[NT]	06/03/2025	[NT]
Date analysed	-			07/03/2025	[NT]	[NT]	[NT]	[NT]	07/03/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	116	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	116	[NT]
Surrogate o-Terphenyl	%		Org-020	67	[NT]	[NT]	[NT]	[NT]	122	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date extracted	-			06/03/2025	[NT]	[NT]	[NT]	[NT]	06/03/2025	[NT]
Date analysed	-			07/03/2025	[NT]	[NT]	[NT]	[NT]	07/03/2025	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	77	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	97	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: OCPs in Water - Trace Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			06/03/2025	[NT]	[NT]	[NT]	[NT]	06/03/2025	[NT]
Date analysed	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025	[NT]
alpha-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	98	[NT]
HCB	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	96	[NT]
gamma-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	104	[NT]
delta-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	108	[NT]
Heptachlor Epoxide	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	134	[NT]
gamma-Chlordane	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-Chlordane	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	µg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	108	[NT]
Dieldrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	124	[NT]
Endrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	112	[NT]
Endosulfan II	µg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	106	[NT]
pp-DDT	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methoxychlor	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	122	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: OP in water LL ANZECCF/ADWG						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			06/03/2025	[NT]	[NT]	[NT]	[NT]	06/03/2025	[NT]
Date analysed	-			07/03/2025	[NT]	[NT]	[NT]	[NT]	07/03/2025	[NT]
Dichlorvos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
Mevinphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	µg/L	0.01	Org-022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyriphos-methyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
Fenitrothion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	101	[NT]
Malathion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	127	[NT]
Chlorpyriphos	µg/L	0.009	Org-022/025	<0.009	[NT]	[NT]	[NT]	[NT]	120	[NT]
Fenthion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	µg/L	0.004	Org-022/025	<0.004	[NT]	[NT]	[NT]	[NT]	108	[NT]
Bromophos ethyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	109	[NT]
Phosalone	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	µg/L	0.02	Org-022/025	<0.02	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	122	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PCBs in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			06/03/2025	[NT]	[NT]	[NT]	[NT]	06/03/2025	[NT]
Date analysed	-			07/03/2025	[NT]	[NT]	[NT]	[NT]	07/03/2025	[NT]
Aroclor 1016	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	134	[NT]
Aroclor 1260	µg/L	2	Org-021/022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	109	[NT]	[NT]	[NT]	[NT]	88	[NT]

QUALITY CONTROL: Total Phenolics in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/03/2025	[NT]	[NT]	[NT]	[NT]	07/03/2025	[NT]
Date analysed	-			07/03/2025	[NT]	[NT]	[NT]	[NT]	07/03/2025	[NT]
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-031	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	374754-2
Date prepared	-			06/03/2025	1	06/03/2025	06/03/2025		06/03/2025	06/03/2025
Date analysed	-			06/03/2025	1	06/03/2025	06/03/2025		06/03/2025	06/03/2025
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		106	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	1.4	[NT]		102	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		100	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	1	49	[NT]		101	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		99	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	103	81
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	17	[NT]		101	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	160	[NT]		99	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	374754-4
Date prepared	-			[NT]	3	06/03/2025	06/03/2025		[NT]	06/03/2025
Date analysed	-			[NT]	3	06/03/2025	06/03/2025		[NT]	06/03/2025
Arsenic-Dissolved	µg/L	1	Metals-022	[NT]	3	1	1	0	[NT]	99
Cadmium-Dissolved	µg/L	0.1	Metals-022	[NT]	3	7.9	7.5	5	[NT]	100
Chromium-Dissolved	µg/L	1	Metals-022	[NT]	3	<1	<1	0	[NT]	108
Copper-Dissolved	µg/L	1	Metals-022	[NT]	3	1100	1100	0	[NT]	#
Lead-Dissolved	µg/L	1	Metals-022	[NT]	3	1	1	0	[NT]	89
Mercury-Dissolved	µg/L	0.05	Metals-021	[NT]	3	<0.05	[NT]		[NT]	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	[NT]	3	330	330	0	[NT]	#
Zinc-Dissolved	µg/L	1	Metals-022	[NT]	3	930	920	1	[NT]	#

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

8 HM in water - dissolved - # Percent recovery is not applicable due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 374754-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Irha Riaz
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**214296.03, Crows Nest**
Number of Samples	Additional analysis
Date samples received	05/03/2025
Date completed instructions received	11/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	12/03/2025
Date of Issue	12/03/2025

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Giovanni Agosti, Group Technical Manager

Authorised By
Nancy Zhang, Laboratory Manager

Cations in water Dissolved				
Our Reference		374754-A-1	374754-A-2	374754-A-3
Your Reference	UNITS	BH2	BH4	BH6
Type of sample		Water	Water	Water
Date digested	-	12/03/2025	12/03/2025	12/03/2025
Date analysed	-	12/03/2025	12/03/2025	12/03/2025
Calcium - Dissolved	mg/L	6.6	23	12
Magnesium - Dissolved	mg/L	14	32	20
Hardness (calc) equivalent $CaCO_3$	mg/L	74	190	110

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

QUALITY CONTROL: Cations in water Dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date digested	-			12/03/2025	[NT]	[NT]	[NT]	[NT]	12/03/2025	[NT]
Date analysed	-			12/03/2025	[NT]	[NT]	[NT]	[NT]	12/03/2025	[NT]
Calcium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	97	[NT]
Magnesium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	96	[NT]

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Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Anna Bui

From: Simon Song
Sent: Tuesday, 11 March 2025 4:01 PM
To: Irha Riaz; Nancy Zhang; Wen-Fei Yuan
Cc: Envirolab Sydney Sample Receipt
Subject: RE: Results for Registration 374754 214296.03, Crows Nest

No problem

ELJ REF: 374754-A
TAT: 1 DAY
DUE: 12/3/25
AB:

Kind Regards,

Simon Song | Senior Customer Service | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E SSong@envirolab.com.au | **W** www.envirolab.com.au

Follow us on: LinkedIn | Facebook | Twitter

From: Irha Riaz <irha.riaz@douglaspartners.com.au>
Sent: Tuesday, 11 March 2025 3:57 PM
To: Nancy Zhang <NZhang@envirolab.com.au>; Wen-Fei Yuan <WenFei.Yuan@douglaspartners.com.au>
Cc: Simon Song <SSong@envirolab.com.au>
Subject: RE: Results for Registration 374754 214296.03, Crows Nest

Thanks Nancy.

1 2 3

Can I please get samples BH2, BH4 and BH6 tested for hardness as well on a fast TAT?

Regards

Irha Riaz | Environmental Scientist

02 9809 0666 +61 477952237 Irha.Riaz@douglaspartners.com.au

www.douglaspartners.com.au 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

Douglas PARTNERS | GROUNDED EXPERTISE

From: Nancy Zhang <NZhang@envirolab.com.au>
Sent: Tuesday, 11 March 2025 3:48 PM
To: Irha Riaz <irha.riaz@douglaspartners.com.au>; Wen-Fei Yuan <WenFei.Yuan@douglaspartners.com.au>
Subject: Results for Registration 374754 214296.03, Crows Nest

COC: 05/03/25, 1205

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	214296.03	**Suburb:**	crows nest	**To:**	Lab name
Project Manager:	Wen-Fei Yuan	**Order Number:**		**Sampler:** IR	Lab address
Email:	WenFei.Yuan@douglaspartners.com.au, irha.riaz			**Attn:**	Name
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ~~☑ 24 hour~~ SP ☐ Same day				Lab phone Lab email
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes	If YES, then handle, transport and store in accordance with FPM HAZID)	

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Voc suite	combo 8 dissolved	combo 3 dissolved	BTEX							Notes/ Preservation/ Additional Requirements
1	BH2				W	G/P	x	x									pah (low level), ocp opp trace level
2	BH4				W	G/P	x	x									pah (low level), ocp opp trace level
3	BH6				W	G/P	x	x									pah (low level), ocp opp trace level
4	BD1				W	G/P			x								
5	TB				W	G				x							
6	TS				W	G				x							

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 374754
Date Received: 5/3/25
Time Received: 1120
Received By: KC
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:** 374754
Send results to: Douglas Partners Pty Ltd		**Received by:** KC
Address:	**Phone:**	**Date & Tim** 5/3/25 1120

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Wen-Fei Yuan

Sample Login Details

Your reference	214296.03, Crows Nest
Envirolab Reference	374754
Date Sample Received	05/03/2025
Date Instructions Received	05/03/2025
Date Results Expected to be Reported	12/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	6 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	Not Provided on the COC

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	OCPs in Water - Trace Level	OP in water LL ANZECCF/ADWG	PCBs in Water	Total Phenolics in Water	HM in water - dissolved
BH2	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH4	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH6	✓	✓	✓	✓	✓	✓	✓	✓	✓
BD1		✓	✓	✓					✓
TB		✓							
TS		✓							

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	214296.03	**Suburb:**	crows nest	**To:**	Lab name
Project Manager:	Wen-Fei Yuan	**Order Number:**		**Sampler:** IR	Lab address
Email:	WenFei.Yuan@douglaspartners.com.au, irha.riaz			**Attn:**	Name
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day				Lab phone Lab email
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Sample ID: Depth From	Sample ID: Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Voc suite	Analytes: combo 8 dissolved	Analytes: combo 3 dissolved	Analytes: BTEX	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Notes/ Preservation/ Additional Requirements
	BH2				W	G/P	x	x									pah (low level), ocp opp trace level
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	BD1				W	G/P			x								
	TB				W	G				x							
	TS				W	G				x							

Metals to analyse:		**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:**
Send results to:	Douglas Partners Pty Ltd	**Received by:**
Address:	**Phone:**	**Date & Tim**

Relinquished by:	Date:	Signed:	Signed: