



A U S T R A L I A N
GEOENVIRO

GEOTECHNICAL & ENVIRONMENTAL SERVICES

DETAILED SITE INVESTIGATION



For: Wales & Associates

Address: 53-55 Donnison Street West, Gosford, NSW

Job No: AG-1625_1rv0

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DOCUMENT CONTROL

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53 - 55 DONNISON STREET, WEST GOSFORD
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List of Abbreviations

A list of the common abbreviations used throughout this report is provided below.

ACM	- Asbestos Containing Material
AEC	- Area of Environmental Concern
AGST	- Above Ground Storage Tank
AHD	- Australian Height Datum
bgs	- Below ground surface
CSM	- Conceptual site model
BTEX	- Benzene, toluene, ethylbenzene and xylenes
B(a)P	- Benzo(a)pyrene
CCA	- Copper Chromate Arsenate
COC	- Contaminants of Concern
AG	- Australian GeoEnviro Pty Ltd
DEC	- NSW Department of Environment and Conservation
DP	- Douglas Partners
DECCW	- NSW Department of Environment, Climate Change and Water
DQI	- Data quality indicator
DQOs	- Data Quality Objectives
DWE	- NSW Department of Water and Energy
EPA	- NSW Environment Protection Authority
ESA	- Environmental Site Assessment
ha	- Hectare
HIL	- Health based investigation level
ESL	- Ecological Screening Level
HSL	- Health Screening Level
LOR	- Limit of Reporting
OEH	- Office of Environment and Heritage
PFAS	- Per- and poly-fluoroalkyl
PFOA	- Perfluorooctanoic Acid
PAHs	- Polycyclic aromatic hydrocarbons
PID	- Photo-ionisation Detector
PCB	- Polychlorinated Biphenyl
PQL	- Practical Quantitation Limit
QA/QC	- Quality Assurance/Quality Control
RPD	- Relative Percentage Difference
SAQP	- Sampling, Analysis and Quality Plan
TRH	- Total Recoverable Hydrocarbons (previously Total Petroleum Hydrocarbons)
TSS	- Total Suspended Solids
UST	- Underground Storage Tank
VOC	- Volatile Organic Compound

Executive summary

This executive summary presents a synopsis of the Detailed Site Investigation for 53 - 55 Donnison Street West, Gosford, NSW (the site).

The object of the Detailed Site Investigation was to ascertain whether the site presents a risk to human health and/or the environment arising from any past/present activities at the site or neighbouring properties. Laboratory testing was undertaken to re-inforce the results of the desktop study.

Based on the desktop assessment and site investigation undertaken by Douglas Partners Pty Ltd (DP). The site historical review indicated the following areas of potential environmental concern:

- Potential importation of fill material that may contain various contaminants;
- Potential heavy metal and asbestos contamination from previous and existing structures; and

An intrusive soil investigation was conducted on the site. A total of eight (8) bore holes were excavated across the site in a systematic based pattern. Soil samples were collected from each borehole location. Selected samples were analysed for a range of analytes outlined within section 6.0 of this report. These samples were selected based on site observations (odour, staining etc), and their position within the borehole (i.e. fill or natural).

Twelve (12) samples (including QA/QC) were recovered and sent to a NATA accredited laboratory for analysis. The concentrations of samples analysed revealed that the levels were below the relevant assessment criteria with the exception of BH5-0.1m, which has presented chrysotile asbestos in approximately 8x4x2mm cement sheet fragments x4 and also exceeded the EIL and HIL criteria for lead, copper and zinc analytes.

The results of the chemical analyses indicate that the site does present a risk to human health and the environment. The site can be made suitable for the construction of a multi-storey building consisting of seven levels of residential units over two basement levels, subject to the following recommendations;

- Conduct a hazardous building materials survey (HazMat survey) prior to any demolition of site buildings to locate hazardous materials such as asbestos (bonded and friable) containing materials, and lead-based paints such that those materials can be appropriately managed and removed before demolition.
- Completion of an asbestos clearance inspection and validation of soils following the demolition of site structures, removal of demolition debris, grass and removal of any asbestos materials;

- Some form of remediation is required at BH5-0.1m; and
- Any material being imported to or exported from the site should be assessed for potential contamination in accordance with NSW EPA Waste Classification Guidelines as being suitable for the intended use.

This report was carried out in accordance with current NSW EPA guidelines; however, it is possible that further contaminated soils may be present between sampling locations.

1.0 INTRODUCTION

1.1 Overview

Australian GeoEnviro Pty Ltd (AG) have undertaken a Detailed Site Investigation with testing and analysis at 53 - 55 Donnison Street West, Gosford, NSW (the site). The investigation was commissioned by Mr. Matthew Wales from Wales & Associates (client). Information provided by the client indicates the proposed development comprises demolition of the existing buildings and infrastructure on the site, followed by construction of a multi-storey building consisting of seven levels of residential units over two basement levels.

2.0 SCOPE OF WORK

This Contamination Assessment has been prepared in general accordance with the following regulatory framework:

- NSW Environment Protection Authority (EPA) "Guidelines for Consultants Reporting on Contaminated Sites" (2020);
- State Environmental Planning Policy (Transport and Infrastructure) 2021;
- NEPM (2013), Schedule B2 – Guideline on Site Characterisation;
- State Environmental Planning Policy (Resilience and Hazards) 2021; and
- National Environment Protection (Assessment of Site Contamination) Measure – National Environmental Protection Council 2013.

The following scope of work was conducted as part of this assessment:

- Review of desktop study report to assist in identification of potential contamination issues:
 - Data from Environment Protection Authority.
 - Current and past zoning of the land.
- Review of soils and geological maps;
- Review of previous reporting at the site;
- Site Inspection by a representative from AG to ascertain current activities, and any visible signs of contamination;
- Collection of soil samples according to a sampling plan;
- Review and summarise previous reporting undertaken at the site;
- Chemical analysis by a NATA accredited laboratory;
- Assessment of the results of the chemical analysis against the appropriate guidelines; and
- Preparation of a Detailed Site Investigation Report.

3.0 SITE DESCRIPTION

The subject site/s are approximately rectangular in shape, legally defined as Lots A and B Deposited Plan 312912 . The site is bounded by Donnison Street West to the north, multi dwelling developments to the south and west with Batley Street situated to the west. The site measures up to 39m by 19m across the south-eastern boundary, encompassing a total area of 1165m² based on the site survey.

At the time of the site inspection, the following observations were made:

A qualified environmental consultant inspected the site on the 16th September 2024. Site photographs are provided in Appendix C. Observations noted during the inspection are summarised below:

The eastern portion of the site comprised of a vacant block of land, with dense grass and vegetation.

The western portion of the site was occupied by a three-storey residential townhouse building. It is considered likely that fill would have been placed at the site during construction of the townhouse building.

The site sloped down to the south. The surrounding area sloped down to the south and east and west.

The eastern portion appeared occupied by two demountable or temporary buildings. No other anthropogenic materials were noted on the site's surface, however, the long grass over the eastern portion of the site precluded thorough inspection of the site surface.

4.0 SITE HISTORY

In order to ascertain the site history, a documentary review of past and present land use at the subject site and the surrounding area has been undertaken by DP, the veracity of the information collected is considered to be relatively high, as the majority of the information was obtained from government sources where possible. The information is summarised below.

The site history information suggests the site use has been residential since at least the 1940s. The site history suggests the dwelling on the eastern portion of the site (No. 55) was removed sometime between 2003 and 2006 and this portion of the site was used by developers between 2018 and 2019 during construction of the multi-storey residential development located on the neighbouring site to the south. Since this portion of the site has remained vacant.

The current townhouse dwelling located on the western portion (No. 53) of the site appears to have been constructed in the early 1990s (approved in 1993).

4.1 Search of Contaminated Land Management Register (NSW EPA)

A summary of the search of the NSW EPA Contaminated Land Management record of notices for the area can be found. No notices have been issued to the subject site. Furthermore, the listed sites on the register are situated at such a distance (greater than 200m), that they are not believed to have provided a potential contamination risk to the subject property.

4.2 Search of Protection of the Environment Operations Public Register (POEO) of Licensed and Delicensed Premises

A search of the POEO Act 1997 public register of licensed and delicensed premises (DECC) indicated that no licensed or delicensed premises were located within or in the immediate surrounding area of the site (within 200m).

4.3 Safe Work NSW Records

At the time of reporting, this office had been given authorisation to request a search of the Storage of Hazardous Chemicals from SafeWork NSW. A search of the records held by SafeWork NSW has not located any records pertaining to the site.

4.4 Product Spill & Loss History

No external information was provided for any product spill and loss. However, based on the site inspection, no signs of chemical staining was observed.

4.5 Section 10.7 (2) and Council Records

A Section 10.7 Planning Certificate describes how a property may be used and the restrictions on development.

Is the land:

Significantly contaminated land within the meaning of that Act?

No

(b) Subject to a management order within the meaning of that Act?

No

(c) Subject of an approved voluntary management proposal within the meaning of that Act?

No

(d) Subject to an ongoing maintenance order within the meaning of that Act?

No

*(e) Subject of a site audit statement within the meaning of that Act? **

No

Note: in this clause 'the Act' refers to the Contaminated Land Management Act 1997.

4.6 Land Zoning

This office understands that the subject site is currently zoned as R1 – General Residential.

4.7 Regional Geology

Soil Landscape mapping (1:100,000 Sydney-Newcastle-Wollongong Soils Landscape Series Sheet) indicates that the site is underlain by Erina Erosional soil landscape group.

4.8 Groundwater and Surface Flows

The closest water body to the site is Brisbane Water which is located approximately 300 m to the south.

Based on the regional topography and the inferred flow direction of nearby watercourses, the anticipated flow direction of groundwater beneath the site is to the south, towards Brisbane Water, the likely receiving surface water body for the groundwater flow path.

Given the local geology (i.e. Terrigal Formation), the groundwater in the fractured rock beneath the site is anticipated to be relatively fresh. Accordingly, potential beneficial uses could include irrigation or drinking water, although the future use of the groundwater for these purposes in the vicinity of the site is considered unlikely given the urban setting.

4.9 Acid Sulfate Soil

To determine whether there is a potential for acid sulfate soils to be present at the site, reference was made to the NSW Office of Environment and Heritage (OEH), eSPADE map viewer. A review of the map indicated that the site is not in an area of potential acid sulfate soils.

5.0 SITE CONDITION AND SURROUNDING ENVIRONMENT

A site investigation was conducted on the 16th September 2024. The field observations are summarized in table 2 below:

Table 2 – Summary of Field Observations and Aesthetics

Parameter	Observation
Visible observations on soil contamination	No visual contamination observed
Presence of drums, fill or waste materials	None observed. No visible indicators of underground fuel tanks (bowzers or venting pipes).
Presence of fill	Greater than 800mm of filling was observed, generally behind retaining structures and within the southern portion of site
Flood potential	Not observed
Relevant sensitive environments	None observed at the time of inspections.
Asbestos	Not visually observed at the time of inspection.

6.0 AREAS OF ENVIRONMENTAL CONCERN

Based on the desktop assessment and site investigation undertaken by this office, material has been imported to the northern portion of site. The potential for the site to be contaminated from on-site sources and off-site sources was considered by AG. Based on the findings of our site inspection and site history review actual or potential contamination sources were identified as moderate to high.

Based on the site inspection, site history, previous reporting and review of available information from the desktop study, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Concern (CoCs) for the site were identified. These are summarised in the conceptual site model in table 3 below;

Table 3 – Contaminants of Concern

Potential AEC	Potentially contaminating activity	Likelihood of Site Impact	Potential CoCs	Comments
Entire site	Importation of fill material from unknown origin.	Moderate to High	Metals, TPH, BTEX, PAH, OCP, OPP, PCB, Asbestos	Based on site observations and borehole logs, greater than 800mm of fill material has been placed at the subject site, particularly behind retaining walls and across the southern portion of site
Entire Site	Asbestos and heavy metal contamination from previous structure	Moderate to High	Lead, Asbestos	Previous structures have the potential to contain asbestos and lead paint

7.0 CONCEPTUAL SITE MODEL

In accordance with NEPM (2013), *Schedule B2 – Guideline on Site Characterisation* and to assist in collecting data for the site. The Conceptual Site Model (CSM) detailed in table 4 below considers the potential risks associated with the plausible pollution linkages between the following features:

- Potential human receptors that may be impacted by site contamination are current and future occupants at the site, excavation/construction and maintenance workers during demolition and construction phase of the project and the general public within close proximity to the site;
- Potential sources of contamination, location and the contaminants of concern identified are presented in Section 6.0. Only potential areas of concern with a likelihood of site impact rating of low to high are included;
- Potential exposure pathways;
- Whether the linkage between each source-pathway-receptor is complete, based on our current site inspection, historical information presented and proposed future site condition;
- The site is not in an area of putrescible waste landfill, 'Inert' waste landfill, reclaimed wetlands and mangroves, organic waste disposal, coal workings, sewers, burial grounds or petroleum and coal-seam gas exploration, therefore a risk assessment of bulk ground gases is not considered necessary.

Table 4 – Conceptual Site Model

Potential Sources	Potential Receptor	Exposure Pathway	Complete Linkages	Risk	Justification
Importation of fill material from unknown origin.	Site Users, General Public, Construction Workers	Dermal Contact, Inhalation of Dust.	Yes (current)	Low	Direct contact with soil outside of hardstand areas and during construction
Asbestos and heavy metal contamination from previous and current structures		Volatilisation and migration of volatile organic contaminants through the unsaturated zone of soil leading to indoor inhalation. This pathway is considered to be open within landscaped areas	Yes (future)	Low	If present, impacted soil will be removed in future before landscaping

8.0 SAMPLING & ANALYSIS QUALITY PLAN AND SAMPLING METHODOLOGY

Sampling and analysis was undertaken in order to assess the nature, location and likely distribution of any contamination present at the subject site specifically within areas identified by AG, and also any potential risk posed to human health or the environment. Test results were compared to the relevant New South Wales Environment Protection Authority (NSW EPA) adopted criteria.

Twelve (12) samples including one (1) split sample, and one (1) trip spike/blank was sent to a NATA accredited laboratory. Samples were selected generally in a systematic way as well as based on site observations (odour, staining etc), and their position within the borehole (i.e. fill or natural).

8.1 Data Quality Objectives (DQO)

Data Quality Objectives (DQO) are qualitative and quantitative criteria that:

- Clarify study objectives.
- Define appropriate types of data to collect.
- Specify the tolerable levels of potential decision making errors.

The purpose of the DQO process is to ensure that the data collection activities are focused on:

- (a) collecting the information needed to make decisions; and
- (b) answering the relevant questions leading up to such decisions.

8.2 DQO Process

The DQO process consists of seven distinct steps:

- **State the Problem**

- As identified in section 7.0 above, the site has multiple potential sources of contamination. The problem is that, due to the potential contamination, an investigation is required to assess whether fill material and underlying natural soils have been contaminated by past/present activities.

- **Identify the Decision**

- If contamination is detected, what is the extent of the impact, are levels detected above relevant assessment criteria, does the site pose a risk to human health and/or the environment, how can the risk be managed?

- **Identify the Information Inputs**

The input into the decision process is as follows:

- Site and historical observations as detailed in sections 3.0 to 7.0 of this report;
- Soil and groundwater (if found) laboratory analytical data collected, field observations and measurements made during field work;
- A NATA accredited laboratory to test the potential contaminants of concern identified in section 6.0 of this report;
- AG compared the results obtained from material sampled to:
 - NEPM 2013, HIL Table 1A, Column B (HIL's);
 - Environmental Investigation Levels (EIL's);
 - Ecological Screening Levels (ESLs);
 - Health Screening Levels (HSL's); and

- For asbestos, the assessed soil must not contain bonded asbestos containing material (ACM) in excess of 0.01% w/w and surface soils within the site is free of visible ACM.

- **Define the Study Boundaries**

- Site investigation was limited to the physical site boundaries with samples collected to a maximum depth of 1000mm below existing surface level, terminated within natural materials

- **Develop the Analytical Approach**

- If levels of contamination exceed the relevant assessment criteria and pose a risk to human health and/or the environment, a remedial action plan and validation assessment will be required;
- The acceptable limits for the QA/QC samples collected during the investigation are presented in Appendix B;
- Acceptable QA/QC data is presented in Appendix B;
- To conclude the decision, the assessment decision rules must be met. The results of sampling and analysis of soil must meet the following criteria:
 - The calculated 95% Upper Confidence Level value (95% UCL) for COPCs do not exist in soil samples at concentrations in excess Assessment Criteria;
 - The standard deviation of the results should be less than 50% of the relevant investigation or screening level; and
 - No single analytical result for a COPC should exceed 250% of the relevant investigation level or screening level.

- **Specify Performance or Acceptance Criteria**

This step involves specifying the decision-maker's acceptable limits on decision errors.

- The acceptable limits on decision error to be applied in the investigation have been developed based on Data Quality Indicators of precision, accuracy, representativeness, comparability and completeness;
- The tolerable limits on decision errors are the probability that 95% of data will satisfy the DQI's, therefore a limit on the decision error will be 5% that a conclusive statement may be incorrect; and

- The potential for significant decision errors can be minimised by completing a robust Quality Analysis and Quality Control (QA/QC) program and by designing a sampling programme that includes appropriate sampling and analytical density for the purposes of the investigation.

- **Develop the Plan for Obtaining Data**

- Samples are to be collected within the proposed development area to assess potential contamination. The sampling plan is based on both systematic manner and field observations.

8.3 Sampling Methodology

Each sample location was excavated utilising a trailer mounted, 100mm solid flight auger drill rig or hand equipment to a maximum depth of up to 1000mm terminated in the natural soils generally. Samples were collected directly from the auger using disposable nitrile gloves. Field screening of samples was carried out by a combination of olfactory and visual contamination indications such as odours, staining or the presence of large particles and foreign materials, such as building rubble etc.

Eight (8) boreholes were excavated across the site in a generally systematic pattern, exposing the following subsurface conditions;

- Between 0 – 800mm: FILL: Silty Gravelly SAND dark grey, some minor bricks and plastic fragments were observed
- Between 100 – 1000mm; RESIDUAL; Silty CLAY, grey mottled red orange.

The soil samples were placed in 250ml laboratory prepared glass jars which were capped using teflon-sealed screw caps with samples for asbestos analysis placed in separate asbestos bags following field screening.

Soil samples were then placed in a chilled ice box to maintain samples at a temperature below approximately 4°C which were then transported to SGS Pty Ltd (NATA accredited laboratory) under stringent chain of custody (COC) procedures.

The samples were forwarded to SGS environmental for analysis along with a Chain of Custody which was subsequently returned to confirm the receipt of all samples.

9.0 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

The field sampling was undertaken by AG. An Environmental Consultant from AG sampled from the test locations and supervised excavation of each borehole.

9.1 Decontamination Procedure

Soil samples were collected using a trailer mounted, 100mm, solid flight drilling rig and hand equipment. The equipment was decontaminated between sampling events using the following procedure:

- 1) Soil was removed from the auger by scrubbing with a brush;
- 2) The auger was washed with phosphate free detergent in a bucket;
- 3) The auger was then rinsed in distilled water in another bucket;
- 4) Steps 2 and 3 were repeated; and
- 5) The auger was then dried with a clean disposable towel.

9.2 Split Sampling

A blind split sample were prepared in the field in order to determine the accuracy of the analytical programs. One split sample was required to meet the 5% duplicate sampling frequency in accordance with NEPM 2013 SchB3. The split sample was analysed for Petroleum Hydrocarbons (analysed as TRH), Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Arsenic, Cadmium, Copper, Lead, Mercury and Zinc (common metals). Approximately twice the normal amount of soil was collected and placed in a decontaminated stainless steel bowl. Sample numbered BH3-0.6m split into 2 portions. One portion was placed in a 250ml laboratory prepared glass jar, capped using Teflon-sealed screw cap. The second portion was placed into a second identical jar, labelled Split .

Samples were forwarded to SGS Sydney. The results are attached in SGS certificate of analysis in Appendix B with the acceptable QA/QC data presented in Appendix B. The split sample comparison indicates that the difference of laboratory test results produced an acceptable RPD,

Table 5 – Field Split & Duplicates

Laboratory	QC Type	No. of samples	RPD %	QC Acceptance Criteria
SGS Sydney	Split	2	• 0 – 100% RPD (When the average concentration is < 5 times the LOR/EQL) • 0 – 75% RPD (When the average concentration is 5 to 10 times the LOR/EQL) • 0 – 50% RPD (When the average concentration is > 10 times the LOR/EQL)	Achieved

The comparisons between the split/duplicate and corresponding original sample indicated generally acceptable RPD overall.

A Chain of Custody (COC) for samples sent to the primary and secondary laboratory is attached in Appendix B, showing the sampler, sampling time and date, receipt of samples at the laboratory, analyses to be performed and sample preservation method.

9.3 Trip Spike

Trip spikes are obtained from the laboratory on a regular basis. The Laboratory prepares VOC spikes comprising of sand or water spiked with known concentrations of BTEX. The purpose of the trip spike is to detect any loss of volatiles from the soil and groundwater samples during field work, transportation, sample extraction or testing. Laboratory prepared trip spike should be included at a rate of one per batch. One soil trip spike and one water trip spike was forwarded to the primary laboratory for BTEX analysis with resulting concentrations compared with the concentrations of the known additions. Test results of the trip spike show a good recovery of the spike concentrations (ranging from 81% to 87%), therefore it is considered that any loss of volatiles from the recovered samples that might have occurred would not affect the outcome or conclusion of this report. Laboratory test certificates are presented in Appendix B.

10.0 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

10.1 Laboratory Accreditation

SGS Australia Pty Ltd is accredited by the National Association of Testing Authorities (NATA) for the analysis carried out and are also accredited for compliance with ISO/IEC 17025.

10.2 Sample Holding Times

The holding times for samples at SGS are presented in table 6 below, along with the allowable holding time, detailed in Schedule B (3) of the National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013):

Table 6 – Holding Times

Laboratory	Analyte	Date Sampled	Date Received	Date of Extraction/ Analysis	Holding Time	Allowable Holding Time
SGS	Metals	16-09-24	18-09-24	21-09-24	5 days	6 months*
	Organochloride Pesticides (OCP)					14 days
	Organophosphorus Pesticides (OPP)					14 days
	Total Petroleum Hydrocarbons (TPH), PAH, BTEX, Phenols & PCB, PFAS					14 days

Note 1: (*) Metals excludes Mercury which has a holding time of 28 days.

Note 2: The soil sample analyses were conducted within the relevant allowable holding time.

10.3 Analytical Methods Used and Practical Quantitation Limits

The analytical methods and practical quantitation limits (PQL)/level of reporting (LOR) used by SGS are indicated on the test certificates located in Appendix B.

10.4 Laboratory Quality Control

SGS carry out in-house Quality Control testing. This provides the laboratory information regarding the accuracy of testing carried out. The RPD (relative percent difference) results for SGS are within the acceptance criteria adopted by the laboratory (see QC attached in Appendix B). If RPDs are in excess of 30%, the higher concentration is adopted as a conservative measure to identify any contamination present onsite.

Table 7 – RPDs

Laboratory	QC Type	QC Outliners Occur	QC Acceptance Criteria
SGS	Laboratory Blanks	No	Achieved
SGS	Laboratory Duplicates	No	Achieved with the exception of 2
SGS	Matrix Spikes	No	Achieved with the exception of 3
SGS	Surrogate Spikes	No	Achieved

11.0 QUALITY ASSESSMENT AND QUALITY CONTROL DATA EVALUATION

Quality Assessment and Quality Control have been achieved through the following procedures.

11.1 Document Completeness

- Preparation of chain of custody records;
- Laboratory confirmation of receipt of intact samples and relevant chain of custody;
- Laboratory provision of NATA accredited results certificates.

11.2 Data Completeness

- Analysis of contaminants of concern;
- Duplicate and split samples within numbers recommended by NEPM.

11.3 Data Representativeness

This is achieved by the following:

- Representative sampling of potential contaminants based on the site history and site activities;
- Sufficient duplicate and split sample numbers complying with NEPM;
- Adequate laboratory internal QA and QC methods complying with NEPM.

11.4 Data Comparability

- Use of consistent sampling personnel and methodologies;
- Use of NATA accredited laboratories;
- Use of consistent test methods between selected laboratories;
- Use of consistent test methods between samples;
- Acceptable RPD between original samples and duplicate and split sample results.

11.5 Data Precision and Accuracy

- The use of NATA accredited laboratories – a requirement of which is adequately trained and experienced staff;
- The use of appropriate and validated laboratory test methods;
- The analysis of duplicate and split samples;
- Acceptable RPD for duplicate and split samples overall;
- Acceptable laboratory performance based on results of blank, matrix spike, control, duplicate and surrogate samples.

11.6 Data Evaluation

Based on the above information regarding quality assurance and quality control, it is considered that the quality objectives for field procedures and laboratory results are reliable for this assessment.

Table 8 – Data Evaluation Summary

Data Quality Objectives	Field Considerations	Laboratory Considerations	QC Acceptance Criteria
Completeness	Achieved	Achieved	Achieved
Comparability	Achieved	Achieved	Achieved
Representativeness	Achieved	Achieved	Achieved
Precision	Achieved	Achieved	Achieved
Accuracy	Achieved	Achieved	Achieved

12.0 BASIS FOR ASSESSMENT CRITERIA

The Assessment criteria used in this investigation have been obtained from the following guideline documents:

- The National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013). This document presents risk-based Health Investigation Levels based on a variety of exposure settings for a number of organic and inorganic contaminants. To assess the risk to human health the results of the laboratory analysis are compared against the Health Investigation Levels (“HIL B”) for the exposure setting.
- Ecological Investigation Levels (EIL’s) for metals are applicable for assessing the risk to terrestrial ecosystems. For arsenic and lead, generic EIL are adopted for urban residential land use for aged contamination. For other metals, where available, EIL are calculated using the EIL calculator developed by CSIRO for NEPC. For this assessment, the analytical results were assessed against the available SQG/EIL for urban residential land use for aged contamination. This guideline was applied to samples TP1-0.4m in areas of future deep soil.
- Health Screening Levels (HSL’s) have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. The HSL’s depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structure.

- Ecological screening levels (ESL's) have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon (TPH) fractions and are applicable for assessing risk to terrestrial ecosystems. ESL's broadly apply to coarse and fine grained soils and various land uses. They are generally applicable to the top 2m of soil. Urban Residential and Public Open Space guidelines were adopted from NEPM Schedule B1, table 1B (5).
- Cooperative Research Centre for Contamination Assessment and Remediation of the Environment, Technical Report series, no. 39.

Table 9 – Basis of Assessment

Contaminant	Assessment Criteria (mg/kg)			
	Health Based Investigation Level (HIL'B')	Ecological Investigation Levels (EIL's)**	Health Screening Levels (HSL's)*	Ecological screening levels (ESL's)
Inorganics (Heavy Metals)				
Arsenic (total)	500	20		
Cadmium	150	3		
Chromium (VI)	500	400		
Copper	30 000	60		
Lead	1200	600		
Mercury	120	1		
Nickel	1200	15		
Zinc	60 000	300		
Organics				
TPH				
C6 to C10			50	180
>C10 to C16			130	120
>C16 to C34				300
>C34				2800
Benzene			0.6	50
Toulene			190	85
Ethylbenzene			390	70
BaP				20
BaP (TEQ)	4			
Xylene			45	105
Napthalene		170	3	
Phenol	45 000			
PAH	400			
OCP				
Aldrin + Dieldrin				
Chlordane	10			
Heptachlor	10			
DDD+DDE+DDT	600	180^		
OPP				
Diazinon	-			
Ethion	-			
Fenitrothion	-			
PCB	1			
Asbestos	0.01% bonded ACM	-	-	

Notes: * fine texture 0m-0.5m has been adopted for assessing the upper fill soil horizon.

** Conservative and generic EIL adopted.

13.0 LABORATORY TEST RESULTS

Test results and Laboratory test certificates are tabulated and presented below in Appendix B. Summary of test results are detailed below in sections 13.1 to 13.4.

13.1 Heavy Metals

Heavy metal concentrations for Arsenic, Cadmium, Copper, Zinc, Chromium, Lead, Mercury, and Nickel are presented in Appendix B. The concentrations of all metals were below the relevant assessment criteria, with the exception of BH5-0.1 which has exceeded the EIL and HIL criteria for Zinc, Lead and Copper.

13.2 OCP, OPP, PCB

The OCP, OPP, PCB concentrations, presented in Appendix B, were less than the relevant assessment criteria adopted, and therefore the chemical analyses indicate that the site is not contaminated with OCP, OPP, PCB.

13.3 Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAH), Chlorinated Hydrocarbons and BTEX

The TPH, PAH and BTEX concentrations, presented in Appendix B, were less than the relevant assessment criteria.

13.4 Asbestos Test Results

The Asbestos test results are presented in table Appendix B. No asbestos was detected within screening samples at the limit of reporting <0.01%w/w. With the exception of BH5-0.1m, has presented chrysotile asbestos in approximately 8x4x2mm cement sheet fragments x4

14.0 DATA GAPS

Based on the CoCs derived for the site, the following data gaps were identified.

- Depth and quality of groundwater.

15.0 SITE CHARACTERISATION

The site is characterized as follows, as a result of the information obtained through this assessment:

- Information provided by the client indicates the proposed development comprises demolition of the existing buildings and infrastructure on the site, followed by construction of a multi-storey building consisting of seven levels of residential units over two basement levels ;
- Twelve (12) samples (including QA/QC) were recovered and sent to a NATA accredited laboratory for analysis. The concentrations of samples analysed revealed levels below the relevant assessment criteria with the exception of sample numbered BH5-0.1

16.0 VALIDATION

A systematic sampling plan was chosen for this site in addition to sampling based on field observations, this was done to:

- Select statistically unbiased sampling locations
- Provide sampling locations at regular intervals, spaced evenly across the site, and
- Ensure that potentially contaminated areas were included in the sampling plan.

The samples collected were compared against the Health Investigation Levels (HIL) for the exposure setting; 'HIL B'. The 95% upper confidence limit (UCL) average was also compared to the HIL guidelines. The samples collected were compared against the investigation levels detailed in section 12.0 for the exposure setting; 'HIL B'. The 95% upper confidence limit (UCL) average was also compared to the relevant guidelines. The data set indicated that the coefficient of variation of the sample measurements were less than 1.2, Therefore, the Students method for determining the 95% UCL was adopted.

17.0 CONCLUSION AND RECOMMENDATIONS

The results of the chemical analyses indicate that the site does present a risk to human health and the environment. The site can be made suitable for the construction of a multi-storey building consisting of seven levels of residential units over two basement levels, subject to the following recommendations;

- Conduct a hazardous building materials survey (HazMat survey) prior to any demolition of site buildings to locate hazardous materials such as asbestos (bonded and friable) containing materials, and lead-based paints such that those materials can be appropriately managed and removed before demolition.
-

- Completion of an asbestos clearance inspection and validation of soils following the demolition of site structures, removal of demolition debris, grass and removal of any asbestos materials;
- Some form of remediation is required at BH5-0.1m; and

Any material being imported to or exported from the site should be assessed for potential contamination in accordance with NSW EPA Waste Classification Guidelines as being suitable for the intended use.

This report was carried out in accordance with current NSW EPA guidelines, however, it is possible that further contaminated soils may be present between sampling locations.

Should you have any queries, please do not hesitate to contact the undersigned.

Australian GeoEnviro Pty Ltd



N. Smith
Principal

Reviewed By



Nicolas Israel
MIEAust, MAPEA, MEIANZ, CEnvP, SSA

I, Nicolas Israel, confirm that I have reviewed the above Detailed Site Investigation report and found it to be compliant with currently published relevant environmental legislation, policies and guidelines. My credentials are provided below.

I am a qualified Professional Mechanical Engineer (**PMEng**), a member of the Institution of Engineers Australia (**IEAust**) (**Environment and Mechanical**), a member of the Environment Institute of Australia and New Zealand (**EIANZ**), a member of the Association of Professional Engineers Australia (**APEA**), a member of the Certified Environmental Practitioners Group (**CEnvP**) and a member of the Soil Science Australia (**SSA**).

I have been working as an environmental engineer for **over 38 years** of which approximately 28 years were spent working with the NSW Environment Protection Authority (**EPA**) and its predecessors in different capacities and on different projects. I have also completed many relevant post graduate studies in most environmental related aspects such as air, noise, site contamination, asbestos awareness and sewerage management.

I have completed the Lead Auditor Auditing Management Systems **ISO19011:2018**, Lead Audit Teams **ISO19011:2018** and Environmental Management Systems **ISO 4001:2015**. I have obtained membership of Exemplar Global as a **Lead Auditor ISO14001:2015** in the qualification Based Environmental Management Systems Auditor with the following Scope of Certification:

1. Environmental Management Audit
2. ISO14001:2015 Audit
3. Site Contamination Assessment
4. Environmental Report Verification
5. Regulatory Compliance Audit
6. Waste Auditing

Professional Certification/Membership Badges



My credentials presented above will satisfy the requirements included in Schedule B9 (Guideline on Competencies & Acceptance of Environmental Auditors and Related Professionals) of the National Environment Protection (Assessment of Site Contamination) Measure April 2011. I have been accepted by NSW EPA as being a suitably qualified person to undertake all stages of Site Contamination Assessments and review the same on several occasions in recent years.

References

- Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites. NSW Environment Protection Authority (EPA) 2020.
- National Environment Protection (Assessment of Site Contamination) Measure – National Environmental Protection Council 2013.
- NEPC, 1999: National Environment Protection Council (1999). National Environment Protection (Assessment of Site Contamination) Measure. Schedule B(3)
- NEPC, 1999: National Environment Protection Council (1999). National Environment Protection (Assessment of Site Contamination) Measure. Schedule B(2) Guideline on Site Characterisation
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia, August 2018.
- Guidelines for the Assessment and Management of Sites Impacted by Hazardous Ground Gases (NSW EPA 2012)
- Guidelines for the Assessment and Management of Groundwater Contamination (NSW DEC 2007)
- PFAS National Environmental Management Plan Version 2.0 – January 2020 prepared by National Chemicals Working Group of the Heads of EPA.
- Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (NSW EPA 2015).
- Part 1: Classifying Waste, Waste Classification Guidelines (2014) published by the Environment Protection Authority NSW

Limitations

This report has been prepared for use by the client who commissioned the works in accordance with the project brief and based on information provided by the client. The advice contained in this report relates only to the current project and all results, conclusions and recommendations should be reviewed by a competent person with experience in environmental investigations before being used for any other purpose. Australian GeoEnviro Pty Ltd (AG) accepts no liability for use or interpretation by any person or body other than the client. This report must not be reproduced except in full and must not be amended in any way without prior approval by the client and AG.

The extent of sampling and analysis of soils has been undertaken targeting areas of environmental concern, targeting specific soil strata from where contamination is considered most likely to occur based on knowledge of site history and visual inspection. This approach has been adopted in order to maximise the probability of identifying contaminants, however the approach may not identify contamination that occurs in unexpected locations or from unexpected sources.

Furthermore, soil, rock and aquifer conditions are variable, resulting in the heterogeneous distribution of contaminants across the site. Contaminants have been identified at discrete locations; however conditions between sample locations have been inferred based on estimated geological and hydrogeological conditions, the nature and extent of identified contamination. Boundaries between zones of variable contamination are generally unclear and have been interpreted based on available data and professional judgement. The accuracy with which subsurface conditions have been characterised depends on the frequency of sampling, field and laboratory methods, the uniformity of the substrate and is therefore limited by the scope of works undertaken.

This report is based on targeted sampling and does not provide a complete assessment of the environmental status of the site and is limited to the scope defined therein. Should information become available regarding conditions at the site including previously unknown sources of contamination, AG reserves the right to review the report in the context of the additional information.

APPENDIX A

FIGURES

Bore Hole Location Plan and Logs

Figure source: Nearmap



Approximate Borehole
Locations



Wales & Associates

53 - 55 Donnison Street West, Gosford, NSW

Drawn By NS

Approved By NS

Job No

Drawing No

Ref No

Scale

AG-1625

Figure 1

Not to scale

APPENDIX B

LABORATORY TEST CERTIFICATES

	Asbestos	BTEX								TRH							Other	Halogenated Benzenes	Inorganics
	Asbestos fibres	Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	Estimated Fibres	Hexachlorobenzene	% Moisture
	Detect	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL	0	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.6	25	25	25	25	90	120	210	100	0.1	1
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay		5	0.7 1 2 3	480				110 310			50 90 150 290		280						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space		170																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil			65	105	125			45			180	120	120	1,300	5,600				
NEPM 2013 Table 1A(1) HILs Res B Soil																		15	

Field ID	Location Code	Date																			
BH1-0.0		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	<100		15.9
BH2-0.1		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	<100		13.6
BH3-0.1		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	<100	<0.1	12.0
BH3-0.6		16 Sep 2024		<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210			22.5
BH4-0.0		16 Sep 2024	1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	>100		14.9
BH5-0.1		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	<100		22.8
BH6-0.1		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	<100		9.5
BH7-0.6		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	110	<120	<210	<100	<0.1	18.9
BH8-0.1		16 Sep 2024	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	<100		11.4
Blank		16 Sep 2024		<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6										<1
split		16 Sep 2024																			22.6

Statistics																			
Number of Results	8	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	8	2	11
Number of Detects	8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	10
Minimum Concentration	0	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	<90	<120	<210	>100	<0.1	<1
Minimum Detect	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	100	ND	9.5
Maximum Concentration	1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.6	<25	<25	<25	<25	110	<120	<210	>100	<0.1	22.8
Maximum Detect	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	100	ND	22.8
Average Concentration *	0.12	0.05	0.05	0.05	0.05	0.1	0.05	0.15	0.3	12	12	12	12	52	60	105	56	0.05	15
Median Concentration *	0	0.05	0.05	0.05	0.05	0.1	0.05	0.15	0.3	12.5	12.5	12.5	12.5	45	60	105	50	0.05	14.9
Standard Deviation *	0.35	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	18	0	6.7
95% UCL (Student's-t) *	0.362	0.05	0.05	0.05	0.05	0.1	0.05	0.15	0.3	12.5	12.5	12.5	12.5	65.65	60	105	68.09	0.05	18.65
% of Detects	100	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	12	0	91
% of Non-Detects	0	100	100	100	100	100	100	100	100	100	100	100	100	89	100	100	88	100	9

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Res B Soil

	Metals								Organochlorine pesticides EPA/Vic											
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Organochlorine pesticides EPA/Vic	2,4-DDT	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (technical)	d-BHC	DDD	DDT	Dieldrin
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	1	0.3	0.5	0.5	1	0.05	0.5	2	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																				
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space	100																		180	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
NEPM 2013 Table 1A(1) HILs Res B Soil	500	150		30,000	1,200	120	1,200	60,000												

Field ID	Location Code	Date																				
BH1-0.0		16 Sep 2024	4	0.4	14	36	140	0.14	2.6	270												
BH2-0.1		16 Sep 2024	4	0.3	20	18	100	<0.05	1.7	150												
BH3-0.1		16 Sep 2024	3	<0.3	7.4	31	61	<0.05	2.1	130	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
BH3-0.6		16 Sep 2024	7	<0.3	21	12	18	<0.05	<0.5	14												
BH4-0.0		16 Sep 2024	5	<0.3	12	17	140	<0.05	2.9	210												
BH5-0.1		16 Sep 2024	5	0.4	13	340	1,900	0.16	3.7	1,800												
BH6-0.1		16 Sep 2024	2	<0.3	6.5	11	22	<0.05	2.5	60												
BH7-0.6		16 Sep 2024	3	<0.3	11	52	83	<0.05	2.5	140	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
BH8-0.1		16 Sep 2024	4	<0.3	19	24	110	<0.05	12	230												
Blank		16 Sep 2024																				
split		16 Sep 2024	9	<0.3	17	12	16	<0.05	0.6	13												

Statistics																					
Number of Results	10	10	10	10	10	10	10	10	10	10	2	2	2	2	2	2	2	2	2	2	2
Number of Detects	10	3	10	10	10	10	2	9	10	10	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	2	0.3	6.5	11	16	<0.05	<0.5	13	13	13	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2
Minimum Detect	2	0.3	6.5	11	16	0.14	0.6	13	13	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	9	0.4	21	340	1,900	0.16	12	1,800	1,800	1,800	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2
Maximum Detect	9	0.4	21	340	1,900	0.16	12	1,800	1,800	1,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	4.6	0.21	14	55	259	0.05	3.1	302	302	302	0.5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1
Median Concentration *	4	0.15	13.5	21	91.5	0.025	2.5	145	145	145	0.5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1
Standard Deviation *	2.1	0.11	5.1	101	579	0.053	3.3	534	534	534	0	0	0	0	0	0	0	0	0	0	0
95% UCL (Student's-t) *	5.797	0.278	17.04	113.8	594.4	0.0807	4.997	611	611	611	0.5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1
% of Detects	100	30	100	100	100	20	90	100	100	100	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects	0	70	0	0	0	80	10	0	0	0	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Res B Soil

	Chlorine Pesticides													Organophosphorous Pesticides						
	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	o,p-DDD	o,p'-DDE	trans-Nonachlor	Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Diazinon	Dichlorvos	Dimethoate	Ethion
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.5	0.5	0.2
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																				
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
NEPM 2013 Table 1A(1) HILs Res B Soil				20				10		500						340				

Field ID	Location Code	Date																			
BH1-0.0		16 Sep 2024																			
BH2-0.1		16 Sep 2024																			
BH3-0.1		16 Sep 2024	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2
BH3-0.6		16 Sep 2024																			
BH4-0.0		16 Sep 2024																			
BH5-0.1		16 Sep 2024																			
BH6-0.1		16 Sep 2024																			
BH7-0.6		16 Sep 2024	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2
BH8-0.1		16 Sep 2024																			
Blank		16 Sep 2024																			
split		16 Sep 2024																			

Statistics																					
Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	0.1	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.25	0.25	0.25	0.1
Median Concentration *	0.1	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.25	0.25	0.25	0.1
Standard Deviation *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95% UCL (Student's-t) *	0.1	0.1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.25	0.25	0.25	0.1
% of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Res B Soil

				PAH																
	Fenitrothion	Malathion	Methidathion	1-Methylnaphthalene	2-methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.2	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																			5	
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																			170	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										0.7										
NEPM 2013 Table 1A(1) HILs Res B Soil																				

Field ID	Location Code	Date																			
BH1-0.0		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
BH2-0.1		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
BH3-0.1		16 Sep 2024	<0.2	<0.2	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH3-0.6		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH4-0.0		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
BH5-0.1		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
BH6-0.1		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH7-0.6		16 Sep 2024	<0.2	<0.2	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
BH8-0.1		16 Sep 2024				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
Blank		16 Sep 2024																			
split		16 Sep 2024																			

Statistics																					
Number of Results	2	2	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
Minimum Concentration	<0.2	<0.2	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND
Maximum Concentration	<0.2	<0.2	<0.5	<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	0.2	<0.1	<0.1	<0.1	<0.1
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND
Average Concentration *	0.1	0.1	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.13	0.05	0.05	0.05	0.05
Median Concentration *	0.1	0.1	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05
Standard Deviation *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.071	0	0	0	0
95% UCL (Student's-t) *	0.1	0.1	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.172	0.05	0.05	0.05	0.05
% of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0	0	0	0
% of Non-Detects	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	33	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Res B Soil

							PCBs										Pesticides			
	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	PAHs (Sum of positives)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1268	Aroclor 1262	PCBs (Sum of total)	Isodrin	Mirex	Parathion	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg
EQL	0.1	0.2	0.3	0.2	0.8	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1	0.1	0.1	0.2	100,000
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																				
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
NEPM 2013 Table 1A(1) HILs Res B Soil		4	4	4	400											1		20		

Field ID	Location Code	Date																			
BH1-0.0		16 Sep 2024	0.2	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
BH2-0.1		16 Sep 2024	0.1	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
BH3-0.1		16 Sep 2024	<0.1	<0.2	<0.3	<0.2	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.1	<0.1	<0.2	<100,000
BH3-0.6		16 Sep 2024	<0.1	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
BH4-0.0		16 Sep 2024	0.2	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
BH5-0.1		16 Sep 2024	0.2	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
BH6-0.1		16 Sep 2024	<0.1	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
BH7-0.6		16 Sep 2024	0.1	<0.2	<0.3	<0.2	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.1	<0.1	<0.2	<100,000
BH8-0.1		16 Sep 2024	0.2	<0.2	<0.3	<0.2	<0.8	<0.8													<100,000
Blank		16 Sep 2024																			
split		16 Sep 2024																			

Statistics																					
Number of Results	9	9	9	9	9	9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	9
Number of Detects	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	0.1	<0.2	<0.3	<0.2	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.1	<0.1	<0.2	<100,000
Minimum Detect	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	0.2	<0.2	<0.3	<0.2	<0.8	<0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.1	<0.1	<0.2	<100,000
Maximum Detect	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	0.13	0.1	0.15	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.05	0.05	0.1	50,000
Median Concentration *	0.1	0.1	0.15	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.05	0.05	0.1	50,000
Standard Deviation *	0.071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95% UCL (Student's-t) *	0.172	0.1	0.15	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.05	0.05	0.1	50,000
% of Detects	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects	33	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Res B Soil

	TPH				
	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	20	20	45	45	110
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay					
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil					
NEPM 2013 Table 1A(1) HILs Res B Soil					

Field ID	Location Code	Date					
BH1-0.0		16 Sep 2024	<20	<20	<45	<45	<110
BH2-0.1		16 Sep 2024	<20	<20	<45	<45	<110
BH3-0.1		16 Sep 2024	<20	<20	<45	<45	<110
BH3-0.6		16 Sep 2024	<20	<20	<45	<45	<110
BH4-0.0		16 Sep 2024	<20	<20	<45	<45	<110
BH5-0.1		16 Sep 2024	<20	<20	<45	<45	<110
BH6-0.1		16 Sep 2024	<20	<20	<45	52	<110
BH7-0.6		16 Sep 2024	<20	<20	84	<45	<110
BH8-0.1		16 Sep 2024	<20	<20	<45	49	<110
Blank		16 Sep 2024					
split		16 Sep 2024					

Statistics					
Number of Results	9	9	9	9	9
Number of Detects	0	0	1	2	0
Minimum Concentration	<20	<20	<45	<45	<110
Minimum Detect	ND	ND	84	49	ND
Maximum Concentration	<20	<20	84	52	<110
Maximum Detect	ND	ND	84	52	ND
Average Concentration *	10	10	29	29	55
Median Concentration *	10	10	22.5	22.5	55
Standard Deviation *	0	0	20	12	0
95% UCL (Student's-t) *	10	10	42.04	36.39	55
% of Detects	0	0	11	22	0
% of Non-Detects	100	100	89	78	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
2013, NEPM 2013 Table 1A(1) HILs Res B Soil

QA/QC Acceptance Limits

QC Sample Type	Method of Assessment	Acceptable Range
Field QC		
Blind Replicates and Split Samples	The assessment of split replicate is undertaken by calculating the Relative Percent Difference (RPD) of the replicate concentration compared with the original sample concentration. The RPD is defined as: $RPD = 100 \times \frac{X_1 - X_2}{\text{Average}}$ Where: X_1 and X_2 are the concentration of the original and replicate samples.	The acceptable range depends upon the levels detected: 0 – 100% RPD (When the average concentration is < 5 times the LOR/EQL) 0 – 75% RPD (When the average concentration is 5 to 10 times the LOR/EQL) 0 – 50% RPD (When the average concentration is > 10 times the LOR/EQL)
Blanks (Rinsate and Trip Blanks)	Each blank is analysed as per the original samples.	Analytical Result < LOR/EQL
Laboratory-prepared Trip Spike	The trip spike is analysed after returning from the field and the % recovery of the known spike is calculated.	70% - 130%
Laboratory QC		
Laboratory Duplicates	Assessment as per Blind Replicates and Split Samples.	The acceptable range depends upon the levels detected: 0 – 100% RPD (When the average concentration is < 4 times the LOR/EQL) 0 – 50% RPD (When the average concentration is 4 to 10 times the LOR/EQL) □ 0 – 30% RPD (When the average concentration is > 10 times the LOR/EQL)
Surrogates Matrix Spikes Laboratory Control Samples	Assessment is undertaken by determining the percent recovery of the known spike or addition to the sample. $\% \text{ Recovery} = 100 \times \frac{C - A}{B}$ Where: A = Concentration of analyte determined in the original sample; B = Added Concentration; C = Calculated Concentration.	70% - 130% (General Analytes) 50% - 130% (Phenols) 60% - 130% (OP Pesticides) If the result is outside the above ranges, the result must be < 3x Standard Deviation of the Historical Mean (calculated over past 12 months)
Method Blanks	Each blank is analysed as per the original samples.	Analytical Result < LOR/EQL
Note: EQL = Laboratory Estimated Quantitation Limit (EQL) or the minimum detection limit for a particular analyte. LOR = Limit of Reporting or the minimum		

CLIENT DETAILS

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Project **AG-1625**
Order Number **AG-1625**
Samples 12

LABORATORY DETAILS

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SGS Reference **SE271236 R0**
Date Received 18/9/2024
Date Reported 25/9/2024

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

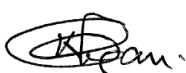
Sample #5: Chrysotile asbestos found in approx 8x4x2mm cement sheet fragments x4.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin

SIGNATORIES



Akheeqar BENIAMEEN
Chemist



Kamrul AHSAN
Senior Chemist



Ly Kim HA
Organic Section Head



Shane MCDERMOTT
Laboratory Manager



Teresa NGUYEN
Organic Chemist



Yusuf KUTHPUDIN
Asbestos Analyst



Ying Ying ZHANG
Laboratory Technician

VOC's in Soil [AN433] Tested: 20/9/2024

PARAMETER	UOM	LOR	BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024 SE271236.001	16/9/2024 SE271236.002	16/9/2024 SE271236.003	16/9/2024 SE271236.004	16/9/2024 SE271236.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1	Spike
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024 SE271236.006	16/9/2024 SE271236.007	16/9/2024 SE271236.008	16/9/2024 SE271236.009	16/9/2024 SE271236.011
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[85%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[81%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[86%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[88%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[87%]
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	-
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-

PARAMETER	UOM	LOR	Blank
			SOIL
			-
			16/9/2024 SE271236.012
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 20/9/2024

PARAMETER	UOM	LOR	BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024 SE271236.001	16/9/2024 SE271236.002	16/9/2024 SE271236.003	16/9/2024 SE271236.004	16/9/2024 SE271236.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			16/9/2024 SE271236.006	16/9/2024 SE271236.007	16/9/2024 SE271236.008	16/9/2024 SE271236.009
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 20/9/2024

PARAMETER	UOM	LOR	BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			16/9/2024 SE271236.001	16/9/2024 SE271236.002	16/9/2024 SE271236.003	16/9/2024 SE271236.004	16/9/2024 SE271236.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1
			SOIL	SOIL	SOIL	SOIL
			16/9/2024 SE271236.006	16/9/2024 SE271236.007	16/9/2024 SE271236.008	16/9/2024 SE271236.009
TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	84	<45
TRH C29-C36	mg/kg	45	<45	52	<45	49
TRH C37-C40	mg/kg	100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	110	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 20/9/2024

PARAMETER	UOM	LOR	BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			16/9/2024 SE271236.001	16/9/2024 SE271236.002	16/9/2024 SE271236.003	16/9/2024 SE271236.004	16/9/2024 SE271236.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.2	0.1	<0.1	<0.1	0.2
Pyrene	mg/kg	0.1	0.2	0.1	<0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1
			SOIL	SOIL	SOIL	SOIL
			16/9/2024 SE271236.006	16/9/2024 SE271236.007	16/9/2024 SE271236.008	16/9/2024 SE271236.009
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	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	0.2
Pyrene	mg/kg	0.1	0.2	<0.1	0.1	0.2
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)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 20/9/2024

			BH3-0.1	BH7-0.6
			SOIL	SOIL
			-	-
			16/9/2024	16/9/2024
			SE271236.003	SE271236.008
PARAMETER	UOM	LOR		
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1

OP Pesticides in Soil [AN420] Tested: 20/9/2024

			BH3-0.1	BH7-0.6
			SOIL	SOIL
			-	-
			16/9/2024	16/9/2024
			SE271236.003	SE271236.008
PARAMETER	UOM	LOR		
Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 20/9/2024

			BH3-0.1	BH7-0.6
			SOIL	SOIL
			-	-
			16/9/2024	16/9/2024
PARAMETER	UOM	LOR	SE271236.003	SE271236.008
Arochlor 1016	mg/kg	0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 20/9/2024

PARAMETER	UOM	LOR	BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024 SE271236.001	16/9/2024 SE271236.002	16/9/2024 SE271236.003	16/9/2024 SE271236.004	16/9/2024 SE271236.005
Arsenic, As	mg/kg	1	4	4	3	7	5
Cadmium, Cd	mg/kg	0.3	0.4	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	20	7.4	21	12
Copper, Cu	mg/kg	0.5	36	18	31	12	17
Lead, Pb	mg/kg	1	140	100	61	18	140
Nickel, Ni	mg/kg	0.5	2.6	1.7	2.1	<0.5	2.9
Zinc, Zn	mg/kg	2	270	150	130	14	210

PARAMETER	UOM	LOR	BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1	split
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024 SE271236.006	16/9/2024 SE271236.007	16/9/2024 SE271236.008	16/9/2024 SE271236.009	16/9/2024 SE271236.010
Arsenic, As	mg/kg	1	5	2	3	4	9
Cadmium, Cd	mg/kg	0.3	0.4	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	6.5	11	19	17
Copper, Cu	mg/kg	0.5	340	11	52	24	12
Lead, Pb	mg/kg	1	1900	22	83	110	16
Nickel, Ni	mg/kg	0.5	3.7	2.5	2.5	12	0.6
Zinc, Zn	mg/kg	2	1800	60	140	230	13



ANALYTICAL RESULTS

SE271236 R0

Mercury in Soil [AN312] Tested: 20/9/2024

			BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024	16/9/2024	16/9/2024	16/9/2024	16/9/2024
PARAMETER	UOM	LOR	SE271236.001	SE271236.002	SE271236.003	SE271236.004	SE271236.005
Mercury	mg/kg	0.05	0.14	<0.05	<0.05	<0.05	<0.05

			BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1	split
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024	16/9/2024	16/9/2024	16/9/2024	16/9/2024
PARAMETER	UOM	LOR	SE271236.006	SE271236.007	SE271236.008	SE271236.009	SE271236.010
Mercury	mg/kg	0.05	0.16	<0.05	<0.05	<0.05	<0.05



ANALYTICAL RESULTS

SE271236 R0

Moisture Content [AN002] Tested: 20/9/2024

			BH1-0.0	BH2-0.1	BH3-0.1	BH3-0.6	BH4-0.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024	16/9/2024	16/9/2024	16/9/2024	16/9/2024
PARAMETER	UOM	LOR	SE271236.001	SE271236.002	SE271236.003	SE271236.004	SE271236.005
% Moisture	%w/w	1	15.9	13.6	12.0	22.5	14.9

			BH5-0.1	BH6-0.1	BH7-0.6	BH8-0.1	split
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024	16/9/2024	16/9/2024	16/9/2024	16/9/2024
PARAMETER	UOM	LOR	SE271236.006	SE271236.007	SE271236.008	SE271236.009	SE271236.010
% Moisture	%w/w	1	22.8	9.5	18.9	11.4	22.6

			Blank
			SOIL
			-
			16/9/2024
PARAMETER	UOM	LOR	SE271236.012
% Moisture	%w/w	1	<1.0

Fibre Identification in soil [AS4964/AN602] Tested: 20/9/2024

PARAMETER	UOM	LOR	BH1-0.0	BH2-0.1	BH3-0.1	BH4-0.0	BH5-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/9/2024 SE271236.001	16/9/2024 SE271236.002	16/9/2024 SE271236.003	16/9/2024 SE271236.005	16/9/2024 SE271236.006
Asbestos Detected	No unit	-	No	No	No	Yes	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	>0.01	<0.01
Date Analysed*	No unit	-	23/09/2024 00:00	23/09/2024 00:00	23/09/2024 00:00	23/09/2024 00:00	23/09/2024 00:00

PARAMETER	UOM	LOR	BH6-0.1	BH7-0.6	BH8-0.1
			SOIL	SOIL	SOIL
			-	-	-
			16/9/2024 SE271236.007	16/9/2024 SE271236.008	16/9/2024 SE271236.009
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01
Date Analysed*	No unit	-	23/09/2024 00:00	23/09/2024 00:00	23/09/2024 00:00

METHOD

METHODOLOGY SUMMARY

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

AN040/AN320

A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

AN040

A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.

AN312

Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

AN403

Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.

AN403

Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.

AN403

The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.

AN420

(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

Total PAH calculated from individual analyte detections at or above the limit of reporting.

AN420

SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

AN433

VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

AN602/AS4964

Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602/AS4964

Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.

AN602/AS4964

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602/AS4964

The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
		IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
***	Indicates that both * and ** apply.	LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be $1.6 / 2$ (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the $\pm$ sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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Email Results: info@austgeo.com.au

[illegible]

SGS EHS Sydney COC
SE271236



Comments:



STATEMENT OF QA/QC PERFORMANCE

SE271236 R0

CLIENT DETAILS

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DENISTONE EAST NSW 2112

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Project **AG-1625**
Order Number **AG-1625**
Samples 12

LABORATORY DETAILS

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SGS Reference **SE271236 R0**
Date Received 18 Sep 2024
Date Reported 25 Sep 2024

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
Matrix Spike	TRH (Total Recoverable Hydrocarbons) in Soil	3 items

SAMPLE SUMMARY

Sample counts by matrix	12 Soil	Type of documentation received	COC
Date documentation received	18/9/2024	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	6.9°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil**Method: ME-(AU)-[ENV]AS4964/AN602**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH2-0.1	SE271236.002	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH3-0.1	SE271236.003	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH4-0.0	SE271236.005	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH5-0.1	SE271236.006	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH6-0.1	SE271236.007	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH7-0.6	SE271236.008	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024
BH8-0.1	SE271236.009	LB324418	16 Sep 2024	18 Sep 2024	16 Sep 2025	20 Sep 2024	16 Sep 2025	25 Sep 2024

Mercury in Soil**Method: ME-(AU)-[ENV]AN312**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH2-0.1	SE271236.002	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH3-0.1	SE271236.003	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH3-0.6	SE271236.004	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH4-0.0	SE271236.005	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH5-0.1	SE271236.006	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH6-0.1	SE271236.007	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH7-0.6	SE271236.008	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
BH8-0.1	SE271236.009	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024
split	SE271236.010	LB324399	16 Sep 2024	18 Sep 2024	14 Oct 2024	20 Sep 2024	14 Oct 2024	24 Sep 2024

Moisture Content**Method: ME-(AU)-[ENV]AN002**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH2-0.1	SE271236.002	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH3-0.1	SE271236.003	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH3-0.6	SE271236.004	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH4-0.0	SE271236.005	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH5-0.1	SE271236.006	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH6-0.1	SE271236.007	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH7-0.6	SE271236.008	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
BH8-0.1	SE271236.009	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
split	SE271236.010	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024
Blank	SE271236.012	LB324397	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	25 Sep 2024	23 Sep 2024

OC Pesticides in Soil**Method: ME-(AU)-[ENV]AN420**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH2-0.1	SE271236.002	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.1	SE271236.003	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	24 Sep 2024
BH3-0.6	SE271236.004	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH4-0.0	SE271236.005	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH5-0.1	SE271236.006	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH6-0.1	SE271236.007	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH7-0.6	SE271236.008	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	24 Sep 2024
BH8-0.1	SE271236.009	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024

OP Pesticides in Soil**Method: ME-(AU)-[ENV]AN420**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH2-0.1	SE271236.002	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.1	SE271236.003	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.6	SE271236.004	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH4-0.0	SE271236.005	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH5-0.1	SE271236.006	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH6-0.1	SE271236.007	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH7-0.6	SE271236.008	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH8-0.1	SE271236.009	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024

PAH (Polynuclear Aromatic Hydrocarbons) in Soil**Method: ME-(AU)-[ENV]AN420**

Sample Name	Sample No.	QC Ref
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SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH2-0.1	SE271236.002	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.1	SE271236.003	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.6	SE271236.004	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH4-0.0	SE271236.005	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH5-0.1	SE271236.006	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH6-0.1	SE271236.007	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH7-0.6	SE271236.008	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH8-0.1	SE271236.009	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH2-0.1	SE271236.002	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.1	SE271236.003	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	24 Sep 2024
BH3-0.6	SE271236.004	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH4-0.0	SE271236.005	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH5-0.1	SE271236.006	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH6-0.1	SE271236.007	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH7-0.6	SE271236.008	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	24 Sep 2024
BH8-0.1	SE271236.009	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH2-0.1	SE271236.002	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH3-0.1	SE271236.003	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH3-0.6	SE271236.004	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH4-0.0	SE271236.005	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH5-0.1	SE271236.006	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH6-0.1	SE271236.007	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH7-0.6	SE271236.008	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
BH8-0.1	SE271236.009	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024
split	SE271236.010	LB324398	16 Sep 2024	18 Sep 2024	15 Mar 2025	20 Sep 2024	15 Mar 2025	25 Sep 2024

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH2-0.1	SE271236.002	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.1	SE271236.003	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH3-0.6	SE271236.004	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH4-0.0	SE271236.005	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH5-0.1	SE271236.006	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH6-0.1	SE271236.007	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH7-0.6	SE271236.008	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024
BH8-0.1	SE271236.009	LB324395	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Oct 2024	25 Sep 2024

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH2-0.1	SE271236.002	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH3-0.1	SE271236.003	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH3-0.6	SE271236.004	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH4-0.0	SE271236.005	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH5-0.1	SE271236.006	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH6-0.1	SE271236.007	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH7-0.6	SE271236.008	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH8-0.1	SE271236.009	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
Spike	SE271236.011	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
Blank	SE271236.012	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024



HOLDING TIME SUMMARY

SE271236 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1-0.0	SE271236.001	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH2-0.1	SE271236.002	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH3-0.1	SE271236.003	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH3-0.6	SE271236.004	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH4-0.0	SE271236.005	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH5-0.1	SE271236.006	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH6-0.1	SE271236.007	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH7-0.6	SE271236.008	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
BH8-0.1	SE271236.009	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	24 Sep 2024
Spike	SE271236.011	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	25 Sep 2024
Blank	SE271236.012	LB324396	16 Sep 2024	18 Sep 2024	30 Sep 2024	20 Sep 2024	30 Sep 2024	25 Sep 2024

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH3-0.1	SE271236.003	%	60 - 130%	95
	BH7-0.6	SE271236.008	%	60 - 130%	99

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH3-0.1	SE271236.003	%	60 - 130%	101
	BH7-0.6	SE271236.008	%	60 - 130%	94
d14-p-terphenyl (Surrogate)	BH3-0.1	SE271236.003	%	60 - 130%	107
	BH7-0.6	SE271236.008	%	60 - 130%	106

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1-0.0	SE271236.001	%	70 - 130%	104
	BH2-0.1	SE271236.002	%	70 - 130%	93
	BH3-0.1	SE271236.003	%	70 - 130%	101
	BH3-0.6	SE271236.004	%	70 - 130%	98
	BH4-0.0	SE271236.005	%	70 - 130%	98
	BH5-0.1	SE271236.006	%	70 - 130%	98
	BH6-0.1	SE271236.007	%	70 - 130%	105
	BH7-0.6	SE271236.008	%	70 - 130%	94
	BH8-0.1	SE271236.009	%	70 - 130%	99
d14-p-terphenyl (Surrogate)	BH1-0.0	SE271236.001	%	70 - 130%	113
	BH2-0.1	SE271236.002	%	70 - 130%	102
	BH3-0.1	SE271236.003	%	70 - 130%	107
	BH3-0.6	SE271236.004	%	70 - 130%	107
	BH4-0.0	SE271236.005	%	70 - 130%	107
	BH5-0.1	SE271236.006	%	70 - 130%	106
	BH6-0.1	SE271236.007	%	70 - 130%	113
	BH7-0.6	SE271236.008	%	70 - 130%	106
	BH8-0.1	SE271236.009	%	70 - 130%	106
d5-nitrobenzene (Surrogate)	BH1-0.0	SE271236.001	%	70 - 130%	109
	BH2-0.1	SE271236.002	%	70 - 130%	100
	BH3-0.1	SE271236.003	%	70 - 130%	101
	BH3-0.6	SE271236.004	%	70 - 130%	102
	BH4-0.0	SE271236.005	%	70 - 130%	98
	BH5-0.1	SE271236.006	%	70 - 130%	98
	BH6-0.1	SE271236.007	%	70 - 130%	114
	BH7-0.6	SE271236.008	%	70 - 130%	99
	BH8-0.1	SE271236.009	%	70 - 130%	104

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH3-0.1	SE271236.003	%	60 - 130%	96
	BH7-0.6	SE271236.008	%	60 - 130%	99

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1-0.0	SE271236.001	%	60 - 130%	78
	BH2-0.1	SE271236.002	%	60 - 130%	88
	BH3-0.1	SE271236.003	%	60 - 130%	73
	BH3-0.6	SE271236.004	%	60 - 130%	85
	BH4-0.0	SE271236.005	%	60 - 130%	84
	BH5-0.1	SE271236.006	%	60 - 130%	72
	BH6-0.1	SE271236.007	%	60 - 130%	73
	BH7-0.6	SE271236.008	%	60 - 130%	79
	BH8-0.1	SE271236.009	%	60 - 130%	110
	Spike	SE271236.011	%	60 - 130%	82
	Blank	SE271236.012	%	60 - 130%	95
d4-1,2-dichloroethane (Surrogate)	BH1-0.0	SE271236.001	%	60 - 130%	76
	BH2-0.1	SE271236.002	%	60 - 130%	85
	BH3-0.1	SE271236.003	%	60 - 130%	73
	BH3-0.6	SE271236.004	%	60 - 130%	82

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	BH4-0.0	SE271236.005	%	60 - 130%	84
	BH5-0.1	SE271236.006	%	60 - 130%	75
	BH6-0.1	SE271236.007	%	60 - 130%	73
	BH7-0.6	SE271236.008	%	60 - 130%	78
	BH8-0.1	SE271236.009	%	60 - 130%	102
	Spike	SE271236.011	%	60 - 130%	76
	Blank	SE271236.012	%	60 - 130%	90
d8-toluene (Surrogate)	BH1-0.0	SE271236.001	%	60 - 130%	74
	BH2-0.1	SE271236.002	%	60 - 130%	88
	BH3-0.1	SE271236.003	%	60 - 130%	75
	BH3-0.6	SE271236.004	%	60 - 130%	86
	BH4-0.0	SE271236.005	%	60 - 130%	88
	BH5-0.1	SE271236.006	%	60 - 130%	75
	BH6-0.1	SE271236.007	%	60 - 130%	76
	BH7-0.6	SE271236.008	%	60 - 130%	80
	BH8-0.1	SE271236.009	%	60 - 130%	110
	Spike	SE271236.011	%	60 - 130%	77
	Blank	SE271236.012	%	60 - 130%	93

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1-0.0	SE271236.001	%	60 - 130%	78
	BH2-0.1	SE271236.002	%	60 - 130%	88
	BH3-0.1	SE271236.003	%	60 - 130%	73
	BH3-0.6	SE271236.004	%	60 - 130%	85
	BH4-0.0	SE271236.005	%	60 - 130%	84
	BH5-0.1	SE271236.006	%	60 - 130%	72
	BH6-0.1	SE271236.007	%	60 - 130%	73
	BH7-0.6	SE271236.008	%	60 - 130%	79
	BH8-0.1	SE271236.009	%	60 - 130%	110
d4-1,2-dichloroethane (Surrogate)	BH1-0.0	SE271236.001	%	60 - 130%	76
	BH2-0.1	SE271236.002	%	60 - 130%	85
	BH3-0.1	SE271236.003	%	60 - 130%	73
	BH3-0.6	SE271236.004	%	60 - 130%	82
	BH4-0.0	SE271236.005	%	60 - 130%	84
	BH5-0.1	SE271236.006	%	60 - 130%	75
	BH6-0.1	SE271236.007	%	60 - 130%	73
	BH7-0.6	SE271236.008	%	60 - 130%	78
	BH8-0.1	SE271236.009	%	60 - 130%	102
d8-toluene (Surrogate)	BH1-0.0	SE271236.001	%	60 - 130%	74
	BH2-0.1	SE271236.002	%	60 - 130%	88
	BH3-0.1	SE271236.003	%	60 - 130%	75
	BH3-0.6	SE271236.004	%	60 - 130%	86
	BH4-0.0	SE271236.005	%	60 - 130%	88
	BH5-0.1	SE271236.006	%	60 - 130%	75
	BH6-0.1	SE271236.007	%	60 - 130%	76
	BH7-0.6	SE271236.008	%	60 - 130%	80
	BH8-0.1	SE271236.009	%	60 - 130%	110

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Number	Parameter	Units	LOR	Result
LB324395.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB324395.001	Alpha BHC	mg/kg	0.1	<0.1
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Lindane (gamma BHC)	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	Endrin aldehyde	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endrin ketone	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	116

OP Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB324395.001	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	103
	d14-p-terphenyl (Surrogate)	%	-	112
Surrogates				

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB324395.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB324395.001	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	106
	2-fluorobiphenyl (Surrogate)	%	-	103
	d14-p-terphenyl (Surrogate)	%	-	112

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB324395.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	TCMX (Surrogate)	%	-	117

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB324398.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB324395.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB324396.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	94
		d8-toluene (Surrogate)	%	-	96
		Bromofluorobenzene (Surrogate)	%	-	93
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result
LB324396.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324399.014	Mercury	mg/kg	0.05	<0.05	<0.05	167	0

Moisture Content

Method: ME-(AU)-[ENV]JAN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324397.011	% Moisture	%w/w	1	12.2	14.7	37	19
SE271236.010	LB324397.022	% Moisture	%w/w	1	22.6	22.2	34	2
SE271236.012	LB324397.024	% Moisture	%w/w	1	<1.0	<1.0	200	0

OC Pesticides in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271236.008	LB324395.026	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
Surrogates		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.13	30	12

OP Pesticides in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271236.008	LB324395.026	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	0	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	0	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	0.0015874280	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	0.0012271271	200	0
		Dichlorvos	mg/kg	0.5	<0.5	0	200	0
		Dimethoate	mg/kg	0.5	<0.5	0	200	0
		Ethion	mg/kg	0.2	<0.2	0.0044695945	200	0
		Fenitrothion	mg/kg	0.2	<0.2	0	200	0
		Malathion	mg/kg	0.2	<0.2	0	200	0
		Methidathion	mg/kg	0.5	<0.5	0.0002472726	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	0	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	0	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4926976713	30	4
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5408005900	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324395.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	195	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	0.2	99	74
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	168	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	0.5	0.6	49	23
		Anthracene	mg/kg	0.1	0.2	0.2	93	6
		Fluoranthene	mg/kg	0.1	0.8	0.7	43	10
		Pyrene	mg/kg	0.1	0.8	0.8	42	4
		Benzo(a)anthracene	mg/kg	0.1	0.4	0.3	59	7
		Chrysene	mg/kg	0.1	0.5	0.4	52	10
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.5	0.4	54	22
		Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.2	89	14
		Benzo(a)pyrene	mg/kg	0.1	0.4	0.3	61	22
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.2	88	24
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	0.2	0.2	78	20
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	0.5	0.4	55	20
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.5	0.4	50	18
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	0.6	0.5	65	16
		Total PAH (18)	mg/kg	0.8	4.5	4.4	32	2
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	9
SE271236.008	LB324395.026	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	0.1	0.1	115	18
		Pyrene	mg/kg	0.1	0.1	0.1	120	16
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	74	17
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	9
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

PCBs in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271236.008	LB324395.026	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271236.008	LB324395.026	Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	mg/kg	-	0	0	30	0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324398.014	Arsenic, As	mg/kg	1	4	4	57	8
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	193	0
		Chromium, Cr	mg/kg	0.5	34	59	31	52 @
		Copper, Cu	mg/kg	0.5	22	29	32	26
		Nickel, Ni	mg/kg	0.5	21	29	32	33 @
		Lead, Pb	mg/kg	1	52	61	32	16
		Zinc, Zn	mg/kg	2	96	99	32	3

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324395.014	TRH C10-C14	mg/kg	20	<20	<20	188	0
		TRH C15-C28	mg/kg	45	80	150	70	59
		TRH C29-C36	mg/kg	45	59	100	85	56
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	140	250	86	58
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	158	0
		TRH F Bands	mg/kg	25	<25	<25	184	0
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	120	210	85	56
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE271236.008	LB324395.026	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	84	<45	108	60
		TRH C29-C36	mg/kg	45	<45	<45	140	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	mg/kg	25	<25	<25	200	0
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	110	<90	135	22
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324396.015	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.3	9.7	50	6
			d8-toluene (Surrogate)	mg/kg	-	11.3	10.7	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.2	10.6	50	6
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE271236.009	LB324396.031	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	7.7	50	28
			d8-toluene (Surrogate)	mg/kg	-	11.0	8.2	50	29
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.0	7.8	50	34
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE271226.010	LB324396.015	TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.3	9.7	50	6
		d8-toluene (Surrogate)	mg/kg	-	11.3	10.7	50	5
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.2	10.6	50	6
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
SE271236.009	LB324396.031	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
		TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	7.7	50	28
		d8-toluene (Surrogate)	mg/kg	-	11.0	8.2	50	29
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.0	7.8	50	34
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324399.002	Mercury	mg/kg	0.05	0.21	0.2	80 - 120	105

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324395.002	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	95
	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	93
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	97
	Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	92
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	99
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	94
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.15	40 - 130	105

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324395.002	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.0	2	60 - 140	102
	Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	100
	Dichlorvos	mg/kg	0.5	1.5	2	60 - 140	73
	Ethion	mg/kg	0.2	2.1	2	60 - 140	105
	Surrogates						
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	103

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324395.002	Naphthalene	mg/kg	0.1	4.2	4	60 - 140	106
	Acenaphthylene	mg/kg	0.1	4.6	4	60 - 140	115
	Acenaphthene	mg/kg	0.1	4.3	4	60 - 140	108
	Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	114
	Anthracene	mg/kg	0.1	4.8	4	60 - 140	121
	Fluoranthene	mg/kg	0.1	4.3	4	60 - 140	107
	Pyrene	mg/kg	0.1	5.2	4	60 - 140	131
	Benzo(a)pyrene	mg/kg	0.1	4.9	4	60 - 140	123
	Surrogates						
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	103

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324395.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	100

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324398.002	Arsenic, As	mg/kg	1	300	318.22	80 - 120	93
	Cadmium, Cd	mg/kg	0.3	4.5	4.81	70 - 130	94
	Chromium, Cr	mg/kg	0.5	36	38.31	80 - 120	93
	Copper, Cu	mg/kg	0.5	260	290	80 - 120	91
	Nickel, Ni	mg/kg	0.5	170	187	80 - 120	90
	Lead, Pb	mg/kg	1	84	89.9	80 - 120	93
	Zinc, Zn	mg/kg	2	240	273	80 - 120	90

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324395.002	TRH C10-C14	mg/kg	20	42	40	60 - 140	105
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	98
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	85
	TRH F Bands						
	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	92
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	84

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR
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Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324396.002	Monocyclic	Benzene	mg/kg	0.1	4.2	5	60 - 140
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140
		Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140
		m/p-xylene	mg/kg	0.2	8.6	10	60 - 140
		o-xylene	mg/kg	0.1	4.5	5	60 - 140

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB324396.002	TRH C6-C10	mg/kg	25	73	92.5	60 - 140	79
	TRH C6-C9	mg/kg	20	65	80	60 - 140	81
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	47	62.5	60 - 140

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324399.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324395.004	Naphthalene	mg/kg	0.1	4.3	<0.1	4	106
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.7	0.1	4	114
		Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	5.9	1.7	4	103
		Anthracene	mg/kg	0.1	5.3	0.7	4	116
		Fluoranthene	mg/kg	0.1	7.6	4.5	4	77
		Pyrene	mg/kg	0.1	8.4	5.0	4	87
		Benzo(a)anthracene	mg/kg	0.1	1.4	2.0	-	-
		Chrysene	mg/kg	0.1	1.6	2.3	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	1.6	2.3	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	0.7	1.0	-	-
		Benzo(a)pyrene	mg/kg	0.1	6.4	2.0	4	110
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.8	1.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	0.2	0.3	-	-
		Benzo(ghi)perylene	mg/kg	0.1	0.9	1.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	7.1	3.0	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	7.1	3.0	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	7.1	3.0	-	-
		Total PAH (18)	mg/kg	0.8	54	24	-	-
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	101
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	101
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	107

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324398.004	Arsenic, As	mg/kg	1	60	6	50	107
		Cadmium, Cd	mg/kg	0.3	47	<0.3	50	93
		Chromium, Cr	mg/kg	0.5	82	32	50	99
		Copper, Cu	mg/kg	0.5	67	19	50	96
		Nickel, Ni	mg/kg	0.5	70	24	50	91
		Lead, Pb	mg/kg	1	75	29	50	92
		Zinc, Zn	mg/kg	2	83	38	50	88

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324395.004	TRH C10-C14	mg/kg	20	35	<20	40	75
		TRH C15-C28	mg/kg	45	170	200	40	-61 ☹
		TRH C29-C36	mg/kg	45	190	210	40	-32 ☹
		TRH C37-C40	mg/kg	100	<100	120	-	-
		TRH C10-C36 Total	mg/kg	110	400	400	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	460	510	-	-
	TRH F Bands	TRH >C10-C16	mg/kg	25	41	<25	40	81
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	41	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	270	320	40	-135 ☹
		TRH >C34-C40 (F4)	mg/kg	120	150	190	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324396.004	Monocyclic	Benzene	mg/kg	0.1	5.0	<0.1	5	100
			Toluene	mg/kg	0.1	5.0	<0.1	5	99
		Aromatic	Ethylbenzene	mg/kg	0.1	4.9	<0.1	5	97
			m/p-xylene	mg/kg	0.2	9.5	<0.2	10	94
			o-xylene	mg/kg	0.1	5.0	<0.1	5	98

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324396.004	Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	7.4	86
			d8-toluene (Surrogate)	mg/kg	-	9.6	7.7	96
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	7.5	96
		Totals	Total BTEX*	mg/kg	0.6	29	<0.6	-
			Total Xylenes*	mg/kg	0.3	14	<0.3	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE271226.001	LB324396.004		TRH C6-C10	mg/kg	25	91	<25	92.5
			TRH C6-C9	mg/kg	20	81	<20	80
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	7.4	86
			d8-toluene (Surrogate)	mg/kg	-	9.6	7.7	96
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	7.5	96
		VPH F	Benzene (F0)	mg/kg	0.1	5.0	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	62	<25	62.5
								97



Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = |OriginalResult - ReplicateResult| \times 100 / Mean$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the

QC Sample	Sample Number	Parameter	Units	LOR
-----------	---------------	-----------	-------	-----

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf

- * NATA accreditation does not cover the performance of this service .
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- ⑩ LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

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SAMPLE RECEIPT ADVICE

SE271236

CLIENT DETAILS

Contact Info
Client AUSTRALIAN GEOENVIRO PTY LTD
Address PO BOX 4153
DENISTONE EAST NSW 2112

Telephone (Not specified)
Facsimile (Not specified)
Email info@austgeo.com.au

Project **AG-1625**
Order Number **AG-1625**
Samples 12

LABORATORY DETAILS

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Laboratory SGS Alexandria Environmental
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Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

Samples Received Wed 18/9/2024
Report Due Wed 25/9/2024
SGS Reference **SE271236**

SUBMISSION DETAILS

This is to confirm that 12 samples were received on Wednesday 18/9/2024. Results are expected to be ready by COB Wednesday 25/9/2024. Please quote SGS reference SE271236 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	12 Soil	Type of documentation received	COC
Date documentation received	18/9/2024	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	6.9°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

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SAMPLE RECEIPT ADVICE

SE271236

CLIENT DETAILS

Client AUSTRALIAN GEOENVIRO PTY LTD

Project AG-1625

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH1-0.0	-	-	26	-	7	10	11	7
002	BH2-0.1	-	-	26	-	7	10	11	7
003	BH3-0.1	30	14	26	11	7	10	11	7
004	BH3-0.6	-	-	26	-	7	10	11	7
005	BH4-0.0	-	-	26	-	7	10	11	7
006	BH5-0.1	-	-	26	-	7	10	11	7
007	BH6-0.1	-	-	26	-	7	10	11	7
008	BH7-0.6	30	14	26	11	7	10	11	7
009	BH8-0.1	-	-	26	-	7	10	11	7
010	split	-	-	-	-	7	-	-	-
011	Spike	-	-	-	-	-	-	11	-
012	Blank	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE271236

CLIENT DETAILS

Client AUSTRALIAN GEOENVIRO PTY LTD

Project AG-1625

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BH1-0.0	3	1	1
002	BH2-0.1	3	1	1
003	BH3-0.1	3	1	1
004	BH3-0.6	-	1	1
005	BH4-0.0	3	1	1
006	BH5-0.1	3	1	1
007	BH6-0.1	3	1	1
008	BH7-0.6	3	1	1
009	BH8-0.1	3	1	1
010	split	-	1	1
012	Blank	-	-	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .



ANALYTICAL REPORT



Accreditation No. 2562

CLIENT DETAILS

Contact Info
Client AUSTRALIAN GEOENVIRO PTY LTD
Address PO BOX 4153
DENISTONE EAST NSW 2112

Telephone (Not specified)
Facsimile (Not specified)
Email info@austgeo.com.au

Project **AG-1625**
Order Number **AG-1625**
Samples 8

LABORATORY DETAILS

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Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
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Email au.environmental.sydney@sgs.com

SGS Reference **SE271236 R0**
Date Received 18 Sep 2024
Date Reported 25 Sep 2024

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Sample #5: Chrysotile asbestos found in approx 8x4x2mm cement sheet fragments x4.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin

SIGNATORIES

Yusuf KUTHPUDIN
Asbestos Analyst

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Date Analysed	Fibre Identification	Est.%w/w*
SE271236.001	BH1-0.0	Soil	30g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE271236.002	BH2-0.1	Soil	27g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE271236.003	BH3-0.1	Soil	27g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE271236.005	BH4-0.0	Soil	38g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	Chrysotile Asbestos Found at RL of 0.1g/kg	>0.01
SE271236.006	BH5-0.1	Soil	32g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE271236.007	BH6-0.1	Soil	26g Sand, Soil, Rocks, Plant Matter	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE271236.008	BH7-0.6	Soil	25g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE271236.009	BH8-0.1	Soil	13g Sand, Soil, Rocks	16 Sep 2024	23 Sep 2024	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD

METHODOLOGY SUMMARY

AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres); (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service.
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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APPENDIX C

SUPPORTING INFORMATION



Douglas Partners

Geotechnics | Environment | Groundwater

Report on
Preliminary Geotechnical Assessment and Preliminary
Site Investigation for Contamination

Proposed Residential Unit Development
53 - 55 Donnison Street West, Gosford

Prepared for
Australian Luxury Living

Project 203360.00
May 2021

Integrated Practical Solutions



Document History

Document details

Project No.	203360.00	Document No.	R.001.Rev0
Document title	Report on Preliminary Geotechnical Assessment and Preliminary Site Investigation for Contamination Proposed Residential Unit Development		
Site address	53 - 55 Donnison Street West, Gosford		
Report prepared for	Australian Luxury Living		
File name	203360.00.R.001.Rev0		

Document status and review

Status	Prepared by	Reviewed by	Date issued
Revision 0	Jessica Paulsen	B. Kerry & D. Carson	5 May 2021

Distribution of copies

Status	Electronic	Paper	Issued to
Revision 0	1	0	Christian Charles, Australian Luxury Living

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		5 May 2021
Reviewer		5 May 2021

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Appendix A: Drawing 1
 Proposed Development Plans
 Site Photographs

Appendix B: About this Report
 Site History Information
 Aerial Photographs

Report on Preliminary Geotechnical Assessment and Preliminary Site Investigation for Contamination

Proposed Residential Unit Development

53 - 55 Donnison Street West, Gosford

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by Australian Luxury Living to complete this preliminary geotechnical assessment (PGA) and preliminary site investigation for contamination (PSI) undertaken for a proposed residential unit development for the site at 53 - 55 Donnison Street West, Gosford (the site). The site is shown on Drawing 1, Appendix A.

The investigation was undertaken in accordance with DP's proposal CCT200226 dated 21 July 2020.

It is understood that this report will be used to support a development application for the proposed residential unit development. It is understood that a PGA is required to accompany the DA submission, and that a more detailed geotechnical investigation would be required at a later date for the structural design of the proposed building. Thus, this PGA aims to provide comment on the expected ground conditions, site constraints and recommended additional investigation, given the proposed development.

The objective of the PSI is to assess the potential for contamination at the site based on past and present land uses and to comment on the need for further investigation and / or management with regard to the proposed development.

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 is understood to comprise the construction of a multi-storey building consisting of seven levels of residential units over two basement levels. Based on dimensions given on the architectural plans (provided in Appendix A), the site comprises two lots that have a combined area of approximately 1,165 m².

3. Scope of Works

The scope of work comprised:

- Review of information obtained from the following sources:
 - o Published data, including topographical, geological and hydrogeological maps;
 - o Historical land titles;
 - o Central Coast Council (CCC) property enquiry information; and
 - o NSW EPA Contaminated Land and Protection of Environment Operations databases;
 - o Historical aerial photographs;
 - o Review of previous investigations completed in the area by DP.
- Walkover to assess existing site conditions, potential contamination sources and receptors and geotechnical aspects of the site; and
- Preparation of this report.

4. Site Information

Site Address	53 - 55 Donnison Street West, Gosford
Legal Description	Lots A and B Deposited Plan 312912
Area	1,165 m ²
Zoning	Zone R1 Residential
Local Council Area	Central Coast Council
Current Use	Residential (western portion, Lot B) and Vacant (eastern portion, Lot A)
Surrounding Uses	Residential in all directions. The neighbouring sites to the south and west are currently occupied by multi-storey residential unit developments. Site is bounded by Donnison Street West to the north and Batley Street to the west.

5. Environmental Setting

5.1 Regional Geology

Reference to the interim 1:25 000 scale Geological Series Sheet for Gosford indicates that the site is mapped as being underlain by the Terrigal Formation.

The Terrigal Formation typically comprises interbedded laminite, siltstone and quartz to lithic-quartz sandstone, and weathers to form medium and high plasticity clay soils.

5.2 Soil Landscape

Soil Landscape mapping (1:100,000 Sydney-Newcastle-Wollongong Soils Landscape Series Sheet) indicates that the site is underlain by Erina Erosional soil landscape group.

5.3 Acid Sulfate Soils

Reference to the Department of Land and Water Conservation 1:25 000 scale acid sulfate soil risk map for Gosford indicates that the site is located in an area where there is no known occurrence of acid sulfate soils.

Acid sulfate soils are normally present in low lying alluvial or marine sediments where surface elevations are less than RL 5 m AHD. Surface elevations at the site are well above RL 5 m AHD (see Section 5.4) and the area is not mapped as having alluvial soils. These conditions are consistent with the acid sulfate soil risk mapping.

5.4 Regional Topography

According to the conditions encountered during the site walkover (see Section 8), the proposed development plans provided by the client (Appendix A) and reference to NSW 2 m Elevation Contours, the site slopes down to the south from approximately 39 m AHD to approximately 35 m AHD. The surrounding area also slopes down to the south.

5.5 Surface Water and Groundwater

The closest water body to the site is Brisbane Water which is located approximately 300 m to the south.

Based on the regional topography and the inferred flow direction of nearby watercourses, the anticipated flow direction of groundwater beneath the site is to the south, towards Brisbane Water, the likely receiving surface water body for the groundwater flow path.

Given the local geology (i.e. Terrigal Formation), the groundwater in the fractured rock beneath the site is anticipated to be relatively fresh. Accordingly, potential beneficial uses could include irrigation or drinking water, although the future use of the groundwater for these purposes in the vicinity of the site is considered unlikely given the urban setting.

6. Site History

The desktop component of this investigation involved a review of historical information relating to potential contamination sources at the site. Relevant findings are provided below and in Appendix B.

6.1 Aerial photographs

Historic aerial photographs for the years 1965, 1975, 1998, 2002 and 2006 were obtained from the NSW Government Historical Imagery database. Photographs for the years 2017 and 2019 were obtained from Google Earth and the photograph for the year 2018 was obtained from SIXMaps.

These photographs were studied in order to identify the likely past uses and changes to the site and surrounding area, particularly those of a potentially contaminating nature. The findings are summarised below and the photographs are presented in Appendix B.

1965

The site appeared to be occupied by two residential dwellings. The surrounding sites appeared occupied by similar residential dwellings, with bushland further to the north.

1975

The dwelling on the western portion of the site appeared to have been changed since the 1965 photograph. The residential dwelling appeared larger than the previous dwelling. The remaining site area and surrounding area appeared similar to the 1965 photograph.

1998

The site and surrounding area appeared similar to the 1975 photograph with the exception of the neighbouring site to the east, which appeared occupied by a larger residential building, possibly a unit or townhouse development.

2002

The site and surrounding area appeared similar to the 1998 photograph.

2006

The site and surrounding area appeared similar to the 2002 photograph with the exception of the neighbouring site to west, on the corner of Batley Street and Donnison Street West, which appeared unoccupied (the residential dwelling appeared to have been removed some time after 2002).

2017

The site and surrounding area appeared similar to the 2006 photograph with the exception of the neighbouring sites to the west on the opposite side of Batley Street. The sites appeared occupied by multistorey residential developments. The site on the corner of Batley Street and Donnison St West appeared to be in the construction phase.

2018

The site appeared occupied by a residential building in the western portion which appeared consistent with that noted in earlier photographs. The eastern portion of the site appeared occupied by demountable or temporary buildings, construction equipment and vehicles.

The neighbouring site to the south appeared to be occupied by a multistorey residential building which appeared to be in the construction phase. It is assumed that the eastern portion of the site was being used during construction of the development on the neighbouring site to the south.

The neighbouring site to the west on the corner of Batley Street and Donnison St West appeared to still be in the construction phase.

2019

The western portion of the site appeared unchanged (occupied by residential building). The eastern portion appeared occupied by three demountable or temporary buildings. The neighbouring site to the south appeared occupied by a completed multi-storey building. The neighbouring sites to the west also appeared occupied by completed multi-storey buildings.

6.2 Historical Land Titles

A historical title deeds search was used to obtain ownership and occupancy information including company names and the occupations of individuals. The title information can assist in the identification of previous land uses by the company names or the site owners and can, therefore, assist in establishing whether there were potentially contaminating activities occurring at the site. A summary of the title deeds and possible land uses (with reference to the aerial photographs and other historical searches) is presented in Table 1 and 2.

Table 1: Historical Title Deeds for Lot A (Eastern Portion of the Site)

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations	Inferred Land Use
19.08.1925 (1925 to 1942)	James Albert Mobbs (Orchardist)	Residential
27.02.1942 (1942 to 1949)	Doris Elizabeth Martin (Married Woman) (Transmission Application not investigated)	Residential
26.08.1949 (1949 to 1962)	Ronald Arthur Preston (Shop Assistant)	Residential
22.06.1967 (1967 to 1997)	Eileen Grace Preston (Spinster)	Residential
19.11.1997 (1997 to 1999)	Ronald Arthur Preston Albert John Black (Transmission Application not investigated)	Residential
21.01.1999 (1999 to 2001)	Peter Francis Sewell Linda Gay Sewell	Residential
19.07.2001 (2001 to 2003)	Yun Mo Ok	Residential
15.07.2003 (2003 to 2007)	Paul John Cutting Michelle Ann Cutting	Residential Aerial photography indicated vacant land from about 2006
03.04.2007 (2007 to 2015)	PHK Group Pty Limited Now Autopack Services Pty Ltd	Vacant
09.03.2015 (2015 to 2017)	Michael Gerald Aiossa David George Aiossa Northfield Properties Pty Ltd	Vacant
16.11.2017 (2017 to Date)	# SSKZ Pty Ltd	Vacant Aerial photography indicated construction equipment storage 2018-2019

Current Owner

Table 2: Historical Title Deeds for Lot B (Western Portion of the Site)

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations	Inferred Land Use
19.08.1925 (1925 to 1942)	James Albert Mobbs (Orchardist)	Residential
27.02.1942 (1942 to 1960)	Doris Elizabeth Martin (Married Woman) (Transmission Application not investigated)	Residential
24.05.1960 (1960 to 1965)	Michael Lawrence Moran (Textile Manufacturer)	Residential
17.09.1965 (1965 to 1992)	Sylvia Mavis Coulter (Married Woman)	Residential
19.11.1992 (1992 to 1995)	Frederick George Butt	Residential
14.12.1995 (1995 to 2001)	Frederick George Butt Belle Butt	Residential
28.03.2001 (2001 to 2013)	Belle Butt	Residential
14.11.2013 (2013 to 2013)	Lynette Adele Smith Noel Sanders Wright (Executors of the Estate of Belle Butt)	Residential
30.12.2013 (2013 to 2016)	Nadeem Mohammed Johanna Elizabeth Dale	Residential
01.04.2016 (2016 to Date)	# Charles Elias Nasr # Fadia Nasr	Residential

Current Owner

No easements or leases recorded for the site (Lot A or Lot B).

6.3 Regulatory Notices

The EPA publishes records of contaminated sites under Section 58 of the CLM Act on a public database, accessible via the internet. The notices relate to investigation and / or remediation of significant contaminated as defined under the CLM Act. More specifically the notices relate to the following:

- Actions taken by the EPA under Sections 15, 17, 19, 21, 23, 26 or 28 of the CLM Act;
- Actions taken by the EPA under Sections 35 or 36 of the Environmentally Hazardous Chemicals Act 1985; and

- Site audit statements provided to the EPA under section 52 of the CLM Act on sites subject to an in-force remediation order.

The search of the database on 31 March 2021 revealed that the subject site and neighbouring sites are not listed

It should be noted that the EPA record of notices for contaminated land does not provide a record of all contaminated land in NSW.

The NSW EPA also issues environmental protection licenses under Section 308 of the POEO Act. The register contains:

- Environmental protection licenses;
- Applications for new licenses and to transfer or vary or extend licenses;
- Environment protection and noise control licenses;
- Convictions and prosecutions under the POEO Act;
- The result of civil proceedings;
- License review information;
- Exemptions and provisions of the POEO Act or Regulations;
- Approvals granted under Clause 9 of the POEO (Control of Burning) Regulation; and
- Approvals granted under Clause 7a of the POEO (Clean Air) Regulation.

A search of the public register on the 31 March 2021 indicated that no licenses were listed for the subject site or neighbouring sites.

6.4 Council Records

A request to view Central Coast Council Records under the Government Information (Public Access) Act 2009 (the GIPA Act) in relation to the site was lodged on 30 March 2021. Council had not provided any information by 19 April 2021; however, the following record of Development Applications was found on Council's website:

- 53 Donnison Street West:
 - o BA71686/1993: Building Application, Dwelling – house was refused in 1993;
 - o BA73933/1993: Building Application, Fence was approved in 1993; and
 - o BA74678/1993: Building Application, Dwelling – house was approved in 1993.
- 55 Donnison Street West:
 - o DA28013/2005: Development Application, Dwelling – house approved under delegation in 2005; and
 - o CC28013/2005: Construction Certificate, Dwelling – house approval not released.

6.5 Site History Integrity Assessment

The information used to establish the history of the site was sourced from reputable and reliable reference documents, many of which were official records held by Government departments / agencies. The databases maintained by various Government agencies potentially can contain high quality information, but some of these do not contain any data at all.

In particular, aerial photographs provide high quality information that is generally independent of memory or documentation. They are only available at intervals of several years, so some gaps exist in the information from this source. The observed site features are open to different interpretations and can be affected by the time of day and / or year at which they were taken, as well as specific events, such as flooding. Care has been taken to consider different possible interpretations of aerial photographs and to consider them in conjunction with other lines of evidence.

6.6 Summary of Site History

The site history information suggests the site use has been residential since at least the 1940s. The site history suggests the dwelling on the eastern portion of the site (No. 55) was removed sometime between 2003 and 2006 and this portion of the site was used by developers between 2018 and 2019 during construction of the multi-storey residential development located on the neighbouring site to the south. Since this portion of the site has remained vacant.

The current townhouse dwelling located on the western portion (No. 53) of the site appears to have been constructed in the early 1990s (approved in 1993).

7. Previous DP Geotechnical Investigations

DP has prepared the following reports for sites within close proximity of the subject site, including the following:

- Review of Geotechnical Aspects, Proposed Multi-storey Apartment Building, 2-6 Wilhelmina Street, Gosford completed in 2015 (DP Project 82804.00);
- Review of Geotechnical Aspects, Proposed Apartment Tower, 6-10 George Street, Gosford completed in 2016 (DP Project 82933.00); and
- Geotechnical Investigation, Proposed Road Extension, Cape Street South, Gosford, completed in 2019 (DP Project 83611.00).

The results of the previous investigations suggest the following:

- Given the geological mapping for the site, the surface soils are expected to comprise mainly medium and high plasticity residual clays derived from the in situ weathering of the parent Terrigal Formation rock layers. Such soils usually range in consistency from firm through to hard, with the firm soils tending to be relatively limited in depth and areal extent, and usually associated with waterlogged zones.
- No evidence of waterlogging was observed during the site walkover inspection for the above sites.

- The borehole completed for the proposed road extension encountered poorly compacted sandy clay fill over the full depth of drilling (1 m). No free groundwater was observed in the borehole during the course of the field work.

8. Site Walkover / Description

A walkover was completed on 15 April 2021. Photographs 1 to 4 are presented in Appendix A.

The eastern portion of the site was occupied by two shipping containers located at the rear (southern end). The remaining area was covered by long grass. The western portion of the site was occupied by a three-storey residential townhouse building. It is considered likely that fill would have been placed at the site during construction of the townhouse building.

The site sloped down to the south. The surrounding area sloped down to the south and east and west.

The eastern portion appeared occupied by two demountable or temporary buildings.

No other anthropogenic materials were noted on the site's surface, however, the long grass over the eastern portion of the site precluded thorough inspection of the site surface.

9. 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).

Potential Sources

Based on the current investigation, the following potential sources of contamination and associated contaminants of potential concern (COPC) have been identified.

- S1: Fill: Associated with levelling, demolition of former buildings on the site.
 - o COPC include metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), phenols and asbestos.
- S2: Former and current buildings.
 - o COPC include asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB.

Potential Receptors

The following potential human receptors have been identified:

- R1: Current users [residential];

- R2: Construction and maintenance workers;
- R3: End users [residential]; and
- R4: Adjacent site users [residential].

The following potential environmental receptors have been identified:

- R5: Surface water [Brisbane Water];
- R6: Groundwater; and
- R7: Terrestrial ecology.

Potential Pathways

The following potential pathways have been identified:

- P1: Ingestion and dermal contact;
- P2: Inhalation of dust and / or vapours;
- P3: Surface water run-off;
- P4: Lateral migration of groundwater providing base flow to water bodies;
- P5: Leaching of contaminants and vertical migration into groundwater; and
- P6: Contact with terrestrial ecology.

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 S4) and receptors (R1 to R7) are provided in below Table 3.

Table 3: Summary of Potentially Complete Exposure Pathways

Source and COPC	Transport Pathway	Receptor	Risk Management Action
S1: Fill, Metals, TRH, BTEX, PAH, OCP and asbestos S2: Former and current buildings, asbestos, SMF, lead (in paint) and PCB	P1: Ingestion and dermal contact P2: Inhalation of dust and / or vapours P3: Surface water run-off P4: Lateral migration of groundwater providing base flow to water bodies P5: Leaching of contaminants and vertical migration into groundwater P6: Contact with terrestrial ecology	R1: Current users [residential] R2: Construction and maintenance workers R3: End users [residential] R4: Adjacent site users [residential].	An intrusive investigation is recommended to assess possible contamination including testing of the soils and groundwater.

10. PSI Conclusions and Recommendations

Based on the findings of this PSI, DP considers that there is generally a low potential for contamination given the past mainly residential use. Some potential contamination sources were identified (refer Table 3, Section 9) including fill and former and current buildings.

The site would generally be considered compatible (from a site contamination perspective) with the proposed residential unit development given that the majority of the site would be excavated for the proposed two basement levels.

Based on review of the limited site history information and the walkover, the site appears to generally have a low potential for contamination, and would generally be compatible with the proposed development (from a site contamination standpoint), subject to completion of the following assessments:

- Existing Structures:** A pre-demolition hazardous building material survey in accordance with SafeWork NSW requirements is recommended to be conducted by an appropriately qualified occupation hygienist prior to the demolition of the existing structures. All demolition work should be undertaken by a licenced demolition contractor and a clearance certificate provided by an occupational hygienist for the ground surface post demolition;
- Soil:** An intrusive soil investigation with associated contamination sampling should be conducted to confirm the assessed low potential for contamination. Given that part of the site is covered in tall grass and given there is a residential property present on part of the site, DP consider it would be appropriate to conduct the intrusive soil investigation following stripping of the vegetation and demolition of the existing structure.

- **Groundwater:** Should the results of the soil investigation indicate signs of contamination; groundwater testing may be recommended.

Any soil removed from the site must be waste classified prior to disposal to a licensed facility as detailed in Section 11.3.2.

11. Geotechnical Comments

11.1 Expected Ground Conditions

Based on a review of the available information the subsurface conditions are likely to comprise medium and high plasticity residual clay soils derived from the in situ weathering of the parent Terrigal Formation rock layers. Such soils usually range in consistency from firm through to hard, with the firm soils tending to be relatively limited in depth and areal extent, and usually associated with waterlogged zones.

The upper layers of the Terrigal Formation tend to be highly weathered, and often include completed weathered layers that have soil properties. As such, rock strengths can vary markedly throughout the rock profile.

11.2 Groundwater

Given excavations are proposed, and groundwater is likely to be encountered, then appropriate shoring and dewatering measures will be required. Generally, seepage rates through the Terrigal Formation and overlying residual soil profile would be expected to be relatively low, and likely able to be managed by pumping from localised sumps within the excavation.

Monitoring of the groundwater collected will be required prior to disposal.

11.3 Recommended Additional Investigation

11.3.1 Geotechnical Investigation

Geotechnical investigation would be required as recommended below:

- Drilling of boreholes to up to approximately 15 m depth (about 5 m below proposed bulk excavation level) targeting bedrock, including coring of the underlying bedrock;
- Standard penetration testing within the soil profile;
- Point load testing on recovered rock core;
- Field permeability testing and seepage analysis in the event that a drained basement and groundwater discharge is proposed; and

- Geotechnical laboratory testing including:
 - Soil and groundwater aggressivity;
 - Atterberg limits;
 - Emerson dispersion; and
 - Maximum dry density and field moisture content

11.3.2 Waste Classification Assessment

It is anticipated that significant quantities of soil and weathered rock will require off-site transport to facilitate the construction of the proposed residential unit development. On this basis, a waste classification assessment would be required. The scope of the waste classification assessment would also be dependent on whether fill material is to be assessed in accordance with the *Excavated Natural Material (ENM) Order 2014* or assessment is limited to the NSW EPA *Waste Classification Guidelines*. Notwithstanding this, the waste classification assessment should include:

- Site walkover and desktop review to identify any potential on-site sources of contamination;
- Screening of samples for potential volatile contaminants using a photoionisation detector (PID); and
- Laboratory testing of selected samples of fill material and natural material for contaminants of concern. This may include the following (although additional testing would be required for an ENM assessment):
 - o Heavy metals (As, Cd, Cr, Cu, Hg, Pb, Ni & Zn);
 - o Petroleum hydrocarbons (TPH, BTEX, PAH & PCB);
 - o Pesticides (OCP); and
 - o Asbestos (fill material only).

12. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for this project at 53 - 55 Donnison Street West, Gosford in accordance with DP's proposal CCT200226.P.001.Rev0 dated 21 July 2020 and acceptance received from Christian Charles of Australian Luxury Living dated 22 February 2021. The work was carried out under revised DP's Conditions of Engagement. This report is provided for the exclusive use of Australian Luxury Living for this project only and for the purposes as described in the report. It should not be used by or be relied upon for other projects or purposes on the same or another 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 DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and / or their agents.

The comments provided in the report are based on a desktop review and walkover inspection of the site and do not include any subsurface investigations. Subsurface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon a desktop review and a walkover inspection, and therefore are to be considered as preliminary in nature. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site. 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 geotechnical and environmental 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.

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. DP 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 DP. This is because this report has been written as advice and opinion rather than instructions for construction.

Douglas Partners Pty Ltd

Appendix A

Drawing 1

Proposed Development Plans

Site Photographs



Site Location

Images sourced from GoogleEarthPro (2019)



Client: Australian Luxury Living

Office: Central Coast

Scale: Not to Scale

Drawn by: J. Paulsen

Date: 19 Apr 2021

Site Location Plan

Proposed Residential Unit Development

53-55 Donnison Street West, Gosford

Project No. 203360.00

Drawing No. 1

Revision: 0

PRE DA DRAWING PACKAGE

19074

Residential Flat Building - 53-55 Donnison Street, West Gosford

SNZHoldings + Australian Luxury Living

SCHEDULE OF DRAWINGS	
DA000	COVER PAGE
DA010	SITE ANALYSIS
DA011	SITE ANALYSIS
DA020	DEMOLITION PLAN
DA030	SITE PLAN
DA040	MASSING PERSPECTIVE 01
DA041	MASSING PERSPECTIVE 01 W/ ENVELOPE
DA042	MASSING PERSPECTIVE 02
DA043	MASSING PERSPECTIVE 02 W/ ENVELOPE
DA050	RENDERED PERSPECTIVE 01
DA051	RENDERED PERSPECTIVE 02
DA052	RENDERED PERSPECTIVE 03
DA053	RENDERED PERSPECTIVE 04
DA054	RENDERED PERSPECTIVE 05
DA100	BASEMENT 2
DA110	BASEMENT 1
DA120	GROUND FLOOR
DA130	FIRST FLOOR
DA140	SECOND FLOOR
DA150	THIRD FLOOR
DA160	FOURTH FLOOR
DA170	FIFTH FLOOR
DA180	SIXTH FLOOR
DA300	NORTHERN ELEVATION
DA301	EASTERN ELEVATION
DA302	SOUTHERN ELEVATION
DA303	WESTERN ELEVATION
DA350	EXTERNAL FINISHES
DA400	SECTION A-A
DA970	FSR CALCULATION



SUBJECT SITE



SITE LOCATION

DRAFT

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NOT FOR CONSTRUCTION

Survey By: Clarke Dowdle
Ref: x Date: 13.11.19

Notes

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NSW 2289 Ph 49524425
Nominated Architect: Daniel Hadley 8209
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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Revised for Pre DA	20.03.20
P4	For Client Approval	02.07.20

Project

Residential Flat Building

Location

53-55 Donnison Street
West Gosford

Client

SNZHoldings +
Australian Luxury Living

Drawing

COVER PAGE

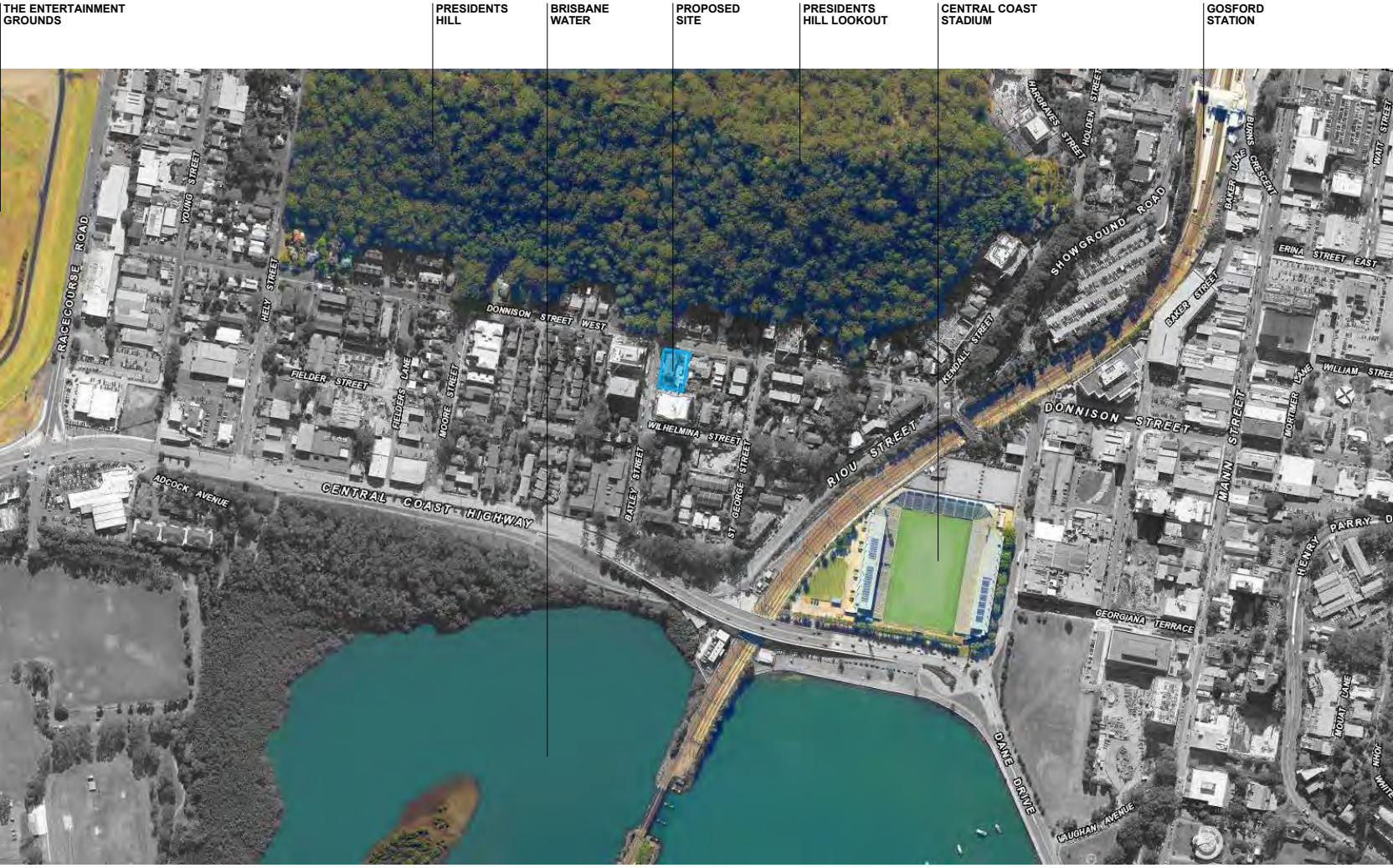
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@ A3	2/07/2020
Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA000

Issue

P4

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Nominated Architect:
Daniel Hadley 8209





THE ENTERTAINMENT GROUNDS

PRESIDENTS HILL

BRISBANE WATER

PROPOSED SITE

PRESIDENTS HILL LOOKOUT

CENTRAL COAST STADIUM

GOSFORD STATION



VIEWS TOWARDS WEST GOSFORD & BRISBANE WATER NATIONAL PARK

VIEWS TOWARDS GOSFORD & KINCUMBER MOUNTAIN RESERVE

VIEWS TOWARDS BRISBANE WATER & POINT CLARE

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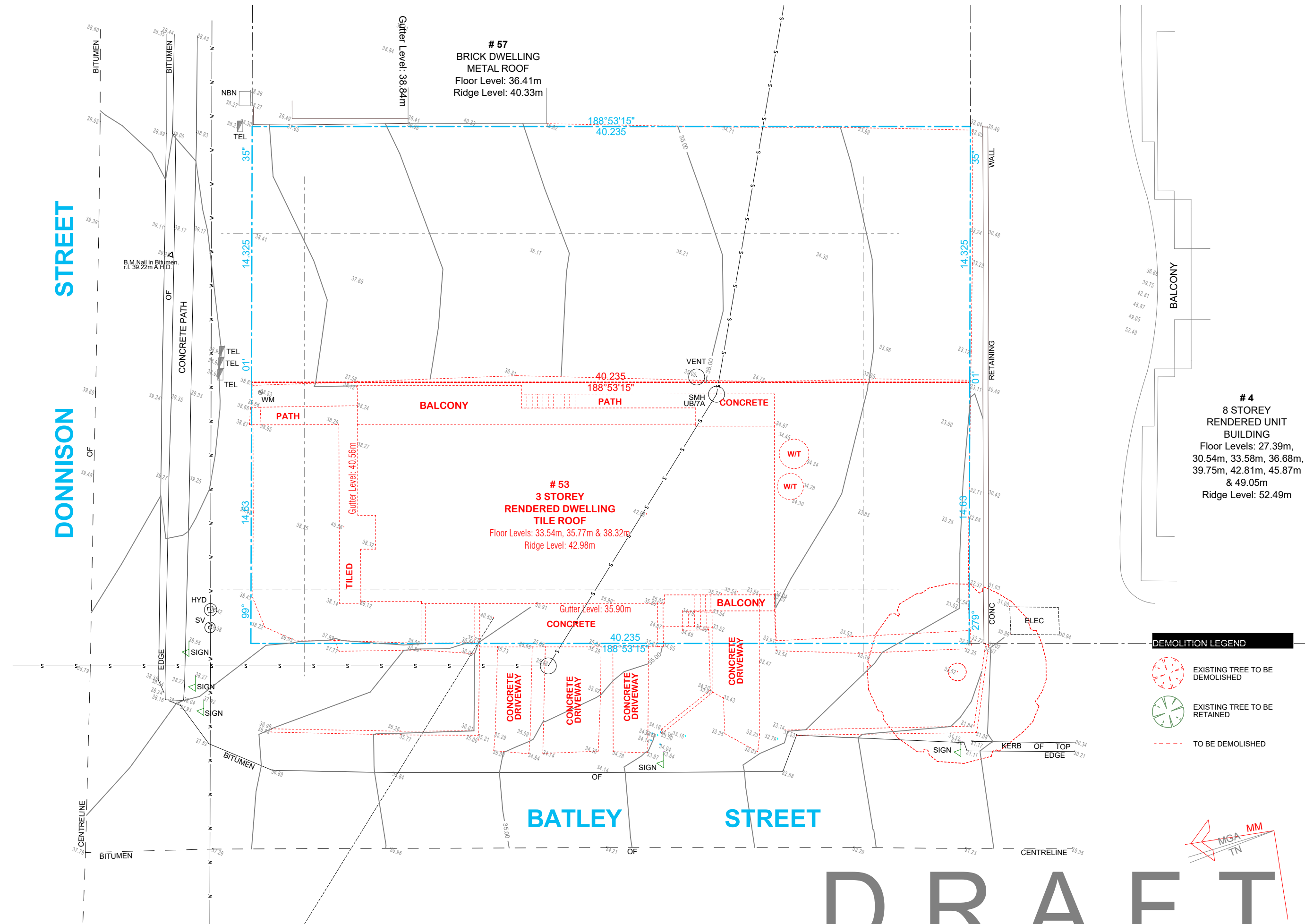
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P2	Pre DA Issue	23.01.20
P3	Revised for Pre DA	20.03.20

Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

Drawing
SITE ANALYSIS
Scale
@ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA010

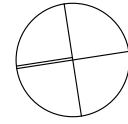
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DESIGNS



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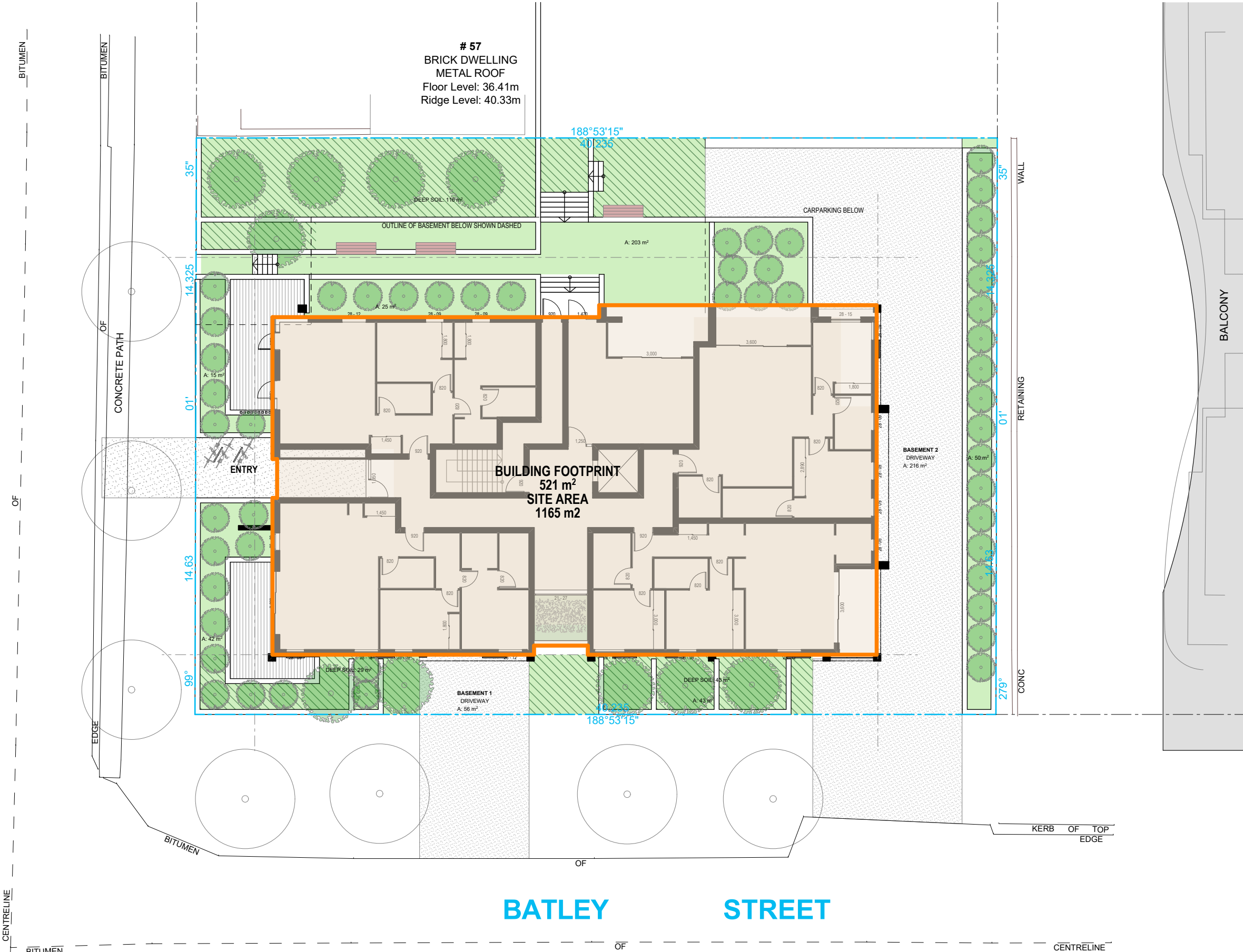
#4
8 STOREY
RENDERED UNIT
BUILDING
Floor Levels: 27.39m,
30.54m, 33.58m, 36.68m,
39.75m, 42.81m, 45.87m
& 49.05m
Ridge Level: 52.49m

- DEMOLITION LEGEND**
- EXISTING TREE TO BE DEMOLISHED
 - EXISTING TREE TO BE RETAINED
 - TO BE DEMOLISHED

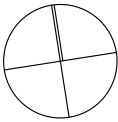
Project Residential Flat Building	
Location 53-55 Donnison Street West Gosford	
Client SNZHoldings + Australian Luxury Living	
Drawing DEMOLITION PLAN	
Scale 1:200 @ A3	Date 2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA020
Issue P3	
PO Box 601 Kotara NSW 2289 Ph 49524425 Nominated Architect: Daniel Hadley 8209	



DONNISON STREET



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SITE COVERAGE LEGEND

- PROPOSED BUILDING FOOTPRINT
- EXISTING BUILDING FOOTPRINT
- CALCULATED LANDSCAPED AREAS
- DEEP SOIL AREAS
- PRIVATE OPEN SPACE
- INDICATIVE PLANTING

SITE COVERAGE NOTES

- PLEASE REFER TO CONSULTING ENGINEERS DRAWINGS FOR STORMWATER DETAILS
- FOR ROADWAY, DRIVEWAY AND RETAINING WALL DESIGN & LEVELS REFER TO CIVIL ENGINEERS DOCUMENTATION
- FOR LANDSCAPE DESIGN & FENCE LOCATIONS REFER TO LANDSCAPE DESIGNERS DOCUMENTATION

Issue	Description	Date
P1	Revised Concept	15.06.20
P2	For Client Approval	02.07.20

Project	Residential Flat Building
Location	53-55 Donnison Street West Gosford
Client	SNZHoldings + Australian Luxury Living
Drawing	

SITE COVERAGE PLAN

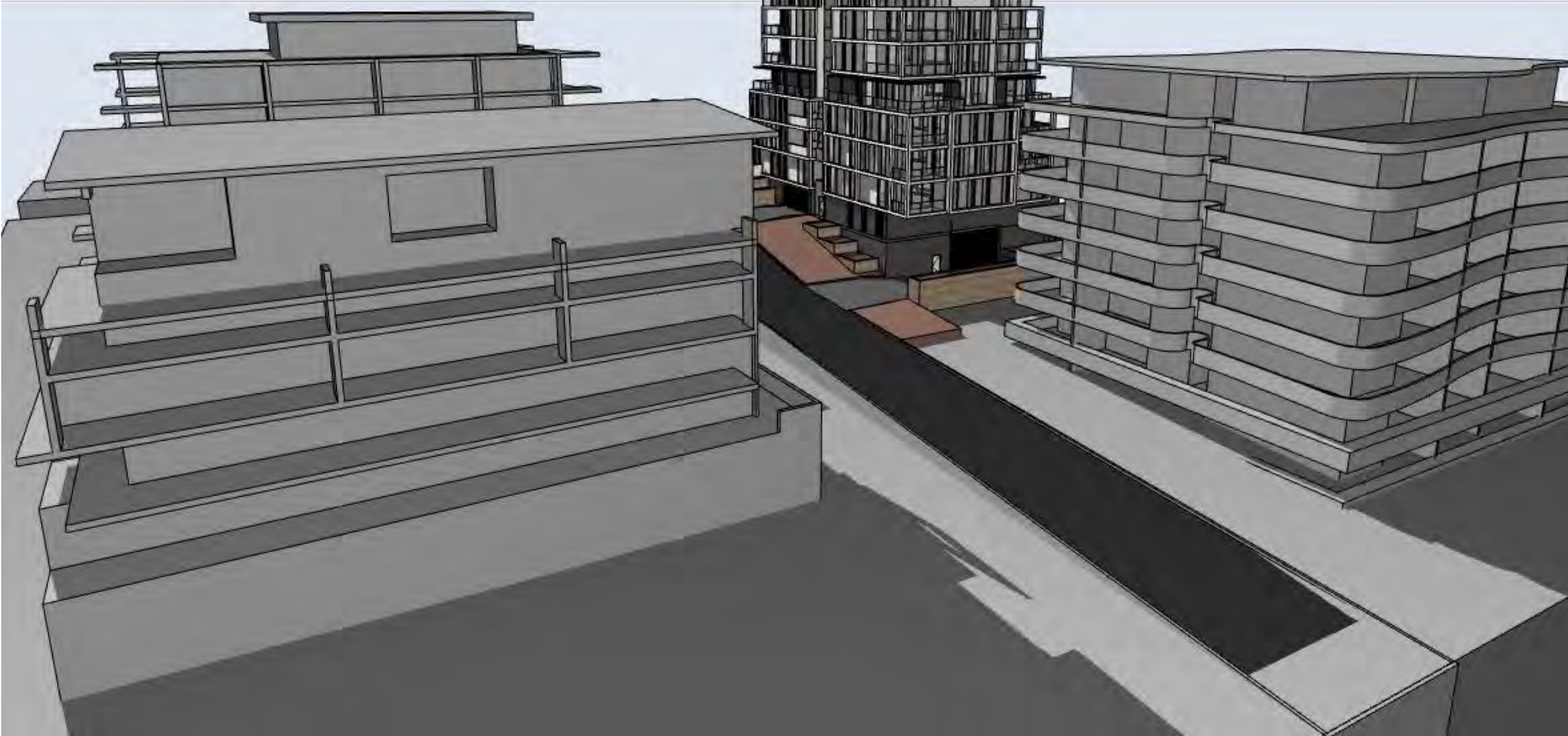
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Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA035

Issue	
P2	
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Built Area: 45% excludes Hardstand areas	Deep Soil: 16% total area 188m² some 3m deep areas included	Landscape: 32% total area 378m²
--	--	------------------------------------

DRAFT



1
-

MASSING CONTEXT BATLEY STREET

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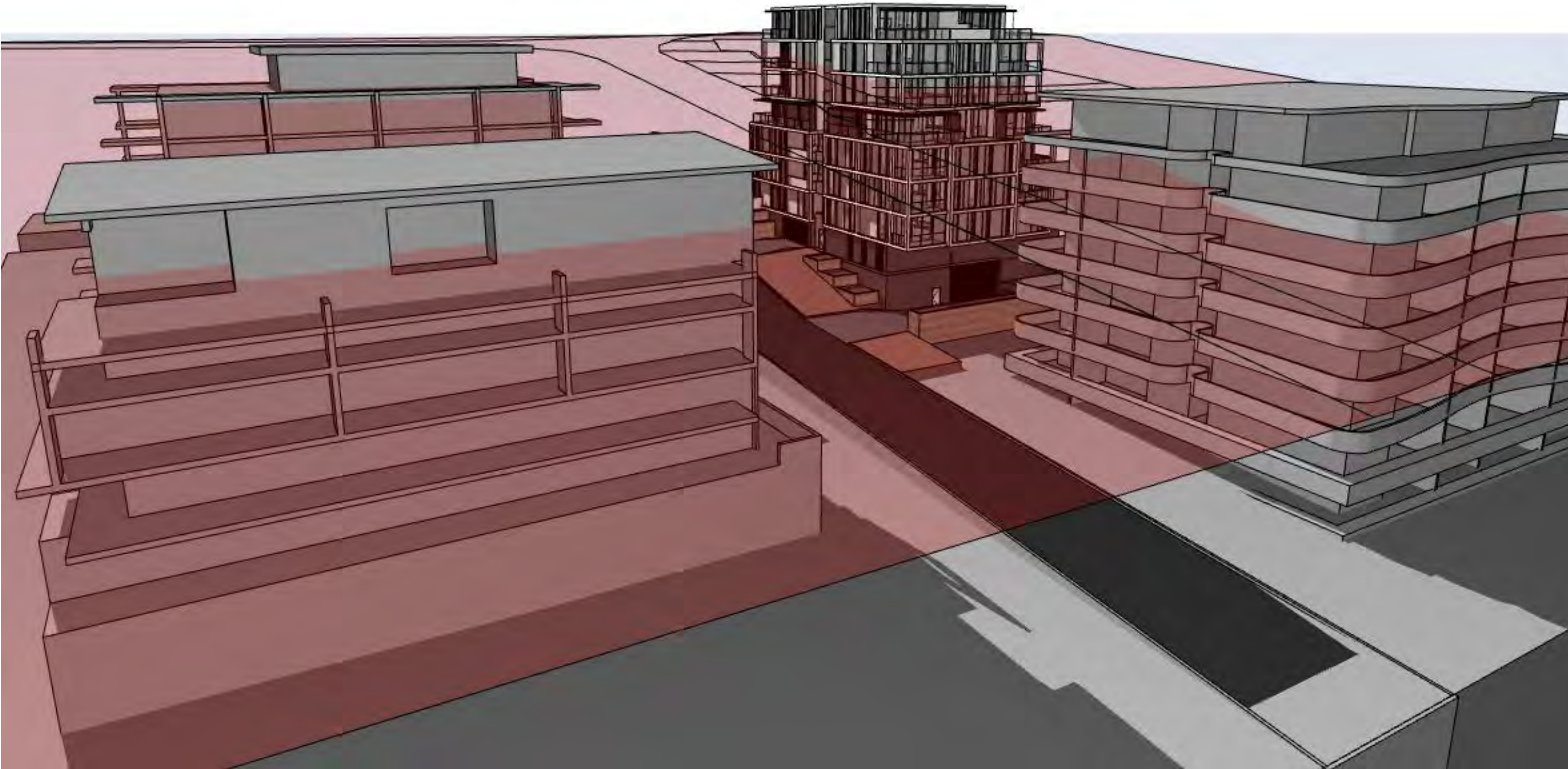
Consultants

Issue	Description	Date
P1	Pre DA Issue	23.01.20
P2	Revised for Pre DA	20.03.20
P3	For Client Approval	02.07.20

Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

Drawing
MASSING PERSPECTIVE 01
Scale
1:1.19 @ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA040

Issue
P3
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NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK



1 MASSING CONTEXT BATLEY STREET W/ ENVELOPES

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Consultants

Issue	Description	Date
P1	Pre DA Issue	23.01.20
P2	Revised for Pre DA	20.03.20
P3	For Client Approval	02.07.20

Project Residential Flat Building	
Location 53-55 Donnison Street West Gosford	
Client SNZHoldings + Australian Luxury Living	
Drawing MASSING PERSPECTIVE 01 W/ ENVELOPE	
Scale 1:1.19 @ A3	Date 2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA041
Issue P3	
PO Box 601 Kotara NSW 2289 Ph 49524425 Nominated Architect: Daniel Hadley 8209	
	



1
-

MASSING CONTEXT DONNISON STREET

FOR AUTHORITY APPROVAL ONLY
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Consultants

Issue	Description	Date
P1	Pre DA Issue	23.01.20
P2	Revised for Pre DA	20.03.20
P3	For Client Approval	02.07.20

Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

Drawing
MASSING PERSPECTIVE 02
Scale
1:1.19 @ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA042

Issue
P3
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK



1
-

MASSING CONTEXT DONNISON STREET

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Consultants

Issue	Description	Date
P1	Pre DA Issue	23.01.20
P2	Revised for Pre DA	20.03.20
P3	For Client Approval	02.07.20

Project Residential Flat Building	
Location 53-55 Donnison Street West Gosford	
Client SNZHoldings + Australian Luxury Living	
Drawing MASSING PERSPECTIVE 02 W/ ENVELOPE	

Scale 1:1.19 @ A3	Date 2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA043

Issue P3	
PO Box 601 Kotara NSW 2289 Ph 49524425 Nominated Architect: Daniel Hadley 8209	



1
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RENDERED PERSPECTIVE ALONG BATLEY STREET

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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Revised for Pre DA	20.03.20
P4	For Client Approval	02.07.20

Project

Residential Flat Building

Location

**53-55 Donnison Street
West Gosford**

Client

**SNZHoldings +
Australian Luxury Living**

Drawing

RENDERED PERSPECTIVE 01

Scale	Date
@ A3	2/07/2020
Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA050

Issue

P4

PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209

ELK
DESIGNS



1
-
RENDERED PERSPECTIVE ALONG BATLEY STREET

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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Revised for Pre DA	20.03.20
P4	For Client Approval	02.07.20

Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

Drawing
RENDERED PERSPECTIVE 02
Scale
@ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA051

Issue
P4
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK
DESIGNS



1
-

RENDERED PERSPECTIVE DONNISON STREET FACADE

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Consultants		
Issue	Description	Date
P1	For Client Approval	02.07.20
Project Residential Flat Building		
Location 53-55 Donnison Street West Gosford		
Client SNZHoldings + Australian Luxury Living		
Drawing RENDERED PERSPECTIVE 03		
Scale @ A3	Date 2/07/2020	
Drawn By PG/JG	QA Checked By DH	
Project Number 19074	Drawing Number DA052	
Issue P1		
PO Box 601 Kotara NSW 2289 Ph 49524425 Nominated Architect: Daniel Hadley 8209		ELK DESIGNS



1
-

RENDERED PERSPECTIVE DONNISON STREET ENTRY

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Consultants		
Issue Description Date		
P1	For Client Approval	02.07.20
Project Residential Flat Building Location 53-55 Donnison Street West Gosford Client SNZHoldings + Australian Luxury Living Drawing RENDERED PERSPECTIVE 04 Scale @ A3 Date 2/07/2020 Drawn By PG/JG QA Checked By DH Project Number 19074 Drawing Number DA053 Issue P1 PO Box 601 Kotara NSW 2289 Ph 49524425 Nominated Architect: Daniel Hadley 8209 ELK DESIGNS		



1

-

RENDERED PERSPECTIVE BATLEY STREET FACADE

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Consultants

Issue	Description	Date
P1	For Client Approval	02.07.20

Project

Residential Flat Building

Location

53-55 Donnison Street
West Gosford

Client

SNZHoldings +
Australian Luxury Living

Drawing

RENDERED PERSPECTIVE 05

Scale	Date
@ A3	2/07/2020
Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA054

Issue

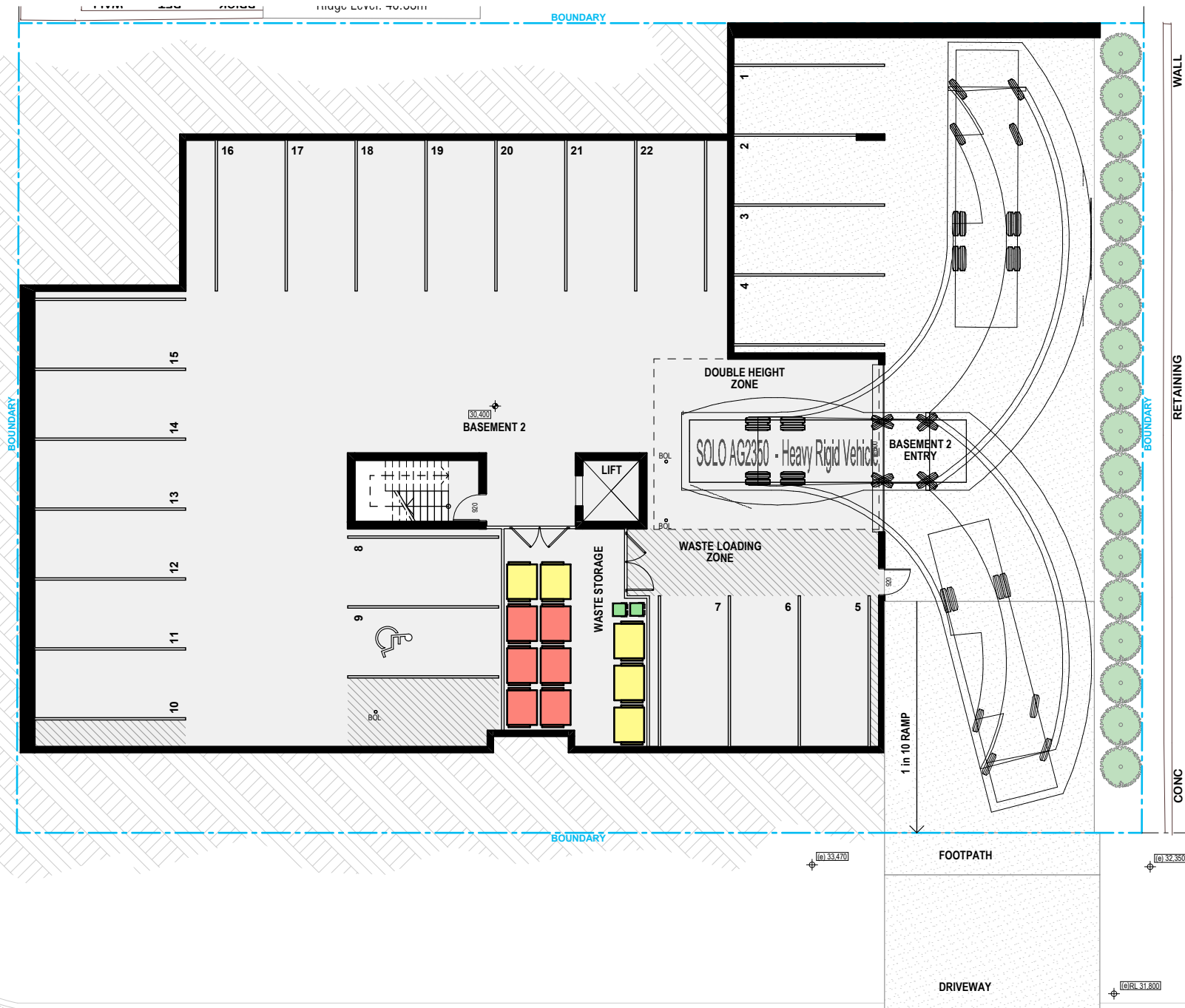
P1

PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209

ELK

DESIGNS

DONNISON STREET WEST



BATLEY STREET

2-6
WILHELMINA STREET

14-16
BATLEY STREET

10-12
BATLEY STREET

DRAFT

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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
BASEMENT 2

Scale	Date
1:200 @ A3	2/07/2020

Drawn By	QA Checked By
PG/JG	DH

Project Number	Drawing Number
19074	DA100

Issue
P6

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NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209

DONNISON STREET WEST

BATLEY STREET

2-6
WILHELMINA STREET

14-16
BATLEY STREET

10-12
BATLEY STREET

DRAFT

PPROVAL ONLY
STRUCTION

Notes

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Nominated Architect: Daniel Hadley 8209

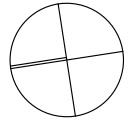
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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
BASEMENT 1

Scale	Date
1:200 @ A3	2/07/2020

Drawn By	QA Checked By
PG/JG	DH

Project Number	Drawing Number
19074	DA110

Issue
P6

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Nominated Architect:
Daniel Hadley 8209



DONNISON STREET WEST

BATLEY STREET

2-6
WILHELMINA STREET

#4
8 STOREY
RENDERED UNIT
BUILDING
Floor Levels: 27.39m,
30.54m, 33.58m, 36.68m,
39.75m, 42.81m, 45.87m
& 49.05m
Ridge Level: 52.49m

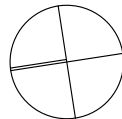
14-16
BATLEY STREET

10-12
BATLEY STREET

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Consultants

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P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
GROUND FLOOR

Scale	Date
1:200 @ A3	2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA120

Issue
P7

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Nominated Architect:
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DESIGNS

DONNISON STREET WEST



BATLEY STREET



2-6
WILHELMINA STREET

14-16
BATLEY STREET

10-12
BATLEY STREET

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P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project

Residential Flat Building

Location

**53-55 Donnison Street
West Gosford**

Client

**SNZHoldings +
Australian Luxury Living**

Drawing

FIRST FLOOR

Scale	Date
1:200 @ A3	2/07/2020

Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA130

Issue
P7

PO Box 601 Kotara
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Nominated Architect:
Daniel Hadley 8209

DONNISON STREET WEST



BATLEY STREET

2-6
WILHELMINA STREET

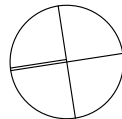
14-16
BATLEY STREET

10-12
BATLEY STREET

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Consultants

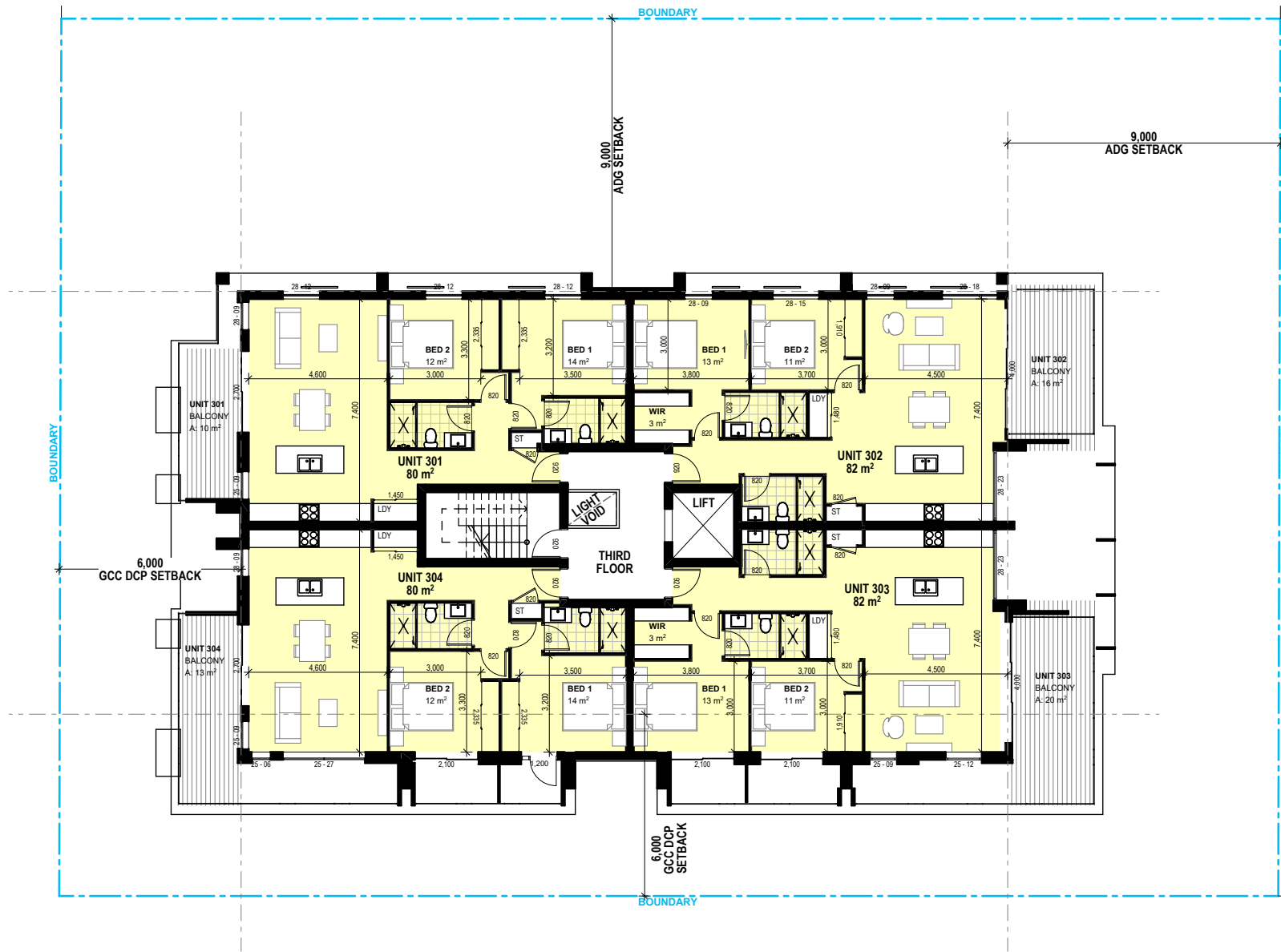
Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

Drawing
SECOND FLOOR
Scale
1:200 @ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA140

Issue
P7
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK

DONNISON STREET WEST



BATLEY STREET

14-16
BATLEY STREET

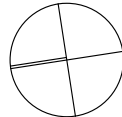
2-6
WILHELMINA STREET

10-12
BATLEY STREET

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Consultants

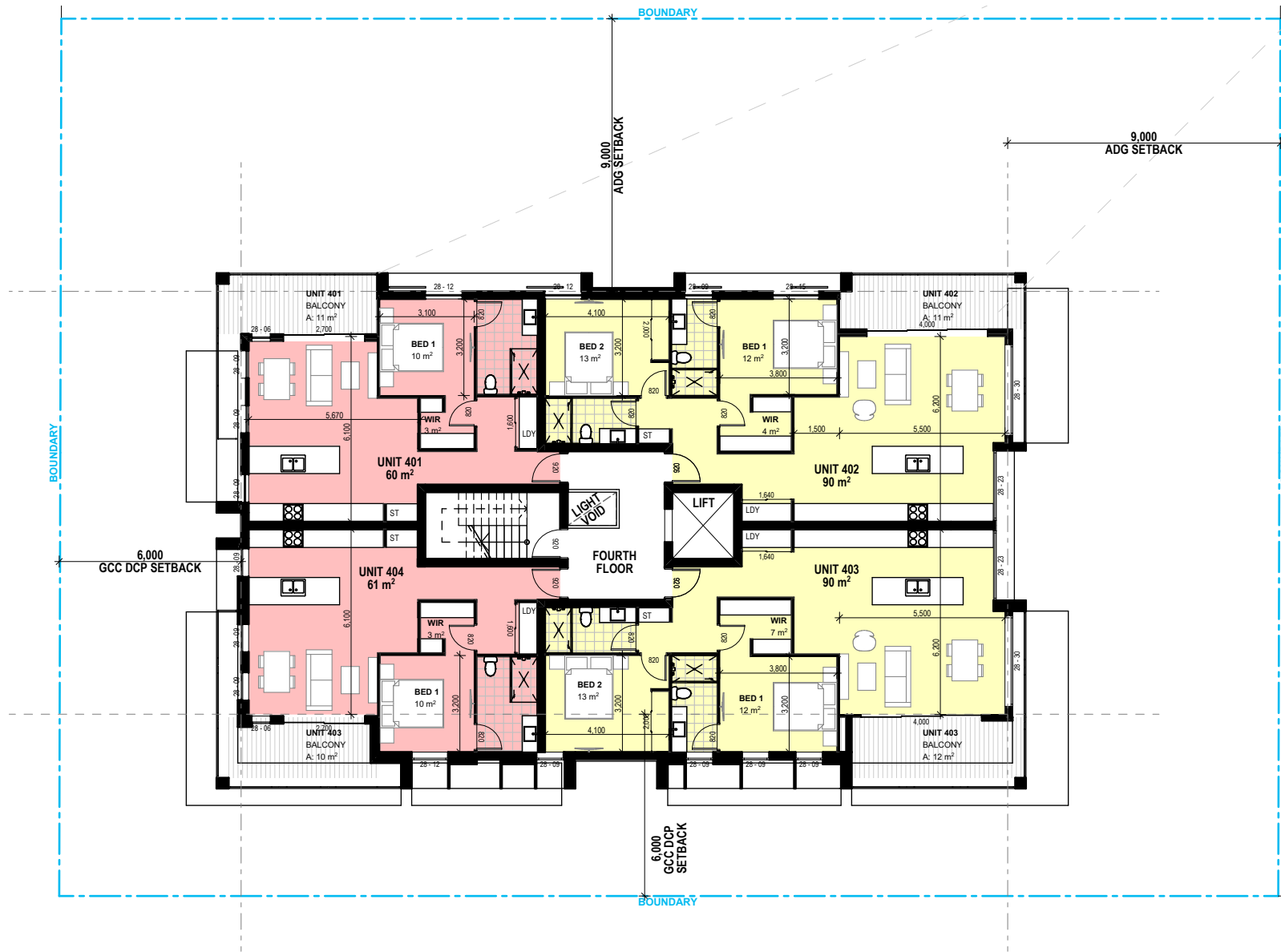
Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project
Residential Flat Building
Location
53-55 Donnison Street
West Gosford
Client
SNZHoldings +
Australian Luxury Living

Drawing
THIRD FLOOR
Scale
1:200 @ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA150

Issue
P7
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK

DONNISON STREET WEST



BATLEY STREET

14-16
BATLEY STREET

2-6
WILHELMINA STREET



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P1	Client Review	08.01.20
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P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
FOURTH FLOOR

Scale	Date
1:200 @ A3	2/07/2020

Drawn By	QA Checked By
PG/JG	DH

Project Number	Drawing Number
19074	DA160

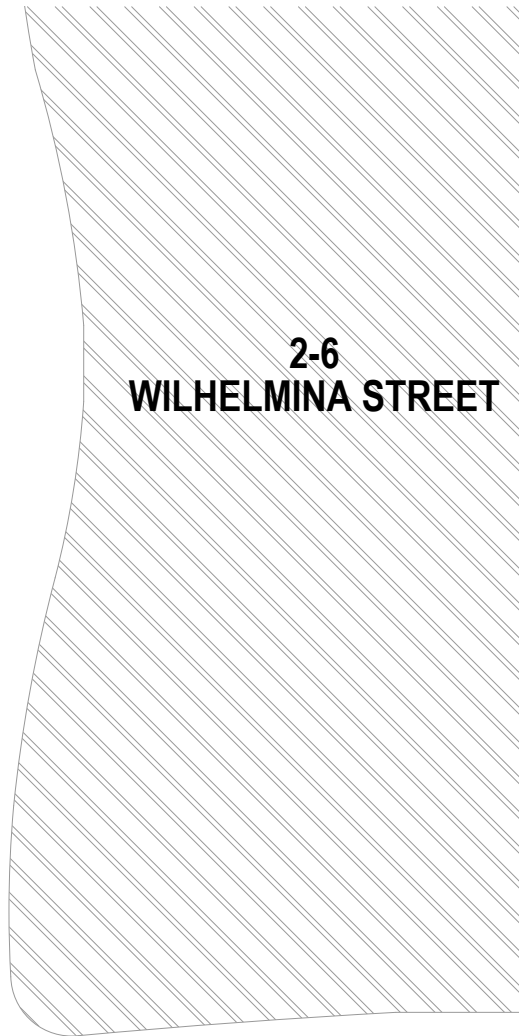
Issue
P7

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NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209

DONNISON STREET WEST



BATLEY STREET



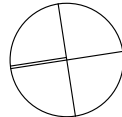
14-16
BATLEY STREET

10-12
BATLEY STREET

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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
FIFTH FLOOR

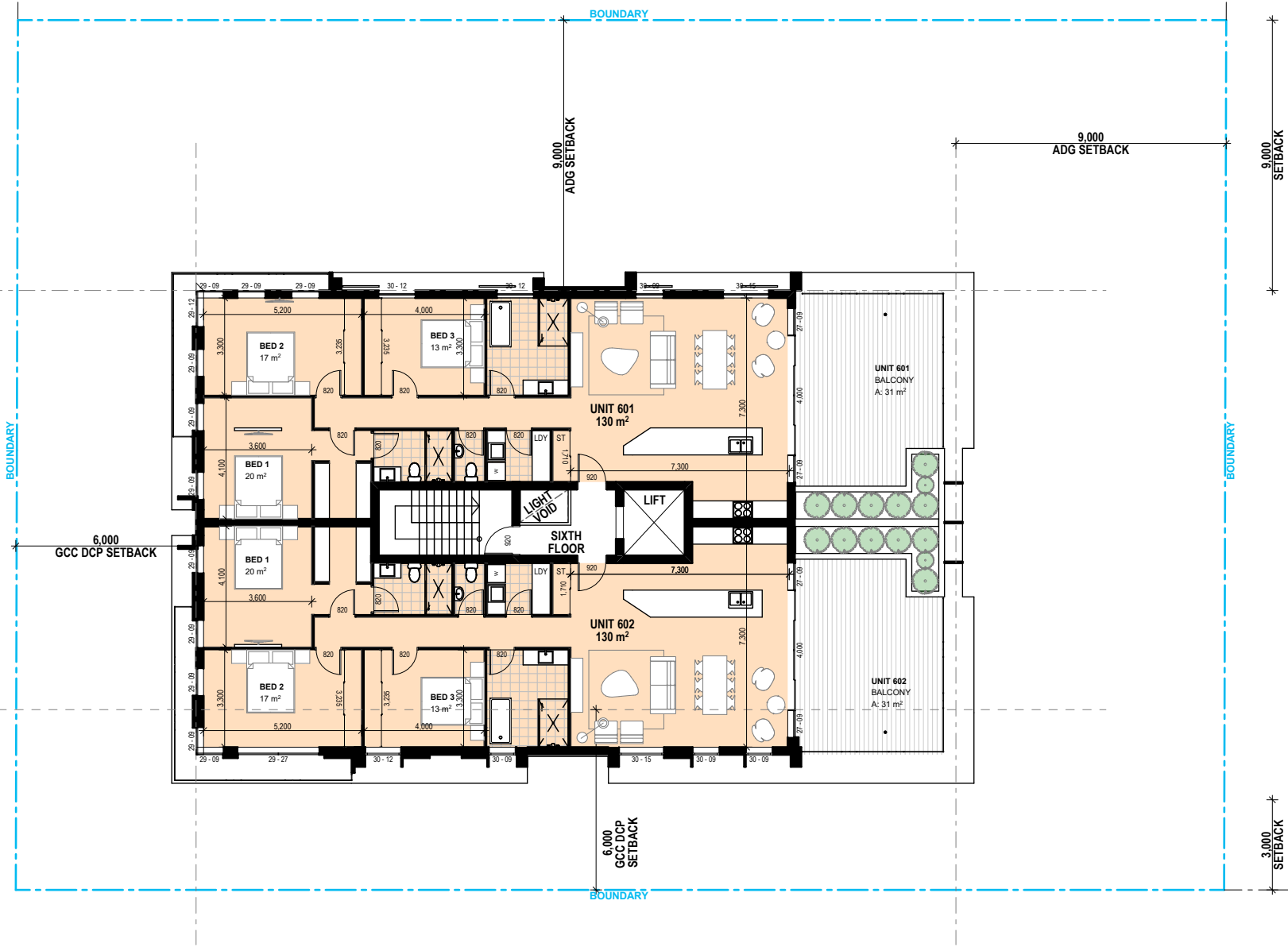
Scale	Date
1:200 @ A3	2/07/2020
Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA170

Issue
P7

PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209

ELK
#411004

DONNISON STREET WEST



BATLEY STREET

2-6
WILHELMINA STREET

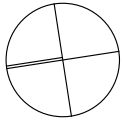
14-16
BATLEY STREET

10-12
BATLEY STREET

FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION

DRAFT

Notes
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect: Daniel Hadley 8209
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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Layout Amendments	04.02.20
P4	Revised for Pre DA	20.03.20
P5	Revised Concept	15.06.20
P6	Unit Mix Options	20.06.20
P7	For Client Approval	02.07.20

Project
Residential Flat Building
Location
53-55 Donnison Street
West Gosford
Client
SNZHoldings +
Australian Luxury Living

Drawing
SIXTH FLOOR
Scale
1:200 @ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA180

Issue
P7
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK

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ELEVATION NOTES

1. REFER TO EXTERNAL FINISHES FOR SELECTED MATERIALS AND COLOURS
2. REFER TO CONSULTING ENGINEERS DRAWINGS FOR STORMWATER DETAILS
3. FOR ROADWAY, DRIVEWAY AND RETAINING WALL DESIGN & LEVELS REFER TO CIVIL ENGINEERS DOCUMENTATION
4. DOWNPIPE POSITIONS ARE INDICATIVE ONLY, POSITION OF DOWNPIPES TO BE CONFIRMED BY BUILDER.
5. FOR LANDSCAPE DESIGN & FENCE LOCATIONS REFER TO LANDSCAPE DESIGNERS DOCUMENTATION

Notes
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NSW 2289 Ph 49524425
Nominated Architect: Daniel Hadley 8209
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Consultants

Issue	Description	Date
P1	Revised for Pre DA	20.03.20
P2	For Client Approval	02.07.20

Project	Residential Flat Building
Location	53-55 Donnison Street West Gosford
Client	SNZHoldings + Australian Luxury Living
Drawing	

NORTHERN ELEVATION

Scale	Date
1:200 @ A3	2/07/2020
Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA300

Issue
P2

PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209



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ELEVATION NOTES

1. REFER TO EXTERNAL FINISHES FOR SELECTED MATERIALS AND COLOURS
2. REFER TO CONSULTING ENGINEERS DRAWINGS FOR STORMWATER DETAILS
3. FOR ROADWAY, DRIVEWAY AND RETAINING WALL DESIGN & LEVELS REFER TO CIVIL ENGINEERS DOCUMENTATION
4. DOWNPIPE POSITIONS ARE INDICATIVE ONLY, POSITION OF DOWNPIPES TO BE CONFIRMED BY BUILDER.
5. FOR LANDSCAPE DESIGN & FENCE LOCATIONS REFER TO LANDSCAPE DESIGNERS DOCUMENTATION

Notes
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Nominated Architect: Daniel Hadley 8209
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Consultants

Issue	Description	Date
P1	Revised for Pre DA	20.03.20
P2	For Client Approval	02.07.20

Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

EASTERN ELEVATION

Scale	Date
1:200 @ A3	2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA301

Issue
P2
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK



ELEVATION NOTES

1. REFER TO EXTERNAL FINISHES FOR SELECTED MATERIALS AND COLOURS
2. REFER TO CONSULTING ENGINEERS DRAWINGS FOR STORMWATER DETAILS
3. FOR ROADWAY, DRIVEWAY AND RETAINING WALL DESIGN & LEVELS REFER TO CIVIL ENGINEERS DOCUMENTATION
4. DOWNPIPE POSITIONS ARE INDICATIVE ONLY, POSITION OF DOWNPIPES TO BE CONFIRMED BY BUILDER.
5. FOR LANDSCAPE DESIGN & FENCE LOCATIONS REFER TO LANDSCAPE DESIGNERS DOCUMENTATION

Notes
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Consultants

Issue	Description	Date
P1	Revised for Pre DA	20.03.20
P2	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
SOUTHERN ELEVATION

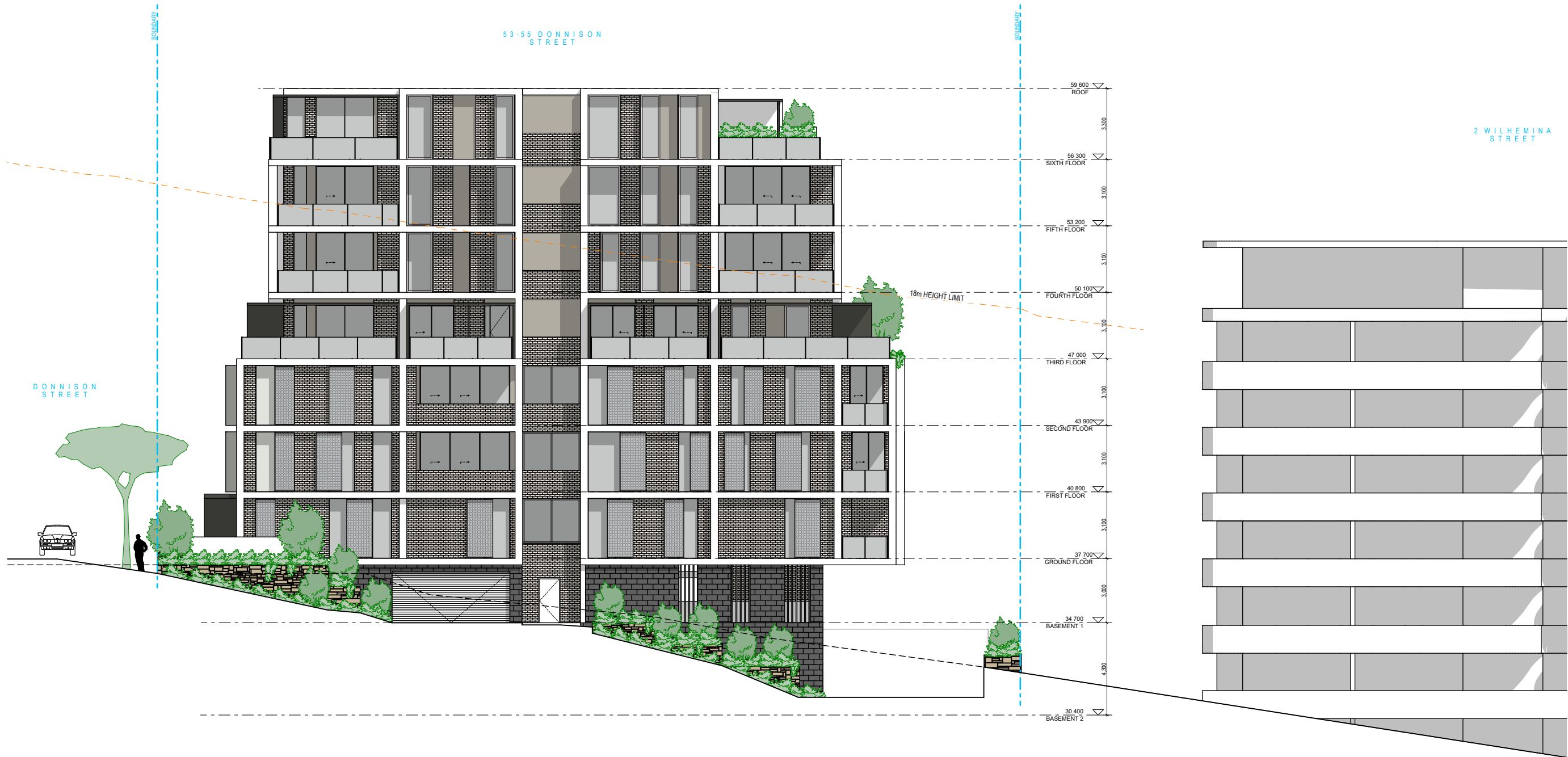
Scale	Date
1:200 @ A3	2/07/2020
Drawn By	QA Checked By
PG/JG	DH
Project Number	Drawing Number
19074	DA302

Issue
P2

PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209

ELK
DESIGNS

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ELEVATION NOTES

1. REFER TO EXTERNAL FINISHES FOR SELECTED MATERIALS AND COLOURS
2. REFER TO CONSULTING ENGINEERS DRAWINGS FOR STORMWATER DETAILS
3. FOR ROADWAY, DRIVEWAY AND RETAINING WALL DESIGN & LEVELS REFER TO CIVIL ENGINEERS DOCUMENTATION
4. DOWNPIPE POSITIONS ARE INDICATIVE ONLY, POSITION OF DOWNPIPES TO BE CONFIRMED BY BUILDER.
5. FOR LANDSCAPE DESIGN & FENCE LOCATIONS REFER TO LANDSCAPE DESIGNERS DOCUMENTATION

Notes
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NSW 2289 Ph 49524425
Nominated Architect: Daniel Hadley 8209
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Consultants

Issue	Description	Date
P1	Revised for Pre DA	20.03.20
P2	For Client Approval	02.07.20

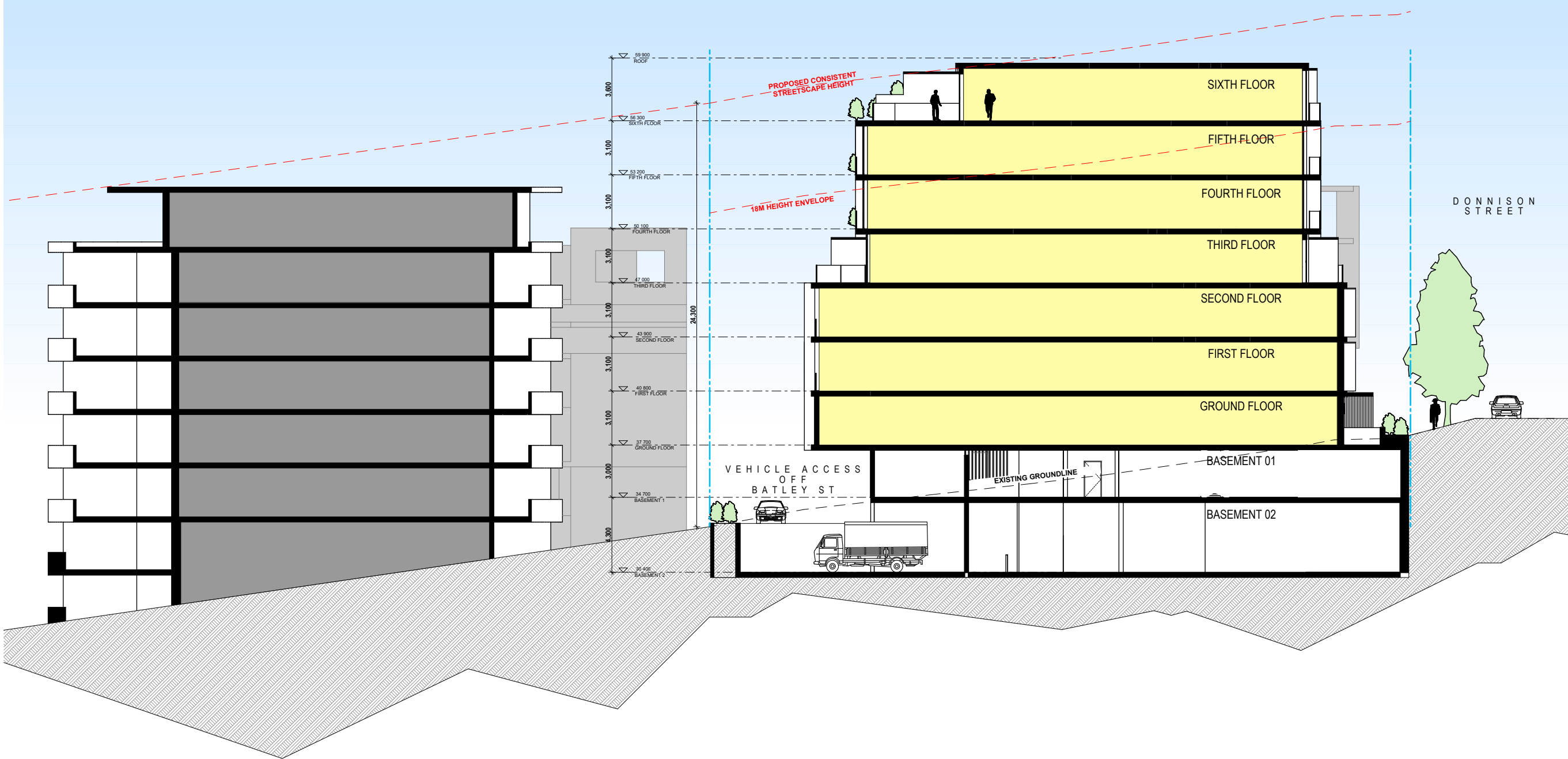
Project
Residential Flat Building
Location
**53-55 Donnison Street
West Gosford**
Client
**SNZHoldings +
Australian Luxury Living**

Drawing
WESTERN ELEVATION
Scale
1:200 @ A3
Date
2/07/2020
Drawn By
PG/JG
QA Checked By
DH
Project Number
19074
Drawing Number
DA303

Issue
P2
PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209
ELK
#410004

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DRAFT



A
-

SECTION AA
1:250

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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Revised for Pre DA	20.03.20
P4	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

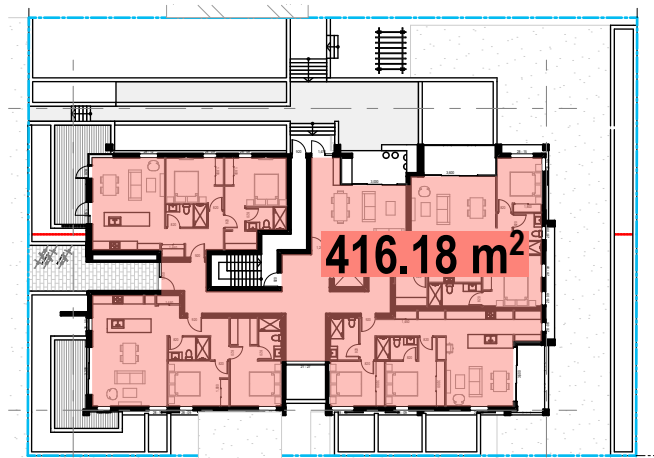
Drawing
SECTION A-A

Scale	Date
1:250 @ A3	2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA400

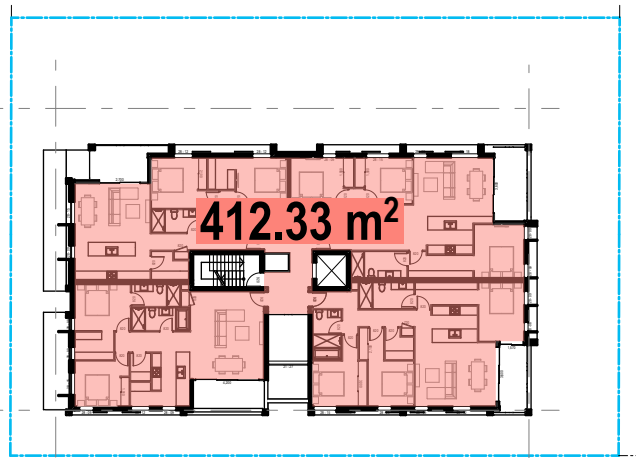
Issue
P4

PO Box 601 Kotara
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Nominated Architect:
Daniel Hadley 8209

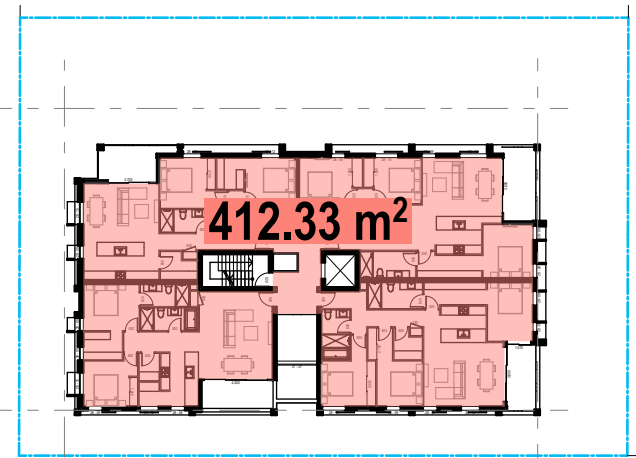
ELK
DESIGNS



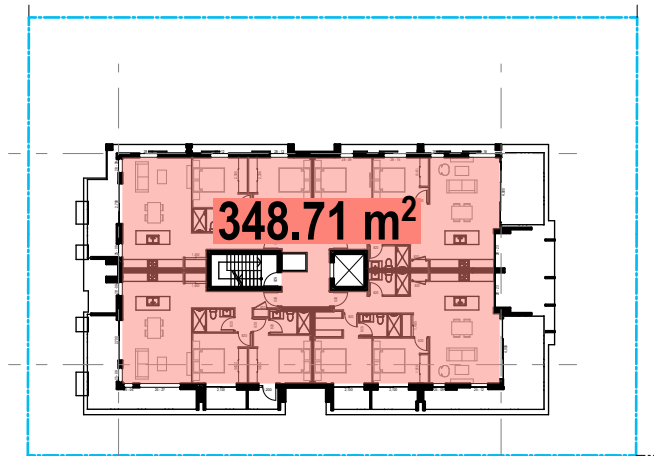
1
GROUND FLOOR FSR
Scale 1:500



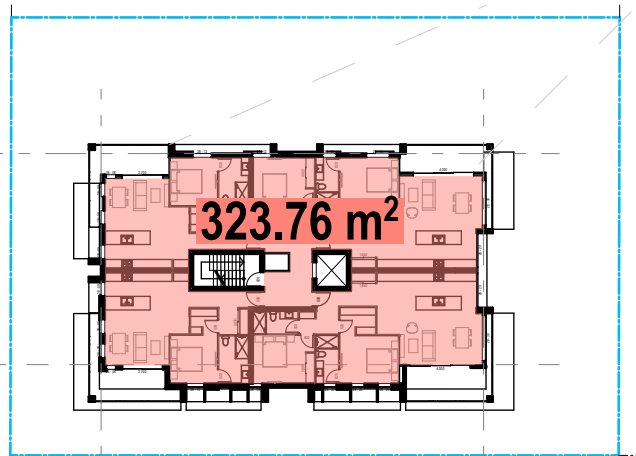
2
FIRST FLOOR FSR
Scale 1:500



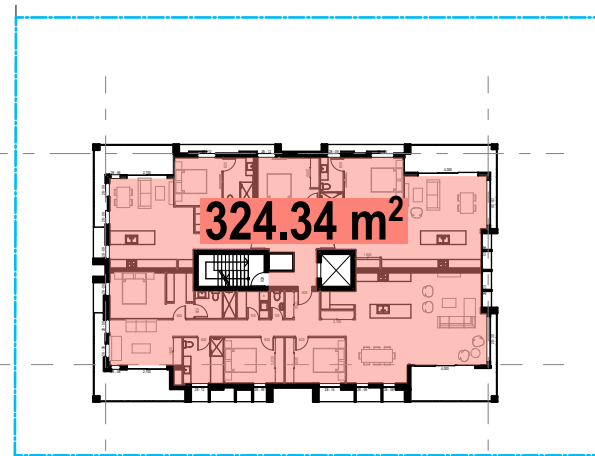
3
SECOND FLOOR FSR
Scale 1:500



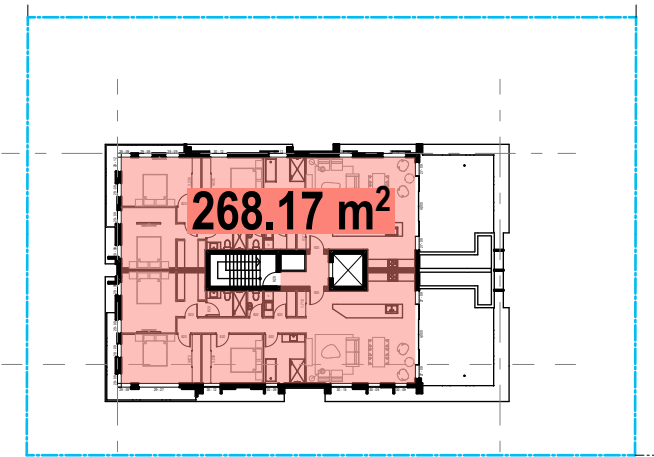
4
THIRD FLOOR FSR
Scale 1:500



5
FOURTH FLOOR FSR
Scale 1:500



6
FIFTH FLOOR FSR
Scale 1:500



7
SIXTH FLOOR FSR
Scale 1:500

FSR CALCULATION (1.5:1 Ratio LEP)	
GROUND FLOOR	416
FIRST FLOOR	412
SECOND FLOOR	412
THIRD FLOOR	349
FOURTH FLOOR	324
FIFTH FLOOR	324
SIXTH FLOOR	268
	2505
SITE AREA	1165
FSR	2.15

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Consultants

Issue	Description	Date
P1	Client Review	08.01.20
P2	Pre DA Issue	23.01.20
P3	Revised for Pre DA	20.03.20
P4	Revised Concept	15.06.20
P5	For Client Approval	02.07.20

Project
Residential Flat Building

Location
**53-55 Donnison Street
West Gosford**

Client
**SNZHoldings +
Australian Luxury Living**

Drawing
FSR CALCULATION

Scale 1:500 @ A3	Date 2/07/2020
Drawn By PG/JG	QA Checked By DH
Project Number 19074	Drawing Number DA970

Issue
P5

PO Box 601 Kotara
NSW 2289 Ph 49524425
Nominated Architect:
Daniel Hadley 8209



Photo 1 - Eastern portion of the site, looking toward the south, 15 April 2021.



Photo 2 - Site, looking toward the south, 15 April 2021.



Site Photographs

53-55 Donnison Street West
Gosford

CLIENT: Australian Luxury Living

PROJECT: 203360.00

PLATE No: 1

REV: 0

DATE: 19-Apr-21



Photo 3 - Eastern portion of the site, looking toward the east, 15 April 2021.



Photo 4 - Eastern portion of the site, looking toward the north-north-east, 15 April 2021.



Site Photographs

53-55 Donnison Street West

Gosford

CLIENT: Australian Luxury Living

PROJECT: 203360.00

PLATE No: 2

REV: 0

DATE: 19-Apr-21

Appendix B

About This Report

Site History Information

Aerial Photographs

About this Report

Douglas Partners



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

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

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.

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.



ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

Address: 53 & 55 Donnison Street West, Gosford, NSW 2550

Description: - Lots A & B D.P. 312912

As regards to Lot A on the attached Cadastral Records Enquiry Report: -

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
19.08.1925 (1925 to 1942)	James Albert Mobbs (Orchardist)	Vol 2437 Fol 122 Then Vol 3787 Fol 196 Now Vol 4574 Fol 93
27.02.1942 (1942 to 1949)	Doris Elizabeth Martin (Married Woman) (Transmission Application not investigated)	Vol 4574 Fol 93
26.08.1949 (1949 to 1962)	Ronald Arthur Preston (Shop Assistant)	Vol 4574 Fol 93 Now Vol 6097 Fol 90
22.06.1967 (1967 to 1997)	Eileen Grace Preston (Spinster)	Vol 6097 Fol 90 Now A/312912
19.11.1997 (1997 to 1999)	Ronald Arthur Preston Albert John Black (Transmission Application not investigated)	A/312912
21.01.1999 (1999 to 2001)	Peter Francis Sewell Linda Gay Sewell	A/312912
19.07.2001 (2001 to 2003)	Yun Mo Ok	A/312912
15.07.2003 (2003 to 2007)	Paul John Cutting Michelle Ann Cutting	A/312912
03.04.2007 (2007 to 2015)	PHK Group Pty Limited Now Autopack Services Pty Ltd	A/312912
09.03.2015 (2015 to 2017)	Michael Gerald Aiossa David George Aiossa Northfield Properties Pty Ltd	A/312912
16.11.2017 (2017 to Date)	# SSKZ Pty Ltd	A/312912

Denotes current registered proprietor

Leases: - NIL

Easements: - NIL



ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards to Lot B on the attached Cadastral Records Enquiry Report: -

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
19.08.1925 (1925 to 1942)	James Albert Mobbs (Orchardist)	Vol 2437 Fol 122 Then Vol 3787 Fol 196 Now Vol 4574 Fol 93
27.02.1942 (1942 to 1960)	Doris Elizabeth Martin (Married Woman) (Transmission Application not investigated)	Vol 4574 Fol 93
24.05.1960 (1960 to 1965)	Michael Lawrence Moran (Textile Manufacturer)	Vol 4574 Fol 93 Now Vol 8076 Fol 142
17.09.1965 (1965 to 1992)	Sylvia Mavis Coulter (Married Woman)	Vol 8076 Fol 142 Now B/312912
19.11.1992 (1992 to 1995)	Frederick George Butt	B/312912
14.12.1995 (1995 to 2001)	Frederick George Butt Belle Butt	B/312912
28.03.2001 (2001 to 2013)	Belle Butt	B/312912
14.11.2013 (2013 to 2013)	Lynette Adele Smith Noel Sanders Wright (Executors of the Estate of Belle Butt)	B/312912
30.12.2013 (2013 to 2016)	Nadeem Mohammed Johanna Elizabeth Dale	B/312912
01.04.2016 (2016 to Date)	# Charles Elias Nasr # Fadia Nasr	B/312912

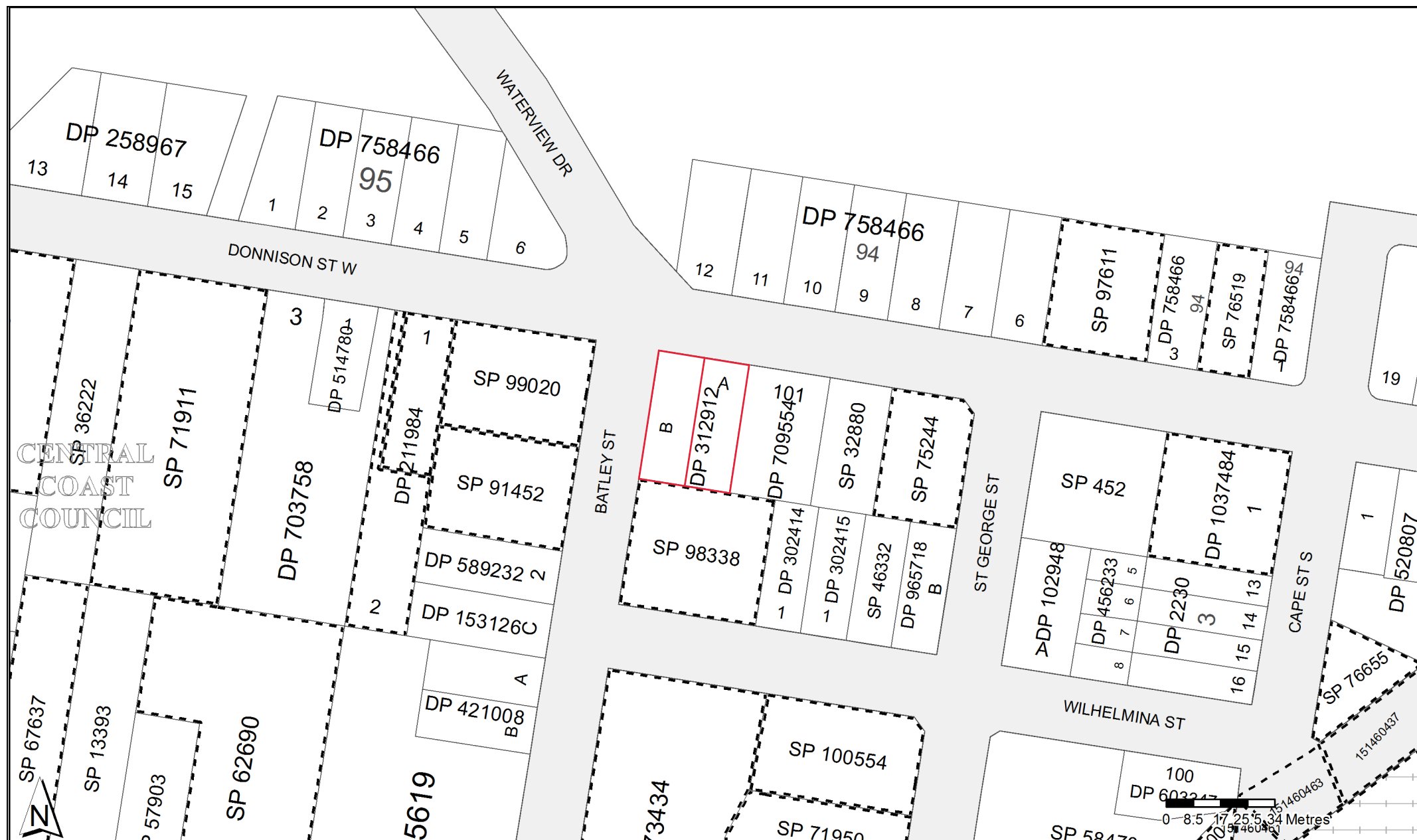
Denotes current registered proprietor

Leases: - NIL

Easements: - NIL

Yours Sincerely,
Taylor Wilson
(Checked by Mark Groll)
8th April 2021

Email: mark.groll@infotrack.com.au





SEARCH DATE

1/4/2021 2:50PM

FOLIO: A/312912

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 6097 FOL 90

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
9/11/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
19/11/1997	3594237	TRANSMISSION APPLICATION	EDITION 1
21/1/1999	5540449	TRANSFER	
21/1/1999	5540450	MORTGAGE	EDITION 2
12/2/1999	5596576	MORTGAGE	EDITION 3
19/7/2001	7786180	DISCHARGE OF MORTGAGE	
19/7/2001	7786181	DISCHARGE OF MORTGAGE	
19/7/2001	7786182	TRANSFER	
19/7/2001	7786183	MORTGAGE	EDITION 4
15/7/2003	9788292	DISCHARGE OF MORTGAGE	
15/7/2003	9788293	TRANSFER	
15/7/2003	9788294	MORTGAGE	EDITION 5
3/4/2007	AD31202	DISCHARGE OF MORTGAGE	
3/4/2007	AD31203	TRANSFER	EDITION 6
9/3/2015	AJ316304	TRANSFER	EDITION 7
16/11/2017	AM891789	TRANSFER	EDITION 8

*** END OF SEARCH ***

Form: 97-01T

Licence: 026CN/0526/96

TRANSFER

New South Wales
Real Property Act 1900



Instructions for filling out
this form are available
from the Land Titles Office

Office of State Revenue use only

OFFICE OF STATE REVENUE (N.S.W. TREASURY)

CLIENT No. 1405589

STAMP DUTY \$2.00

TRANSACTION No. 990303

ASSESSMENT DETAILS

STAMP No. 75

SIGNATURE *Lw Jev*

DATE 13/1/99

- (A) **I** [REDACTED]
Show no more than 20 titles.
If appropriate, specify the
share or part transferred.

F [REDACTED] 2

- (B) **LODGED BY**

LTO Box

Name, Address or DX and Telephone

23L

CSB

REFERENCE (15 character maximum): 211299508

- (C) **T** [REDACTED] **R** [REDACTED]
(D) acknowledges receipt of the consideration of \$230,000.00
and as regards the land specified above transfers to the transferee an estate in fee simple.

- (E) Encumbrances (if applicable) 1. 2. 3.

- (F) **T** [REDACTED]
(G)

T TS (s713 LGA) TW (Sheriff)	TENANCY: JOINT
---	-----------------------

- (H) We certify this dealing correct for the purposes of the Real Property Act 1900.

DATE 13/01/99

Signed in my presence by the transferor who is personally known to me.

[Signature]
Signature of Witness

MICHAEL JAMES DAILY
Name of Witness (BLOCK LETTERS)

SOLICITOR GOSFORD
Address of Witness

[Signature] R A Preston
Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Solicitor for the Transferee
PAUL ANTHONY BAILEY

NB: if signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name in block letters.

TRANSFER

7786182B

New South Wales
Real Property Act 1900



Office of State Revenue

CLIENT No. 3168099

STAMP DUTY \$2.00

TRANSACTION No. 911806

ASSESSMENT DETAILS:

STAMP No. 99

SIGNATURE *R Taylor*

DATE 2/5/01

(A) **IT**
If appropriate, specify the share or part transferred.

☒ F	☐ M
------------------------------------	-------------------------

(B) **LODGED BY**

LTO Box <i>2-5</i>	Name, Address or DX and Telephone <i>7-11</i>
-----------------------	--

Reference (optional):

(C) **T** ☐ **R** ☐ **P** ☐

(D) acknowledges receipt of the consideration of \$288,000.00
and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable): 1. Nil 2. 3.

(F) **TRANSFeree**

T TS (s713 LGA) TW (Sheriff)	YUN MO OK TENANCY:
---	---

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE**

Signed in my presence by the transferor who is personally known to me.

[Signature]

Signature of Witness

MARIA KATSIARIS

Name of Witness (BLOCK LETTERS)

99 ELIZABETH ST SYDNEY

Address of Witness

[Signature]

Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

R Taylor

Signature of Transferee's
Licensed Conveyancer
RODNEY JOHN TAYLOR

Form: **OT**
Release: **OT**
www.lpi.nsw.gov.au

TRANSFER

New South Wales
Real Property Act 1900



9788293F

PRIVACY NOTE: this information is legally required and will

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY

12-05-2003

0001396371-001

SECTION 18(2)

DUTY

\$ *****2.00

(A) **T** [REDACTED] **E**

F [REDACTED] **2**

(B) **LODGED BY**

Delivery
Box

Name, Address or DX and Telephone

CODES

T

TW

(Sheriff)

23C

CSB

Reference:

257030301

(C) **T** [REDACTED] **R**

Y [REDACTED] **C**

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of \$ 420,000.00 and as regards
(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple

(F) **SHARE
TRANSFERRED**

(G) **Encumbrances (if applicable):**

(H) **T** [REDACTED] **E**

TENANCY: Joint Tenants

(J) **DATE**

06.06.03

I certify that the person(s) signing opposite, with whom
I am personally acquainted or as to whose identity I am
otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real
Property Act 1900 by the transferor.

Signature of witness:

[Signature]

Signature of transferor:

[Signature]

Name of witness:

Address of witness: 99 MANN ST

GOSFORD

Certified for the purposes of the Real Property Act
1900 by the person whose signature appears below.

Signature:

[Signature]

Signatory's name:

Noel Kneale

Signatory's capacity:

Solicitor for TRANSFEREE

Form: 01T
Release: 1
www.lpi.nsw.gov.au

TRANSFER

New South Wales
Real Property Act 1900



AD31203J

PRIVACY NOTE: this information is legally required and will

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY

03-04-2007

0004165092-001

SECTION 12(3)

DUTY

\$ *****2.00

(A) [REDACTED] E

(B) LODGED BY

Delivery
Box

537C

Name, Address or DX and Telephone

ALEXANDER LEE & ASSO.

DX 8138 BLACKTOWN LPPN123389D

Reference: PHK

CODES

T

TW

(Sheriff)

(C) T [REDACTED]

(D) CONSIDERATION The transferor acknowledges receipt of the consideration of \$ 360,000.00 and as regards

(E) ESTATE the land specified above transfers to the transferee an estate in fee simple

(F) SHARE
TRANSFERRED

(G) Encumbrances (if applicable):

(H) T [REDACTED]

(I) TENANCY: ~~Joint Tenants~~

(J) DATE 30-3-07

I certify that the person(s) signing opposite, with whom
I am personally acquainted or as to whose identity I am
otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real
Property Act 1900 by the transferor.

Signature of witness:

Name of witness:

TINA MAREE JACKSON

Address of witness:

104 Watkin Ave
Hayward NSW 2256

Signature of transferor:

Certified for the purposes of the Real Property Act
1900 by the person whose signature appears below.

Signature:

Signatory's name:

ALEXANDER LEE

Signatory's capacity:

transferee's solicitor

Handwritten signature

Form: 01T
Release: 6-1

TRANSFER
New South Wales
Real Property Act 1900



AJ316304Q

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only

Office of State Revenue
(NSW)
Client No: 130697105 4230
Duty: \$10.00 Tax: 7986789-00/
Assist details:

(A) T [REDACTED] E [REDACTED]

(B) **LODGED BY**

Document Collection Box 268D
Name, Address or DX, Telephone, and Customer Account Number if any
SYDNEY LEGAL AGENTS - INFOTRACK
LLP: 132579W
Reference: AUSTIN / 173261

CODES

T
TW

OFFICE OF STATE REVENUE
(NSW)
130697105 4230
(C) [REDACTED]
ALTERATION NOTED

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of \$ 380,000.00
(E) **ESTATE** the abovementioned land transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) [REDACTED] E [REDACTED]

(I) **TENANCY:** Tenants in Common in Equal Shares

DATE 3rd March 2015

(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: PHK Group Pty Limited (ACN 123 753 720) now known as Autopak Services Pty Ltd
Authority: section 127 of the Corporations Act 2001

Signature of authorised person: [Signature]

Signature of authorised person: [Signature]

Name of authorised person: PAUL KEARNEY
Office held: SOLE DIRECTOR SECRETARY.

Name of authorised person:
Office held:

17 MAR 2015
TIME: 1-30

Certified correct for the purposes of the Real Property Act 1900 on behalf of the transferee by the person whose signature appears below.

Signature:

Signatory's name: JESSICA MARTIN
Signatory's capacity: solicitor

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 773486 Full name: Jessica Martin Signature: [Signature]

* s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

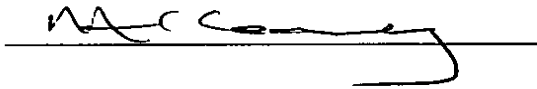
STATUTORY DECLARATION

I, **PAUL ANTONY KEARNEY**, Director, of 65 Wharf Rd, in the State of New South Wales, do hereby solemnly and sincerely declare as follows: Gladesville NSW 2111

1. I am the one of Directors of AUTOPAK SERVICES PTY LTD ACN 123 753 720.
2. The company was formerly known as PHK GROUP PTY LTD.
3. The company's name was changed from PHK GROUP PTY LTD to AUTOPAK SERVICES PTY LTD on or about the 05/02/2007 as noted on the ASIC and ABN searches. Annexed hereto and marked with the letter "A" are copies of the ASIC and ABN searches.

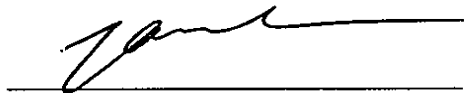
AND I MAKE this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900.

Declared by Declarant at Blacktown On the 27 February 2015



In the presence of an authorised witness, who states: I certify, pursuant to s.34 of the Oaths Act 1900 (NSW) that, in relation to the making of this Statutory Declaration:

1. I saw the face of the maker.
2. I have known the maker for at least 12 months



~~Alexander Lee, Solicitor (Law Society No. 8978)~~

Vanessa Lee, Solicitor (Law Society No. 54500)



ASIC

Australian Securities & Investments Commission

Australian Company

AUTOPAK SERVICES PTY LTD
ACN 123 753 720

Extracted from ASIC's database at AEST 12:41:18 on 27/02/2015

Company Summary

Name: AUTOPAK SERVICES PTY LTD

ACN: 123 753 720

ABN: 36 123 753 720

Registration Date: 02/02/2007

Next Review Date: 02/02/2016

Former Name(s): PHK GROUP PTY LTD

Status: Registered

Type: Australian Proprietary Company, Limited By Shares

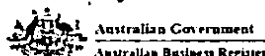
Locality of Registered Office: ST MARYS NSW 2760

Regulator: Australian Securities & Investments Commission

Further information relating to this organisation may be purchased from ASIC.

27/02/2015

Current details for ABN 36 123 753 720 | ABN Lookup



ABN Lookup

Current details for ABN 36 123 753 720

ABN details

Entity name:	AUTOPAK SERVICES PTY LTD
ABN status:	Active from 05 Feb 2007
Entity type:	Australian Private Company
Goods & Services Tax (GST):	Registered from 05 Feb 2007
Main business location:	NSW 2760

Trading name(s)

Trading name	From
PHK GROUP PTY LTD	05 Feb 2007

ASIC registration - ACN or ARBN

123 753 720 [View record on the ASIC website](#)

Deductible gift recipient status

Not entitled to receive tax deductible gifts

ABN last updated: 10 Oct 2011

Record extracted: 27 Feb 2015

Disclaimer

The Registrar makes every reasonable effort to maintain current and accurate information on this site. The Commissioner of Taxation advises that if you use ABN Lookup for information about another entity for taxation purposes and that information turns out to be incorrect, in certain circumstances you will be protected from liability. For more information see [disclaimer](#).



FOLIO: A/312912

SEARCH DATE	TIME	EDITION NO	DATE
7/4/2021	6:05 PM	8	16/11/2017

LAND

LOT A IN DEPOSITED PLAN 312912

LOCAL GOVERNMENT AREA CENTRAL COAST
PARISH OF GOSFORD COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP312912

FIRST SCHEDULE

SSKZ PTY LTD

(T AM891789)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 B268883 COVENANT

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***



SEARCH DATE

1/4/2021 2:50PM

FOLIO: B/312912

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 8076 FOL 142

Recorded	Number	Type of Instrument	C.T. Issue
31/8/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
2/11/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/11/1989	Y643121	MORTGAGE	EDITION 1
14/12/1990	Z398017	DISCHARGE OF MORTGAGE	EDITION 2
19/11/1992	E912653	TRANSFER	EDITION 3
14/12/1995	0766412	TRANSFER	EDITION 4
28/3/2001	7503300	NOTICE OF DEATH	EDITION 5
14/11/2013	AI163086	TRANSMISSION APPLICATION (EXECUTOR, ADMINISTRATOR, TRUSTEE)	EDITION 6
30/12/2013	AI266559	TRANSFER	EDITION 7
30/12/2013	AI266560	MORTGAGE	
1/4/2016	AK185926	DISCHARGE OF MORTGAGE	EDITION 8
1/4/2016	AK185927	TRANSFER	
1/4/2016	AK185928	MORTGAGE	
8/9/2018	AN695391	DEPARTMENTAL DEALING	EDITION 9 CORD ISSUED

*** END OF SEARCH ***

RP13



TRANSFER

Real Property Act, 1900



E
912653 P

①

OFFICE OF STATE REVENUE

1992/93

N14

DULY STAMPED

1ST REC N°

800254705

Office of State Revenue use only

003558



(A)

[Redacted]

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

[Redacted]

(B) **LODGED BY**

L.T.O. Box

717A

Name, Address or DX and Telephone

RAVES MARSH & CO.
SOLICITORS
219-227 ELIZABETH STREET
SYDNEY
DX 255

REFERENCE (max. 15 characters):

L - Butt

(C)

[Redacted]

(D) acknowledges receipt of the consideration of \$295,000.00

and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. NIL 2. 3.

(F)

[Redacted]



[Redacted]

as joint tenants/tenants in common

(G)

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATE** 10 November 1992

Signed in my presence by the transferor who is personally known to me.

Virginia Ann Rule

Signature of Witness

VIRGINIA ANN RULE

Name of Witness (BLOCK LETTERS)

91 KOOLANG ROAD, GREEN POINT

Address of Witness

L M Boulter

Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

B. G. Wilson

B. G. WILSON
SOLICITOR GOSFORD

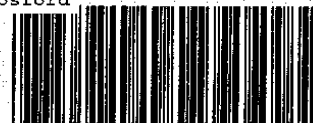
Signature of Transferee's Solicitor

[Signature]

RP13

TRANSFER

Real Property Act, 1900

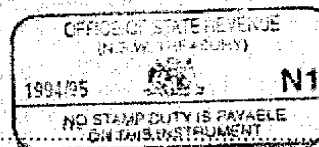


0
766412 Y



Office of State Revenue use only

032943



(A) L [REDACTED] D

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

[REDACTED]

(B) LODGED BY

L.T.O. Box

Name, Address or DX and Telephone

717A

RAVES MARSH & CO,
SOLICITORS
219-227 ELIZABETH STREET
SYDNEY
DX 255 L-BUT

REFERENCE (max. 15 characters):

(C) T [REDACTED] R

[REDACTED]

(D) acknowledges receipt of the consideration of \$1.00

and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following ENCUMBRANCES 1. NIL

2. 3.

(F) [REDACTED]

[REDACTED]

(G) T

as joint tenants/tenants in common

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. DATE 5 DECEMBER 1995

Signed in my presence by the transferor who is personally known to me.

Signature of Witness B. G. WILSON
SOLICITOR GOSFORD
Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

Signature of Witness B. G. WILSON
SOLICITOR GOSFORD
Name of Witness (BLOCK LETTERS)

Address of Witness

B. Butt.

Signature of Transferee



Form: 03AE
Release: 2-2

**TRANSMISSION
APPLICATION**
by an Executor,
Administrator or Trustee
New South Wales
Section 93 Real Property Act 1900



AI163086W

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

(A) T	E	E	
(B) REGISTERED DEALING	NUMBER		TORRENS TITLE
(C) LODGED BY	DOCUMENT COLLECTION BOX 392 C	NAME, ADDRESS OR DX, TELEPHONE, AND CUSTOMER ACCOUNT NUMBER IF ANY SYDNEY LEGAL AGENTS LLP : 128005 Y REFERENCE: DM-30074 Tappell - 79749	CODE AE
(D)	E	R	
(E)	L		

- (F) The abovementioned applicant, being entitled as executor of the will of the deceased registered proprietor (who died on 7 July 2013) pursuant to probate No. 2013/00231246 granted on 5 November 2013 (a certified copy of which is lodged herewith) hereby applies to be registered as proprietor of the estate or interest of the deceased registered proprietor in the abovementioned land

DATE 11 November 2013

(G)

I certify I am an eligible witness and that the applicant signed this dealing in my presence.
[See note* below]

Certified correct for the purposes of the Real Property Act 1900 by the applicant.

Signature of witness:

James Patrick Maitland

Signature of applicant:

James Patrick Maitland
James Patrick Maitland

Name of witness:

James Patrick MAITLAND

Address of witness:

1-5 Baker St.,
GOSFORD NSW 2250

- (H) This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS. The applicant's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 519716 Full name: James Patrick Maitland Signature: *James Patrick Maitland*

* s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

Evidence sighted ~~and returned~~ (office use only): *Am*

Form: 01T
Licence: 01-05-025
Licensee: LEAP Legal Software Pty Limited
Firm name: Patrick McHugh & Co

TRANSFER

New South Wales
Real Property Act 1900



AI266559E

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the use of this form for the establishment and maintenance of the Real Property Register. Section 30B of the RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only

(1)

Client No: 3915362

Duty: 10

Trans No: 7410659

358

Asst details:

(A) [REDACTED]

[REDACTED] 2

(B) LODGED BY

Document
Collection
Box
601V

Name, Address or DX, Telephone, and Customer Account Number if any

LLPN: 123440G
HSBC

Reference: 696220 DALE

CODES

T
TW

(C) T [REDACTED]

[REDACTED]

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$615,000.00

(E) ESTATE

the abovementioned land transfers to the transferee an estate in fee simple.

(F) SHARE
TRANSFERRED

Whole

(G) Encumbrances (if applicable):

(H) [REDACTED]

[REDACTED]

(I) **TENANCY: Joint Tenants**

DATE

(J) I certify I am an eligible witness and that the transferor signed this dealing in my presence.
[See note* below]

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of witness:

Signature of transferor:

Name of witness:

M. J. CRUTCHLEY
Mervyn John Crutchley

Address of witness:

38 PICNIC POINT ROAD

PANANIA
NSW 2213

Certified correct for the purposes of the Real Property Act 1900 on behalf of the transferee by the person whose signature appears below.

Signature:

Signatory's name: Patrick John McHugh

Signatory's capacity: Solicitor for the Transferee

(K) The transferee's agent certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 523459 Full name: Shelley Onysko Signature: [Signature]

Annexure **A** to TRANSFER

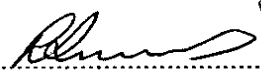
Parties: Lynette Adele SMITH and Noel Sanders WRIGHT (Transferors)
and Nadeem MOHAMMED and Johanna Elizabeth DALE (Transferees)

Dated:/...../.....

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

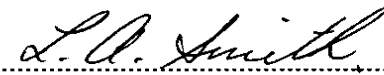
Signature of witness:


.....

Signature of transferor:

Name of witness:

RHONDA SIMMONS


.....
Lynette Adele Smith

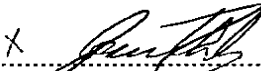
Address of witness:

UNIT 13 B THORNTON TOWER
SURFERS PARADISE
.....

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

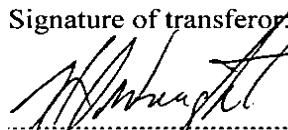
Signature of witness:


.....

Signature of transferor:

Name of witness:

M. J. CRUTCHLEY
Mervyn John Crutchley


.....
Noel Sanders Wright

Address of witness:

38 PICNIC POINT ROAD
PANANIA
NSW 2213



FOLIO: B/312912

SEARCH DATE	TIME	EDITION NO	DATE
7/4/2021	6:05 PM	9	8/9/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY WESTPAC BANKING CORPORATION.

LAND

LOT B IN DEPOSITED PLAN 312912

LOCAL GOVERNMENT AREA CENTRAL COAST
PARISH OF GOSFORD COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP312912

FIRST SCHEDULE

CHARLES ELIAS NASR

FADIA NASR

AS JOINT TENANTS

(T AK185927)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 B268883 COVENANT
- 3 AK185928 MORTGAGE TO WESTPAC BANKING CORPORATION

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***



Photo 1 - 1965



Photo 2 - 1975



Aerial Photographs
53-55 Donnison Street West
Gosford

CLIENT: Australian Luxury Living

PROJECT: 203360.00

PLATE No: 1

REV: 0

DATE: 8-Apr-21



Photo 3 - 1998



Photo 4 - 2002



Aerial Photographs
53-55 Donnison Street West
Gosford

CLIENT: Australian Luxury Living

PROJECT: 203360.00

PLATE No: 2

REV: 0

DATE: 8-Apr-21



Photo 5 - 2006



Photo 6 - 2017



Aerial Photographs
53-55 Donnison Street West
Gosford

CLIENT: Australian Luxury Living

PROJECT: 203360.00

PLATE No: 3

REV: 0

DATE: 8-Apr-21



Photo 7 - 2018



Photo 8 - 2019



Aerial Photographs
53-55 Donnison Street West
Gosford

CLIENT: Australian Luxury Living

PROJECT: 203360.00

PLATE No: 4

REV: 0

DATE: 8-Apr-21

Image 1: BH7



Image 2: Retaining structure across the southern portion of site



Image 3: Existing townhouse development



Image 4: BH5



Image 5:

