

DETAILED SITE INVESTIGATION

46-50 MEREDITH STREET BANKSTOWN, NSW

FOR MACE GROUP

C/- C & J BOVA PROPERTY INVESTMENTS PTY LTD

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EXECUTIVE SUMMARY

STS GeoEnvironmental Pty Ltd (STS) was commissioned by MACE Group on behalf of C & J BOVA Property Investments Pty Ltd to conduct a Detailed Site Investigation (DSI) for the properties located at 46-50 Meredith Street, Bankstown NSW, hereafter referred as “the site”.

The site is roughly rectangular and covers an area of 3,103 m². Three (3) stand-alone single storey brick/weatherboard residence currently occupy the site which is zoned as ‘B4 – Mixed Use’ under the Bankstown Local Environmental Plan 2015. The site is being proposed for a high density residential development which will consist of a multi- level boarding house over two levels of basement.

STS carried out a Geotechnical Investigation (GI) for the site in November 2017 which included soil sampling and laboratory screening of common Contaminants of Potential Concern (CoPC). The analytical results indicated that CoPC were detected in selected soil samples at concentrations below the NEPM 1999, 2013 HIL-B (criteria protective of human health and ecological receptors within a high density residential setting).

The purpose of the DSI is to identify potential contamination at the site in determining the acceptability of the human-health exposure and ecological risks for consideration of the land suitability for its proposed development.

The tasks involved in undertaking the DSI include the following:

- Review of the previous reports pertaining to the site;
- Site inspection;
- Intrusive investigation at seven (7) locations and collection of representative soil samples;
- Chemical analysis of selected soil samples at NATA accredited laboratories; and
- Data interpretation, assessment and reporting.

Aerial images of the site and surrounds indicated that the the northern portion of the site was occupied by structures of varying sizes at least from the 1930. Redevelopment at the site occurred in the 1950s and involved the construction of structures consistent with low density residential land use. No other site redevelopment has been observed at the site.

The intrusive investigation works for the DSI were completed on 22 December 2018 and were carried out by way of boreholes advanced at seven (7) locations across the site. Fill material consisted of silty clays and minor gravel and sand inclusions were encountered in three (3) boreholes extending to depths ranging from 0.15m to 0.5m below existing ground level. Groundwater was not encountered in any of the boreholes.

Twenty (20) soil samples were recovered at different depths intervals in fill and natural soil encountered at the borehole locations. Selected soil samples were submitted to NATA

accredited laboratories to screen for Contaminants of Potential Concern (CoPC). The strategy adopted for the analytical soil test was based on the GI 2017 results, review of site history, the formulated Conceptual Site Model (CSM), site observations made during the site inspection and outcome of the field screening test.

Analytical soil test results were compared against generic NEPM 1999, 2013 HIL B assessment criteria. NEPM generic EILs/ESLs and calculated site specific EILs (copper, chromium, nickel and zinc) were adopted for the assessment for the protection of ecological receptors.

CoPC were detected at levels below the laboratory limit of reporting or within background ranges. However, asbestos contamination (bonded ACM and friable) exceeding the NEPM 1999, 2013 HIL B criteria was identified in surface soil recovered from one location of the site (BH104, 0.1m). Further, one marginal exceedance of site-specific zinc EIL occurred for one soil sample (BH101, 0.1m).

STS understand that the site is currently occupied. Therefore, the asbestos contamination hotspot identified at the site must be immediately barricaded and managed in accordance with regulatory requirements.

STS consider that the site is suitable for the intended use provided it is developed according to the proposed development plans and layout configuration. However, the asbestos contamination hotspot must be remediated prior to the proposed redevelopment work. Further, STS recommend a Hazardous Material survey, a soil waste classification and an Unexpected Find Protocol to be undertaken for the site.

1. INTRODUCTION

STS GeoEnvironmental Pty Ltd (STS) were engaged by Mace Group (on behalf of C & J BOVA Property Investments Pty Ltd) to undertake a Detailed Site Investigation (DSI) for the land located at 46-50 Meredith Street, Bankstown, NSW, hereafter referred as 'the site'.

A Geotechnical Investigation and Soil Sampling Program (GI-SSP) was previously completed by STS and should be read in conjunction with this report. The findings of the (GI-SSP) are summarised in Section 5 of this report.

The objectives of the DSI were the following:

- Establish the site history and usage;
- Determine the occurrence of past and current potentially activities which occurred at the site;
- Establish the distribution of contamination across the site; and
- Assessment of the suitability of the site for the intended use.

The investigation was performed in accordance with the Environment Protection Authority (EPA) and the national guidelines for the assessment and management of land contamination.

The scope of the DSI includes the following:

- Review of previous reports pertaining to the site;
- Review of readily available historical records related to the site and surrounding;
- Undertake a site inspection;
- Establish a preliminary Conceptual Site Model (CSM);
- Intrusive site investigation by way of boreholes at seven (7) locations across the site;
- Soil sampling from 7 locations across the site;
- Laboratory analyses of selected soil samples for a range of Chemicals of Potential Concern(CoPC);
- Validation and interpretation of analytical and Quality Assurance (QA) data;
- Evaluation of potential contaminant exposure pathways for current and future receptors both onsite and offsite;
- Establishment of a Conceptual Site Model (CSM);
- Assessment of potential risk to human-health and the environment;

- Recommendations for the site in accordance with the relevant guidelines for the assessment and management of site contamination; including recommendation for any further investigation or remediation/management that may be required; and
- Prepare a confidential report for Mace Group (on behalf of C & J BOVA Property Investments Pty Ltd).

2. REDEVELOPMENT AND PROPOSED LAND USE

STS understand that the proposed development will be carried in two stages. Based on the architectural plans provided by the client, the site is to be redeveloped for a high-density residential land use (boarding house). The proposed redevelopment will involve demolition of all existing site structures and the construction of a multi-level residential buildings over two level of basement. Further, about 10% of the site (327m²) is proposed as deep soil. The proposed development plans are presented in Appendix A.

3. SITE IDENTIFICATION

The site is roughly rectangular and covers an area of 3,103m². Four (4) Lots constitute the site as described in Table 3.1 below.

Table 3.1– Surrounding Land Use

Street Address	Deposited Plan (DP)
46 Meredith St, Bankstown NSW	Lot 1 DP 184630
46 Meredith St, Bankstown NSW	Lot 215 DP 1061972
48 Meredith St, Bankstown NSW	Lot C DP 403280
50 Meredith St, Bankstown NSW	Lot 1 DP 974382

The 4 Lots are located within the Parish of Bankstown, County of Cumberland and are zoned as “B4-Mixed Used”. The site location is presented in Drawing 18/3620/1.

The site fronts Meredith Street to the east over approximately 50 m. An existing single storey residence building and concrete car park limits the site to the north, medium and low-density residential to the west and apartment block borders the site to the south.

The existing ground level of the site falls gently to the south. The site configuration and immediate surrounding land uses are presented in Drawing 18/3620/2.

4. SURROUNDING LAND USES

The site is located within an area under mixed residential and commercial land use. The current land use on the neighbouring land is presented in Table 4.1 below.

Table 4.1 – Surrounding Land Use

Direction relative to the site	Land Use
North	Dental clinic and medium density residential beyond
East	Meredith Street and mixed high density residential/commercial beyond.
South	Medium and low density residential
West	Medium and low density residential

Bankstown Public School and Salt Pan Creek, located respectively at about 750m and 900m to the south, are the most sensitive land uses in the vicinity of the site.

5. PREVIOUS INVESTIGATIONS

STS (December 2017) completed a Geotechnical Investigation (GI) for the site. The GI report is titled:

- *Geotechnical Investigation for C & J BOVA Property Investments Property Pty Ltd, 40-50 Meredith Street, Bankstown NSW, Report No. 17/3747, Project No. 21794/9027C, December 2017.*

The GI which included a soil sampling and testing program had the following scope :

- Intrusive investigation by way of six (6) boreholes advanced at different locations across the site to assess the subsurface conditions across the site;
- Foundation design parameters;
- Site classification as per AS2870;
- Assessment of soil aggressiveness to steel and concrete;
- Recommendations for excavation support in the short and long-term; and
- Vibration control for the proposed excavation.
- Soil sampling;
- Analysis of selected soil samples at NATA accredited laboratories;
- Preliminary determination of potential onsite contamination sources; and

- Preliminary assessment of human health and environmental health risks.

6. PREVIOUS INVESTIGATION FINDINGS

Fourteen (14) soil samples recovered from seven locations across the site were selected for laboratory testing. The Contaminants of Potential Concern (CoPC) targeted during the analysis program included Heavy Metals (HM); Benzene, Ethylbenzene, Toluene, Xylenes (BTEX), Petroleum Hydrocarbons, Polycyclic Aromatic (PAHs), Organochlorine and Organophosphorous Pesticides (OCPs and OPPs), Phenolic Compounds (Phenols), Polychlorinated Biphenyls (PCBs) and Asbestos.

The analytical results indicated that CoPC were detected at levels below the laboratory limit of reporting (LOR) or at Australian soil background levels. Further, asbestos was not identified in any of the soil samples.

The analytical data generated from the laboratory analysis program were used with assumptions in a preliminary risk assessment of potential harm to human health within the proposed site development setting. NEPM 1999 (2013) HIL-B were adopted as the assessment criteria.

The results of the preliminary risk assessment indicated low potential for harm to human health within the proposed development setting.

7. SITE FEATURES

A walkover of the site was carried out on 22 November 2018 before the start of the intrusive investigation activities to validate the findings gathered from historical documents and to assess the land conditions of the site and surrounding.

A plan showing the existing site configuration is shown in Drawing No. 18/3620/2. At the time of the site survey, only Lot 215 in DP 1061972 was vacant. The remaining three lots were occupied by stand-alone one storey residence. A fibro shed was in the backyard on Lot 1 in DP 974382 and Lot 1 in DP 184630. A pile of timber and steel were identified on Lot 215 in DP 1061972.

The perimeter of the residences and sheds occupying the lots is covered with concrete. Vegetation at the site consisted of mature trees fronting Meredith Street and the southern boundary of the site. An area of overgrown vegetation occupied the back of Lot 1 in DP 184630. The remaining areas of the site are covered with grass.

No other visual or olfactory observation associated with potential contamination was made.

8. GEOLOGY AND HYDROGEOLOGY

Based on the Sydney Geological series, it indicated that the site is underlain by Triassic Age Bringelly Shale of the Wianamatta Group which comprises shale, claystone and laminite.

The site geology was revealed by thirteen boreholes advanced at the site. Six (6) boreholes were advanced within the scope of the 2017 GI and seven (7) additional were drilled as part of the DSI. The location of the boreholes advanced at the site during the GI-SSP is presented in Drawing 18/3620/3.

Reference to the historical and current borehole logs indicated that fill material was encountered at four sampling locations namely BH 104, BH5, BH 106 and BH 107. The layer of fill extending from the existing ground level to depths ranging 0.15m to 0.5m below the existing ground level (bgl). The fill material encountered at the site consisted mainly of silty clay with sand and gravel. Underlying the fill material was residual silty clays.

The soil profiles encountered in the boreholes advanced at the other sampling locations consisted of top soil (silty clay) overlying residual silty clays. Shale bedrock was encountered at depths ranging from 1m to 2.6m below existing grade (GI 2017).

Ground water was not encountered in any of the boreholes advanced at the site. Three boreholes (BH1, BH2 and BH4) advanced during the 2017 GI-SSP were completed as piezometers. A site visit was carried out to measure the water level in the piezometers. Standing water level in the well was reported to range from 7.9m to 8.2m bgl.

A search of the NSW Office of Water and groundwater database was carried out by STS. The search results indicated that no registered groundwater bores were located within 500m of the site. Registered bores closest to the site are located to the east/northeast within of about 1km to 1.5km.

Further, our review of the Botany Bay Acid Sulfate Soil Risk map (Department of Land and Water conservation, 1997) indicated that the site is in an area of “no known occurrences of acid sulfate soil materials”.

Base on the results of the GI, DSI and the information gathered from the registered borehole search, a Preliminary Hydrogeological Model (PHM) of the site was established and is presented in Table 8.1 below.

Table 8.1 – Preliminary Site Hydrogeological Model

Aquifer Type and Lithology:	Fractured bedrock – Bringelly Shale
Perched groundwater:	Not expected to be present at the site.
Depth to Regional Aquifer at Site:	>1.5m
Local Groundwater Flow Direction:	South towards Salt Pan Creek.
Regional Groundwater Flow Direction:	South to the southwest (S-SW)
Receiving Environments:	Local: Salt Pan Creek located approximately 900m to the south of the site. Regional: Georges River

9. HYDROLOGY

No permanent surface water bodies were identified on the site. Stormwater from the site occurs as runoff over hard stand areas towards piped underground drains. Based on site observations, it appears that stormwater drains towards the south.

There are no natural water courses within 500m radius of the site. The major surface water features in the locality are Salt Pan Creek and Georges River located at about 900m and 1.5km due south respectively

10. SITE HISTORY

STS reviewed the following sources of historical information:

- Selected aerial photographs of the site and surrounds;
- Section 10.7 planning certificate;
- Historical land titles; and
- NSW EPA contaminated site register; and
- POEO Licence register.

10.1 Aerial Photographs

Aerial photographs of the site and surrounds dated; 1930, 1956, 1965, 1975, 1986, 1994, 2007 and 2018 were obtained from Land and Property Information (LPI) NSW. A summary of the observations made from the photographs are presented in Table 10.1 below. Copies of the selected aerial photographs reviewed for this assessment are provided in Appendix C.

Table 10.1 – Aerial photograph interpretation

Year	Site Features	Surrounding Land Use
1930	A warehouse like structure appears to encroach onto the site to the northwest and east of this structure are minor site buildings. The remaining area of the site is vacant.	Most of the surrounding land are developed except further west to the site where portion of land is undeveloped. Overall land use across the locality appears to be mainly residential.
1956	It appears that the site has been subdivided. Existing structures have been removed and three stand-alone residences and other minor structures have been built on the site.	Development occurred across the locality and it appears that the low density residential is still the predominant land use across the locality. Ground disturbance is identified on a site further to the northwest of the site.
1965	The site remains largely unchanged.	Surrounding land use remains largely unchanged except for commercial development on land further east of the site.
1975	The site remains largely unchanged.	Surrounding land use remains largely unchanged.
1986	The site remains largely unchanged.	Commercial/Industrial development to the east and southeast of the site.
1994	The site remains largely unchanged.	Surrounding land use remains largely unchanged.
2007	The site remains largely unchanged.	Surrounding land use remains largely unchanged.
2018	The site remains largely unchanged.	Surrounding land use remains largely unchanged.

10.2 Planning Certificate

The Section 10.7 Planning Certificates (formerly section 149) for the site were reviewed. A copy of the certificates obtained from the Canterbury Bankstown Council is presented in Appendix B. The information gathered from the review of the documents indicates that no notice had been issued to the site related to contamination risk under the provisions of the

Contaminated Land Management Act 1997. Further, the site had never been subjected to an NSW EPA Site Audit.

10.3 Historical Title Search

STS requested a historical title search for the four (4) Lots forming the site. The title records obtained from the NSW Land Titles Office are presented in Appendix D. STS review of the title deeds indicated that various individuals have owned the land over the years and C J Bova Pty Ltd and John Anthony Bova are the current owners of the site.

A summary of the historical ownership of the site the site is presented below from Table 10.2 to Table 10.5 inclusive.

Table 10.2 – Historical land title summary for Lot 1 in DP 184630

Period	Registered Owner
1991 - present	C J Bova Pty Ltd & John Anthony Bova
1988- 1991	Colin John Bova & John Anthony Bova
1981 - 1988	Roy Vitetta, Matthew Vitetta & Providenza Vitteta
1965 - 1981	Thora Teresa Corstorphan
1936 - 1965	Herbert John Smith (Pastrycook)
1932- 1936	Eric Roy Childs (Electrician)

Table 10.3 – Historical land title summary for Lot 215 in DP 1061972

Period	Registered Owner
1991 - present	C J Bova Pty Ltd & John Anthony Bova
1988 - 1991	Colin John Bova & John Anthony Bova
1981 - 1988	Roy Vitetta, Matthew Vitetta & Providenza Vitteta
1980 - 1981	Thora Teresa Corstorphan
1957 - 1980	Hebert John Smith
1942 - 1957	Arthur George Williamson
1940 - 1942	William John Francis Jones & Lilian Mary Jones
1938 - 1940	William John Francis Jones
1937 - 1938	Lilian Mary Jones
1912- 1937	Steward Mc Donald (Labourer)

Table 10.4 – Historical land title summary for Lot C in DP 403280

Period	Registered Owner
2001 - present	C J Bova Pty Ltd
1988 - 2001	C J Bova Investments Pty Ltd
1978 - 1988	George Hall Medical Management Services Pty Ltd
1977 - 1978	Simon Brook Hinchcliffe
1942 - 1977	Arthur George Williamson
1940 - 1942	William John Francis Jones & Lilian Mary Jones
1938 - 1940	William John Francis Jones
1937 - 1938	Lilian Mary Jones
1912- 1937	Steward Mc Donald (Labourer)

Table 10.5 – Historical land title summary for Lot 1 in DP 974382

Period	Registered Owner
1999 - present	C J Bova Investments Pty Ltd
1996 - 1999	LIGON 268 Pty Ltd
1983 - 1996	Christos Mitrofanis
1978 - 1983	Isidora Tizzzone & Maria Tizzzone
1973 - 1978	Antoine Ghanem & Nahad Ghanem
1946 - 1973	Frederick Arthur McDonald
9/7/1946 – 12/8/1946	Elizabeth McDonald
1913- 1946	Frederick McDonald

10.4 NSW EPA Contaminated Land Register

A review of the NSW EPA public register of contaminated sites revealed that as of 20 December 2018, there were no records of any notices issued under *Section 58* of the *Contaminated Land Management Act, 1997* for the site or the surrounding properties.

A search of the same register was also conducted for the land under the Bankstown City Council area. The results indicated that thirty one (31) notices were issued to nine (9) sites. A copy of the search results is presented in Appendix E.

A search of the NSW EPA Licence Register indicated was conducted on 20 December 2018 and the results indicated that no licences has ever been issued to the site.

10.5 Site History Summary

The history of the site has been established based on the historical records review, a walkover inspection, and anecdotal information provided by the current owner of the property.

A review of the title search results indicated that the site was owned mainly by individuals. Based on historical aerial imagery, it appeared that the northern portion of the site was occupied structures at least from the 1930s. At that time the remaining area of the site appeared vacant and possibly covered with thin vegetation (mainly grass).

It appears that the site was subdivided in the 1950s and redeveloped for low density residential land use. Information gathered from subsequent aerial photographs indicated that no other redevelopment occurred at the site.

Based on the local topography and information gathered from intrusive investigations (GI 2017 and DSI), it appeared that the southwestern corner of the site has been filled. The exact timing of the site filling is unknown.

In the 1930s, land development occurred across the locality, although some land parcels were still vacant. By 1956, nearly all available land in the locality was developed and the land use was mainly low-density residential. Over the years to present, land to the east/northeast of the site were gradually developed for commercial land use.

11. CONCEPTUAL SITE MODEL

STS develop a Conceptual Site Model (CSM) based on the site history review, site inspection, the intrusive site investigation, and the proposed land use. The CSM is a tool used to assess the potential environmental concern at the site in regard to contamination sources, contaminants migration pathways and the potential impacts on the human and ecological receptors at the site and off-site.

11.1 Contaminant Sources

Based on the historical records review, site inspection, and anecdotal information, STS considered the following to be contaminating activities which occurred on the site:

- Inappropriate demolition operation of former site structures;
- Site filling from unknown source; and
- Potential historical use of pesticides around and under the residences and site building.

Potential contaminant sources, receptors and possible exposure pathways are presented in Table 11.1 below.

Table 11.1 – Conceptual Site Model (CSM)

Contaminant Source	Location	Potential Contaminants of Concern	Exposure Pathways	Potential On-site Receptors	Potential Off-site Receptors
Inappropriate demolition operations	Surface soil within the footprint of former site structures and other areas of the site.	Asbestos and Heavy Metals	Inadvertent ingestion, direct contact and dust inhalation. Root uptake by vegetation	Construction workers, intrusive maintenance workers, existing and future site occupants. Other terrestrial fauna species living within the site boundaries and proximity. Vegetation in proposed deep soils	Occupants/visitors of the neighbouring site during proposed excavation due to exposure to potentially contaminated fugitive dust.
Imported fill	Within the southwest area of the site.	Heavy metals, TPHs, TRHs, MAHs, BTEX, PAHs, PCBs, and asbestos.	Inadvertent ingestion, direct contact and dust inhalation. Root uptake by vegetation	Construction workers, intrusive maintenance workers, existing and future site occupants. Other terrestrial fauna species living within the site boundaries and proximity. Vegetation in proposed deep soils	Occupants/visitors of the neighbouring site during proposed excavation due to exposure to potentially contaminated fugitive dust.
Historical use of pesticides	Surface soil around existing and former building structures	OCPs and OPPs	Inadvertent ingestion, direct contact and dust inhalation.	Construction workers, intrusive maintenance workers, existing and future site occupants.	Occupants/visitors of the neighbouring site during proposed excavation due to exposure to potentially contaminated fugitive dust.

12. SAMPLING, ANALYSIS AND QUALITY PLAN (SAQP)

STS developed a SAQP to ensure that data collected for the DSI is representative and provide an appropriate basis for the contamination assessment of the site. The SAQP was developed in accordance with NEPM 1999, 2013 guidelines. The SAQP included the following:

- Data quality objectives (DQO);
- Sampling methodology and procedures;
- Field screening;
- Sampling handling, storage and transfer procedures; and
- Analytical Quality Assurance/Quality Control (QA/QC).

13. DATA QUALITY OBJECTIVES (DQO)

The *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM) (and updated April 2013) and Australian Standard (AS) 4482.1-2005 recommend the implementation of data quality objectives (DQOs) during the investigation of potentially contaminated sites. The DQO process described in AS 4482.1-2005 outlines seven distinct steps which are designed to ensure an investigation is performed in a structured and efficient manner. The seven steps and the associated processes that were implemented to ensure data and decision-making quality are outlined below:

Step 1 – State the Problem

The site was predominantly under low density residential land use and is being proposed for redevelopment into a of a multi-level residential building (boarding house) over two level of basement. STS carried out a GI at the site in November 2017. Site filling was identified at one sampling location within the southwestern portion of the site. CoPC was detected at concentrations below the assessment criteria (NEPM 1999, 2013 HIL-B). Investigation of potential contamination across the site is required to assess potential significance for the proposed development.

Step 2 – Identify the Decision

To assess the suitability of the site for the proposed mixed high-density residential land use, the characterisation of soil contamination across the site is required.

The scope of the DSI would be able to characterise the extent of contamination across the site and to assess the associated potential human and ecological risks in relation to the proposed site development and the proposed site layout configuration.

Step 3 – Identify Inputs to the Decision

The inputs to the decision are the following:

- Review of previous investigation (GI 2017)
- Soil sampling from seven (7) boreholes nominated at locations across the site;
- Analysis of selected soil samples at a NATA accredited laboratory;
- Implement a quality assurance/quality control (QA/QC) programme; and
- Interpretation of the analytical results.

Step 4 – Define the Study Boundaries

The DSI covered the entire site which is located at 46-50 Meredith Street, Bankstown, NSW. The site boundaries are defined in Section 3 and are shown on Drawing No. 18/3620/2.

Step 5 – Develop a Decision Rule

To determine whether the soil at the site could potentially pose any significant human-health and ecological risks in a high-density residential land use setting, results of the laboratory analyses (historical and current) will be compared to the NEPM HIL B criteria and other NSW EPA endorsed criteria. Quantifiable standards to assess data quality are also implemented.

If the concentrations of contaminants detected in the soil samples exceeds the assessment criteria; an assessment of the need for further investigation, remediation and/or management of identified soil contamination will be undertaken.

Step 6 - Specify Limits on Decision Errors

Acceptable limits of decision errors were set concerning specific Data Quality Indicators (DQI) to ensure the precision, accuracy, completeness, and comparability of analytical data. A field Quality Assurance (QA) program was also implemented.

Step 7 – Optimize the Design for Obtaining Data

The following was implemented in the design for obtaining quality data to enable the project objectives to be met:

- Validation of historical analytical data;
- Collection of an appropriate number of soil samples in boreholes advanced across the site;
- Storage and transport of soil in an appropriate manner to ensure quality objectives and sample integrity.

- Analysis of selected soil samples for CoPC based on information gathered from the historical analytical data, established site history, formulated CSM and field testing/observations;
- Appropriate sampling methods and analytical testing methods to ensure soil samples are representative of the current site conditions;
- Implementation of an appropriate analytical program for soil samples which was executed by NATA accredited laboratories.

14. FIELD INVESTIGATION

The field activities for the DSI were undertaken by STS on the 22 November 2018. The assessment was performed according to the following:

- EPA guidelines comprising:
 - *Contaminated Sites: Sampling Design Guidelines, 1995;*
 - *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, 1997;*
 - *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition 2017);*
 - *Managing Asbestos In or On Soil, March 2014;*
 - *Technical Note: Investigation of Service Station Sites (EPA, 2014); and*
 - *Vapour Intrusion, Technical Practical Note, 2010.*
- Department of Environment, Climate Change, and Water (DECC): Implementing the protection of Environment Operations (UPSS, 2008);
- *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites* published by the Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council, January 1992 (ANZECC Guidelines);
- Australian Standard 4482.1-2005: *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-volatile and Semi-Volatile Compounds, 2 November 2005, Standards Australia;*
- *Guidelines for the Assessment, Remediation, and Management of Asbestos-Contaminated Sites in Western Australia*, Western Australian Department of Health (WA DOH), 2009;

14.1 Soil Sampling Locations

The sampling nominated locations were governed by the presence of site constraints (existing site structures and underground services), the locations of previous sampling locations and the proposed site configuration. In total seven (7) sampling locations were nominated under the scope of the DSI. The sampling locations (including the historical) are presented in Drawing 18/3620/3.

14.2 Soil Sampling

Five (5) of the boreholes were advanced with a ute mounted drilling rig (BH101 through BH105 inclusive). BH106 and BH107 were auger drilled due to site access constraint.

In total twenty (20) soil samples (including duplicates) were retrieved at different depths along the soil profiles encountered in the seven (7) boreholes. The depths at which samples were recovered in each borehole were referenced to the depth below existing ground surface at each borehole location. All the soil samples collected at the site were visually inspected and documented on the borehole logs presented in Appendix F.

Fill/native soil samples were recovered directly from the auger using new disposable latex gloves for each sample collection. Following collection, the samples were transferred into new clean jars and 500 ml plastic zip lock bags provided by Australian Laboratory Services (ALS). No sample mixing was carried out to ensure the integrity of the samples and to minimise the potential loss of volatiles.

All jars were filled with zero headspaces and then placed into ice-cooled container. Selected soil samples were then submitted to NATA accredited laboratories under a Chain of Custody (COC). A copy of the COC is provided in Appendix G.

All sampling activities were carried out under the supervision of a qualified environmental engineer from STS.

14.3 Field Screening

Selected soil samples were screened using a Photoionization Detector (PID) which was calibrated with a 100ppm iso-butylene calibration gas. Soil samples were recovered at different depths in the boreholes and placed in sealed plastic bags. The PID probe was inserted in the headspace of the sample containers to screen for volatiles. PID reading were recorded on the borehole logs.

14.4 Equipment Decontamination

Solid flight and hand augers were decontaminated between sampling location using distilled water until the augers were free of any residual materials.

14.5 Analytical Programme for Soil Samples

The selection of analytes was based on the following information:

- Site history established by the DSI;
- GI 2017 analytical data review;

- Visual and olfactory observations during field works; and
- Formulated Conceptual Site Model (CSM).

Selected soil samples were analysed for a broad range of potential contaminants including:

- Heavy metals;
- Total petroleum hydrocarbons (TPH);
- Monocyclic aromatic hydrocarbons (MAH);
- Polycyclic aromatic hydrocarbons (PAH);
- Organochlorine pesticides (OCP);
- Polychlorinated biphenyls (PCB);
- Phenolic compounds; and
- Asbestos

Details of the soil analysis programme are presented in the COC presented in Appendix G.

15. QUALITY ASSURANCE PROGRAM

In accordance with the NEPM 2013 and AS 4482.1-2005, Quality Assurance (QA) of data was a key component of this investigation to assess the representativeness/integrity of samples and accuracy/reliability of the analytical results.

The QA procedures, actions and checks implemented during the investigation include:

- Implementation of appropriate soil sampling methods in accordance with the EPA requirements, the NEPM 2013 and other endorsed guidelines;
- Appropriate sample handling and transportation, and analysis of samples within recommended holding times;
- Collection and analysis of quality control (QC) samples;
- Implementation of internal laboratory QC analyses; and
- The use of the National Association of Testing Authorities (NATA) registered laboratories (primary and secondary) and methods.

15.1 Quality Control Sampling

Inaccuracies in sampling and analytical programs may be due to many causes, including a collection of unrepresentative samples, cross-contamination between samples, unanticipated interferences between elements during laboratory analyses, equipment malfunctions, and operator's error. Inappropriate sampling, preservation, handling, storage, and analytical techniques can also reduce the precision and accuracy of results.

To address these potential data quality issues, a field-based QC program was undertaken to measure the effectiveness of the QA procedures by comparison with acceptance criteria. The NEPM has documented procedures for QC sampling and analysis to ensure that the required degree of accuracy and precision is obtained. The NEPM and EPA guidelines recommend the use of two laboratories for the implementation of a field QC program in addition to the internal laboratories' QC procedures, which are required as per their NATA registration.

According to the NEPM, the collection of intra and inter-laboratory duplicate samples is required, along with blank samples. Intra-laboratory and inter-laboratory samples are duplicates of primary samples that are collected in the field. Intra-laboratory samples are analysed by the primary laboratory and are used as a check on the precision of the sampling and analytical procedures. Inter-laboratory samples are analysed by a secondary laboratory and provide a check as to the accuracy of the analytical data.

According to the NEPM, a split of a minimum of 10% of the primary samples as field duplicate samples (5% inter-laboratory and 5% intra-laboratory) as well as blanks is required. Where less than 20 samples are to be analysed, a minimum of two field duplicate samples (one inter-laboratory and one intra-laboratory) and a blank is generally considered sufficient. Blanks are generally collected on each day that sampling is performed and are analysed where necessary.

For this DSI, the following field quality control samples were collected and analysed:

- Two (2) intra-laboratory duplicate soil sample;
- One (1) inter-laboratory duplicate soil sample;
- One (1) rinsate and one (1) trip blank sample.

15.2 Quality Control Criteria

A check on the comparability of the field duplicate sample results is achieved by calculating the Relative Percent Difference (RPD). RPDs are calculated as the absolute value of the difference between the primary and duplicate sample results, divided by the average value, expressed as a percentage.

According to AS 4482.1-2005 (and referenced in the NEPM), RPDs below 50% are considered to have demonstrated a good correlation between duplicate sample results. However, AS 4482.1-2005 also states that the acceptable variation between results can be higher for organic analytes than for inorganics; and for low concentrations of analytes. In view of this, and based on STS GeoEnvironmental experience, RPDs up to 70% are acceptable for organic species. RPDs of 100% or more are generally considered to demonstrate a poor correlation unless results are less than five times the laboratory detection limits.

15.3 Laboratory Quality Control

An internal laboratory QC program involves the preparation and analysis of its own duplicate samples, reagent blanks and control samples (where the analyte concentration is known) or matrix spikes. Duplicate samples are subjected to the same preparation and analytical procedures as primary samples. The laboratories are required to analyse matrix spikes or control samples at a minimum frequency of 5% of the total number of primary samples in each sample batch. The laboratory compares the results of method blanks, duplicates and control sample analyses to established quality assurance criteria for data precision and accuracy. If the results do not meet the criteria, then the analyses would be repeated.

The relevant criteria are:

- Method blanks should not return any positives on analysis;
- Duplicate samples should not vary by more than 35% from the mean result; and
- Control samples should generally give a recovery of 75-125%.

16. ASSESSMENT CRITERIA

The assessment criteria for this investigation have been selected with consideration of the proposed high density development proposed at the site. Analytical laboratory results of selected soil samples were compared to investigation levels published in the following:

- *National Environment Protection (Assessment of Site Contamination) Measure* (NEPM 1999, 2013), Environment Protection Council (NEPC), December 1999 (updated April 2013); and
- *CRC Care Technical Report No. 10: Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater* (Friebel, E & Nadebaum, 2011);

The selected assessment criteria are presented in Table 16.1 to Table 16.2 and the rationale for the selection are provided in the following sections.

16.1 Human Health

As outlined in Section 2, the site is proposed to be redeveloped for high-density residential land use (boarding house) over two levels of basement.

Deep soil of a total area of about 327 m² is proposed along the southern and western boundaries of the site. Other areas of the proposed site configuration outside the proposed buildings include a communal area on the northwest and hardstand surfaces across the site.

Based on the proposed setting, the NEPM HIL B criteria are the most appropriate and have been adopted for this assessment.

NEPM 2013 HSL (A&B) have been considered to assess potential human health risks associated with petroleum hydrocarbons in soil, groundwater and from soil vapour intrusion. HSLs for clayey soils have been selected given that the soil profiles encountered during the intrusive investigation are predominantly clayey textured soils.

The NEPM 2013 'management limits' for residential, parkland and open spaces generic land use have also been adopted. Assessment criteria for fine textured grade soils were selected.

The CRC Care Health Screening Levels (HSLs) for direct contact with soils in high-density residential land use setting (HSL-B Criteria) have also been adopted for petroleum hydrocarbon compounds in the absence of NEPM HIL criteria.

Assessment of vapour intrusion into the proposed basement is based on NEPM 2013 criteria for two metres (2m) to less than four (4) metre (2 to <4m) in clayey soil, assuming that any potential secondary contaminant source will be located at more than five metres (5m) below the floor of the basement.

The selected assessment criteria for soils are presented in Table 16.1 and Table 16.2 below.

Table 16.1 – Site soil assessment criteria (inorganics)

Contaminant	NEPM 1999 Background Ranges ⁽⁶⁾	NEPM 2013 HIL B ⁽¹⁾ /HSL (Residential A & B) ⁽²⁾	NEPM 2013 EIL/ ESL (Urban Residential & Public Open Space) ⁽³⁾
Arsenic	1-50	500	100 (n)
Cadmium	1	150	3 (f)
Chromium	5-1000	500 (b)	413 (b) (f)
Copper	2-100	30 000	123 (n)
Lead	2-200	1 200	1100 (e)
Mercury	0.03 (c)	120 (c)	1 (c), (f)
Nickel	5-500	1 200	30 (f)
Zinc	10-300	60 000	302 (n)
Bonded asbestos	-	0.04% (w/w) (k)	-
Friable Asbestos	-	0.001% (w/w) (k)	-
Asbestos fibres	-	No detectable (k)	-

Table 16.2 – Site soil assessment criteria (organics)

Contaminant	NEPM 1999 Background Ranges ⁽⁶⁾	NEPM 2013 HIL B ⁽¹⁾ /HSL B ⁽²⁾ Low – density residential	NEPM 2013 EIL/ ESL Urban Residential & Public Open Space ⁽³⁾	CRC CARE 2011 HSL-B Direct Soil Contact ⁽⁴⁾	NEPM 2013 Management. Limits Urban Residential & Public Open Space ⁽⁵⁾
TPH (C ₆ -C ₁₀)	-	-	-	5 600	-
TPH (C ₁₀ -C ₁₆)	-	-	-	4200	-
F1 TPH (C ₆ -C ₁₀) (g)	-	9,900 (d)	180 (i)	-	700 (l)
F2 TPH (C ₁₀ -C ₁₆) (h)	-	NL (d)	120 (i)	-	1000 (l)
F3 TPH (C ₁₆ -C ₃₄)	-	-	1 300 (i)	5800	2 500 (l)
F4 TPH (C ₃₄ -C ₄₀)	-	-	2 800 (i)	8100	10 000 (l)
Benzene	0.05-1 (a)	40 (d)	65 (i)	140	-
Toluene	0.1-1 (a)	53,000 (d)	105(i)	21 000	-
Ethylbenzene	-	16,000 (d)	125 (i)	5 900	-
Xylenes	-	24,000(d)	45 (i)	17 000	-
Naphthalene	-	95 (d)	170 (e)	2 200	-
Benzo(a)pyrene	-	-	1.4 (i)	-	-
Carcinogenic PAHs	-	4	-	-	-
Total PAHs	0.95-5 (a)	400	-	-	-

TCE	-	0.02 (d)	-	-	-
1,1,1 - TCA	-	60(d)	-	-	-
Cis-1,2 dichloroethene	-	0.08 (d)	-	-	-
Vinyl chloride	-	0.03 (d)	-	-	-
Aldrin + Dieldrin	-	10	-	-	-
Chlordane	-	90	-	-	-
DDT+DDE+ DDD	-	600	180 (e), (m)	-	-
Heptachlor	-	10	-	-	-
Phenols	0.03-0.5 (a)	45 000	-	-	-
PCBs	0.02-0.1 (a)	2	-	-	-

Notes: All criteria in mg/kg concentrations unless otherwise specified

- (1) NEPM (2013) – Schedule B1 – HILs for Soil Contaminants – Residential B- Table 1A (1).
- (2) NEPM (2013) – Schedule B1 – HSLs for Vapour Intrusion – HSL B Low-high density residential -Table 1A (3.)
- (3) NEPM (2013) – Schedule B1 – Soil EILs and ESLs – Urban Residential and Public Open Space – Tables 1B (5) and 1B (6).
- (4) CRC CARE (2011) – Technical Report No. 10 – Soil HSLs for Direct Contact – HSL B High-Density Residential – Table B4.
- (5) NEPM (2013) – Schedule B1 – Management Limits for TPH Fractions F1-F4 in Soil – Table 1B (7).
- (6) NEPM (1999) – Schedule B1 – Soil Investigation Levels – Background Ranges - Table 5-A.
- (a) ANZECC 1992 background ranges used where no NEPM criteria available.
- (b) The criterion for chromium VI.
- (c) Criterion for inorganic mercury.
- (d) NEPM 2013 HSL criterion for vapour intrusion, 2<4m depth in clayey soils.
- (e) 2013 NEPM generic EIL.
- (f) NEPM 1999 EIL used where no NEPM 2013 criteria are available.
- (g) F1 TPH = TPH (C6-C10) minus BTEX fraction.
- (h) F2 TPH = TPH (C10-C16) fraction.
- (i) NEPM 2013 ESL criterion for fine textured soils - Table 1B (6).
- (j) Criterion for chromium III.
- (k) 2009 WA DOH/NEPM 2013 thresholds for asbestos in soil, residential B² (NEPM 2013 - Schedule B1 - Table 7).
- (l) NEPM 2013 NEPM management limit criterion for coarse texture grade soils
- (m) Criterion for DDT
- (n) Site specific EILs
- (o) Criterion for free cyanide

16.2 Ecological Receptors

The Ecological Screening Levels (ESL) and the Ecological Investigation Levels (EILs) have been developed for the generic “Urban Residential and Public Open Space” land use scenario.

These levels apply to the top 2m of soil which comprises the root zone and habitats of most terrestrial species.

Petroleum fractions have been detected in some soil samples recovered from the site. Therefore ESLs for fine grained soil have been selected.

Site-specific EILs were determined based on the methodology outlined in the NEPM 1999, 2013. Cation Exchange Capacity and pH were averaged for the EIL calculation.

An average pH and CEC of 8 pH units and 5 meq/100g respectively were considered to determine Added Contaminant Limit (ACL) values for arsenic, chromium (III), nickel and zinc based on based on Table 1B (1) to Table 1B (3), Schedule B1 of NEPM 1999, 2013.

The determined ACLs values are presented in Table 16.3 below. Further, based on site observation during soil sampling at the site, the soil profiles encountered are assumed to contain more than ten percent (>10%) by weight of clay.

Table 16.3 – Summary of ACLs

Contaminants	ACL (mg/kg)
Arsenic	95
Chromium (III)	400
Nickel	30
Zinc	180

Ambient Background Concentrations (ABCs) considered for the calculation of site specific EILs were based on values published by Olszowy et al. (1995) for NSW (old suburbs and high traffic). The 25th percentile values were considered as presented in Table 16.4 below.

Table 16.4 – Summary of ABCs

Contaminants	As	Cr	Cu	Pb	Hg	Ni	Zn
25 percentiles (mg/kg)	5	13	28	163	0.05	5	122

EILs for lead, arsenic, DDT and naphthalene are generic as indicated in Table 1B (4) and Table 1B (5) of NEPM 1999, 2013 Schedule B1.

17. ANALYTICAL RESULTS

Laboratory analyses were conducted on fourteen (14) primary and three (3) duplicate soil samples out of the total 20 samples collected. The analytical results are summarised in Table A. Details of all the analyses are presented in laboratory reports included in Appendix H.

17.1 Soil Sampling Results Interpretation

Asbestos:

Out of five (5) selected soil samples tested, asbestos was identified in one (1) surface soil sample (BH104-0.1m). Asbestos was identified in the soil sample as both bonded ACM and friable asbestos (fibrous and fines). No asbestos fibres were detected in the soil sample.

Metals:

Most of the soil samples analysed returned results which were above the laboratory reporting limits (LOR) but within the background ranges. However, soil sample S107 (BH3, 0.1m) return a zinc concentration of 310 mg/kg which exceeds the site specific EIL (302mg/kg).

BTEXN:

All samples tested returned concentrations which were below the LOR.

TRH C₆ – C₁₀:

All samples tested returned concentrations which were below the LOR.

TRH C₁₀ – C₁₆:

All samples tested returned concentrations which were below the LOR.

TRH C₁₆ – C₃₄:

All samples tested returned concentrations which were below the LOR.

TRH C₃₄ – C₄₀:

All samples tested returned concentrations which were below the LOR.

Polycyclic Aromatic Hydrocarbons (PAHs):

All samples tested returned concentrations which were below the LOR.

Phenols:

No phenols were reported above the LOR.

Polychlorinated Biphenyls (PCBs):

All samples tested returned concentrations which were below the LOR.

Organochlorine/Organophosphate Pesticides (OC/OPPs):

All samples tested returned concentrations which were below the LOR.

18. CONTAMINATION ASSESSMENT

Based on the site history review established during the DSI, two rounds (2017 GI and DSI) of intrusive investigations, and field and laboratory testing; the level of contaminants in the soil at the majority of the sampling locations is low and below the adopted assessment criteria protective of human health for the intended land use. However, bonded ACM and friable asbestos (fibrous and fines) were detected in one surface soil sample (BH104, 0.1m). The concentration of asbestos contamination exceeds HIL-B criteria.

Sampling location BH104 was nominated within the footprint of a former site shed. The presence of asbestos within this area of the site is likely to be the result of poor demolition practice. Based on the site overall asbestos test results, asbestos contamination is likely to be limited to the footprint of the former shed and its immediate vicinity. Therefore, a localised asbestos contamination impact at the site is probable based on the above observation.

Zinc concentration (310mg/kg) in one surface soil sample (0.1m) at one location (BH103) exceeded the site specific EIL (302mg/kg) protective of ecological receptors. This concentration also marginally exceeded the NEPM background range. Based on the proposed site configuration, sample location BH103 is located within the proposed deep soil area along the western boundary of the site.

The EIL exceedance at BH103 is considered to be marginal and based on the overall analytical data (including the historical), the potential for harmful impact to ecological receptors at the site may be considered as insignificant.

19. DUTY TO REPORT CONTAMINATION

Under the provisions of the *Contaminated Land Management Act 1997* (CLM Act), a site owner or occupant must notify EPA of any significant contamination that has the potential to cause human-health or environmental impacts. The requirements for reporting contamination are outlined in EPA's (2015) *Guidelines on the Duty to Report Contamination Under the Contaminated Land Management Act 1997*. The guideline states the need to consider trigger levels for soil, groundwater and soil vapour when assessing for notifiable land contamination under the CLM Act.

For soil, the notification thresholds are the HILs and soil-based HSLs, which are outlined in Schedule B1 of the *National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999* (NEPC 2013). Where contaminants in the soils on a particular site exceed their HIL criteria by more than 2.5 times in any one sample or where the average concentrations (i.e. 95% upper confidence limits of the arithmetic mean of the contaminant concentrations) of contaminants in soil exceed the applicable HILs; **and** where persons may have been, or foreseeably will be exposed to the contamination, EPA must be notified.

The Duty to Report Guidelines also apply the specific criteria for asbestos in soil that are provided in the NEPM, these being that notification would be required where friable asbestos from anthropogenic sources is present in the soil at a weight-based percentage which exceeds 0.001%. Also, where a particular site is the source of contamination which results in the above being realised on adjacent land, EPA must also be notified. Further, it should be noted that the Duty to Report Guidelines do not define notification thresholds for all contaminants. EPA has advised that where no criteria are listed, the need to submit a notification (or otherwise) should be based on advice provided by an environmental consultant.

For groundwater or surface water, EPA must be notified if a) elevated concentrations of contaminants are identified to be above criteria which are protective of drinking water and ecosystem protection (adopted from the ADWG 2011 and ANZECC 2000 respectively) and also potential vapour intrusion (NEPM HSLs) b) where the contaminant concentrations will foreseeably remain above these criteria **and** c) where the groundwater impacts are due to sources on a particular site rather than being regional or background concentrations. Further, the presence of phase-separated hydrocarbons (PSH) on groundwater is an immediate notification trigger regardless of aqueous concentrations which may be present.

The Duty to Report Guidelines also provide notification criteria for soil gas, these being that notification is required where concentrations of contaminants in soil gas are equal to or above both the NEPM HSLs and the NEPM interim health investigation levels for volatile chlorinated compounds (the latter provided in Schedule B7 of the NEPM).

19.1 Assessment of Duty of Report Requirements

Except for asbestos, the analytical results of the selected soil samples did not trigger an EPA notification requirement based on section 2.3 of the NSW EPA's "Guidelines on the Duty to Report Contamination under the *Contaminated Land Management Act 1997*".

The level of asbestos contamination (bonded and friable) identified at one sampling location has triggered an EPA notification based on section 2.3 of the NSW EPA's "Guidelines on the Duty to Report Contamination under the *Contaminated Land Management Act 1997*". Therefore, STS advise that the client notifies the EPA about the asbestos contamination as per regulatory requirements.

20. EVALUATION OF QUALITY ASSURANCE

20.1 Field Duplicate Sample Results

The results of the field intra and inter-laboratory duplicate sample analyses were compared to those of the corresponding primary samples. The results are presented in Table B.

The results show that the variations between the primary and duplicate sample concentrations exceed the allowable Relative Percentage Difference (RPD) criteria of 50% for mercury (S107/S108) and chromium and copper (S116/S117) for primary and duplicate surface soil sample pairs. The discrepancies might be due to the heterogeneous distribution of the heavy metals within the natural soil. Overall, the RPD results indicate an acceptable agreement between the primary and duplicate samples.

Further, the results of the trip blank sample indicated that no cross-contamination has occurred during sampling at the site, sample storage and transfer to the laboratory.

STS consider that the field procedures adopted were appropriate and the soil samples recovered from the site were representative of the site conditions at the time the site investigation was carried out.

20.2 Laboratory Quality Control Programme

Our review of the laboratory's internal QC program has shown that majority of internal duplicate samples, spike recoveries, surrogate standards, and laboratory blanks were within the laboratories' recommended range for acceptable reproducibility. Therefore, STS considers the laboratory data obtained in the sampling program to be of acceptable precision, accuracy and reliability and representative of the site conditions encountered.

20.3 Quality Control

An appraisal of the key procedure-based quality control aspects of the investigation is summarized in Table 20.1 below.

Table 20.1 Assessment of QA/QC

Item	Compliance	Reference/Comments
Appropriate sampling methods adopted?	Yes	Refer to Sections 14
Appropriate sample handling and transportation procedures implemented?	Yes	Refer to Sections 14 and COC documentation in Appendix G
Samples analysed within recommended laboratory holding times?	Yes	Refer to COC documentation in Appendix G and laboratory reports in Appendix H
NATA accredited laboratory testing methods used?	Yes	Refer to laboratory reports in Appendix H

21. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the 2017 GI and DSI, STS conclude the following:

- Bonded and friable asbestos identified at concentrations exceeding HIL-B in surface soil sample (BH104, 0.1m) has triggered an EPA notification requirement based on section 2.3 of the NSW EPA's "Guidelines on the Duty to Report Contamination under the *Contaminated Land Management Act 1997*".
- The limited site history review indicated that structures of various sizes occupied the northern portion of the site at least from the 1930s;
- Redevelopment at the site occurred most probably after the 1930s involved the construction of structures associated with low density residential land use setting;
- No EPA notices or POEO licences have been issued to the site or to surrounding land;
- Site filling was encountered at four (4) locations across the site in boreholes advanced during two rounds of intrusive investigation (2017 GI and DSI);
- Selected soil samples were analysed by NATA accredited laboratories and the analytical results indicated that the level of the CoPC present in the fill and natural soil at the sampling locations are below the adopted human health assessment criteria adopted for the proposed development setting. However, bonded and friable asbestos were identified at concentrations exceeding HIL-B in one surface soil sample (BH104, 0.1m);
- Assessment criteria protective of ecological receptors were exceeded for two (BH101 and BH103) surface soil samples located within the proposed deep soil area near the northern and western site boundary respectively;

- Groundwater was not encountered in any of the boreholes advanced at the site during the intrusive investigations (2017 GI and DSI);
- Based on available historical and current land use information of the site, it is unlikely that a groundwater impact has occurred at the site.

Based on the findings of the 2017 GI and DSI, STS consider that the site is suitable for the intended high- density residential land use provided it is developed according to the proposed development plans and layout configuration and that the following recommendations are implemented:

- The presence of bonded and friable asbestos has triggered a notification requirement based on section 2.3 of the NSW EPA's "Guidelines on the Duty to Report Contamination under the *Contaminated Land Management Act 1997*". Hence, an EPA notification should be undertaken.
- Due to the potential harm to current site users presented by the identified asbestos contamination identified at the site, it is recommended that the hotspot is immediately barricaded and sign-posted according to regulatory requirements. The current site users should also be informed about asbestos contamination. NSW SafeWork should be contacted to provide further guidance in minimizing exposure risk.
- A hazardous material survey of all existing site structures should be undertaken prior to the start of any demolition work at the site;
- An Unexpected Find Protocol (UFP) should be prepared upon commencement of construction phase of the proposed development at the site to allow appropriate management of any unexpected contamination which could potentially be encountered;
- Waste soil to be generated by the proposed excavation works should be appropriately classified for potential beneficial reuse and/or disposal at a licenced landfill facility; and
- A Remedial Action Plan (RAP) should be prepared for the site to remediate asbestos contamination identified within the footprint of the former site shed prior to the site redevelopment.

22. LIMITATIONS

STS GeoEnvironmental Pty Ltd has performed its services for this project in accordance with its current professional standards. Laboratory analyses were undertaken as part of this investigation by Australian Laboratory Services, who are NATA accredited for the analyses performed.

When assessing the extent of contamination across a site from a soil sampling program, there is a possibility that variations may occur between sample locations; and the actual presence of contaminated material at the site may differ from that referred to herein, since no sampling program, no matter how comprehensive, can reveal all anomalies and hot spots that may be present within the investigation area.

The information collected for this investigation has been used to form an opinion about site contamination with regard to the proposed use of the site; this being high density residential land use. If the proposed land use or the development plan configuration and layout are changed, the conclusions given in this report may be subject to a review against a different set of land use criteria. Also, regulatory evaluation criteria are constantly changing and therefore, concentrations of contaminants presently considered low may, in the future, fall under different regulatory standards that may alter the outcome of this investigation. Opinions and judgments expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions.

This document and the information herein have been prepared solely for the use of C & J BOVA Property Investments Pty Ltd for the purposes nominated in this report. No person or organization other than C & J BOVA Property Investments Pty Ltd are entitled to rely on any part of the report without the prior written consent of STS GeoEnvironmental Pty Ltd. Any third party relying on this report shall have no legal recourse against STS GeoEnvironmental Pty Ltd or its parent organizations or subsidiaries and shall indemnify and defend them from all and against all claims arising out of, or in conjunction with such use or reliance.

Report Written By:



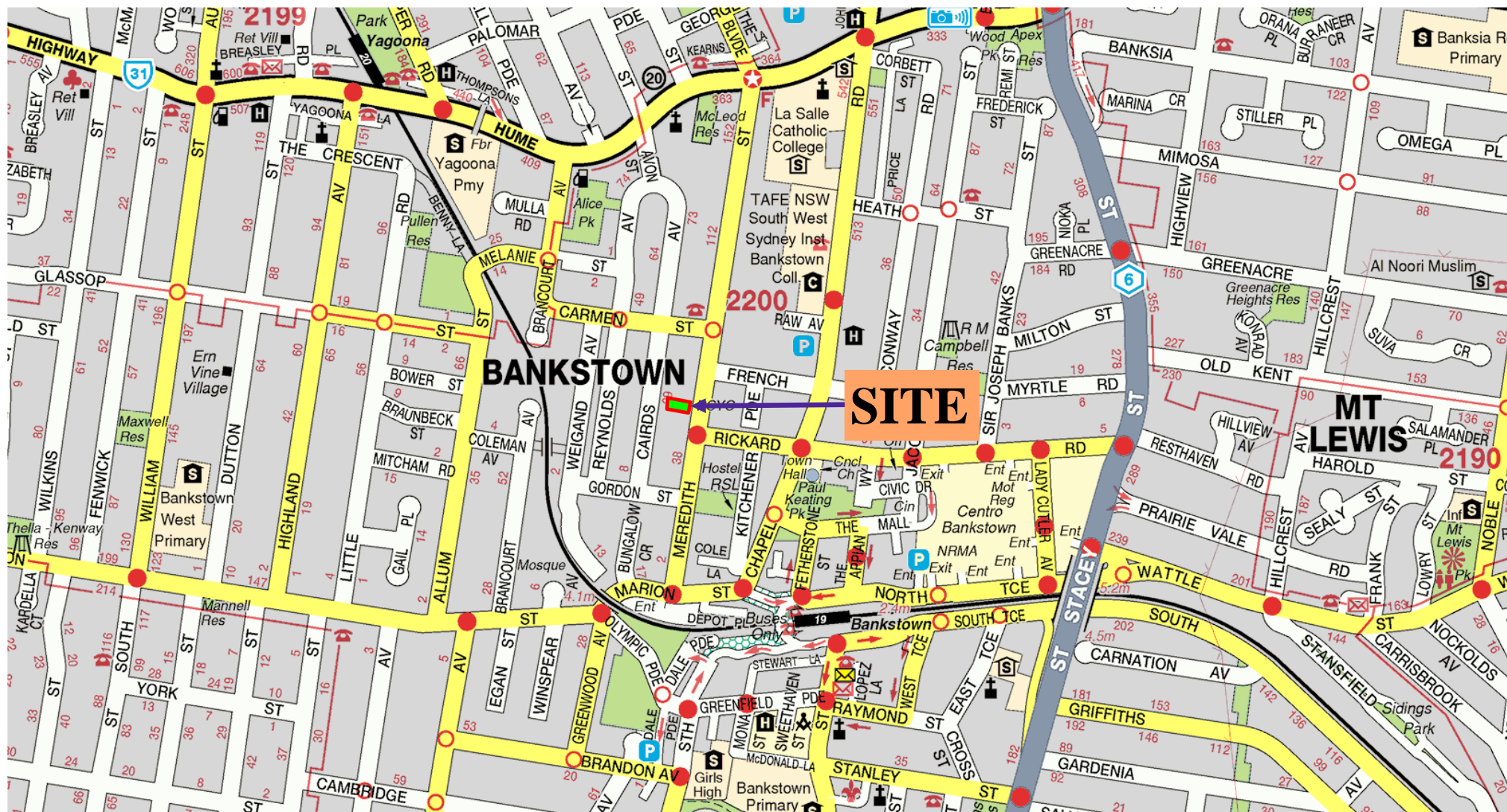
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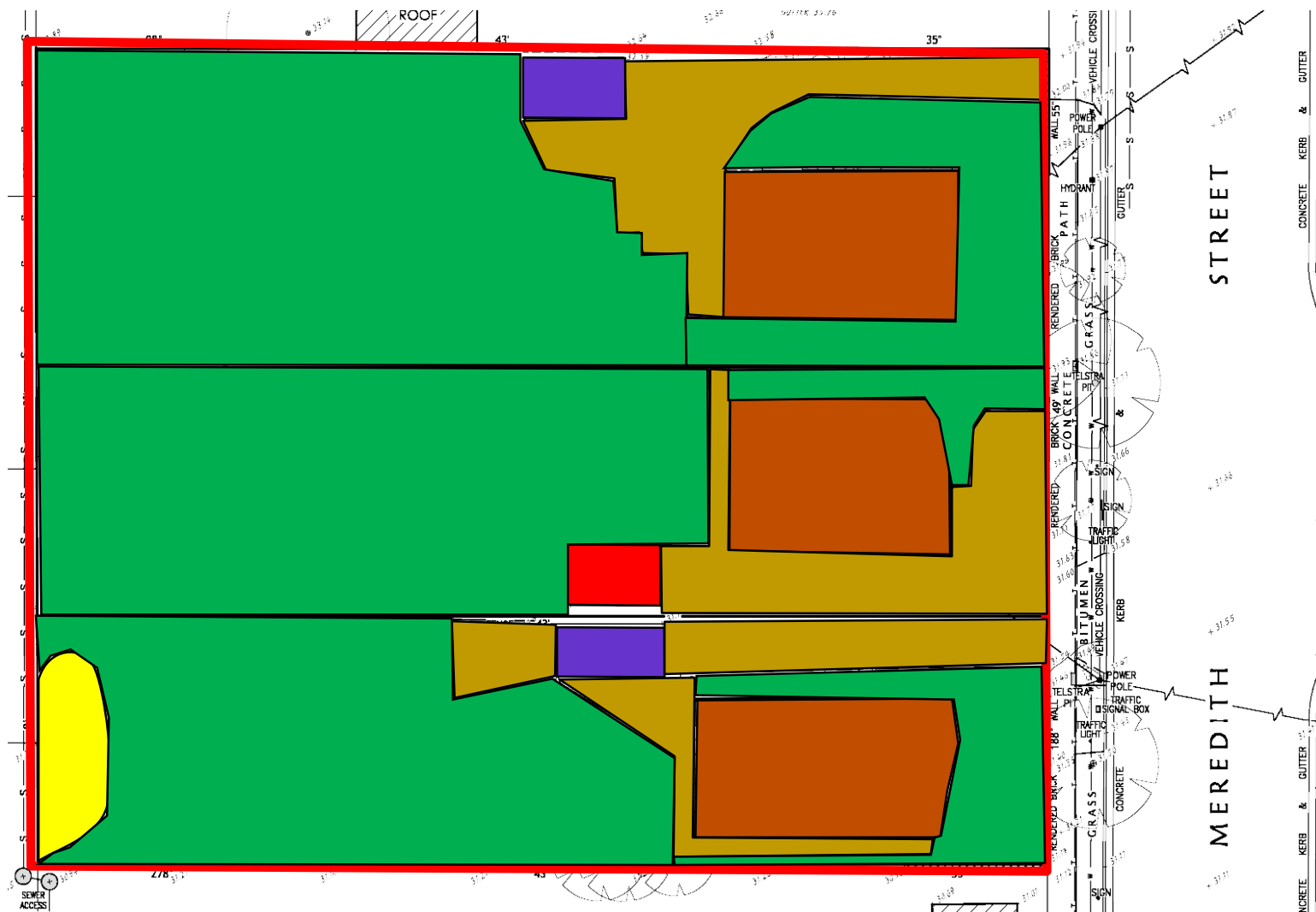
Report Reviewed By:



*Esther Koay, MIEAust CPEng NER
Environmental Manager
STS GeoEnvironmental Pty Limited*

FIGURES





- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| — Site Boundary | Footprint of former fibro shed |
| Grass/Vegetation | One Storey Brick Residence |
| Concrete | Overgrown Domestic Waste Stockpile |
| Fibre Cement Shed | |

STS GEOENVIRONMENTAL Pty. Ltd.

Scale: Unknown

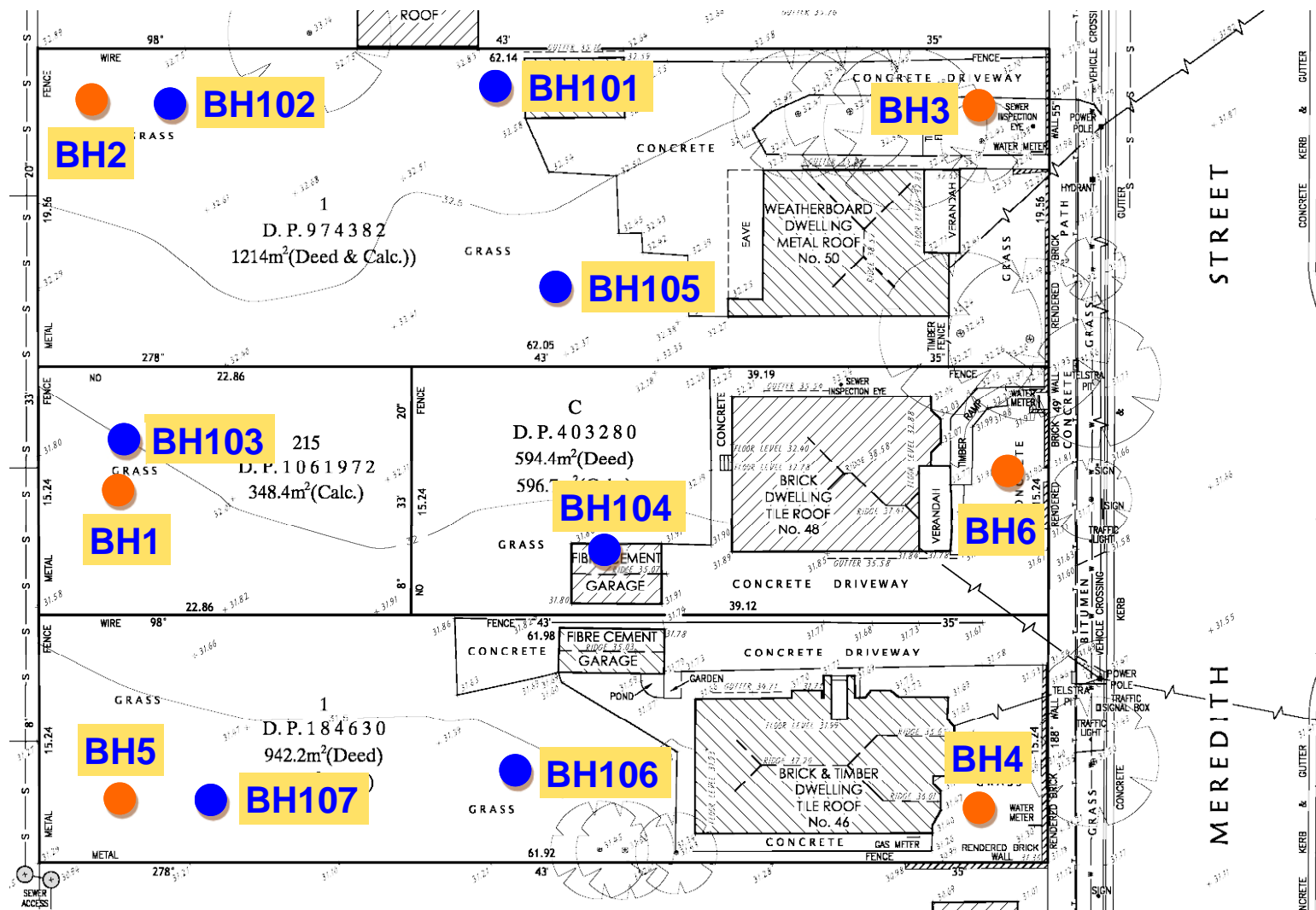
Date: December 2018




Client: C & J BOVA PROPERTY INVESTMENTS PTY LTD

**DETAILED SITE INVESTIGATION
46-50 MEREDITH STREET, BANKSTOWN
SAMPLING LOCATIONS**

Project No.
21794/1294D

Drawing No: 18/3620/2



-  Sampling Location (GI-SSP, Nov)
-  Sampling Location DSI Nov 2018)
-  Borehole Identification

STS GEOENVIRONMENTAL Pty. Ltd.	Scale: Unknown	Date: December 2018
Client: C & J BOVA PROPERTY INVESTMENTS PTY LTD		
DETAILED SITE INVESTIGATION 46-50 MEREDITH STREET, BANKSTOWN SAMPLING LOCATIONS		Project No. 21794/1294D
		Drawing No: 18/3620/3

TABLES OF RESULTS

Table A Analytical Results for Primary Soil Samples

Analytes	Borehole No.								NEPM Background Ranges	NEPM 2013 HIL Residential B/ HSL A&B (Low-High Density Residential)	NEPM 2013 EILs/ ESLs (Urban Residential and Public Open Space)	CRC CARE 2011 HSL-B Residential (High Density) Direct Contact	NEPM 2013 Management Limits (Residential, Parkland & Public Open Space)				
	BH101	BH101	BH102	BH102	BH102	BH103	BH103	BH104									
	Sample No.	S101	S102	S104	S105	S106	S107	S109						S110			
	Sample Depth (m)	0.1	0.5	0.2	0.5	1.4	0.1	0.5						0.1			
Type of Soil		Natural	Natural	Natural	Natural	Natural	Natural	Natural	Fill								
Sample Date	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18									
Metals																	
Arsenic	42	13	9	6	25	10	5	8	1-50	500	100 (g)						
Cadmium	<1	<1	<1	<1	<1	<1	<1	<1	1	150	3 (g)						
Chromium	19	16	15	14	8	16	9	14	5-1000	500 (g)	413 (g)(h)						
Copper	20	22	17	16	21	32	36	16	2-100	30000	123 (g)						
Lead	148	49	63	14	12	198	27	47	2-200	1200	1100 (g)						
Mercury	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.03 (a)	120 (g)	1 (g)(g)						
Nickel	7	4	8	4	4	7	4	12	5-500	1200	30 (g)						
Zinc	299	52	124	33	30	310-700	49	67	10-300	60000	302 (g)						
Monocyclic Aromatic Hydrocarbons (MAHs)																	
Benzene	<0.2	---	---	---	---	---	---	<0.2	0.05-1 (b)	0.7 (d)	65 (l)	140					
Toluene	<0.5	---	---	---	---	---	---	<0.5	0.1-1 (b)	---	105 (l)	21000					
Ethylbenzene	<0.5	---	---	---	---	---	---	<0.5	---	---	125 (l)	5000					
Xylenes	<0.5	---	---	---	---	---	---	<0.5	---	---	45 (l)	17000					
Naphthalene	<1	---	---	---	---	---	---	<1	---	---	710 (l)	2250					
Total MAHs above detection limits	ND	---	---	---	---	---	---	ND	---	---	---	---					
Total Recoverable Hydrocarbons (TRHs)																	
Total C ₁₀ -C ₁₆	<10	---	---	---	---	---	---	<10	---	---	---	3600					
Total C ₁₇ -C ₂₈	<50	---	---	---	---	---	---	<50	---	---	---	4250					
F1 C ₁₀ -C ₁₆ (l)	<10	---	---	---	---	---	---	<10	---	90 (d)	180 (l)	800 (k)					
F2 C ₁₇ -C ₂₈ (m)	<50	---	---	---	---	---	---	<50	---	---	120 (l)	1000 (k)					
F3 C ₁₀ -C ₁₆ (l)	<100	---	---	---	---	---	---	<100	---	---	1300 (l)	5000	3500 (k)				
F4 C ₁₇ -C ₂₈ (m)	<100	---	---	---	---	---	---	<100	---	---	5800 (l)	8100	10000 (k)				
Total C ₁₀ -C ₂₈	<50	---	---	---	---	---	---	<50	---	---	---	---					
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Naphthalene	<0.5	---	---	---	---	---	---	<0.5	---	---	---	---					
Benzo(a)pyrene	<0.5	---	---	---	---	---	---	<0.5	---	---	1.4 (l)	---					
Carcinogenic PAHs	<0.5	---	---	---	---	---	---	<0.5	---	---	---	---					
Total PAHs above detection limits	ND	---	---	---	---	---	---	ND	0.95-5 (b)	4	---	---					
Organochlorine Pesticides (OCPs)																	
Hexachlorobenzene (HCB)	<0.05	---	---	---	---	---	---	<0.05	---	15	---	---					
Heptachlor	<0.05	---	---	---	---	---	---	<0.05	---	10	---	---					
Chlordane	<0.05	---	---	---	---	---	---	<0.05	---	90	---	---					
Endrin	<0.05	---	---	---	---	---	---	<0.05	---	20	---	---					
Endosulfan (sum)	<0.05	---	---	---	---	---	---	<0.05	---	400	---	---					
Methoxychlor	<0.2	---	---	---	---	---	---	<0.2	---	500	---	---					
DDT+DDE+DDD	<0.05	---	---	---	---	---	---	<0.05	---	600	---	---					
Aldrin + Dieldrin	<0.05	---	---	---	---	---	---	<0.05	---	10	180 (f)(j)	---					
Total OCPs above detection limits	ND	---	---	---	---	---	---	ND	---	---	---	---					
Organophosphorus Pesticides (OPPs)																	
Chlorpyrifos	<0.05	---	---	---	---	---	---	<0.05	---	340	---	---					
Total OPPs above detection limits	ND	---	---	---	---	---	---	ND	---	---	---	---					
Phenolic Compounds																	
Pentachlorophenol	<2	---	---	---	---	---	---	<2	---	130	---	---					
Total Phenols above detection limits	ND	---	---	---	---	---	---	ND	0.03-0.5 (b)	45000	---	---					
Polychlorinated Biphenyls (PCB)																	
Total PCBs above detection limits	ND	---	---	---	---	---	---	ND	0.02-0.1 (b)	---	---	---					
Asbestos																	
Bonded ACMs (15% Asbestos in ACM >7mm) (w/w) (%)	<0.01	---	---	---	---	---	---	<0.01	---	0.04 (g)	---	---					
Frable asbestos (fibrous and fines)(w/w) (%)	<0.001	---	---	---	---	---	---	<0.001	---	0.001 (g)	---	---					
Free Fibres	No	---	---	---	---	---	---	No	---	No detectable (e)	---	---					
Asbestos Type	---	---	---	---	---	---	---	Ch	---	---	---	---					
pH	---	5.3	6.1	5.5	5.5	8.2	---	---	---	---	---	---					
CEC	---	12.5	9.2	10.9	17.2	9.4	---	---	---	---	---	---					

Notes : Results in mg/kg unless specified otherwise.

ND = No individual species detected above laboratory detection limits.

1 Calculated in accordance with Table 1A(3) of NEPM 2013

2 Combined carcinogenic PAHs with relative potency to benzo(a)pyrene

Results shaded red exceed the NEPM 2013 HIL Residential B /HSL A & B low - high density residential criteria

Results shaded blue exceed the NEPM 2013 EIL/ESL criteria for an urban residential and public open space setting

Results shaded green exceed the CRC CARE 2011 HSL-B high density residential criteria for direct contact with soil

Results shaded yellow exceed the NEPM 2013 management limits for a residential, parkland and public open space land setting

(a) Criterion for inorganic mercury.

(b) ANZECC 1992 background ranges used where no NEPM criteria available.

(c) Criterion for hexavalent chromium.

(d) NEPM 2013 HSL criterion for vapour intrusion, 0-1m depth in clay soils.

(e) 2009 WA DOH/NEPM 2013 HSLs for asbestos in soil.

(f) 2013 NEPM generic EIL.

(g) Site specific EIL.

(h) Criterion for chromium III.

(i) NEPM 2013 ESL criterion for fine texture grade soils.

(j) Criterion for DDT.

(k) Criterion for fine texture grade soils.

(l) F1 TPH = TPH (C6-C10) minus BTEX fraction.

(m) F2 TPH = TPH (C10-C16) minus naphthalene fraction.

Table A Analytical Results for Primary Soil Samples

Analytes	Borehole No.							NEPM Background Ranges	NEPM 2013 HIL Residential B/ HSL A&B (Low -High Density Residential)	NEPM 2013 EILs/ ESLs (Urban Residential and Public Open Space)	CRC CARE 2011 HSL-B Residential (High Density) Direct Contact	NEPM 2013 Management Limits (Residential, Parkland & Public Open Space)
	BH104	BH105	BH105	BH106	BH106	BH107						
	Sample No. S111	S113	S115	S116	S118	S119						
Sample Depth (m)	0.2	0.1	0.25	0.1	0.3	0.1						
Type of Soil	Fill	Topsoil/Fill	Topsoil/Fill	Fill	Natural	Fill						
Sample Date	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18	22-Nov-18						
Metals												
Arsenic	13	5	6	<5	5	<5	1-50	500		100 (g)		
Cadmium	<1	<1	<1	<1	<1	<1	1	150		3 (g)		
Chromium	12	11	10	11	9	16	5-1000	500 (g)		413 (g)(f)		
Copper	20	21	22	17	26	17	2-100	30000		123 (g)		
Lead	16	109	101	82	19	78	2-200	1200		1100 (g)		
Mercury	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.03 (g)	120 (g)		1 (g)(g)		
Nickel	6	7	6	5	4	7	5-500	1200		30 (g)		
Zinc	31	119	112	109	85	153	10-300	60000		302 (g)		
Monocyclic Aromatic Hydrocarbons (MAHs)												
Benzene	---	<0.2	---	<0.2	---	<0.2	0.05-1 (g)	0.7 (g)		65 (l)		140
Toluene	---	<0.5	---	<0.5	---	<0.5	0.1-1 (g)	480 (g)		105 (l)		21000
Ethylbenzene	---	<0.5	---	<0.5	---	<0.5				125 (l)		5900
Xylenes	---	<0.5	---	<0.5	---	<0.5				110 (g)		17000
Naphthalene	---	<1	---	<1	---	<1				2 (g)		2200
Total MAHs above detection limits	---	ND	---	ND	---	ND				170 (l)		
Total Recoverable Hydrocarbons (TPHs)												
Total C ₁₀ -C ₂₅	---	<10	---	<10	---	<10						5600
Total C ₂₆ -C ₄₀	---	<50	---	<50	---	<50						4200
F1 C ₁₀ -C ₂₅	---	<10	---	<10	---	<10		50 (g)		180 (l)		800 (k)
F2 C ₂₆ -C ₄₀ (m)	---	<50	---	<50	---	<50		280 (g)		120 (l)		1000 (k)
F3 C ₁₀ -C ₂₅	---	<100	---	<100	---	<100				1300 (l)		5900
F4 C ₂₆ -C ₄₀	---	<100	---	<100	---	<100				1120 (l)		17000
Total C ₁₀ -C ₄₀	---	<50	---	<50	---	<50				5600 (l)		8100
												10000 (k)
Polycyclic Aromatic Hydrocarbons (PAHs)												
Naphthalene	---	<0.5	---	<0.5	---	<0.5						
Benzo(a)pyrene	---	<0.5	---	<0.5	---	<0.5				1.4 (l)		
Carcinogenic PAHs	---	<0.5	---	<0.5	---	<0.5				4		
Total PAHs above detection limits	---	ND	---	ND	---	ND	0.95-5 (g)	400				
Organochlorine Pesticides (OCPs)												
Hexachlorobenzene (HCB)	---	<0.05	---	<0.05	---	---		15				
Heptachlor	---	<0.05	---	<0.05	---	---		10				
Chlordane	---	<0.05	---	<0.05	---	---		90				
Endrin	---	<0.05	---	<0.05	---	---		20				
Endosulfan (sum)	---	<0.05	---	<0.05	---	---		400				
Methoxychlor	---	<0.2	---	<0.2	---	---		500				
DDT+DDE+DDD	---	<0.05	---	<0.05	---	---		600		180 (l)(l)		
Aldrin + Dieldrin	---	<0.05	---	<0.05	---	---		10				
Total OCPs above detection limits	---	ND	---	ND	---	---						
Organophosphorus Pesticides (OPPs)												
Chlorpyrifos	---	<0.05	---	<0.05	---	---		340				
Total OPPs above detection limits	---	ND	---	ND	---	---						
Phenolic Compounds												
Pentachlorophenol	---	<2	---	<2	---	---		130				
Total Phenols above detection limits	---	ND	---	ND	---	---	0.03-0.5 (g)	45000				
Polychlorinated Biphenyls (PCBs)												
Total PCBs above detection limits	---	<0.1	---	<0.1	---	<0.1	0.02-0.1 (g)					
Asbestos												
Bonded ACMs< 15% Asbestos in ACM >7mm (w/w) (%)	---	<0.01	---	<0.01	---	<0.01			0.04 (g)			
Friable asbestos (fibres and fines)(w/w) (%)	---	<0.001	---	<0.001	---	<0.001			0.001 (g)			
Free Fibres	---	No	---	No	---	No			No detectable (g)			
Asbestos Type	---		---		---							
pH	---	---	---	---	6.2	---						
CEC	---	---	---	---	6.8	---						

Notes : Results in mg/kg unless specified otherwise.

ND = No individual species detected above laboratory detection limits.

1 Calculated in accordance with Table 1A(3) of NEPM 2013

2 Combined carcinogenic PAHs with relative potency to benzo(a)pyrene

Results shaded red exceed the NEPM 2013 HIL Residential B/ HSL A & B low - high density residential criteria

Results shaded blue exceed the NEPM 2013 EIL/ESL criteria for an urban residential and public open space setting

Results shaded green exceed the CRC CARE 2011 HSL-B high density residential criteria for direct contact with soil

Results shaded yellow exceed the NEPM 2013 management limits for a residential, parkland and public open space land setting

(a) Criterion for inorganic mercury.

(b) ANZECC 1992 background ranges used where no NEPM criteria available.

(c) Criterion for hexavalent chromium.

(d) NEPM 2013 HSL criterion for vapour intrusion, 0-1m depth in clay soils.

(e) 2009 WA DOH/NEPM 2013 HSLs for asbestos in soil.

(f) 2013 NEPM generic EIL.

(g) Site specific EIL.

(h) Criterion for chromium III.

(i) NEPM 2013 ESL criterion for fine texture grade soils.

(j) Criterion for DDT.

(k) Criterion for fine texture grade soils.

(l) F1 TPH = TPH (C6-C10) minus BTEX fraction.

(m) F2 TPH = TPH (C10-C16) minus naphthalene fraction.

Table B: Results of Quality Control - Intra and Inter-Laboratory Duplicate Samples

	Sample No.:	S107	S108*	RPD (%)	S113	S114*	RPD (%)	S116	S117**	RPD (%)
Analytes	Date Sampled:	22-Nov-18	22-Nov-18		22-Nov-18	22-Nov-18				
Metals										
Arsenic		10	13	26	5	6	18	<5	<5	<50
Cadmium		<1	<1	<50	<1	<1	<50	<1	<1	<50
Chromium (Total)		16	15	6	11	10	10	11	6	59
Copper		32	34	6	21	22	5	17	6	96
Lead		186	217	15	109	101	8	82	73	12
Mercury		0.1	0.2	67	0.1	0.1	0	<0.1	<0.1	<50
Nickel		7	8	13	7	6	15	5	4	22
Zinc		310	326	5	119	112	6	159	135	16
Organochlorine Pesticides										
alpha-BHC		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Hexachlorobenzene		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
beta-BHC		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
gamma-BHC		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Delta-BHC		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Heptachlor		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Total Chlordane		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Dieldrin		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
4,4-DDE		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Endrin		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Endosulfan		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
4,4 DDD		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Endrin Aldehyde		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Endosulfan Sulfate		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
4,4 DDT		----	----	----	<0.2	<0.2	<70	<0.2	<0.2	<70
Endrin Ketone		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Metoxychlor		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Organophosphorus Pesticides (OPPs)										
Dichlorvos		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Demeton-S-Methyl		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Monocrotophos		----	----	----	<0.2	<0.2	<70	<0.2	<0.2	<70
Dimethoate		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Diazinon		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Chloropyrifos-Methyl		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Parathion-Methyl		----	----	----	<0.2	<0.2	<70	<0.2	<0.2	<70
Malathion		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Fenthion		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Chloropyrifos		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Parathion		----	----	----	<0.2	<0.2	<70	<0.2	<0.2	<70
Pirimphos-Methyl		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Chlorfenvinphos		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Bromophos-Ethyl		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Fenamiphos		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Prothiofos		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Ethion		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Carbophenothion		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70
Azinphos Methyl		----	----	----	<0.05	<0.05	<70	<0.05	<0.05	<70

Notes : Results expressed as mg/kg dry weight unless otherwise indicated

*Denotes intra-laboratory field duplicate sample analysed by ALS Sydney

**Denotes inter-laboratory field duplicate sample analysed by ALS Brisbane

nt Denotes analytes not tested

RPDs shaded grey exceed the acceptance criteria

Table C Results of Quality Control - Rinsate and Trip Blank Samples

Analyte	Sample No.: Medium: Date Sampled:	Sample Numbers	
		RB01	TB01
		Water	Soil
		17-May-18	17-May-18
Metals			
Arsenic		<1	
Cadmium		<0.1	
Chromium		<1	
Copper		<1	
Lead		<1	
Mercury		<0.1	
Nickel		<1	
Zinc		<5	
Monocyclic Aromatic Hydrocarbons (MAHs)			
Benzene		<1	<0.2 ¹
Ethylbenzene		<2	<0.5 ¹
Toluene		<2	<0.5 ¹
Xylenes		<2	<0.5 ¹
Napthalene		<5	<1 ¹
Total Recoverable Hydrocarbons (TPHs)			
Total C ₆ -C ₁₀		<20	<10 ¹
Total C ₁₀ -C ₁₆		<100	
F1 C ₆ -C ₁₀ ¹ (l)		<20	<10 ¹
F2 C ₁₀ -C ₁₆ ¹ (m)		<100	
F3 >C ₁₆ -C ₃₄		<100	
F4 >C ₃₄ -C ₄₀		<100	
Total C ₁₀ -C ₄₀		<100	

Note: Results expressed as ug/L unless otherwise indicated

¹ Denotes results in mg/kg

■ RPDs that have been shaded exceed the acceptance criteria

APPENDIX A – PROPOSED DEVELOPMENT PLANS

Project address	
Project name	46-50 Meredith St, Bankstown
Street address	46-50 Meredith Street Bankstown 2200
Local Government Area	Canterbury-Bankstown Council
Plan type and plan number	deposited 403280
Lot no.	C
Section no.	-
Project type	
No. of residential flat buildings	1
No. of units in residential flat buildings	68
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	3102.7
Roof area (m²)	1370
Non-residential floor area (m²)	124.68
Residential car spaces	75
Non-residential car spaces	32

Common area landscape			
Common area lawn (m²)	88.0		
Common area garden (m²)	642.0		
Area of indigenous or low water use species (m²)	320.0		
Assessor details			
Assessor number	20241		
Certificate number	0002885160		
Climate zone	56		
Project score			
Water	✓ 40	Target 40	
Thermal Comfort	✓ Pass	Target Pass	
Energy	✓ 26	Target 25	

46-50 Meredith St. Bankstown

Client: C&J Bova Investments P/L

DEVELOPMENT APPLICATION



Drawing Set	Sheet Number	Sheet Name
100 Site Plans	100-01	Site Analysis_[N]
	100-02	Site Plan_[N]
101 Demolition Plans	101-01	Demolition Plan_[N]
110 GA Plans	110-00	Basement 1 & 2_[N]
	110-01	Ground & Level 1_[N]
	110-02	Levels 2 & 3_[N]
	110-03	Levels 4 & 5_[N]
	110-04	Level 6 & Roof_[N]
	110-05	Basement 1 & 2 Stage 1_[N]
	110-06	Ground & Level 1 Stage 1_[N]
	110-07	Levels 2 & 3 Stage 1_[N]
	110-08	Levels 4 & 5 Stage 1_[N]
	110-09	Level 6 & Roof Stage 1_[N]
	110-10	Typical Apartments_[N]
210 GA Elevations	210-01	Elevations_[N]
	210-02	Elevations Stage 1_[N]
310 GA Sections	310-01	Sections_[N]
	310-02	Ramp Sections_[N]
710 GFA Diagrams	710-01	GFA Diagrams_[N]
720 Shadow Diagrams	720-01	Shadow Study June 21st_[N]
810 Supplementary Drawings	810-01	Cross Ventilation, Solar & Storage_[N]
	810-02	Adaptable Room types_[N]
	810-03	Materials_[N]
900 3D VIEWS	900-01	Visualisation_[N]
	900-02	Visualisation_[N]
	900-03	Visualisation Stage 1_[N]
	900-04	Montage_[N]

DEVELOPMENT SUMMARY

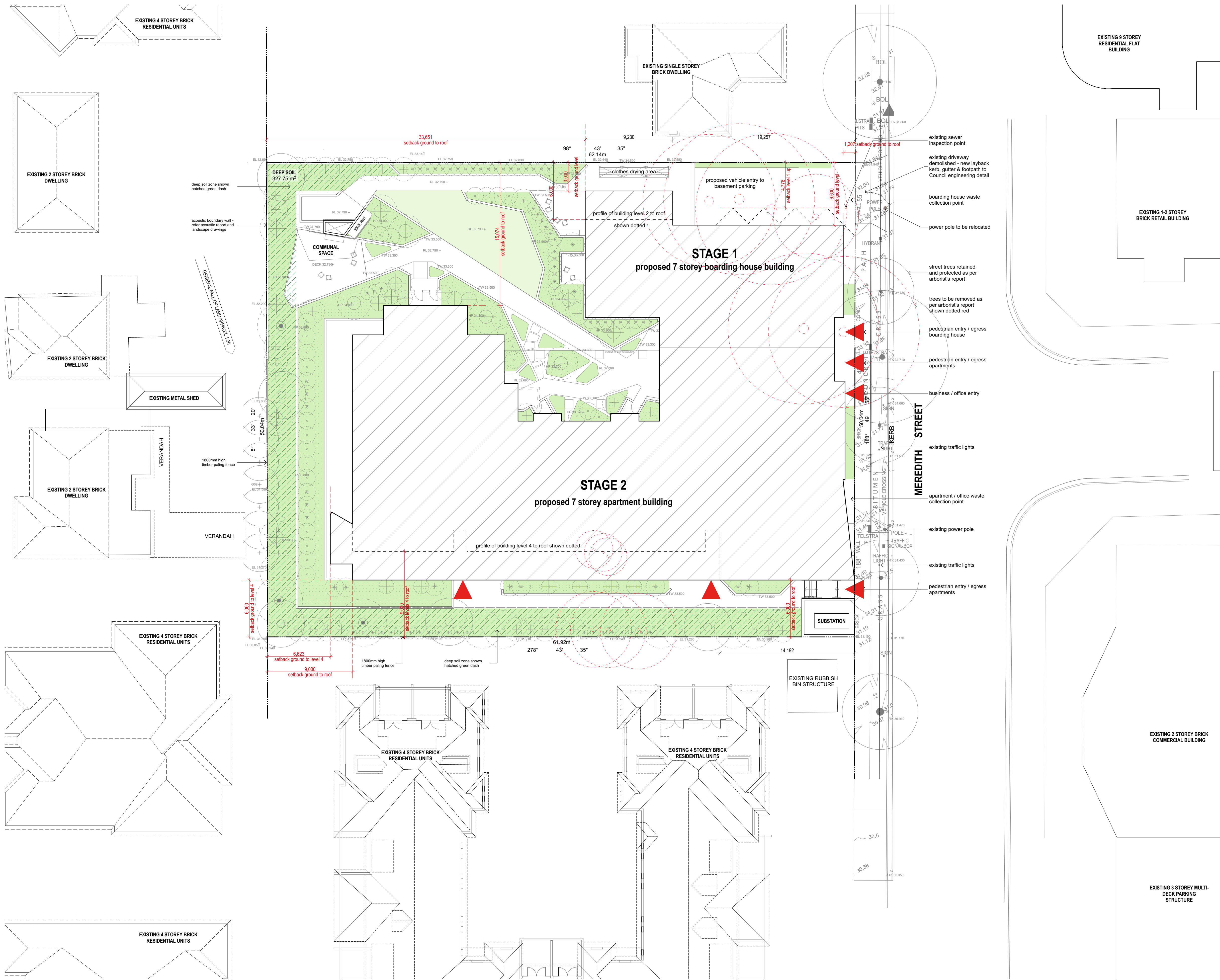
Site Area	3103m²
Permissible FSR	2.5:1
Permissible GFA	7757.5m²
Min. deep soil	7% (217m²)
Proposed FSR	2.5:1
Proposed GFA	7748.10m²
Proposed deep soil	10.5% (327m²)
Communal Open Space	Stage 1 - 2512m² = 83% of site Stage 2 - 716m² = 14% of site

Apartment Mix		
1 Bed	28	= 41%
2 Bed	32	= 47%
3 Bed	8	= 12%
TOTAL		68

3 of which are adaptable
16 of which are Liveable Housing Design Silver Level >20%

BOARDING HOUSE	
Rooms/Units	54 Rooms (3 of which are accessible)
Managers Room	1 room
Communal Room	1 room
Communal Laundry	1 room
Business/Office Tenancy	125 m²
Waste (Business)	2 x 660L bins
Waste (Residential)	6 x 1100L bins

Refer drawings, SEE and consultant reports for car parking, solar access and cross ventilation rates and area schedules.



1 Site Plan
1:200

0 1 2 3 4 5 10
1:200
@ A1

NOTES

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K	04/06/18	for review	PG	CG
L	15/06/18	for review	JE & PG	CG
M	21/06/18	for final consultant reports	JE & PG	CG
N	03/07/18	for DA submission	JE & PG	CG

North

Client
CJBI

Project Title
Bankstown
46-50 Meredith St

Drawing Title
Site Plans

Site Plan

GLYDE
ARCHITECTS

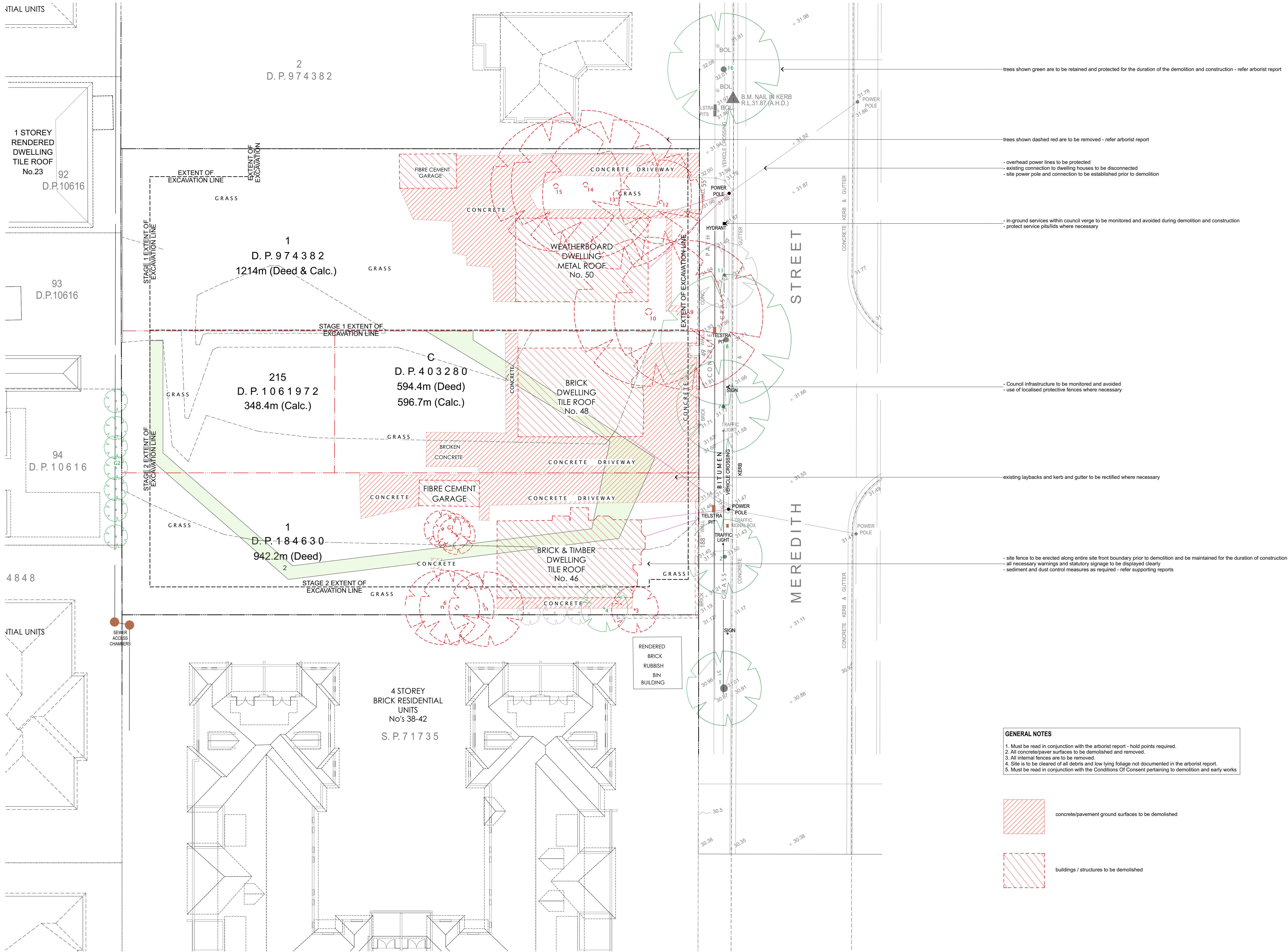
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Status
DA SUBMISSION

Project No.
17003

Rev
[N]

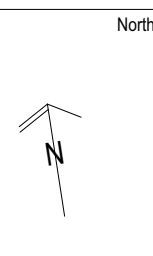
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100-02



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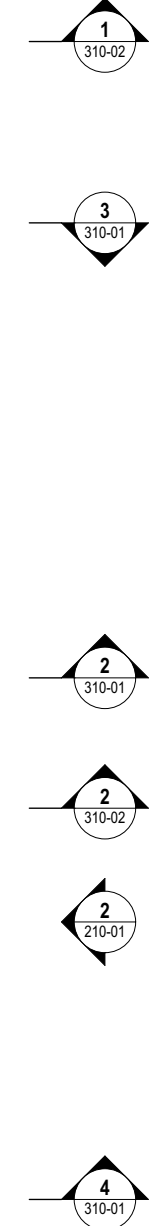
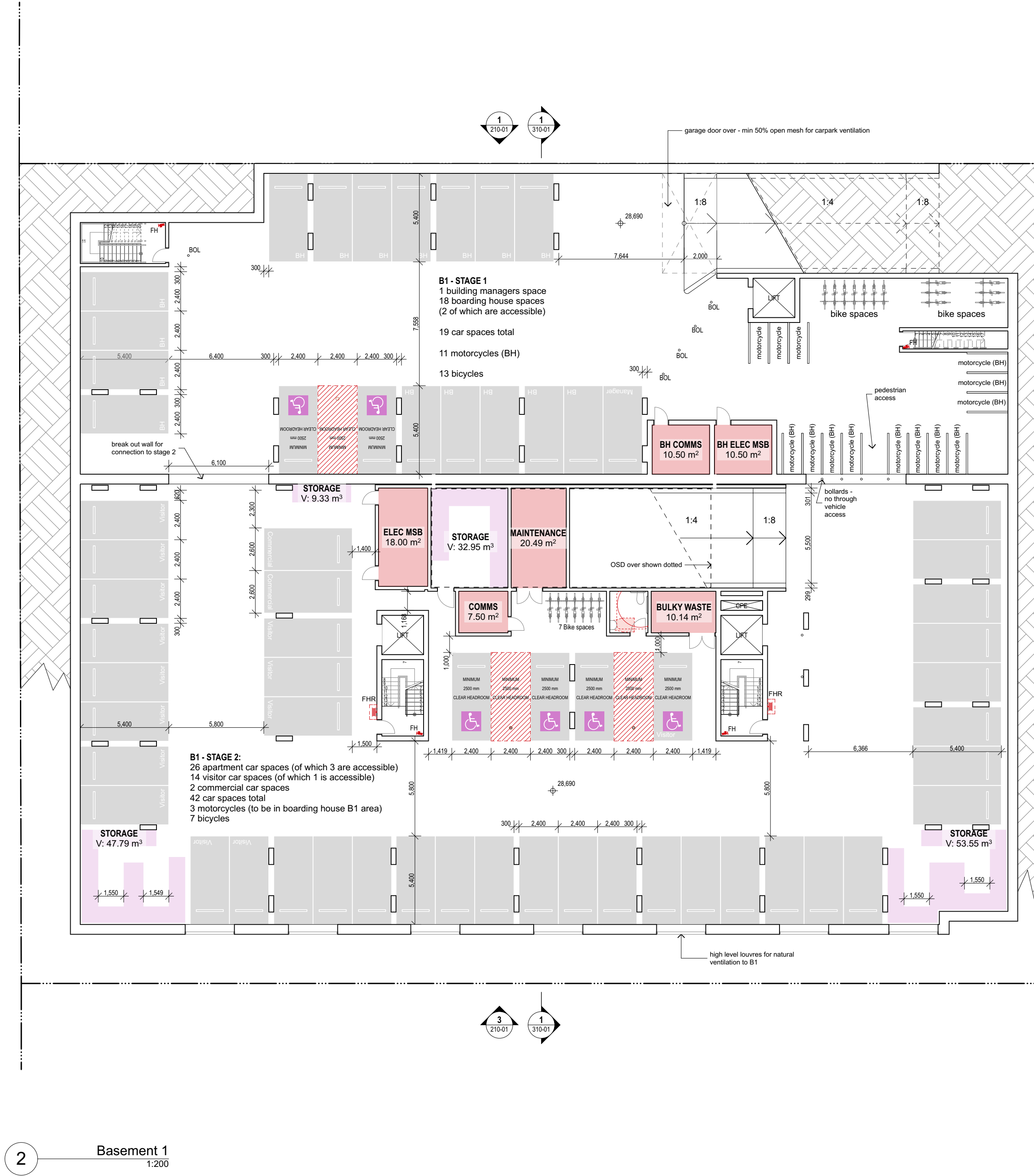
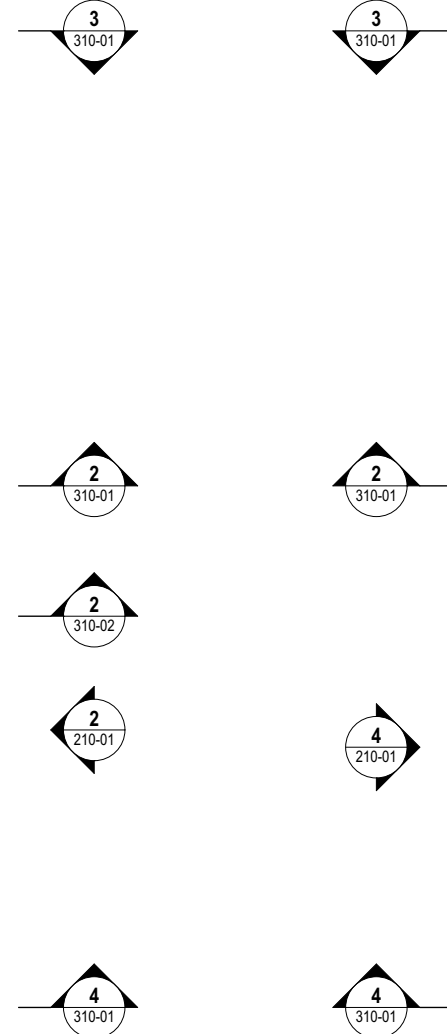
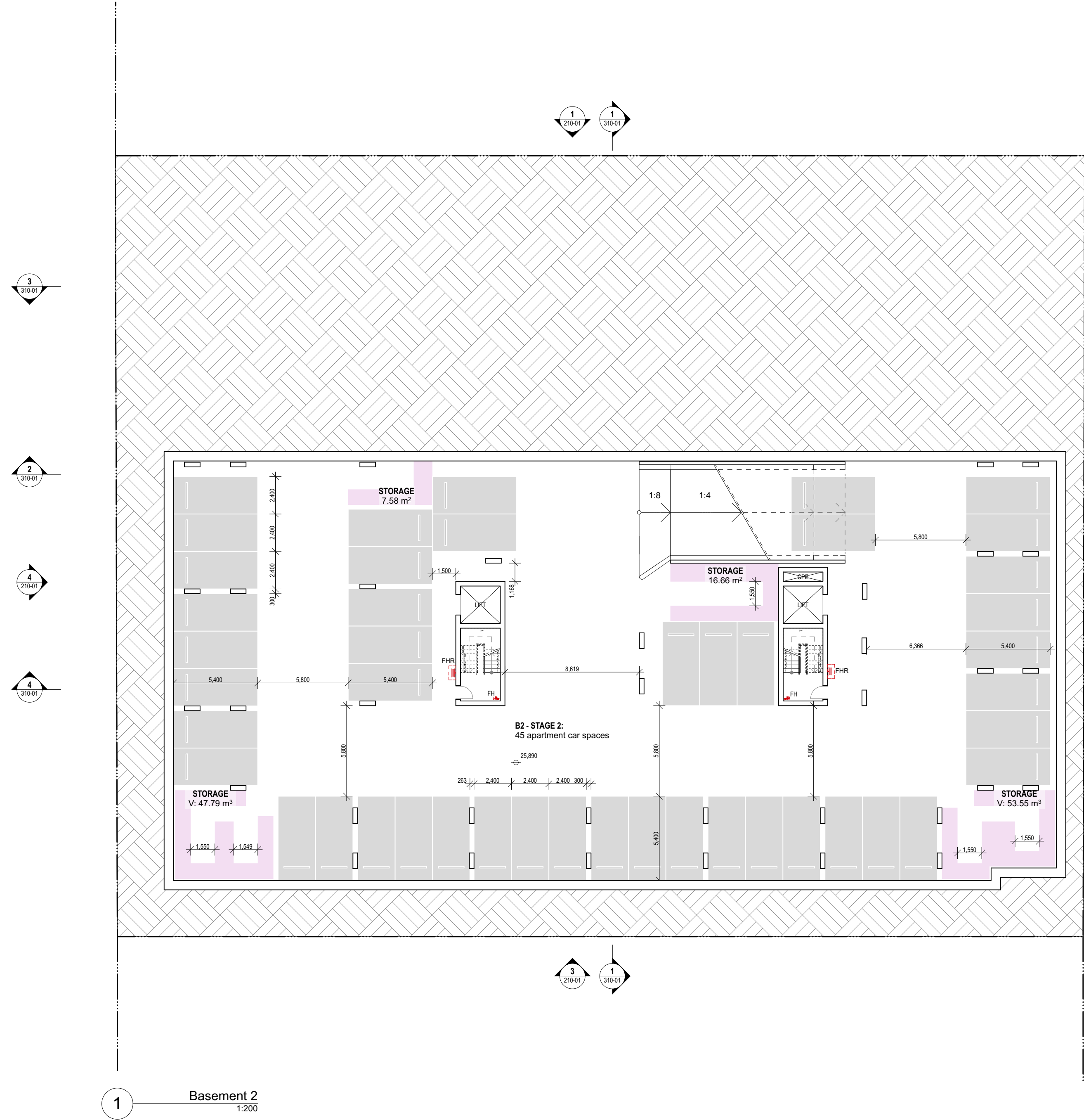
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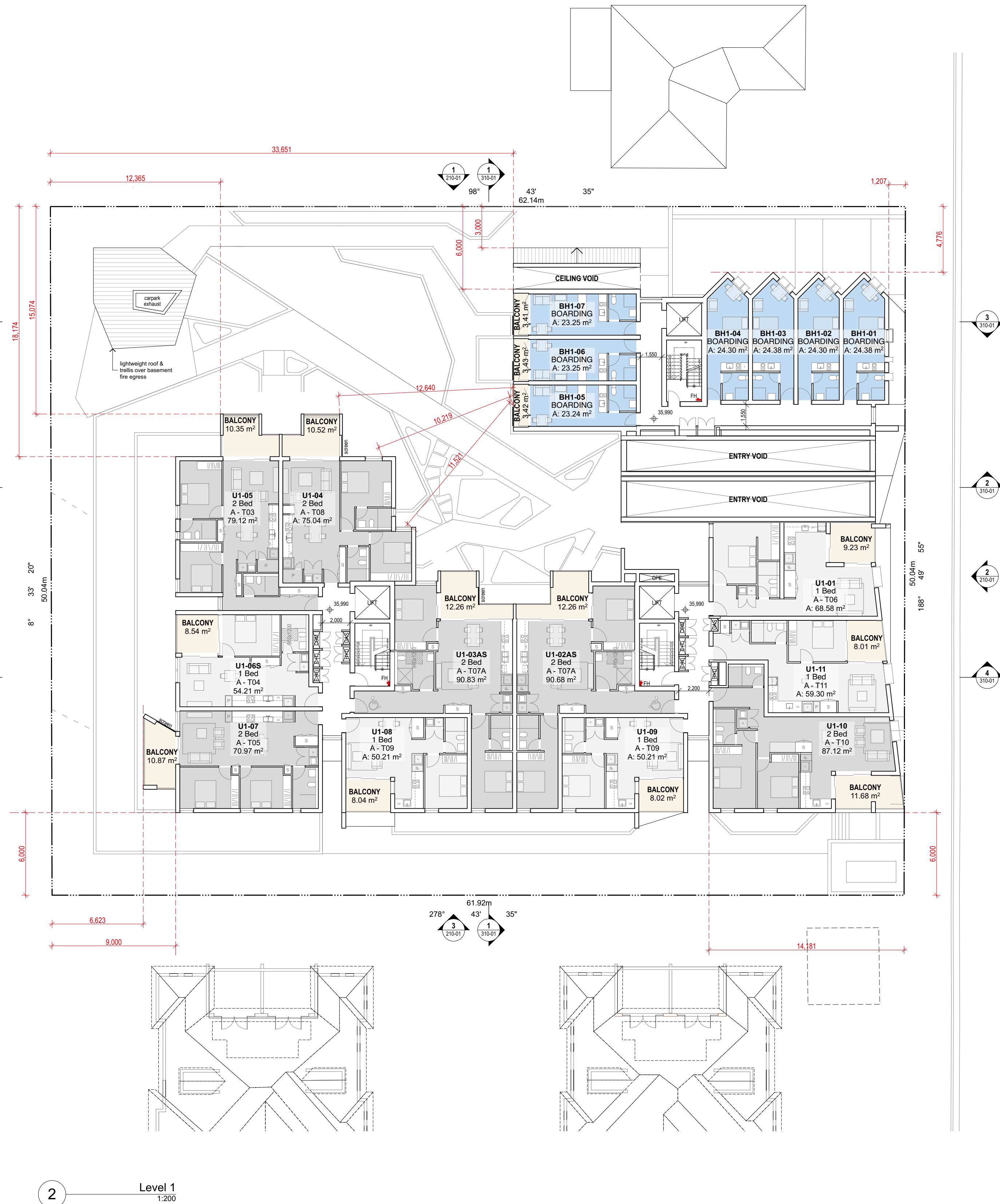
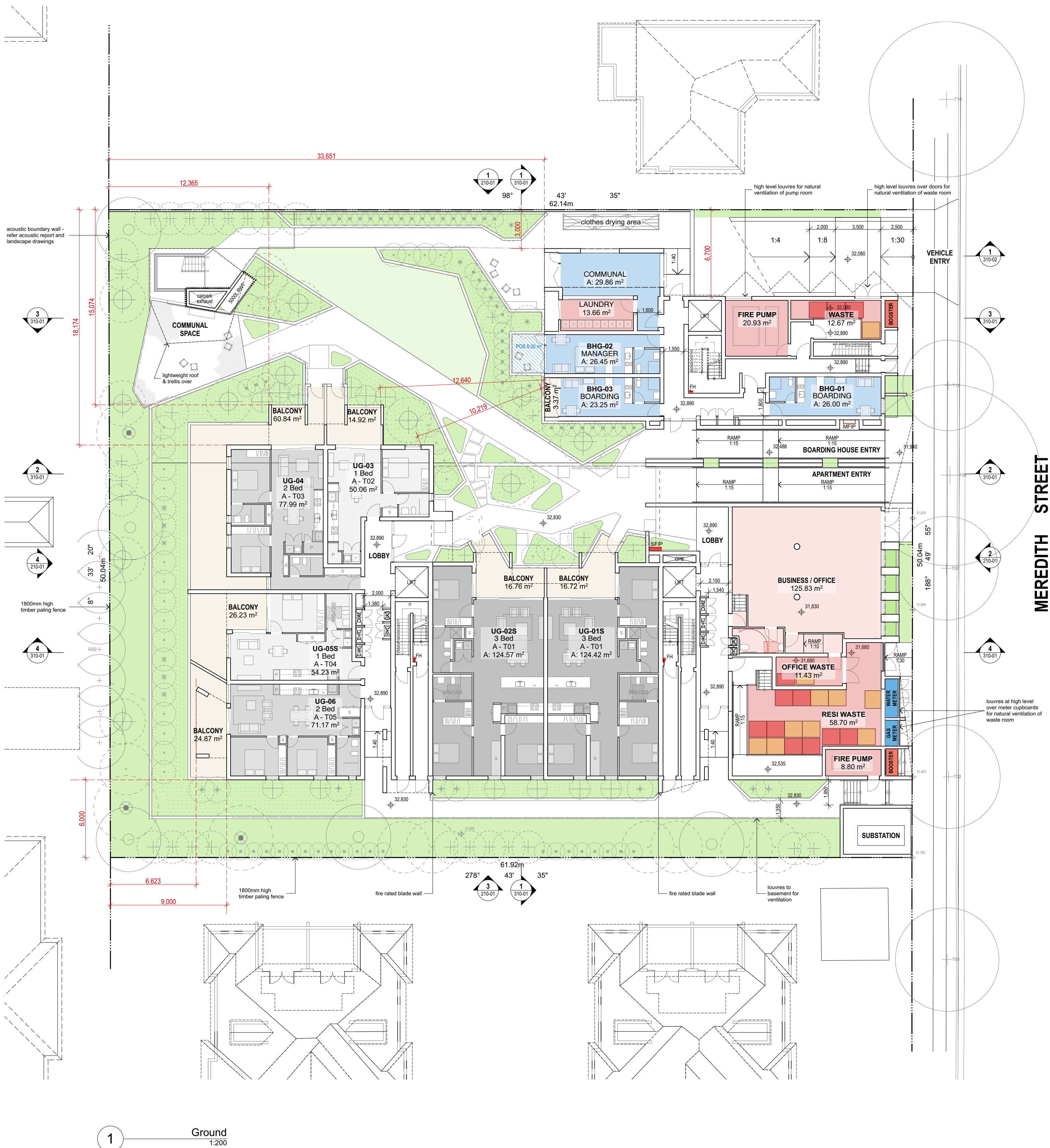


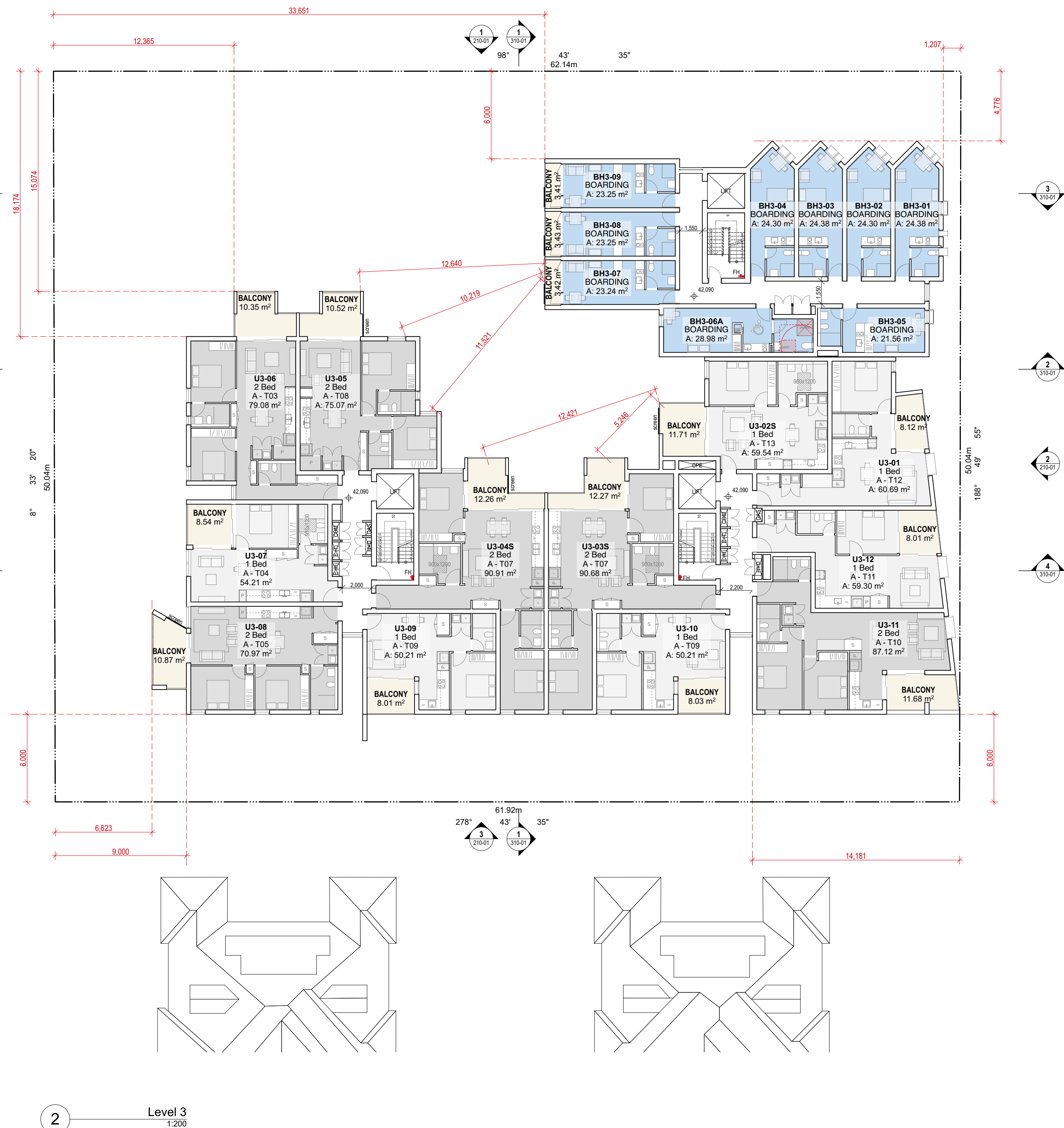
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Project Title **Bankstown**
Drawing Title **Demolition Plans**

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Status **DA SUBMISSION**
Project No. **17003**
Dwg No. **101-01**







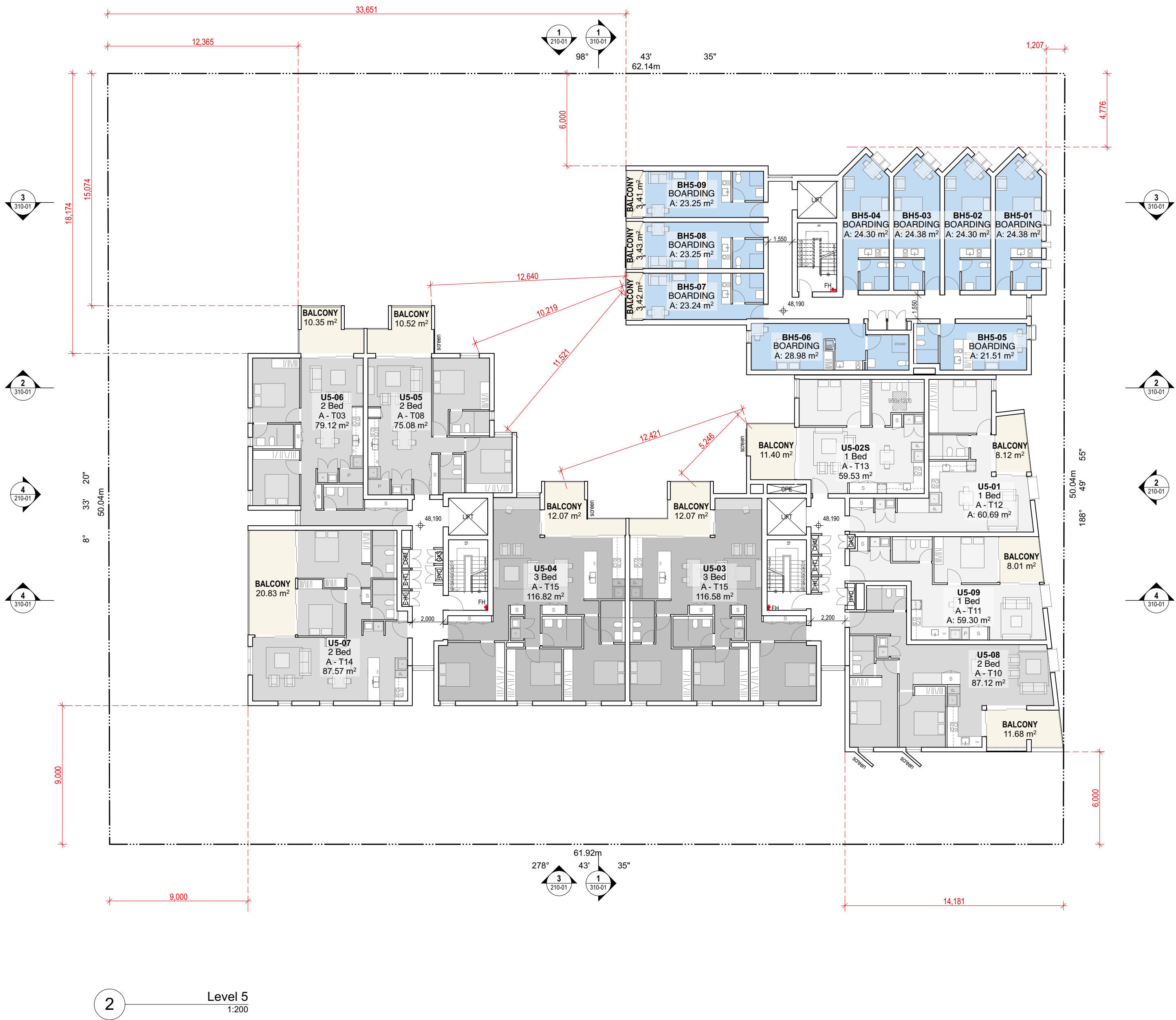
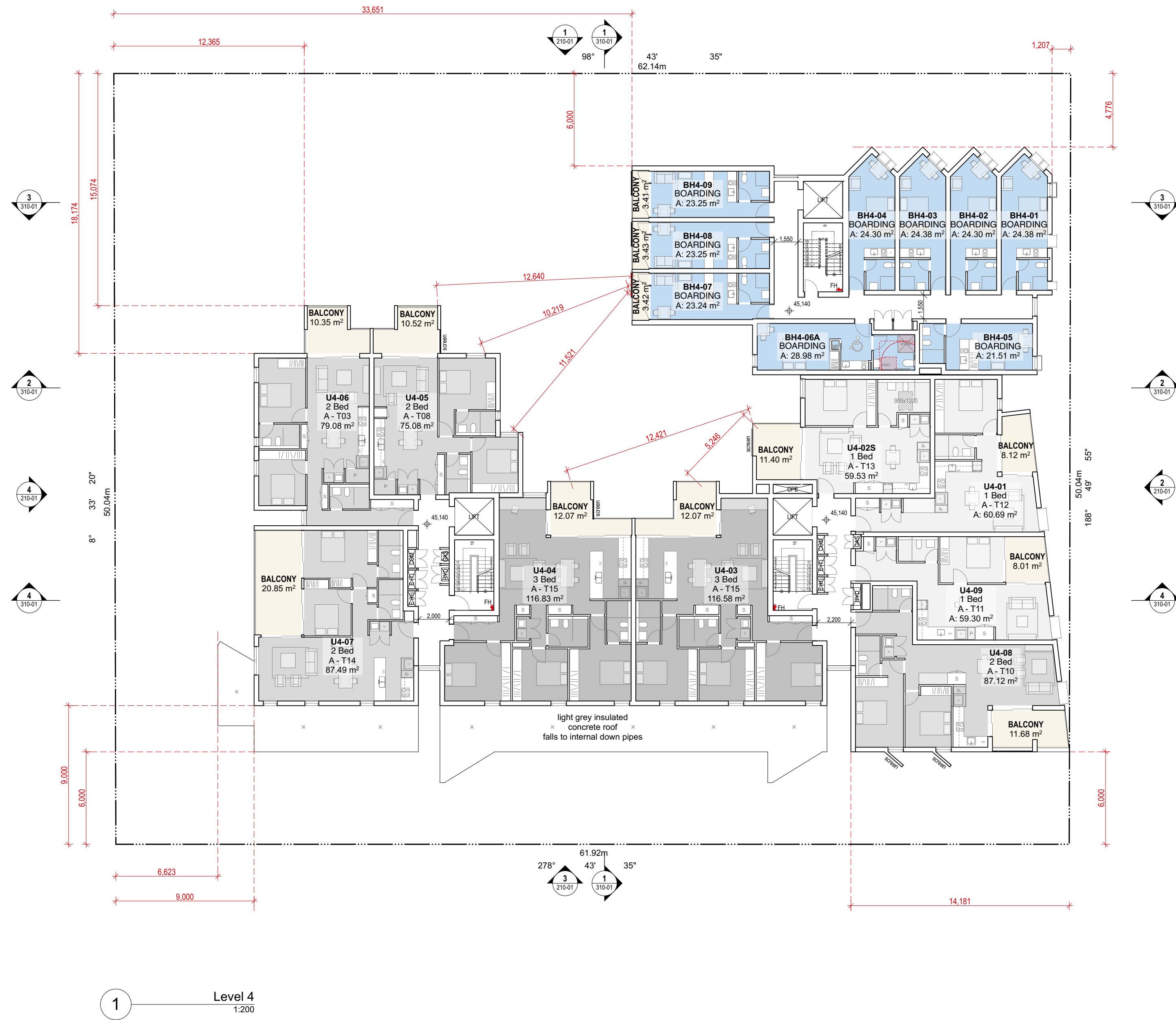
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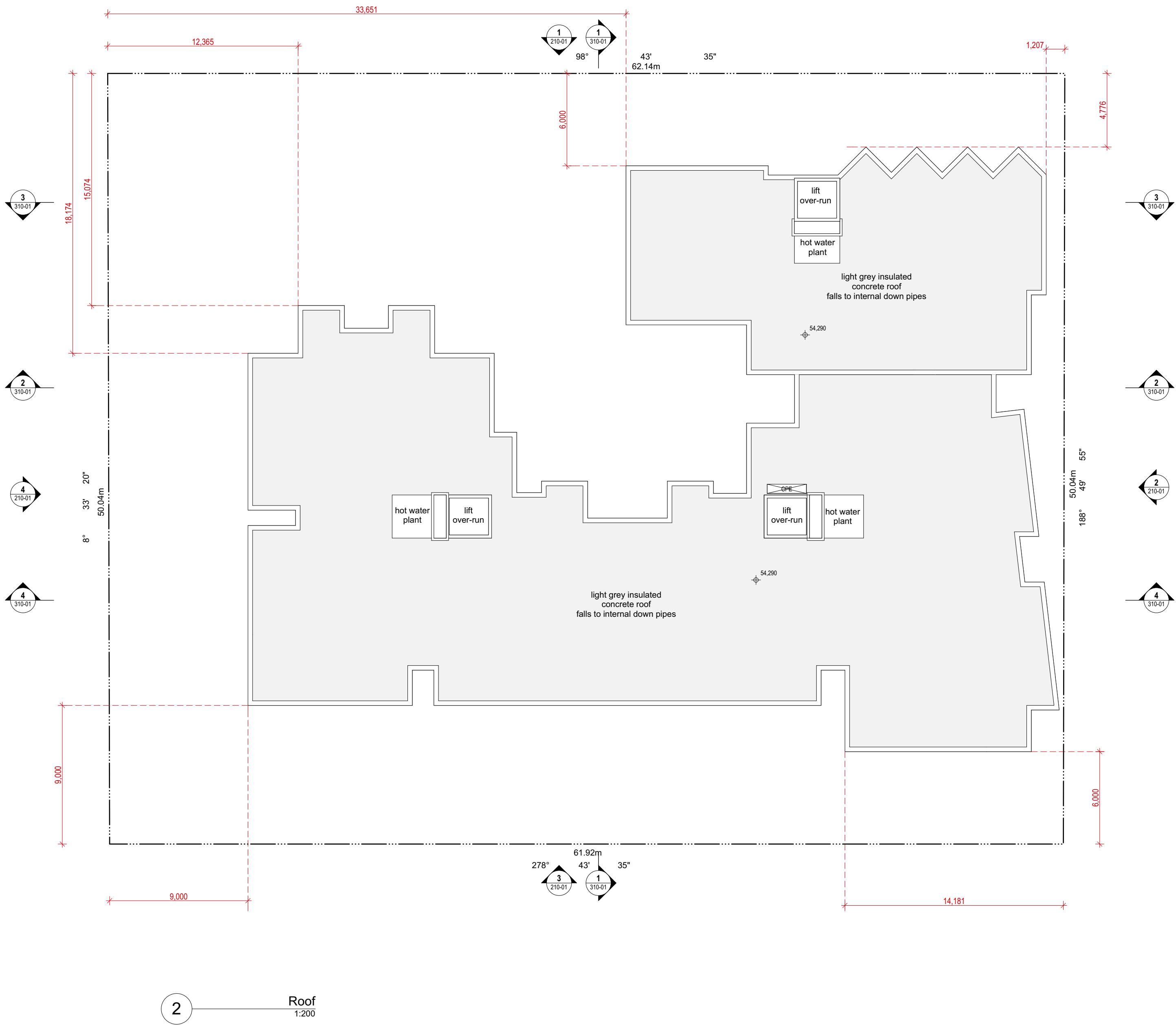
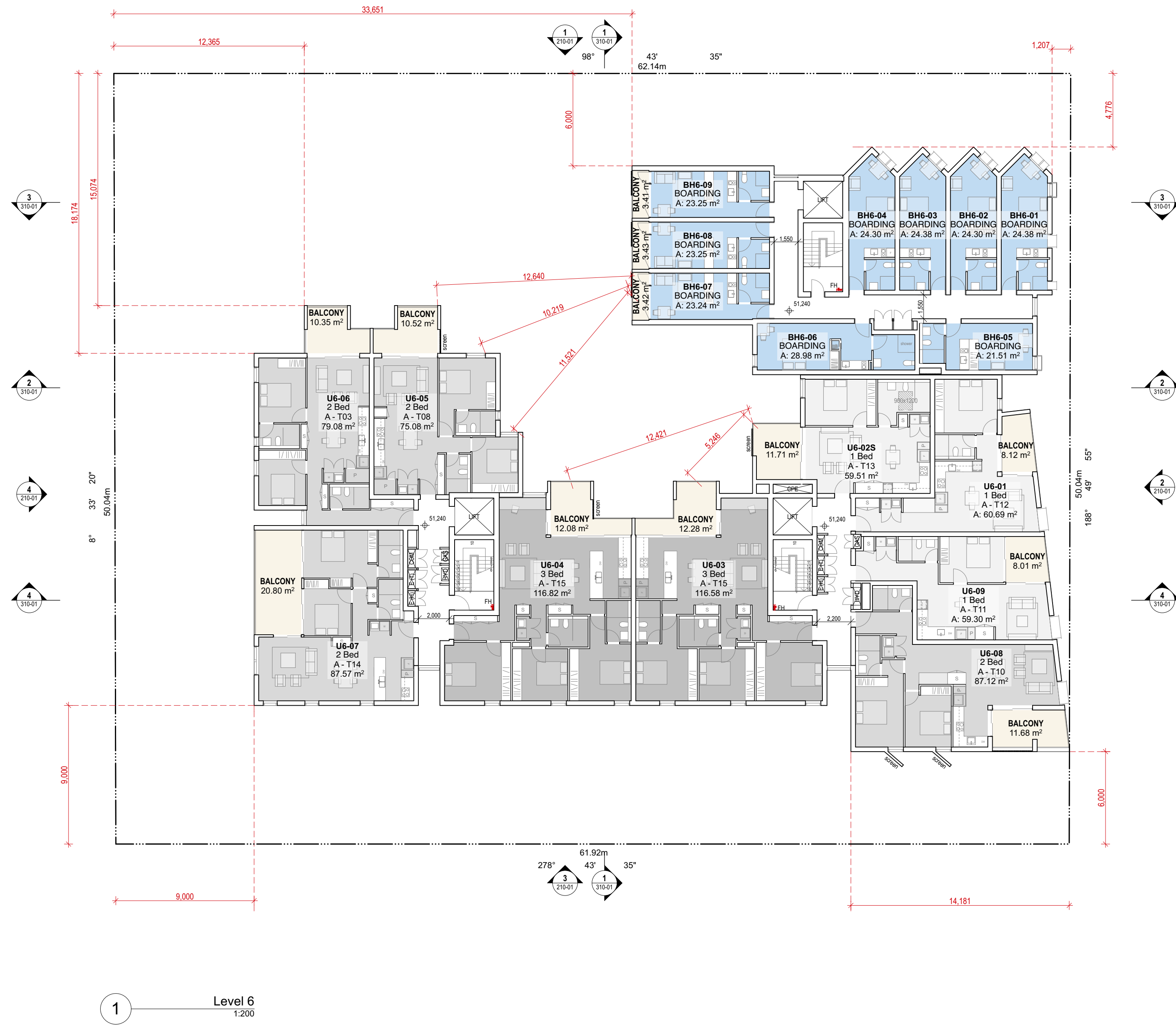
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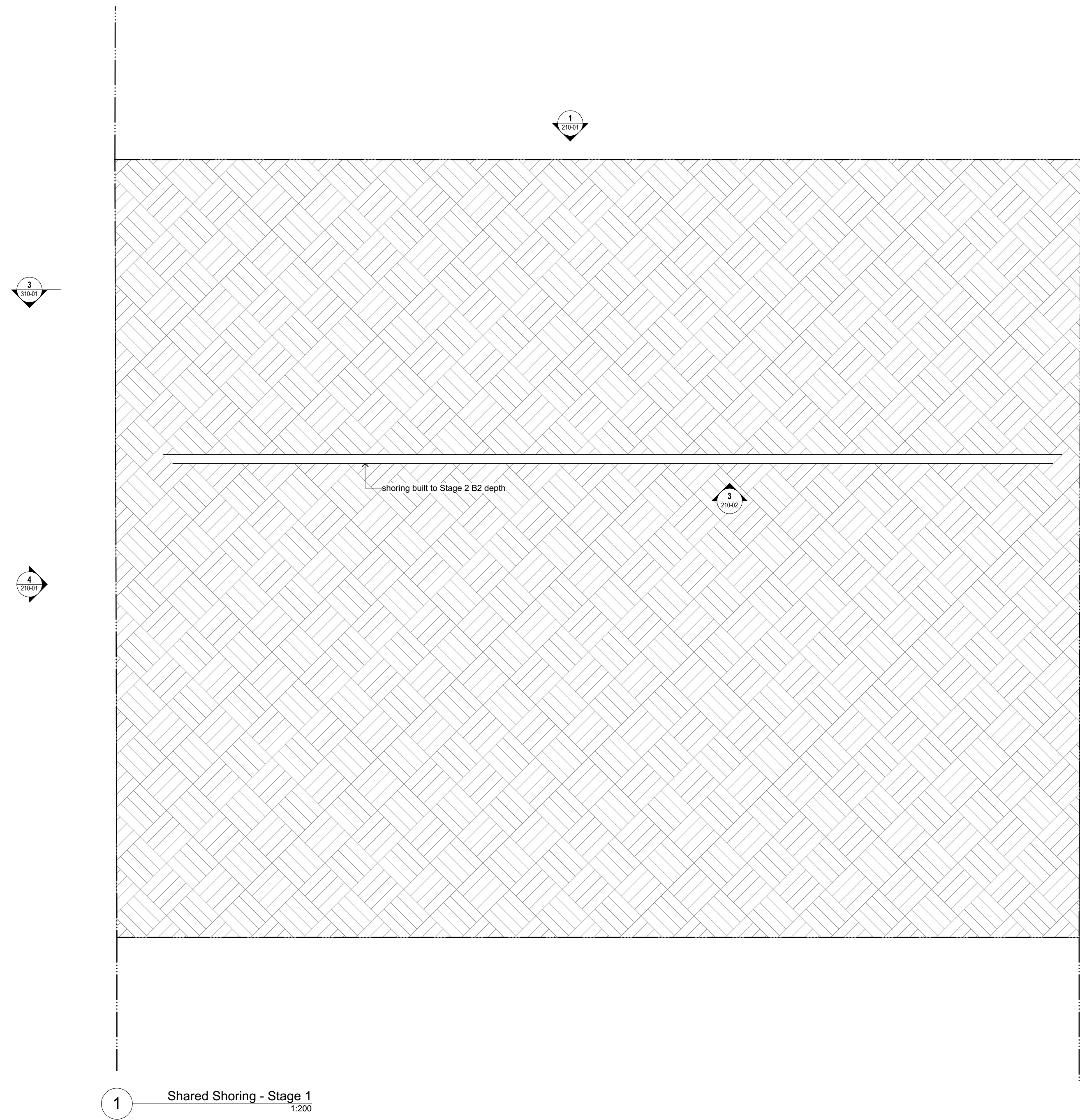
Levels 2 & 3

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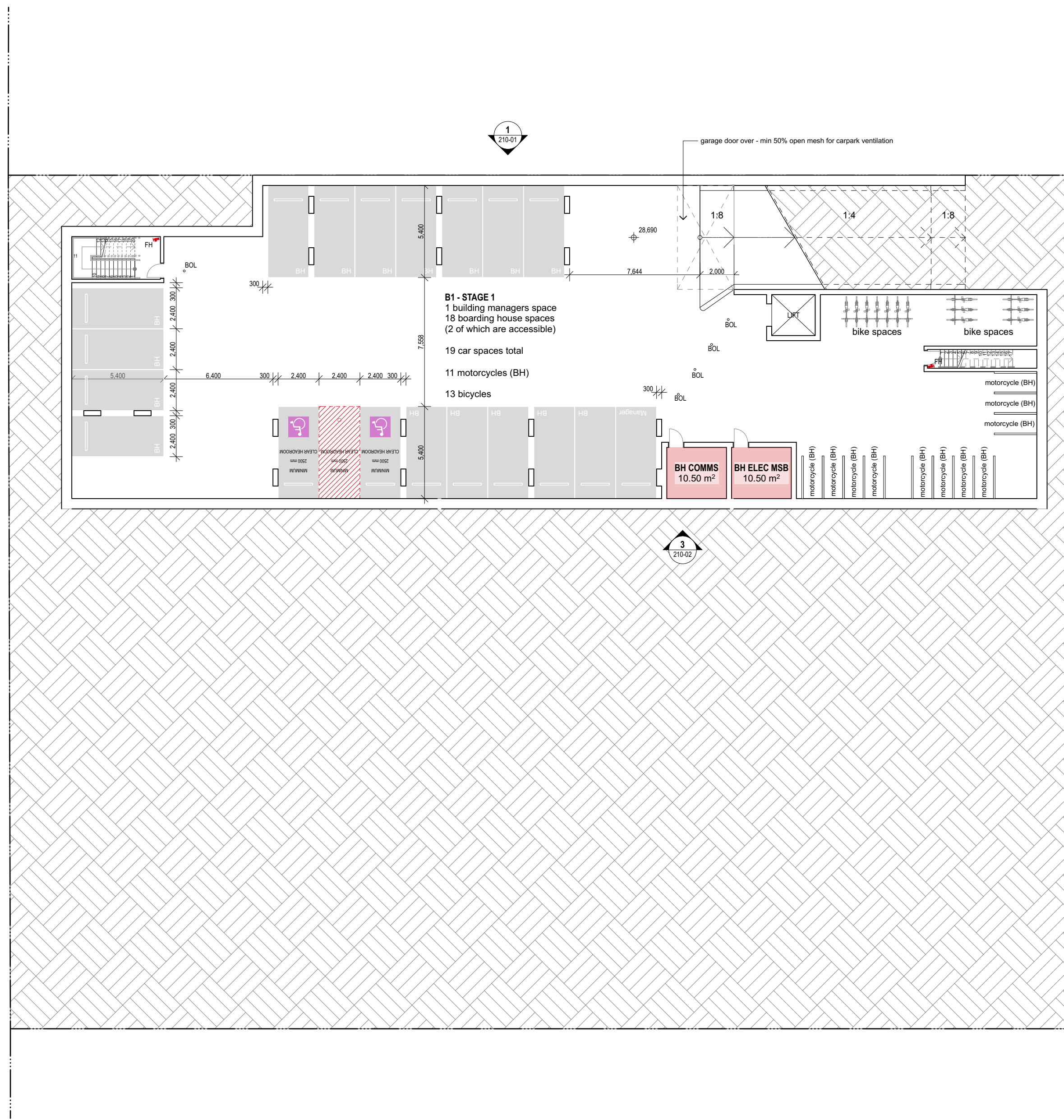
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Project No.	17003	Rev [N]
Dwg No.	110-02	



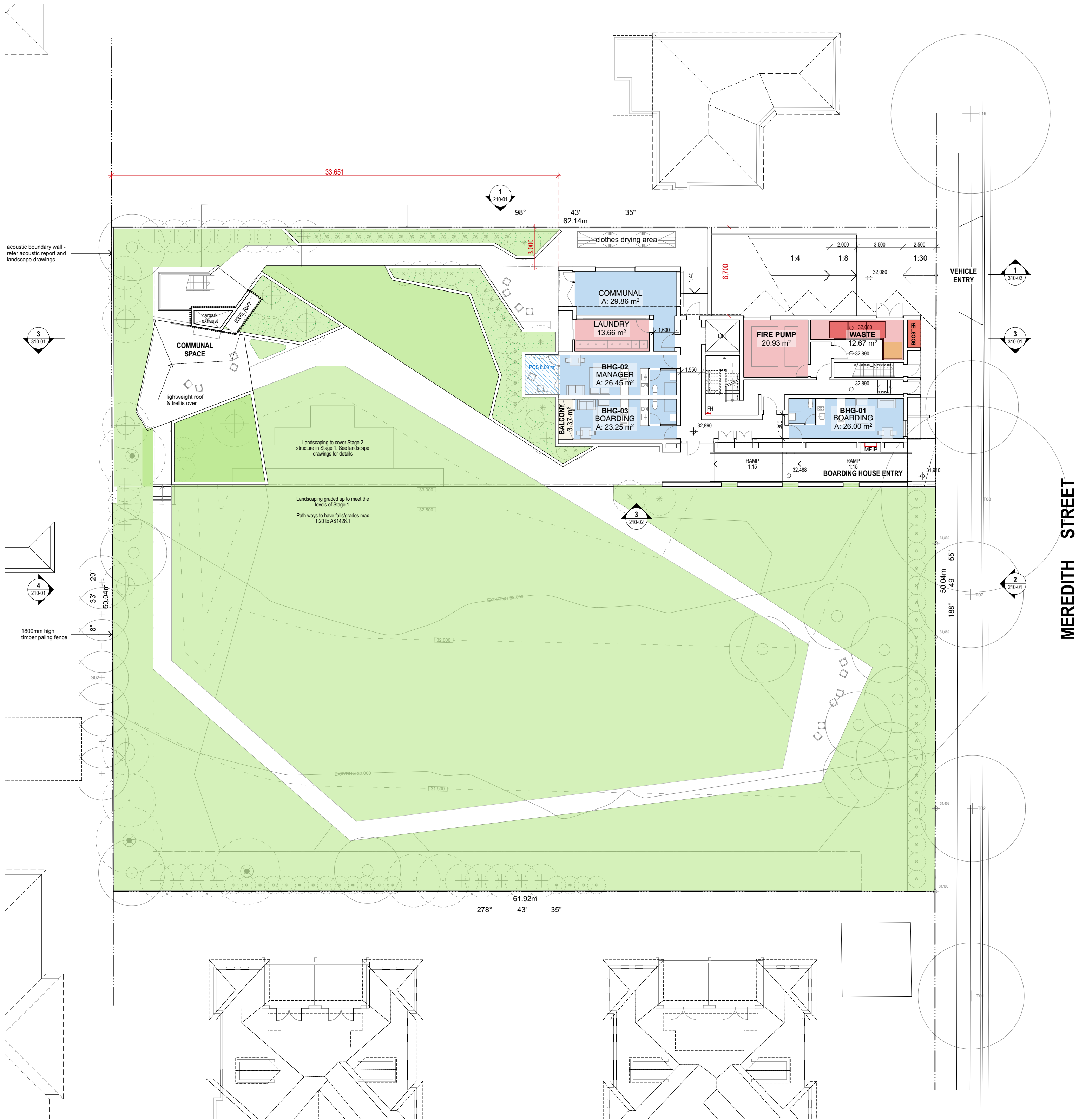




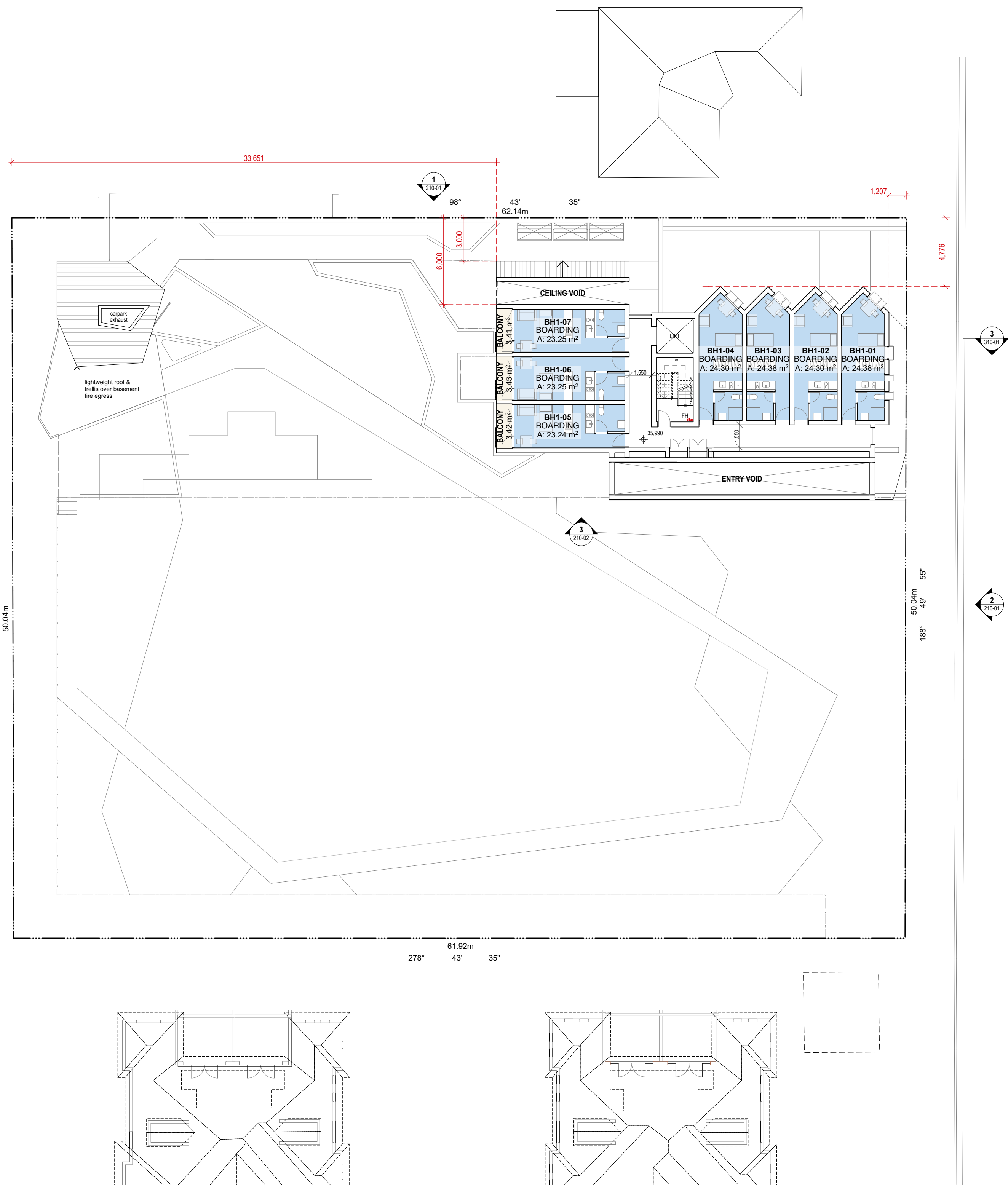
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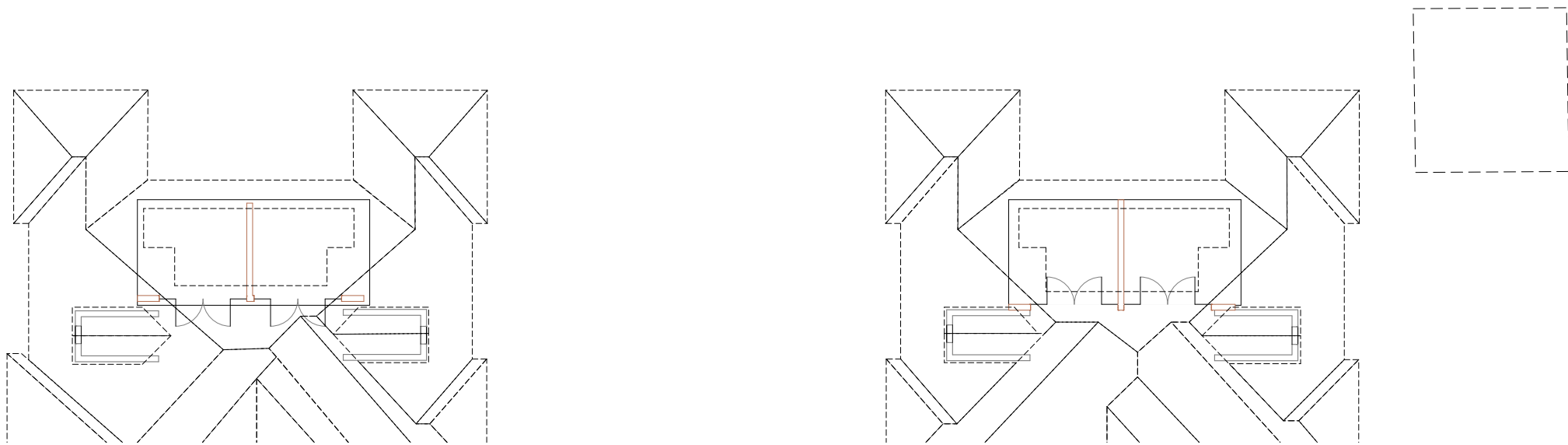
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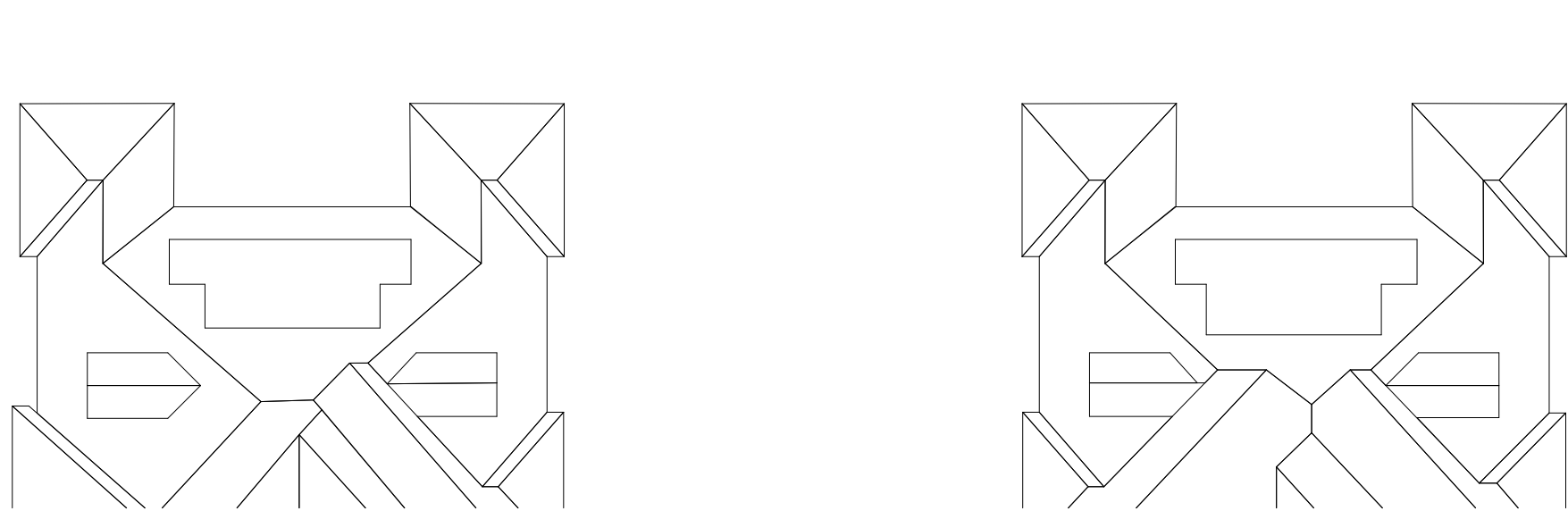
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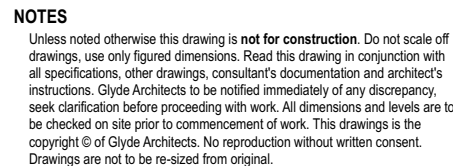
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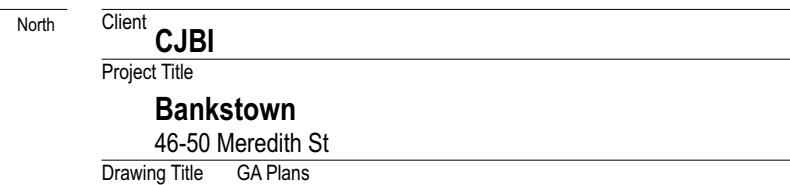
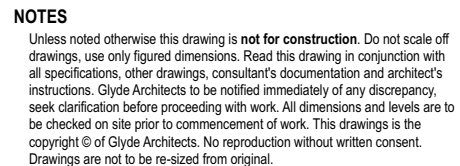
Drawing Title	GA Plans
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Levels 2 & 3 Stage 1

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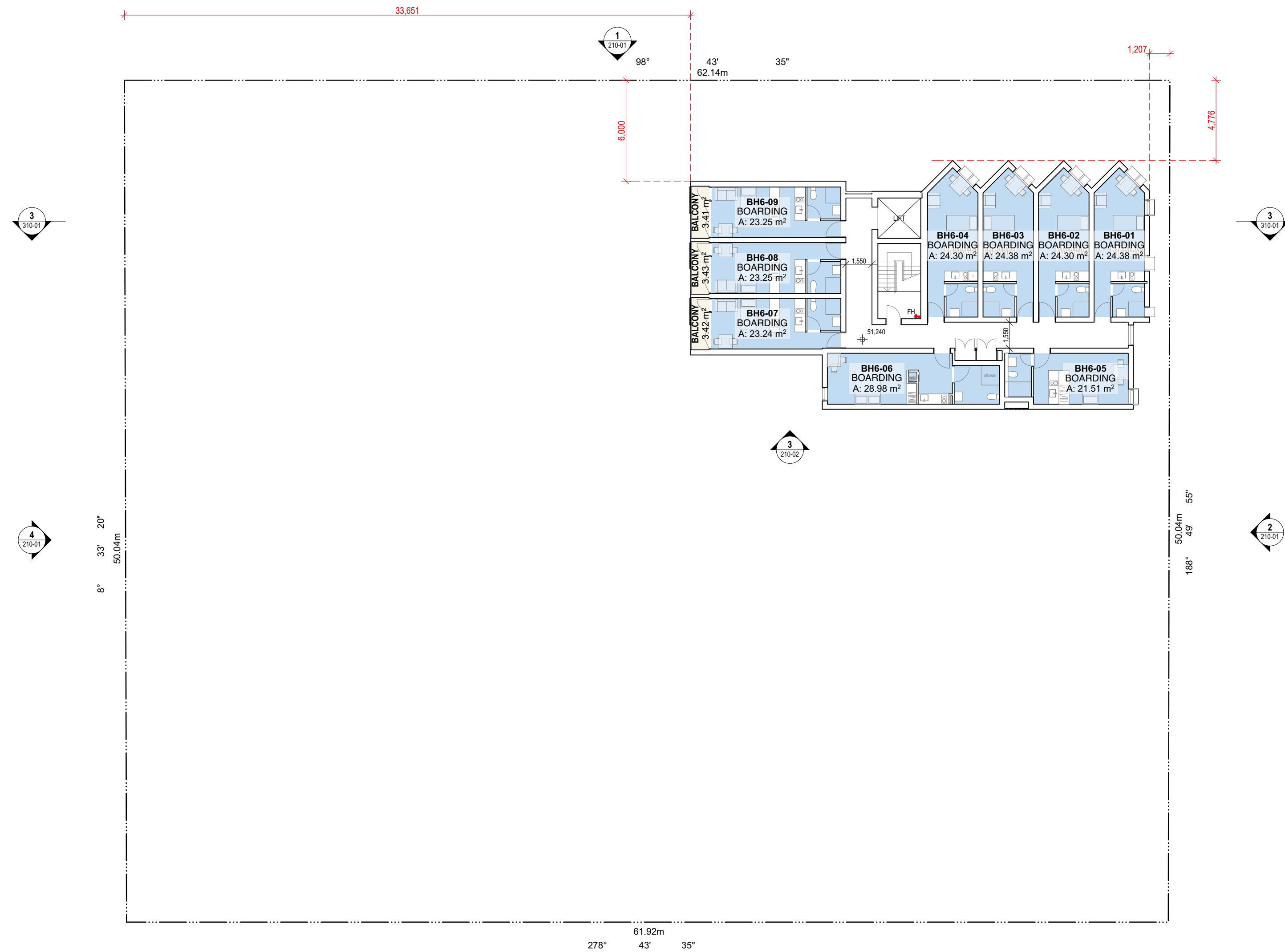
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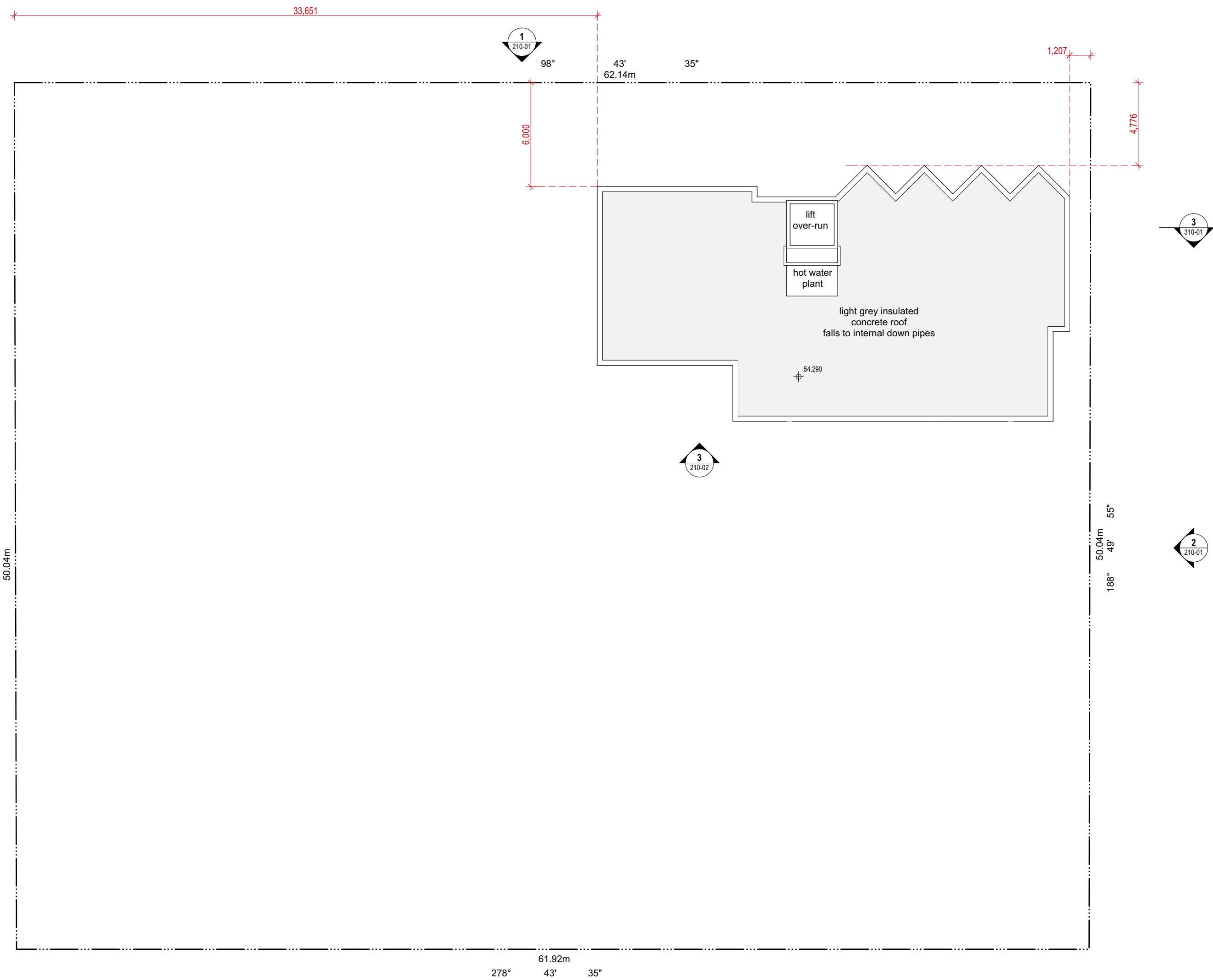


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Dwg No.	110-08	



1 Level 6 Stage 1
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2 Roof Stage 1
1:200



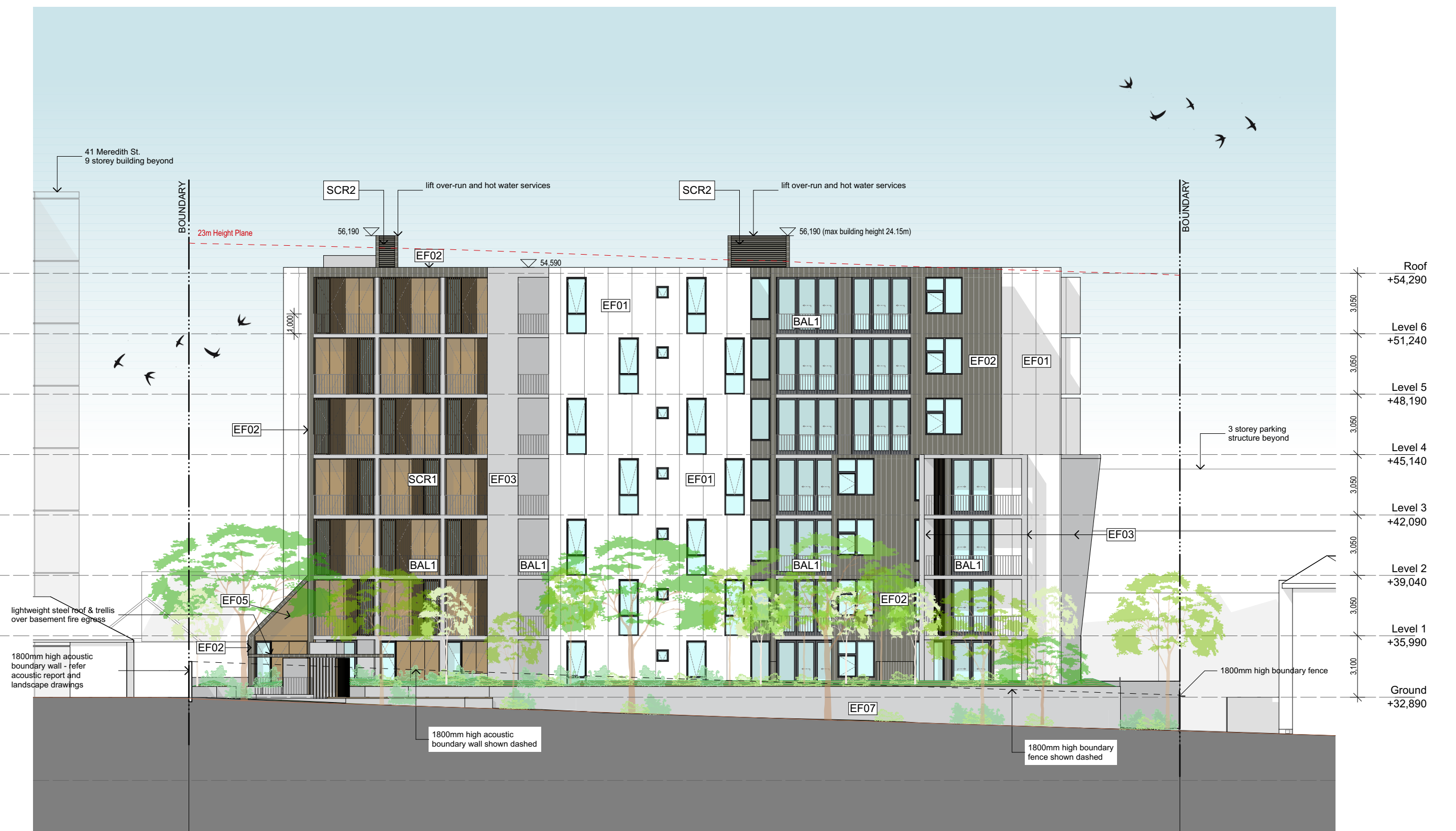
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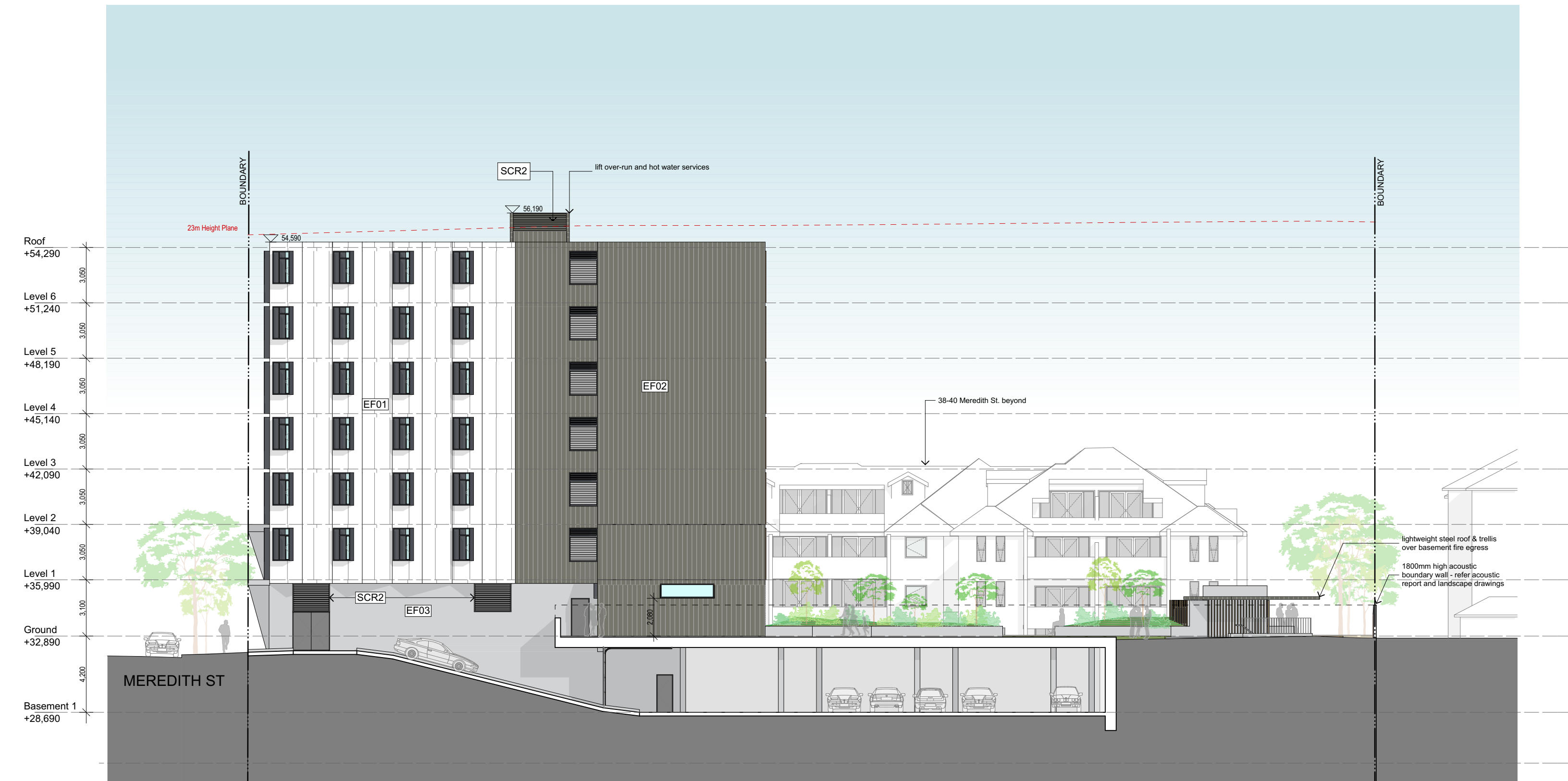
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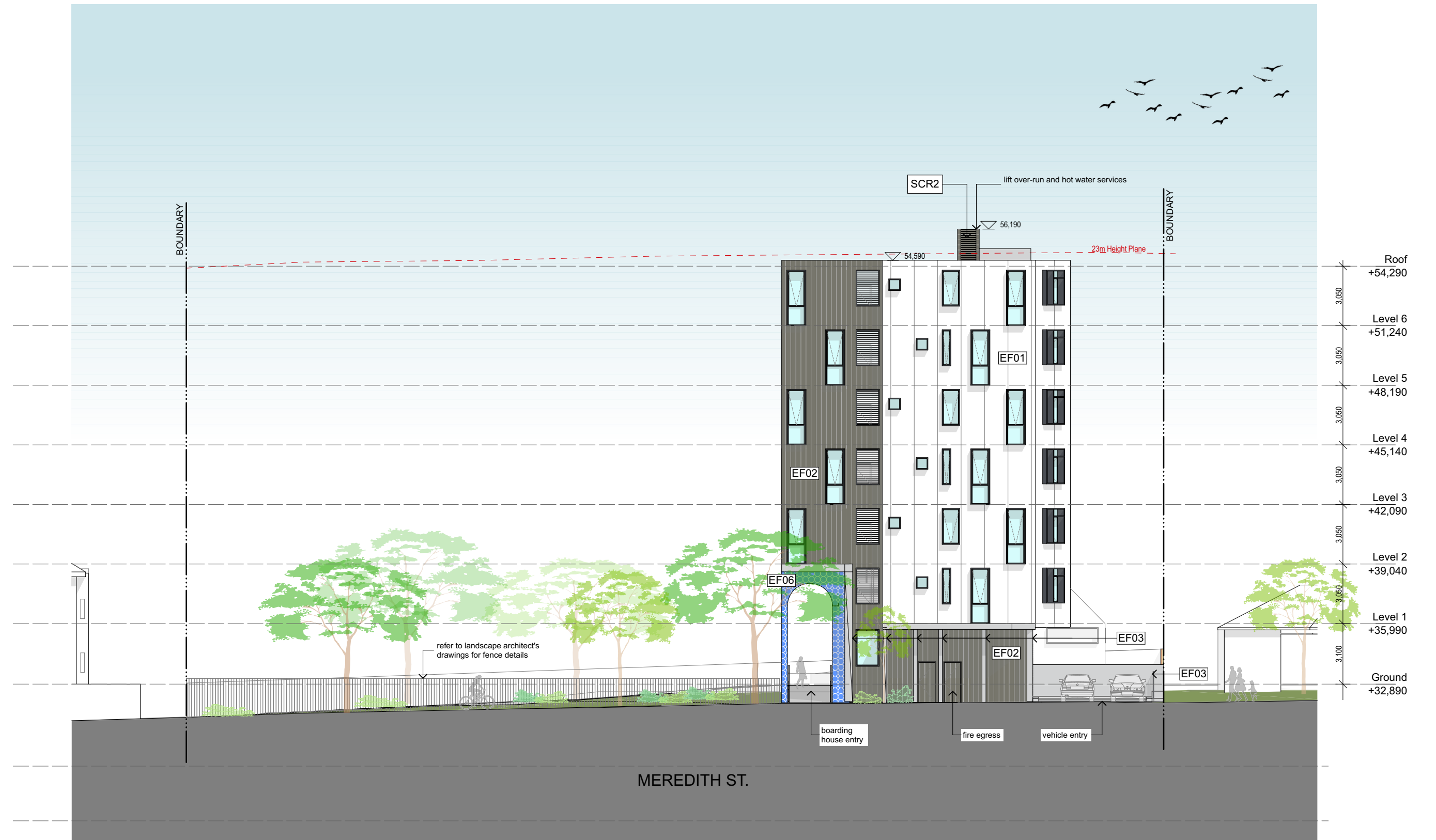
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1:200



4 West Elevation
1:200



1 North Elevation Stage 1
1:200



2 East Elevation Stage 1
1:200



3 South Elevation Stage 1
1:200



4 West Elevation Stage 1
1:200

0 1 2 3 4 5 10
@ A1
1:200
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MATERIALS KEY
EF01
EF02
EF03
EF05
EF06
EF07

Cemintel Barestone 9mm fibre cement sheet cladding to manufacturers specifications
Fielders Nailstrip 265mm metal cladding 'Woodland Grey'
Off-form concrete
Parklex 'Bronze' or similar Proforma 9mm installed to manufacturers instructions
Moroccan mosaic tile (to walls and ceiling of vaulted entry)
Natural cement render finish

BAL1
SCR1
SCR2
WINDOWS

100mm x10mm thick flat bar aluminium powder coated charcoal grey - verticals spaced max. 125mm apart, matching profile handrail and bottom rail.
Timber or similar solar / privacy screen
Horizontal Aluminium Louvers - 'Woodland Grey'
Capral 400 series or similar frames powder coated charcoal grey

Rev.	Date	Revision Notes	Drawn by	Checked by
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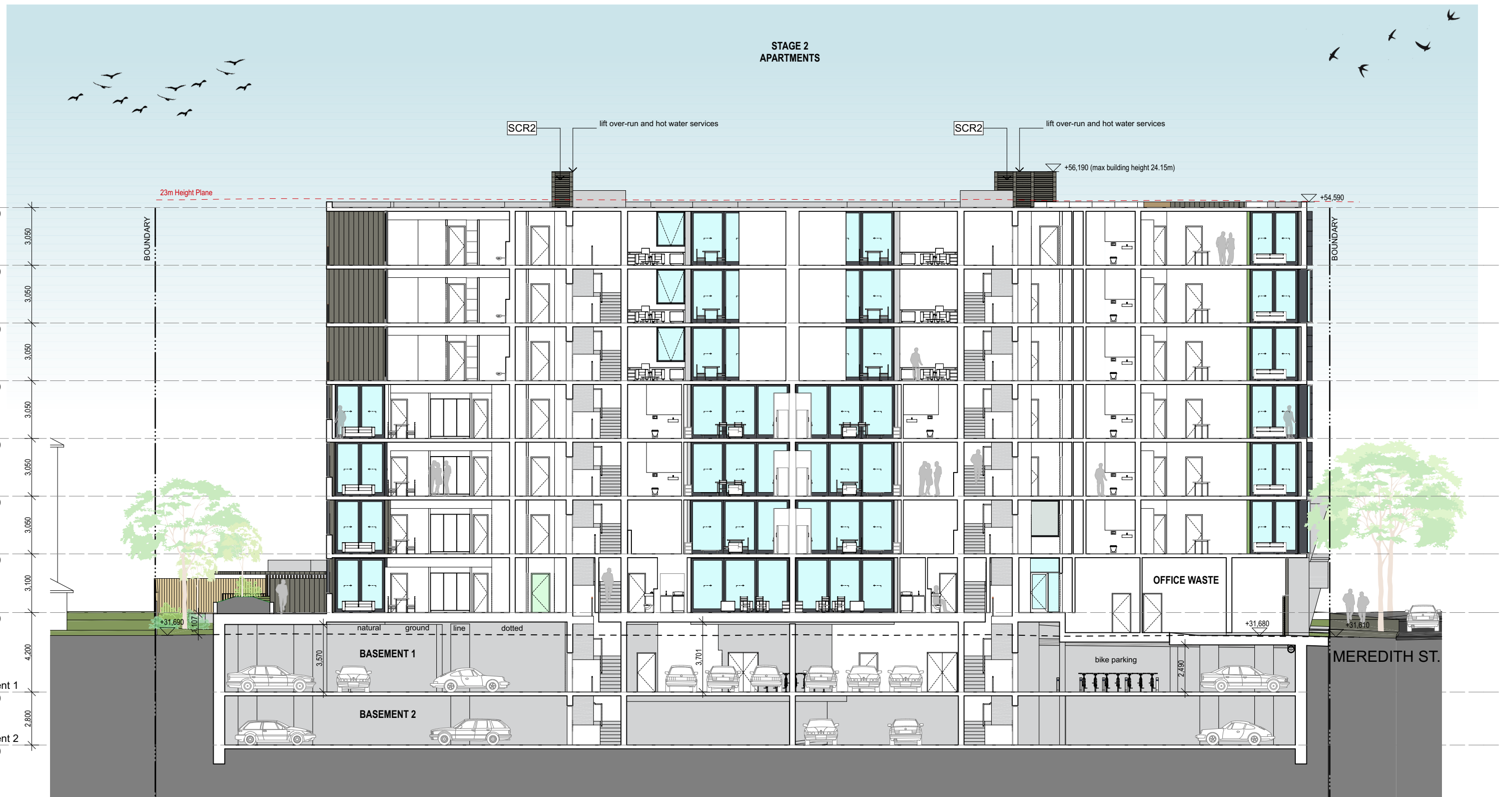
Client
CJBI
Project Title
Bankstown
46-50 Meredith St
Drawing Title
GA Elevations

Elevations Stage 1

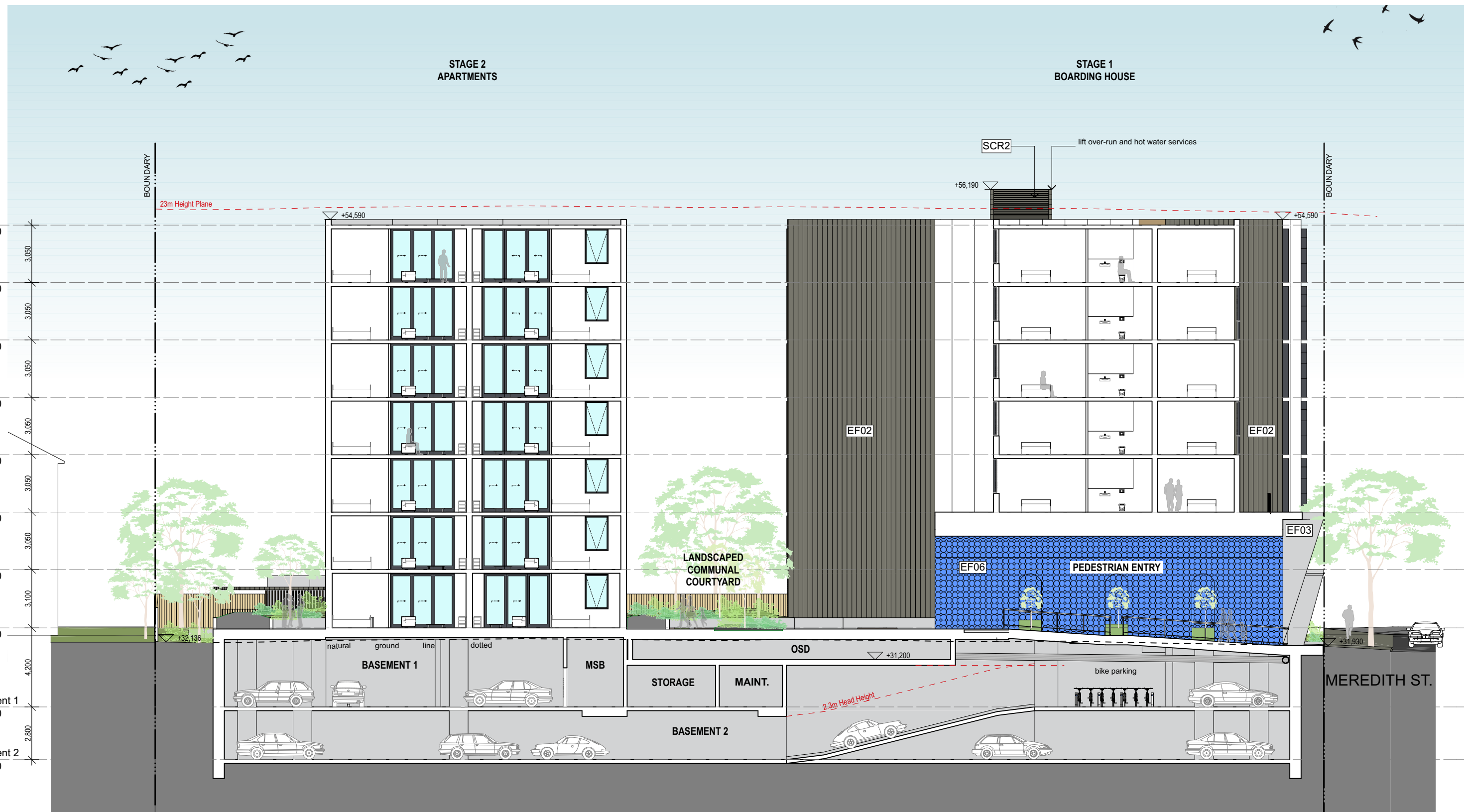
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Rev
[N]
Dwg No.
210-02



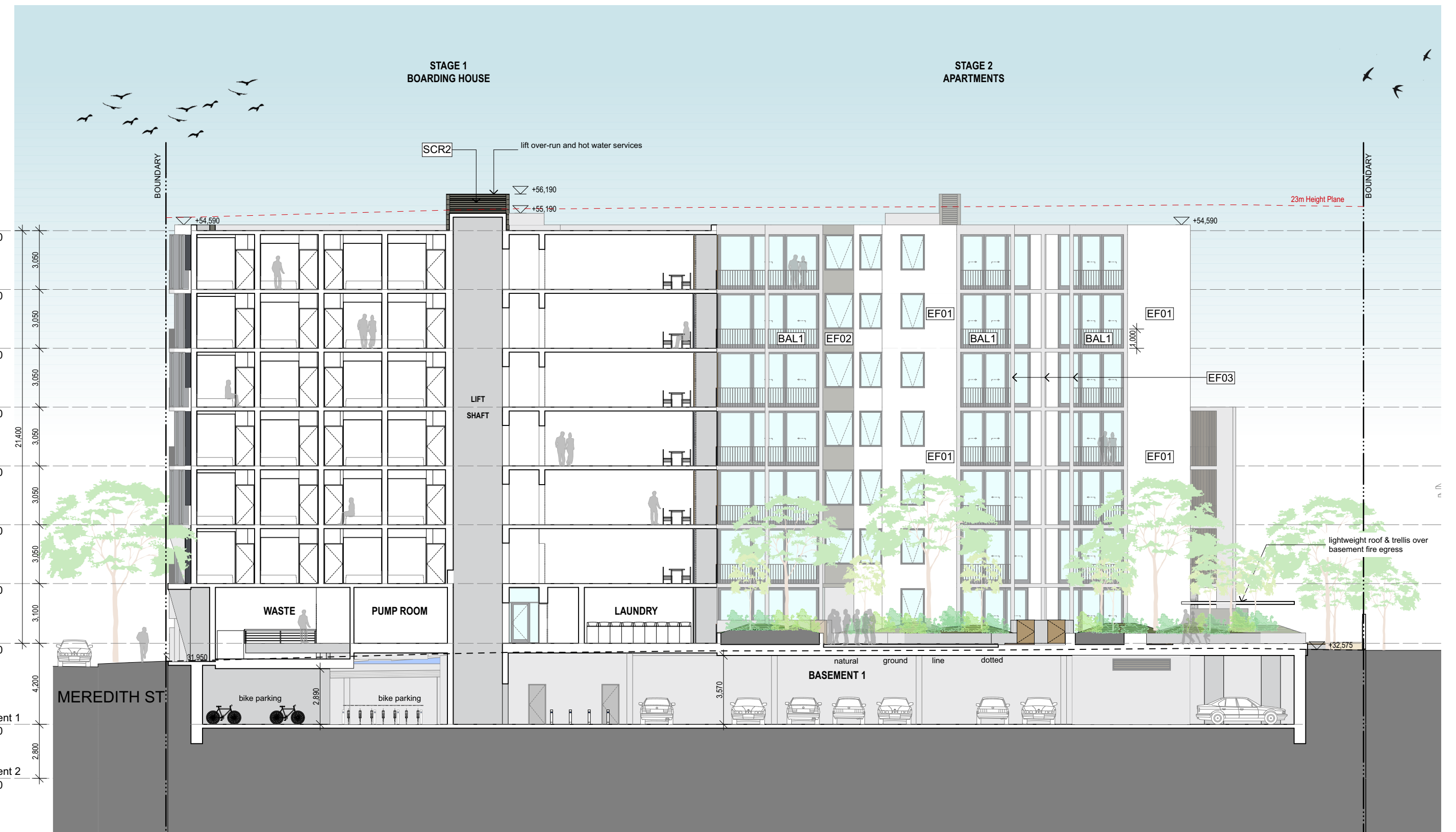
1 Cross Section
1:200



4 Long Section 3
1:200



2 Long Section
1:200



3 Long Section 2
1:200

NOTES

1 2 3 4 5 10
@ A1
1:200

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JE & PG	CG

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CJBI
Project Title
Bankstown
46-50 Meredith St
Drawing Title
GA Sections

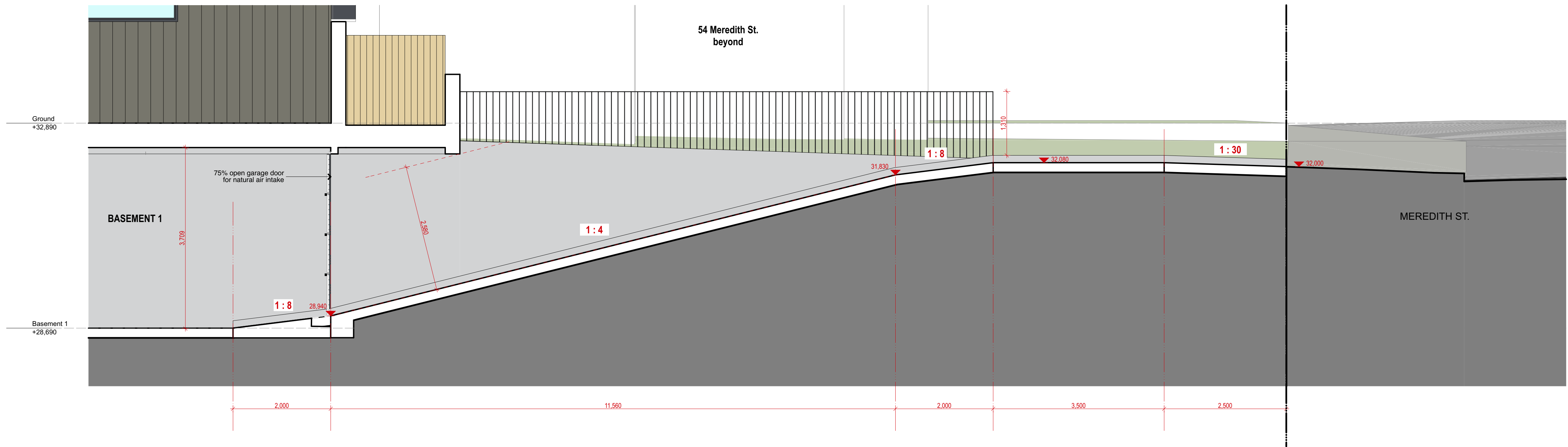
Sections

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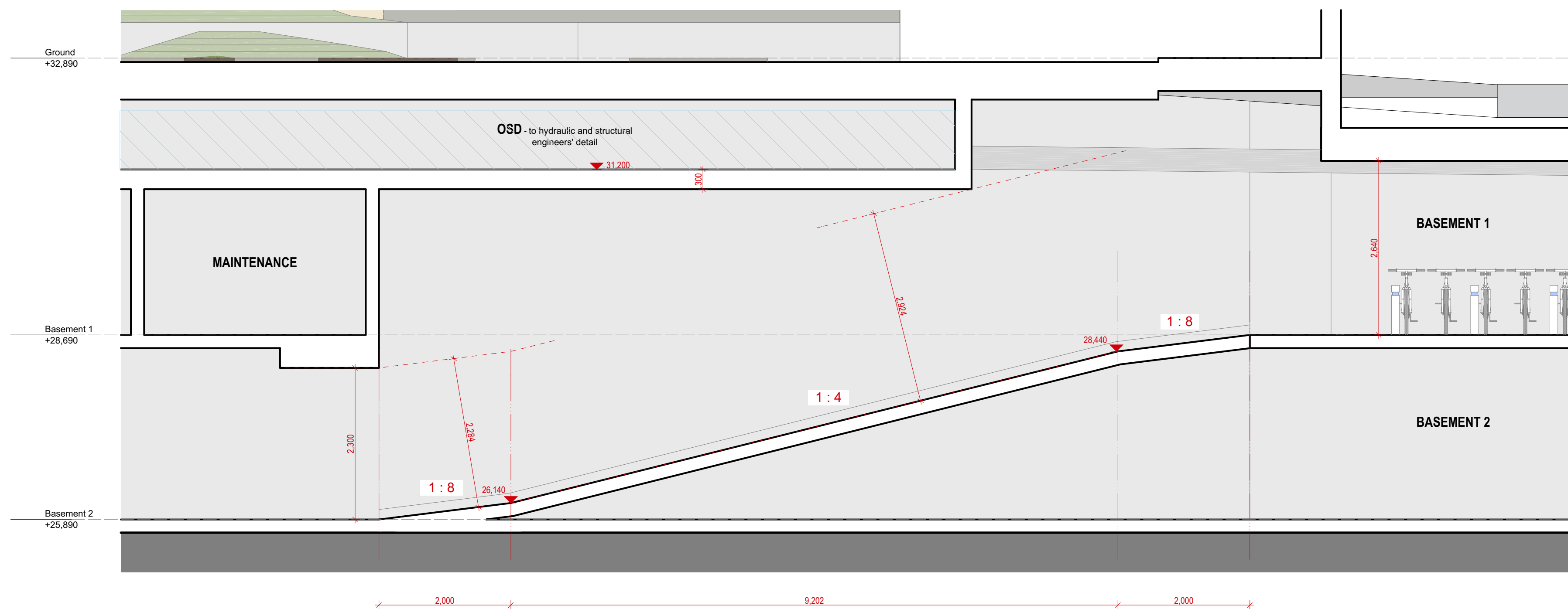
Status
DA SUBMISSION
Project No.
17003
Dwg No.
310-01

Rev

[N]



1 Main Vehicle Ramp Section
1:50



2 B2 to B1 Vehicle Ramp Section
1:50

0 1 2
1:50
@A1

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EF03
EF05
EF06
EF07

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SCR1
SCR2
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PG	CG
JE & PG	CG
JE & PG	CG
JE & PG	CG

Client

CJBI

Project Title

Bankstown

46-50 Meredith St

Drawing Title

GA Sections

Ramp Sections

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Status

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Project No.

17003

Dwg No.

310-02

Rev

[N]

APPENDIX B – PLANING CERTIFICATES

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SAI Global Property
PO Box 447
SOUTHBANK VIC 3205

CERTIFICATE DETAILS

NUMBER	20184584	DATE	13-Dec-2018
---------------	----------	-------------	-------------

RECEIPT AND REFERENCE DETAILS

FEE	\$133.00		
RECEIPT NUMBER	4071651	RECEIPT DATE	12-Dec-2018
REFERENCE	SAI:43883		

PROPERTY DESCRIPTION

PROPERTY	50 Meredith Street, BANKSTOWN NSW 2200		
TITLE	Lot 1 DP 974382		
PARISH	Bankstown	COUNTY	CUMBERLAND

PLANNING INSTRUMENTS

In accordance with Section 10.7(2) and at the date of this certificate the following Environmental Planning Instruments apply to the land.

Bankstown Local Environmental Plan 2015 Gazetted on 05-Mar-2015

LAND ZONING

B4 Mixed Use

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SECTION 10.7(2) DETAILS

In accordance with section 10.7(2) of the Environmental Planning and Assessment Act 1979 (as amended) and at the date of this certificate, the following prescribed matters relate to the land.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

Affected by Bankstown Local Environmental Plan 2015 Amendments and Planning Proposals in respect of general information as detailed in Appendix 1.

Affected by State Environmental Planning Policies (SEPP's), Proposed State Environmental Planning Policies and Deemed State Environmental Planning Policies as detailed in Appendix 2.

Affected by Bankstown Development Control Plan 2015 (refer to Appendix 3 which lists the contents chapters within the DCP).

2. ZONING AND LAND USE UNDER RELEVANT LEPs

Unless specified otherwise in this section of the certificate, the land does not include or comprise critical habitat, is not in a conservation area and has no environmental heritage item on the land.

The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent are specified in clause 3.1 of the LEP 2015 plan and the land use table as detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent are specified in Part 2 and clause 3.2 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development is prohibited within the zone are specified in Part 2 and clauses 4.1A-2(c), 4.1B-2(4), 6.6 and 6.8 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

2A. ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Unless specified otherwise in this section of the certificate, the land is not within any zone or land use under a Precinct Plan, a proposed Precinct Plan or Part 3 of State Environmental Planning Policy (Sydney Region Growth Centres) 2006.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

3. COMPLYING DEVELOPMENT

Housing Code

Complying development under the Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Alterations Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Subdivisions Code (strata subdivision)

Complying development under the Subdivisions Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Rural Housing Code

Complying development under the Rural Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may not** be carried out on the land.

The land is non complying because the land has been identified by an environmental planning instrument as being either one of the following zones:-

- R2 Low Density Residential, R3 Medium Density Residential, R4 High Density Residential
- B1 Neighbourhood Centre, B2 Local Centre, B4 Mixed Use, B5 Business Development, B6 Enterprise Corridor, B7 Business Park
- IN1 General Industrial, IN2 Light Industrial
- SP1 Special Activities, SP2 Infrastructure
- RE1 Public Recreation, RE2 Private Recreation
- E1 National Park and Nature Reserves
- Land unzoned under LEP 2015.....*refer to the Land Zoning of this certificate on page 1.*

OR

The land is affected by one or more of the following 4 exemptions:-

- A Heritage item *refer to clause 2 of this certificate,*
- Land in the 25 or higher ANEF contour..... *refer to clause 7 of this certificate,*
(Unless the development is only for the erection of ancillary development, the alteration of or an addition to ancillary development or the alteration of a dwelling house)
- Acid sulfate soils class 1 or 2 *refer to clause 7 of this certificate,*
- Land in a vegetated buffer area *refer to clause 7 of this certificate,*

Note: If the land has been rendered non complying due to an exemption listed above, you are advised to check with Council for the extent of the exemption. The Code may render the land complying for any land which is outside the extent of the exemption. Reference should be made to the "Planning Maps" on Council's website www.bankstown.nsw.gov.au which identifies the land exemptions.

General Development Code

Complying development under the General Development Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Commercial and Industrial Alterations Code

The extent to which the land is land on which complying development may be carried out under the Commercial and Industrial Alterations Code of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **is not restricted** by any of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Note: There are other provisions in "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" that must be complied with in order for development on the land to be complying development.

Commercial and Industrial (New Buildings and Additions) Code

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Complying development under the Commercial and Industrial (New Buildings and Additions) Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" may be carried out on the land.

4. COASTAL PROTECTION

Unless specified otherwise in this section of the certificate, the land is not affected by the operation of Section 38 or 39 of the Coastal Protection Act 1979.

4A. CERTAIN INFORMATION RELATING TO BEACHES AND COASTS

Unless specified otherwise in this section of the certificate, the land is not subject to an order under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (or on public land adjacent to the land) and, Council has not been notified under Section 55X of the Coastal Protection Act 1979 that temporary coastal protection works have been placed on the land (or on public land adjacent to the land).

4B. ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

Unless specified otherwise in this section of the certificate, the owner (or any previous owner) has not consented in writing that the land is subject to annual charges under Section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works.

5. MINE SUBSIDENCE

Not affected by Section 15 of the Mine Subsidence Compensation Act 1961, proclaiming land to be a mine subsidence district.

6. ROAD WIDENING AND REALIGNMENT

Not affected by any road widening or road realignment under (1) Division 2 of part 3 of the Roads Act 1993; or (2) any Environmental Planning Instrument; or (3) any resolution of Council. However, should your property be near an arterial or main road you should check with the Roads and Maritime Services for possible affectations.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Unless specified otherwise in this section of the certificate, the land is not affected by policies adopted by Council or by any other authority (that has notified Council of its adoption) that restricts development of the land. For bush fire prone land refer to section 11. For flood prone land refer to section 7A.

Affected by a resolution of Council adopting a policy concerning the management of contaminated land. That policy applies to all land in the City of Canterbury-Bankstown and will restrict development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Council's website at www.bankstown.nsw.gov.au or from the Customer Service Area.

Note: Additional information regarding contaminated land matters for this property may also be provided on part 5 of this section 10.7 planning certificate. For further information contact Council on 9707 9000.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

Unless specified otherwise in this section of the certificate, the land is not affected by flood related development controls.

8. LAND RESERVED FOR ACQUISITION

Not affected by either an Environmental Planning Instrument or proposed Environmental Planning Instrument referred to in clause 5.1 providing for the acquisition of the land or part of the land by a public authority, as referred to in Section 27 of the Environmental Planning & Assessment Act. Reference should be made to the LEP 2015 plan as a whole for details.

9. CONTRIBUTION PLANS

Affected by Bankstown City Council Section 94A Development Contributions Plan 2009 which allows Council to impose a levy on development within the City of Canterbury-Bankstown in accordance with Directions issued by the Minister for Planning. The levy will be spent on the provision of public works and infrastructure. Date of commencement 8th June 2009. For further details on the plan contact Council on 9707 9000 or visit Council's website – www.bankstown.nsw.gov.au

9A. BIODIVERSITY CERTIFIED LAND

Unless specified otherwise in this section of the certificate, the land is not biodiversity certified land within the meaning of Part 7AA of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Unless specified otherwise in this section of the certificate, the land is not subject to a Biobanking Agreement under Part 7A of the Threatened Species Conservation Act 1995, made by the Department of Environment, Climate Change and Water that has notified Council of the existence of the agreement.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

11. BUSHFIRE PRONE LAND

Unless specified otherwise in this section of the certificate, the land is not bushfire prone.

12. PROPERTY VEGETATION PLANS

Unless specified otherwise in this section of the certificate, the land is not subject to a Property Vegetation Plan under the Native Vegetation Act 2003, as approved by any other authority that has notified Council of the existence of the plan.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Unless specified otherwise in this section of the certificate, the land is not subject to a Tree Order under the Trees (Disputes Between Neighbours) Act 2006, made by an authority that has notified Council of the existence of the order.

14. DIRECTIONS UNDER PART 3A

Unless specified otherwise in this section of the certificate, the land is not subject to a Direction by the Minister under section 75P (2) (c1) of the Act that a provision of an EPI does not have an effect.

15. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR SENIORS HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application granted after 12.10.2007 under SEPP (Housing for Seniors or People with a Disability) 2004 setting out the terms of any conditions imposed under clause 18(2) or a current site compatibility certificate issued under clause 25 of the SEPP.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under clause 19 of SEPP (Infrastructure) 2007 where a valid site compatibility certificate has been issued.

17. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under SEPP (Affordable Rental Housing) 2009 where a valid site compatibility certificate and conditions have been issued.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

18. PAPER SUBDIVISION INFORMATION

Unless specified otherwise in this section of the certificate, the land is not subject to a paper subdivision or subdivision order.

19. SITE VERIFICATION CERTIFICATES

Unless specified otherwise in this section of the certificate, the land is not subject to a current site verification certificate of which the Council is aware in respect to Division 3 of Part 4AA of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

20. LOOSE-FILL ASBESTOS INSULATION

A residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill ceiling insulation. Contact NSW Fair Trading for more information.

MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT, 1997

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 59(2) of the Contaminated Land Management Act 1997.

MATTERS ARISING UNDER THE NATION BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT, 2009

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 26 of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009.

This completes the prescribed matters for the certificate under section 10.7(2) of the Environmental Planning and Assessment Act 1979, as amended. While this certificate indicates the zoning of the land, it is suggested that the relevant Planning Instrument be inspected on Council's website under Development – Planning Maps or at Council's Customer Service Centre to provide an overall view of the area and the site's surrounding zonings.

SECTION 10.7(5) DETAILS

At the date of this certificate, the following relevant matters are provided in good faith in accordance with the requirements of Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Council has selected the following matters for checking as those most likely to be of concern and do not comprise an exhaustive list. The absence of any reference to any matter affecting the land shall not imply that any matter not referred to in this certificate does not affect the land.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

ADDITIONAL INFORMATION

Unless specified otherwise in this section of the certificate, there are no relevant matters arising under Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Please contact Council's general enquiries number listed at the bottom of this sheet for further information about any matter referred to in this certificate.



Melissa Ratkun
Manager Information Management

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 1

Bankstown Local Environmental Plan 2015 Amendments & Planning Proposals.

(relating to general information only which may affect part or the whole of the City)

Note: As of 1 July 2009, Draft LEP's have been replaced with "Planning Proposals". A planning proposal is a document that explains the intended effect of, and justification for, a proposed LEP.

Nil

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 2

State Environmental Planning Policies (SEPP's), Proposed SEPP's and Deemed SEPP's

Note: The names of the relevant instrument's plus their gazettal dates are listed below. For further details please refer to the Department of Planning website www.planning.nsw.gov.au under the heading "Planning System – Legislation and Planning Instruments".

SEPP No.19 – Bushland in Urban Areas, gazetted 24.10.1986
SEPP No.21 – Caravan Parks, gazetted 24.4.1992
SEPP No.30 – Intensive Agriculture, gazetted 8.12.1989
SEPP No.32 – Urban Consolidation (Redevelopment of Urban Land), gazetted 15.11.1991
SEPP No.33 – Hazardous and Offensive Development, gazetted 13.3.1992
SEPP No.50 – Canal Estate Development, gazetted 10.11.1997
SEPP No.55 – Remediation of Land, gazetted 28.8.1998
SEPP No.62 – Sustainable Aquaculture, gazetted 25.8.2000
SEPP No.64 – Advertising and Signage, gazetted 16.3.2001
SEPP No.65 – Design Quality of Residential Flat Development, gazetted 26.7.2002
SEPP – (Housing for Seniors or People with a Disability) 2004, gazetted 31.3.2004
SEPP – (Building Sustainability Index: BASIX) 2004, gazetted 25.6.2004
SEPP – (Major Development) 2005, gazetted 1.8.2005
SEPP – (Mining, Petroleum Production and Extractive Industries) 2007, gazetted 16.2.2007
SEPP – (Miscellaneous Consent Provisions) 2007, gazetted 26.10.2007
SEPP – (Infrastructure) 2007, gazetted 21.12.2007
SEPP – (Exempt and Complying Development Codes) 2008, gazetted 12.12.2008
SEPP – (Affordable Rental Housing) 2009, gazetted 31.7.2009
SEPP – (Sydney Drinking Water Catchment) 2011, gazetted 21.1.2011

PROPOSED SEPP - Competition SEPP, 27.7.2010

Note: As of 1 July 2009, regional environmental plans (REPs) are no longer part of the hierarchy of environmental planning instruments in NSW. The removal of the REP layer is intended to simplify the State's planning system. All existing REPs (listed below) are now deemed State environmental planning policies (SEPPs).

Deemed SEPP – Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment, gazetted 5.2.1999

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 3

Bankstown Development Control Plan 2015

DATE OF COMMENCEMENT – 13th May 2015

The following is a list of the contents within Bankstown Development Control Plan 2015. If further information is required please contact Council on 9707 9000.

INTRODUCTION	
PART A	PRECINCT CONTROLS
A1	Centres
A2	Corridors
A3	Key infill development sites
PART B	GENERAL CONTROLS
B1	Residential development
B2	Commercial centres
B3	Industrial precincts
B4	Sustainable development
B5	Parking
B6	Child care centres
B7	Educational establishments
B8	Places of public worship
B9	Sex services premises
B10	Telecommunications facilities
B11	Tree preservation order
B12	Flood risk management

Please note: Council may from time to time exhibit draft changes to the development control plan that may affect your land. To find out more, please contact Council on 9707 9000 or view Council's website and refer to the Development Control Plan - www.bankstown.nsw.gov.au

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 4

Land Use Table

Note. A type of development referred to in the Land Use Table is a reference to that type of development only to the extent it is not regulated by an applicable State environmental planning policy. The following State environmental planning policies in particular may be relevant to development on land to which this Plan applies:

State Environmental Planning Policy (Affordable Rental Housing) 2009 (including provision for secondary dwellings)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Infrastructure) 2007 (relating to public facilities such as those for air transport, correction, education, electricity generation, health services, ports, railways, roads, waste management and water supply systems)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Rural Lands) 2008
State Environmental Planning Policy No 33—Hazardous and Offensive Development
State Environmental Planning Policy No 50—Canal Estate Development
State Environmental Planning Policy No 62—Sustainable Aquaculture
State Environmental Planning Policy No 64—Advertising and Signage

Zone RU4 Primary Production Small Lots
Permitted without consent Home occupations
Permitted with consent Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Dwelling houses; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Intensive plant agriculture; Kiosks; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Roads; Roadside stalls; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R2 Low Density Residential
Permitted without consent Home occupations
Permitted with consent Bed and breakfast accommodation; Boarding houses; Boat sheds; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Health consulting rooms; Home-based child care; Hospitals; Information and education facilities; Jetties; Multi dwelling housing; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Seniors housing; Water recreation structures; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R3 Medium Density Residential
Permitted without consent Nil
Permitted with consent Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Group homes; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Water supply systems
Prohibited Any development not specified in item 2 or 3

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone R4 High Density Residential
Permitted without consent
Nil
Permitted with consent
Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Residential flat buildings; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Serviced apartments; Shop top housing; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B1 Neighbourhood Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Bulky goods premises; Business identification signs; Business premises; Car parks; Child care centres; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Garden centres; Hardware and building supplies; Health services facilities; Information and education facilities; Kiosks; Landscaping material supplies; Markets; Medical centres; Neighbourhood shops; Office premises; Places of public worship; Plant nurseries; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Research stations; Residential flat buildings; Respite day care centres; Restaurants or cafes; Roads; Seniors housing; Service stations; Shop top housing; Shops; Take away food and drink premises; Timber yards; Tourist and visitor accommodation; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B2 Local Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Shop top housing; Tourist and visitor accommodation; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone B4 Mixed Use
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse and distribution centres; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B5 Business Development
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Child care centres; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Markets; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Respite day care centres; Roads; Serviced apartments; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B6 Enterprise Corridor
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Community facilities; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Light industries; Markets; Multi dwelling housing; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Residential flat buildings; Roads; Seniors housing; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone B7 Business Park
Permitted without consent
Nil
Permitted with consent
Building identification signs; Business identification signs; Child care centres; Light industries; Neighbourhood shops; Office premises; Passenger transport facilities; Respite day care centres; Roads; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Places of public worship; Port facilities; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN1 General Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Port facilities; Residential accommodation; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN2 Light Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Garden centres; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Residential accommodation; Resource recovery facilities; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone SP1 Special Activities
Permitted without consent Nil
Permitted with consent The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone SP2 Infrastructure
Permitted without consent Nil
Permitted with consent Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone RE1 Public Recreation
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Car parks; Caravan parks; Charter and tourism boating facilities; Child care centres; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Intensive plant agriculture; Jetties; Kiosks; Marinas; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Roads; Water recreation structures; Water supply systems; Wharf or boating facilities
Prohibited Any development not specified in item 2 or 3

Zone RE2 Private Recreation
Permitted without consent Nil
Permitted with consent Building identification signs; Business identification signs; Car parks; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Helipads; Kiosks; Marinas; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Roads; Water supply systems
Prohibited Any development not specified in item 2 or 3

Zone E1 National Parks and Nature Reserves
Permitted without consent Uses authorised under the National Parks and Wildlife Act 1974
Permitted with consent Nil
Prohibited Any development not specified in item 2 or 3

Zone W1 Natural Waterways
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Jetties; Marinas; Mooring pens; Moorings; Water recreation structures; Wharf or boating facilities
Prohibited Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SAI Global Property
PO Box 447
SOUTHBANK VIC 3205

CERTIFICATE DETAILS

NUMBER	20184585	DATE	13-Dec-2018
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RECEIPT AND REFERENCE DETAILS

FEE	\$133.00		
RECEIPT NUMBER	4071651	RECEIPT DATE	12-Dec-2018
REFERENCE	SAI:43883		

PROPERTY DESCRIPTION

PROPERTY	46 Meredith Street, BANKSTOWN NSW 2200		
TITLE	Lot 1 DP 184630		
PARISH	Bankstown	COUNTY	CUMBERLAND

PLANNING INSTRUMENTS

In accordance with Section 10.7(2) and at the date of this certificate the following Environmental Planning Instruments apply to the land.

Bankstown Local Environmental Plan 2015 Gazetted on 05-Mar-2015

LAND ZONING

B4 Mixed Use

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SECTION 10.7(2) DETAILS

In accordance with section 10.7(2) of the Environmental Planning and Assessment Act 1979 (as amended) and at the date of this certificate, the following prescribed matters relate to the land.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

Affected by Bankstown Local Environmental Plan 2015 Amendments and Planning Proposals in respect of general information as detailed in Appendix 1.

Affected by State Environmental Planning Policies (SEPP's), Proposed State Environmental Planning Policies and Deemed State Environmental Planning Policies as detailed in Appendix 2.

Affected by Bankstown Development Control Plan 2015 (refer to Appendix 3 which lists the contents chapters within the DCP).

2. ZONING AND LAND USE UNDER RELEVANT LEPs

Unless specified otherwise in this section of the certificate, the land does not include or comprise critical habitat, is not in a conservation area and has no environmental heritage item on the land.

The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent are specified in clause 3.1 of the LEP 2015 plan and the land use table as detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent are specified in Part 2 and clause 3.2 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development is prohibited within the zone are specified in Part 2 and clauses 4.1A-2(c), 4.1B-2(4), 6.6 and 6.8 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

2A. ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Unless specified otherwise in this section of the certificate, the land is not within any zone or land use under a Precinct Plan, a proposed Precinct Plan or Part 3 of State Environmental Planning Policy (Sydney Region Growth Centres) 2006.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

3. COMPLYING DEVELOPMENT

Housing Code

Complying development under the Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Alterations Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Subdivisions Code (strata subdivision)

Complying development under the Subdivisions Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Rural Housing Code

Complying development under the Rural Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may not** be carried out on the land.

The land is non complying because the land has been identified by an environmental planning instrument as being either one of the following zones:-

- R2 Low Density Residential, R3 Medium Density Residential, R4 High Density Residential
- B1 Neighbourhood Centre, B2 Local Centre, B4 Mixed Use, B5 Business Development, B6 Enterprise Corridor, B7 Business Park
- IN1 General Industrial, IN2 Light Industrial
- SP1 Special Activities, SP2 Infrastructure
- RE1 Public Recreation, RE2 Private Recreation
- E1 National Park and Nature Reserves
- Land unzoned under LEP 2015.....*refer to the Land Zoning of this certificate on page 1.*

OR

The land is affected by one or more of the following 4 exemptions:-

- A Heritage item *refer to clause 2 of this certificate,*
- Land in the 25 or higher ANEF contour..... *refer to clause 7 of this certificate,*
(Unless the development is only for the erection of ancillary development, the alteration of or an addition to ancillary development or the alteration of a dwelling house)
- Acid sulfate soils class 1 or 2 *refer to clause 7 of this certificate,*
- Land in a vegetated buffer area *refer to clause 7 of this certificate,*

Note: If the land has been rendered non complying due to an exemption listed above, you are advised to check with Council for the extent of the exemption. The Code may render the land complying for any land which is outside the extent of the exemption. Reference should be made to the "Planning Maps" on Council's website www.bankstown.nsw.gov.au which identifies the land exemptions.

General Development Code

Complying development under the General Development Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Commercial and Industrial Alterations Code

The extent to which the land is land on which complying development may be carried out under the Commercial and Industrial Alterations Code of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **is not restricted** by any of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Note: There are other provisions in "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" that must be complied with in order for development on the land to be complying development.

Commercial and Industrial (New Buildings and Additions) Code

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Complying development under the Commercial and Industrial (New Buildings and Additions) Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" may be carried out on the land.

4. COASTAL PROTECTION

Unless specified otherwise in this section of the certificate, the land is not affected by the operation of Section 38 or 39 of the Coastal Protection Act 1979.

4A. CERTAIN INFORMATION RELATING TO BEACHES AND COASTS

Unless specified otherwise in this section of the certificate, the land is not subject to an order under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (or on public land adjacent to the land) and, Council has not been notified under Section 55X of the Coastal Protection Act 1979 that temporary coastal protection works have been placed on the land (or on public land adjacent to the land).

4B. ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

Unless specified otherwise in this section of the certificate, the owner (or any previous owner) has not consented in writing that the land is subject to annual charges under Section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works.

5. MINE SUBSIDENCE

Not affected by Section 15 of the Mine Subsidence Compensation Act 1961, proclaiming land to be a mine subsidence district.

6. ROAD WIDENING AND REALIGNMENT

Not affected by any road widening or road realignment under (1) Division 2 of part 3 of the Roads Act 1993; or (2) any Environmental Planning Instrument; or (3) any resolution of Council. However, should your property be near an arterial or main road you should check with the Roads and Maritime Services for possible affectations.

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7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Unless specified otherwise in this section of the certificate, the land is not affected by policies adopted by Council or by any other authority (that has notified Council of its adoption) that restricts development of the land. For bush fire prone land refer to section 11. For flood prone land refer to section 7A.

Affected by a resolution of Council adopting a policy concerning the management of contaminated land. That policy applies to all land in the City of Canterbury-Bankstown and will restrict development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Council's website at www.bankstown.nsw.gov.au or from the Customer Service Area.

Note: Additional information regarding contaminated land matters for this property may also be provided on part 5 of this section 10.7 planning certificate. For further information contact Council on 9707 9000.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

Unless specified otherwise in this section of the certificate, the land is not affected by flood related development controls.

8. LAND RESERVED FOR ACQUISITION

Not affected by either an Environmental Planning Instrument or proposed Environmental Planning Instrument referred to in clause 5.1 providing for the acquisition of the land or part of the land by a public authority, as referred to in Section 27 of the Environmental Planning & Assessment Act. Reference should be made to the LEP 2015 plan as a whole for details.

9. CONTRIBUTION PLANS

Affected by Bankstown City Council Section 94A Development Contributions Plan 2009 which allows Council to impose a levy on development within the City of Canterbury-Bankstown in accordance with Directions issued by the Minister for Planning. The levy will be spent on the provision of public works and infrastructure. Date of commencement 8th June 2009. For further details on the plan contact Council on 9707 9000 or visit Council's website – www.bankstown.nsw.gov.au

9A. BIODIVERSITY CERTIFIED LAND

Unless specified otherwise in this section of the certificate, the land is not biodiversity certified land within the meaning of Part 7AA of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Unless specified otherwise in this section of the certificate, the land is not subject to a Biobanking Agreement under Part 7A of the Threatened Species Conservation Act 1995, made by the Department of Environment, Climate Change and Water that has notified Council of the existence of the agreement.

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11. BUSHFIRE PRONE LAND

Unless specified otherwise in this section of the certificate, the land is not bushfire prone.

12. PROPERTY VEGETATION PLANS

Unless specified otherwise in this section of the certificate, the land is not subject to a Property Vegetation Plan under the Native Vegetation Act 2003, as approved by any other authority that has notified Council of the existence of the plan.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Unless specified otherwise in this section of the certificate, the land is not subject to a Tree Order under the Trees (Disputes Between Neighbours) Act 2006, made by an authority that has notified Council of the existence of the order.

14. DIRECTIONS UNDER PART 3A

Unless specified otherwise in this section of the certificate, the land is not subject to a Direction by the Minister under section 75P (2) (c1) of the Act that a provision of an EPI does not have an effect.

15. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR SENIORS HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application granted after 12.10.2007 under SEPP (Housing for Seniors or People with a Disability) 2004 setting out the terms of any conditions imposed under clause 18(2) or a current site compatibility certificate issued under clause 25 of the SEPP.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under clause 19 of SEPP (Infrastructure) 2007 where a valid site compatibility certificate has been issued.

17. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under SEPP (Affordable Rental Housing) 2009 where a valid site compatibility certificate and conditions have been issued.

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18. PAPER SUBDIVISION INFORMATION

Unless specified otherwise in this section of the certificate, the land is not subject to a paper subdivision or subdivision order.

19. SITE VERIFICATION CERTIFICATES

Unless specified otherwise in this section of the certificate, the land is not subject to a current site verification certificate of which the Council is aware in respect to Division 3 of Part 4AA of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

20. LOOSE-FILL ASBESTOS INSULATION

A residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill ceiling insulation. Contact NSW Fair Trading for more information.

MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT, 1997

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 59(2) of the Contaminated Land Management Act 1997.

MATTERS ARISING UNDER THE NATION BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT, 2009

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 26 of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009.

This completes the prescribed matters for the certificate under section 10.7(2) of the Environmental Planning and Assessment Act 1979, as amended. While this certificate indicates the zoning of the land, it is suggested that the relevant Planning Instrument be inspected on Council's website under Development – Planning Maps or at Council's Customer Service Centre to provide an overall view of the area and the site's surrounding zonings.

SECTION 10.7(5) DETAILS

At the date of this certificate, the following relevant matters are provided in good faith in accordance with the requirements of Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Council has selected the following matters for checking as those most likely to be of concern and do not comprise an exhaustive list. The absence of any reference to any matter affecting the land shall not imply that any matter not referred to in this certificate does not affect the land.

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ADDITIONAL INFORMATION

Unless specified otherwise in this section of the certificate, there are no relevant matters arising under Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Please contact Council's general enquiries number listed at the bottom of this sheet for further information about any matter referred to in this certificate.



Melissa Ratkun
Manager Information Management

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 1

Bankstown Local Environmental Plan 2015 Amendments & Planning Proposals.

(relating to general information only which may affect part or the whole of the City)

Note: As of 1 July 2009, Draft LEP's have been replaced with "Planning Proposals". A planning proposal is a document that explains the intended effect of, and justification for, a proposed LEP.

Nil

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Appendix 2

State Environmental Planning Policies (SEPP's), Proposed SEPP's and Deemed SEPP's

Note: The names of the relevant instrument's plus their gazettal dates are listed below. For further details please refer to the Department of Planning website www.planning.nsw.gov.au under the heading "Planning System – Legislation and Planning Instruments".

SEPP No.19 – Bushland in Urban Areas, gazetted 24.10.1986
 SEPP No.21 – Caravan Parks, gazetted 24.4.1992
 SEPP No.30 – Intensive Agriculture, gazetted 8.12.1989
 SEPP No.32 – Urban Consolidation (Redevelopment of Urban Land), gazetted 15.11.1991
 SEPP No.33 – Hazardous and Offensive Development, gazetted 13.3.1992
 SEPP No.50 – Canal Estate Development, gazetted 10.11.1997
 SEPP No.55 – Remediation of Land, gazetted 28.8.1998
 SEPP No.62 – Sustainable Aquaculture, gazetted 25.8.2000
 SEPP No.64 – Advertising and Signage, gazetted 16.3.2001
 SEPP No.65 – Design Quality of Residential Flat Development, gazetted 26.7.2002
 SEPP – (Housing for Seniors or People with a Disability) 2004, gazetted 31.3.2004
 SEPP – (Building Sustainability Index: BASIX) 2004, gazetted 25.6.2004
 SEPP – (Major Development) 2005, gazetted 1.8.2005
 SEPP – (Mining, Petroleum Production and Extractive Industries) 2007, gazetted 16.2.2007
 SEPP – (Miscellaneous Consent Provisions) 2007, gazetted 26.10.2007
 SEPP – (Infrastructure) 2007, gazetted 21.12.2007
 SEPP – (Exempt and Complying Development Codes) 2008, gazetted 12.12.2008
 SEPP – (Affordable Rental Housing) 2009, gazetted 31.7.2009
 SEPP – (Sydney Drinking Water Catchment) 2011, gazetted 21.1.2011

PROPOSED SEPP - Competition SEPP, 27.7.2010

Note: As of 1 July 2009, regional environmental plans (REPs) are no longer part of the hierarchy of environmental planning instruments in NSW. The removal of the REP layer is intended to simplify the State's planning system. All existing REPs (listed below) are now deemed State environmental planning policies (SEPPs).

Deemed SEPP – Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment, gazetted 5.2.1999

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Appendix 3

Bankstown Development Control Plan 2015

DATE OF COMMENCEMENT – 13th May 2015

The following is a list of the contents within Bankstown Development Control Plan 2015. If further information is required please contact Council on 9707 9000.

INTRODUCTION	
PART A	PRECINCT CONTROLS
A1	Centres
A2	Corridors
A3	Key infill development sites
PART B	GENERAL CONTROLS
B1	Residential development
B2	Commercial centres
B3	Industrial precincts
B4	Sustainable development
B5	Parking
B6	Child care centres
B7	Educational establishments
B8	Places of public worship
B9	Sex services premises
B10	Telecommunications facilities
B11	Tree preservation order
B12	Flood risk management

Please note: Council may from time to time exhibit draft changes to the development control plan that may affect your land. To find out more, please contact Council on 9707 9000 or view Council's website and refer to the Development Control Plan - www.bankstown.nsw.gov.au

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Appendix 4

Land Use Table

Note. A type of development referred to in the Land Use Table is a reference to that type of development only to the extent it is not regulated by an applicable State environmental planning policy. The following State environmental planning policies in particular may be relevant to development on land to which this Plan applies:

State Environmental Planning Policy (Affordable Rental Housing) 2009 (including provision for secondary dwellings)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Infrastructure) 2007 (relating to public facilities such as those for air transport, correction, education, electricity generation, health services, ports, railways, roads, waste management and water supply systems)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Rural Lands) 2008
State Environmental Planning Policy No 33—Hazardous and Offensive Development
State Environmental Planning Policy No 50—Canal Estate Development
State Environmental Planning Policy No 62—Sustainable Aquaculture
State Environmental Planning Policy No 64—Advertising and Signage

Zone RU4 Primary Production Small Lots
Permitted without consent Home occupations
Permitted with consent Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Dwelling houses; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Intensive plant agriculture; Kiosks; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Roads; Roadside stalls; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R2 Low Density Residential
Permitted without consent Home occupations
Permitted with consent Bed and breakfast accommodation; Boarding houses; Boat sheds; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Health consulting rooms; Home-based child care; Hospitals; Information and education facilities; Jetties; Multi dwelling housing; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Seniors housing; Water recreation structures; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R3 Medium Density Residential
Permitted without consent Nil
Permitted with consent Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Group homes; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Water supply systems
Prohibited Any development not specified in item 2 or 3

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Zone R4 High Density Residential
Permitted without consent
Nil
Permitted with consent
Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Residential flat buildings; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Serviced apartments; Shop top housing; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B1 Neighbourhood Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Bulky goods premises; Business identification signs; Business premises; Car parks; Child care centres; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Garden centres; Hardware and building supplies; Health services facilities; Information and education facilities; Kiosks; Landscaping material supplies; Markets; Medical centres; Neighbourhood shops; Office premises; Places of public worship; Plant nurseries; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Research stations; Residential flat buildings; Respite day care centres; Restaurants or cafes; Roads; Seniors housing; Service stations; Shop top housing; Shops; Take away food and drink premises; Timber yards; Tourist and visitor accommodation; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B2 Local Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Shop top housing; Tourist and visitor accommodation; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

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Zone B4 Mixed Use
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse and distribution centres; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B5 Business Development
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Child care centres; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Markets; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Respite day care centres; Roads; Serviced apartments; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B6 Enterprise Corridor
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Community facilities; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Light industries; Markets; Multi dwelling housing; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Residential flat buildings; Roads; Seniors housing; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

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Zone B7 Business Park
Permitted without consent
Nil
Permitted with consent
Building identification signs; Business identification signs; Child care centres; Light industries; Neighbourhood shops; Office premises; Passenger transport facilities; Respite day care centres; Roads; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Places of public worship; Port facilities; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN1 General Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Port facilities; Residential accommodation; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN2 Light Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Garden centres; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Residential accommodation; Resource recovery facilities; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

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Zone SP1 Special Activities
Permitted without consent Nil
Permitted with consent The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone SP2 Infrastructure
Permitted without consent Nil
Permitted with consent Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone RE1 Public Recreation
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Car parks; Caravan parks; Charter and tourism boating facilities; Child care centres; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Intensive plant agriculture; Jetties; Kiosks; Marinas; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Roads; Water recreation structures; Water supply systems; Wharf or boating facilities
Prohibited Any development not specified in item 2 or 3

Zone RE2 Private Recreation
Permitted without consent Nil
Permitted with consent Building identification signs; Business identification signs; Car parks; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Helipads; Kiosks; Marinas; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Roads; Water supply systems
Prohibited Any development not specified in item 2 or 3

Zone E1 National Parks and Nature Reserves
Permitted without consent Uses authorised under the National Parks and Wildlife Act 1974
Permitted with consent Nil
Prohibited Any development not specified in item 2 or 3

Zone W1 Natural Waterways
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Jetties; Marinas; Mooring pens; Moorings; Water recreation structures; Wharf or boating facilities
Prohibited Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

**SAI Global Property
PO Box 447
SOUTHBANK VIC 3205**

CERTIFICATE DETAILS

NUMBER	20184586	DATE	13-Dec-2018
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RECEIPT AND REFERENCE DETAILS

FEE	\$133.00		
RECEIPT NUMBER	4071651	RECEIPT DATE	12-Dec-2018
REFERENCE	SAI:43883		

PROPERTY DESCRIPTION

PROPERTY	46 Meredith Street, BANKSTOWN NSW 2200		
TITLE	Lot 215 DP 1061972		
PARISH	Bankstown	COUNTY	CUMBERLAND

PLANNING INSTRUMENTS

In accordance with Section 10.7(2) and at the date of this certificate the following Environmental Planning Instruments apply to the land.

Bankstown Local Environmental Plan 2015 Gazetted on 05-Mar-2015

LAND ZONING

B4 Mixed Use

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SECTION 10.7(2) DETAILS

In accordance with section 10.7(2) of the Environmental Planning and Assessment Act 1979 (as amended) and at the date of this certificate, the following prescribed matters relate to the land.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

Affected by Bankstown Local Environmental Plan 2015 Amendments and Planning Proposals in respect of general information as detailed in Appendix 1.

Affected by State Environmental Planning Policies (SEPP's), Proposed State Environmental Planning Policies and Deemed State Environmental Planning Policies as detailed in Appendix 2.

Affected by Bankstown Development Control Plan 2015 (refer to Appendix 3 which lists the contents chapters within the DCP).

2. ZONING AND LAND USE UNDER RELEVANT LEPs

Unless specified otherwise in this section of the certificate, the land does not include or comprise critical habitat, is not in a conservation area and has no environmental heritage item on the land.

The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent are specified in clause 3.1 of the LEP 2015 plan and the land use table as detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent are specified in Part 2 and clause 3.2 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development is prohibited within the zone are specified in Part 2 and clauses 4.1A-2(c), 4.1B-2(4), 6.6 and 6.8 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

2A. ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Unless specified otherwise in this section of the certificate, the land is not within any zone or land use under a Precinct Plan, a proposed Precinct Plan or Part 3 of State Environmental Planning Policy (Sydney Region Growth Centres) 2006.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

3. COMPLYING DEVELOPMENT

Housing Code

Complying development under the Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Alterations Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Subdivisions Code (strata subdivision)

Complying development under the Subdivisions Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Rural Housing Code

Complying development under the Rural Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may not** be carried out on the land.

The land is non complying because the land has been identified by an environmental planning instrument as being either one of the following zones:-

- R2 Low Density Residential, R3 Medium Density Residential, R4 High Density Residential
- B1 Neighbourhood Centre, B2 Local Centre, B4 Mixed Use, B5 Business Development, B6 Enterprise Corridor, B7 Business Park
- IN1 General Industrial, IN2 Light Industrial
- SP1 Special Activities, SP2 Infrastructure
- RE1 Public Recreation, RE2 Private Recreation
- E1 National Park and Nature Reserves
- Land unzoned under LEP 2015.....*refer to the Land Zoning of this certificate on page 1.*

OR

The land is affected by one or more of the following 4 exemptions:-

- A Heritage item *refer to clause 2 of this certificate,*
- Land in the 25 or higher ANEF contour..... *refer to clause 7 of this certificate,*
(Unless the development is only for the erection of ancillary development, the alteration of or an addition to ancillary development or the alteration of a dwelling house)
- Acid sulfate soils class 1 or 2 *refer to clause 7 of this certificate,*
- Land in a vegetated buffer area *refer to clause 7 of this certificate,*

Note: If the land has been rendered non complying due to an exemption listed above, you are advised to check with Council for the extent of the exemption. The Code may render the land complying for any land which is outside the extent of the exemption. Reference should be made to the "Planning Maps" on Council's website www.bankstown.nsw.gov.au which identifies the land exemptions.

General Development Code

Complying development under the General Development Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Commercial and Industrial Alterations Code

The extent to which the land is land on which complying development may be carried out under the Commercial and Industrial Alterations Code of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **is not restricted** by any of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Note: There are other provisions in "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" that must be complied with in order for development on the land to be complying development.

Commercial and Industrial (New Buildings and Additions) Code

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Complying development under the Commercial and Industrial (New Buildings and Additions) Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" may be carried out on the land.

4. COASTAL PROTECTION

Unless specified otherwise in this section of the certificate, the land is not affected by the operation of Section 38 or 39 of the Coastal Protection Act 1979.

4A. CERTAIN INFORMATION RELATING TO BEACHES AND COASTS

Unless specified otherwise in this section of the certificate, the land is not subject to an order under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (or on public land adjacent to the land) and, Council has not been notified under Section 55X of the Coastal Protection Act 1979 that temporary coastal protection works have been placed on the land (or on public land adjacent to the land).

4B. ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

Unless specified otherwise in this section of the certificate, the owner (or any previous owner) has not consented in writing that the land is subject to annual charges under Section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works.

5. MINE SUBSIDENCE

Not affected by Section 15 of the Mine Subsidence Compensation Act 1961, proclaiming land to be a mine subsidence district.

6. ROAD WIDENING AND REALIGNMENT

Not affected by any road widening or road realignment under (1) Division 2 of part 3 of the Roads Act 1993; or (2) any Environmental Planning Instrument; or (3) any resolution of Council. However, should your property be near an arterial or main road you should check with the Roads and Maritime Services for possible affectations.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Unless specified otherwise in this section of the certificate, the land is not affected by policies adopted by Council or by any other authority (that has notified Council of its adoption) that restricts development of the land. For bush fire prone land refer to section 11. For flood prone land refer to section 7A.

Affected by a resolution of Council adopting a policy concerning the management of contaminated land. That policy applies to all land in the City of Canterbury-Bankstown and will restrict development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Council's website at www.bankstown.nsw.gov.au or from the Customer Service Area.

Note: Additional information regarding contaminated land matters for this property may also be provided on part 5 of this section 10.7 planning certificate. For further information contact Council on 9707 9000.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

Unless specified otherwise in this section of the certificate, the land is not affected by flood related development controls.

8. LAND RESERVED FOR ACQUISITION

Not affected by either an Environmental Planning Instrument or proposed Environmental Planning Instrument referred to in clause 5.1 providing for the acquisition of the land or part of the land by a public authority, as referred to in Section 27 of the Environmental Planning & Assessment Act. Reference should be made to the LEP 2015 plan as a whole for details.

9. CONTRIBUTION PLANS

Affected by Bankstown City Council Section 94A Development Contributions Plan 2009 which allows Council to impose a levy on development within the City of Canterbury-Bankstown in accordance with Directions issued by the Minister for Planning. The levy will be spent on the provision of public works and infrastructure. Date of commencement 8th June 2009. For further details on the plan contact Council on 9707 9000 or visit Council's website – www.bankstown.nsw.gov.au

9A. BIODIVERSITY CERTIFIED LAND

Unless specified otherwise in this section of the certificate, the land is not biodiversity certified land within the meaning of Part 7AA of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Unless specified otherwise in this section of the certificate, the land is not subject to a Biobanking Agreement under Part 7A of the Threatened Species Conservation Act 1995, made by the Department of Environment, Climate Change and Water that has notified Council of the existence of the agreement.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

11. BUSHFIRE PRONE LAND

Unless specified otherwise in this section of the certificate, the land is not bushfire prone.

12. PROPERTY VEGETATION PLANS

Unless specified otherwise in this section of the certificate, the land is not subject to a Property Vegetation Plan under the Native Vegetation Act 2003, as approved by any other authority that has notified Council of the existence of the plan.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Unless specified otherwise in this section of the certificate, the land is not subject to a Tree Order under the Trees (Disputes Between Neighbours) Act 2006, made by an authority that has notified Council of the existence of the order.

14. DIRECTIONS UNDER PART 3A

Unless specified otherwise in this section of the certificate, the land is not subject to a Direction by the Minister under section 75P (2) (c1) of the Act that a provision of an EPI does not have an effect.

15. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR SENIORS HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application granted after 12.10.2007 under SEPP (Housing for Seniors or People with a Disability) 2004 setting out the terms of any conditions imposed under clause 18(2) or a current site compatibility certificate issued under clause 25 of the SEPP.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under clause 19 of SEPP (Infrastructure) 2007 where a valid site compatibility certificate has been issued.

17. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under SEPP (Affordable Rental Housing) 2009 where a valid site compatibility certificate and conditions have been issued.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

18. PAPER SUBDIVISION INFORMATION

Unless specified otherwise in this section of the certificate, the land is not subject to a paper subdivision or subdivision order.

19. SITE VERIFICATION CERTIFICATES

Unless specified otherwise in this section of the certificate, the land is not subject to a current site verification certificate of which the Council is aware in respect to Division 3 of Part 4AA of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

20. LOOSE-FILL ASBESTOS INSULATION

A residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill ceiling insulation. Contact NSW Fair Trading for more information.

MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT, 1997

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 59(2) of the Contaminated Land Management Act 1997.

MATTERS ARISING UNDER THE NATION BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT, 2009

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 26 of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009.

This completes the prescribed matters for the certificate under section 10.7(2) of the Environmental Planning and Assessment Act 1979, as amended. While this certificate indicates the zoning of the land, it is suggested that the relevant Planning Instrument be inspected on Council's website under Development – Planning Maps or at Council's Customer Service Centre to provide an overall view of the area and the site's surrounding zonings.

SECTION 10.7(5) DETAILS

At the date of this certificate, the following relevant matters are provided in good faith in accordance with the requirements of Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Council has selected the following matters for checking as those most likely to be of concern and do not comprise an exhaustive list. The absence of any reference to any matter affecting the land shall not imply that any matter not referred to in this certificate does not affect the land.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

ADDITIONAL INFORMATION

Unless specified otherwise in this section of the certificate, there are no relevant matters arising under Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Please contact Council's general enquiries number listed at the bottom of this sheet for further information about any matter referred to in this certificate.



Melissa Ratkun
Manager Information Management

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 1

Bankstown Local Environmental Plan 2015 Amendments & Planning Proposals.

(relating to general information only which may affect part or the whole of the City)

Note: As of 1 July 2009, Draft LEP's have been replaced with "Planning Proposals". A planning proposal is a document that explains the intended effect of, and justification for, a proposed LEP.

Nil

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 2

State Environmental Planning Policies (SEPP's), Proposed SEPP's and Deemed SEPP's

Note: The names of the relevant instrument's plus their gazettal dates are listed below. For further details please refer to the Department of Planning website www.planning.nsw.gov.au under the heading "Planning System – Legislation and Planning Instruments".

SEPP No.19 – Bushland in Urban Areas, gazetted 24.10.1986
SEPP No.21 – Caravan Parks, gazetted 24.4.1992
SEPP No.30 – Intensive Agriculture, gazetted 8.12.1989
SEPP No.32 – Urban Consolidation (Redevelopment of Urban Land), gazetted 15.11.1991
SEPP No.33 – Hazardous and Offensive Development, gazetted 13.3.1992
SEPP No.50 – Canal Estate Development, gazetted 10.11.1997
SEPP No.55 – Remediation of Land, gazetted 28.8.1998
SEPP No.62 – Sustainable Aquaculture, gazetted 25.8.2000
SEPP No.64 – Advertising and Signage, gazetted 16.3.2001
SEPP No.65 – Design Quality of Residential Flat Development, gazetted 26.7.2002
SEPP – (Housing for Seniors or People with a Disability) 2004, gazetted 31.3.2004
SEPP – (Building Sustainability Index: BASIX) 2004, gazetted 25.6.2004
SEPP – (Major Development) 2005, gazetted 1.8.2005
SEPP – (Mining, Petroleum Production and Extractive Industries) 2007, gazetted 16.2.2007
SEPP – (Miscellaneous Consent Provisions) 2007, gazetted 26.10.2007
SEPP – (Infrastructure) 2007, gazetted 21.12.2007
SEPP – (Exempt and Complying Development Codes) 2008, gazetted 12.12.2008
SEPP – (Affordable Rental Housing) 2009, gazetted 31.7.2009
SEPP – (Sydney Drinking Water Catchment) 2011, gazetted 21.1.2011

PROPOSED SEPP - Competition SEPP, 27.7.2010

Note: As of 1 July 2009, regional environmental plans (REPs) are no longer part of the hierarchy of environmental planning instruments in NSW. The removal of the REP layer is intended to simplify the State's planning system. All existing REPs (listed below) are now deemed State environmental planning policies (SEPPs).

Deemed SEPP – Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment, gazetted 5.2.1999

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 3

Bankstown Development Control Plan 2015

DATE OF COMMENCEMENT – 13th May 2015

The following is a list of the contents within Bankstown Development Control Plan 2015. If further information is required please contact Council on 9707 9000.

INTRODUCTION	
PART A	PRECINCT CONTROLS
A1	Centres
A2	Corridors
A3	Key infill development sites
PART B	GENERAL CONTROLS
B1	Residential development
B2	Commercial centres
B3	Industrial precincts
B4	Sustainable development
B5	Parking
B6	Child care centres
B7	Educational establishments
B8	Places of public worship
B9	Sex services premises
B10	Telecommunications facilities
B11	Tree preservation order
B12	Flood risk management

Please note: Council may from time to time exhibit draft changes to the development control plan that may affect your land. To find out more, please contact Council on 9707 9000 or view Council's website and refer to the Development Control Plan - www.bankstown.nsw.gov.au

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 4

Land Use Table

Note. A type of development referred to in the Land Use Table is a reference to that type of development only to the extent it is not regulated by an applicable State environmental planning policy. The following State environmental planning policies in particular may be relevant to development on land to which this Plan applies:

State Environmental Planning Policy (Affordable Rental Housing) 2009 (including provision for secondary dwellings)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Infrastructure) 2007 (relating to public facilities such as those for air transport, correction, education, electricity generation, health services, ports, railways, roads, waste management and water supply systems)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Rural Lands) 2008
State Environmental Planning Policy No 33—Hazardous and Offensive Development
State Environmental Planning Policy No 50—Canal Estate Development
State Environmental Planning Policy No 62—Sustainable Aquaculture
State Environmental Planning Policy No 64—Advertising and Signage

Zone RU4 Primary Production Small Lots
Permitted without consent Home occupations
Permitted with consent Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Dwelling houses; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Intensive plant agriculture; Kiosks; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Roads; Roadside stalls; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R2 Low Density Residential
Permitted without consent Home occupations
Permitted with consent Bed and breakfast accommodation; Boarding houses; Boat sheds; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Health consulting rooms; Home-based child care; Hospitals; Information and education facilities; Jetties; Multi dwelling housing; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Seniors housing; Water recreation structures; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R3 Medium Density Residential
Permitted without consent Nil
Permitted with consent Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Group homes; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Water supply systems
Prohibited Any development not specified in item 2 or 3

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone R4 High Density Residential
Permitted without consent
Nil
Permitted with consent
Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Residential flat buildings; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Serviced apartments; Shop top housing; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B1 Neighbourhood Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Bulky goods premises; Business identification signs; Business premises; Car parks; Child care centres; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Garden centres; Hardware and building supplies; Health services facilities; Information and education facilities; Kiosks; Landscaping material supplies; Markets; Medical centres; Neighbourhood shops; Office premises; Places of public worship; Plant nurseries; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Research stations; Residential flat buildings; Respite day care centres; Restaurants or cafes; Roads; Seniors housing; Service stations; Shop top housing; Shops; Take away food and drink premises; Timber yards; Tourist and visitor accommodation; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B2 Local Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Shop top housing; Tourist and visitor accommodation; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone B4 Mixed Use
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse and distribution centres; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B5 Business Development
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Child care centres; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Markets; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Respite day care centres; Roads; Serviced apartments; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B6 Enterprise Corridor
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Community facilities; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Light industries; Markets; Multi dwelling housing; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Residential flat buildings; Roads; Seniors housing; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone B7 Business Park
Permitted without consent
Nil
Permitted with consent
Building identification signs; Business identification signs; Child care centres; Light industries; Neighbourhood shops; Office premises; Passenger transport facilities; Respite day care centres; Roads; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Places of public worship; Port facilities; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN1 General Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Port facilities; Residential accommodation; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN2 Light Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Garden centres; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Residential accommodation; Resource recovery facilities; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone SP1 Special Activities
Permitted without consent Nil
Permitted with consent The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone SP2 Infrastructure
Permitted without consent Nil
Permitted with consent Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone RE1 Public Recreation
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Car parks; Caravan parks; Charter and tourism boating facilities; Child care centres; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Intensive plant agriculture; Jetties; Kiosks; Marinas; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Roads; Water recreation structures; Water supply systems; Wharf or boating facilities
Prohibited Any development not specified in item 2 or 3

Zone RE2 Private Recreation
Permitted without consent Nil
Permitted with consent Building identification signs; Business identification signs; Car parks; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Helipads; Kiosks; Marinas; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Roads; Water supply systems
Prohibited Any development not specified in item 2 or 3

Zone E1 National Parks and Nature Reserves
Permitted without consent Uses authorised under the National Parks and Wildlife Act 1974
Permitted with consent Nil
Prohibited Any development not specified in item 2 or 3

Zone W1 Natural Waterways
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Jetties; Marinas; Mooring pens; Moorings; Water recreation structures; Wharf or boating facilities
Prohibited Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SAI Global Property
PO Box 447
SOUTHBANK VIC 3205

CERTIFICATE DETAILS

NUMBER	20184587	DATE	13-Dec-2018
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RECEIPT AND REFERENCE DETAILS

FEE	\$133.00		
RECEIPT NUMBER	4071651	RECEIPT DATE	12-Dec-2018
REFERENCE	SAI:43883		

PROPERTY DESCRIPTION

PROPERTY	48 Meredith Street, BANKSTOWN NSW 2200		
TITLE	Lot C DP 403280		
PARISH	Bankstown	COUNTY	CUMBERLAND

PLANNING INSTRUMENTS

In accordance with Section 10.7(2) and at the date of this certificate the following Environmental Planning Instruments apply to the land.

Bankstown Local Environmental Plan 2015 Gazetted on 05-Mar-2015

LAND ZONING

B4 Mixed Use

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

SECTION 10.7(2) DETAILS

In accordance with section 10.7(2) of the Environmental Planning and Assessment Act 1979 (as amended) and at the date of this certificate, the following prescribed matters relate to the land.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs

Affected by Bankstown Local Environmental Plan 2015 Amendments and Planning Proposals in respect of general information as detailed in Appendix 1.

Affected by State Environmental Planning Policies (SEPP's), Proposed State Environmental Planning Policies and Deemed State Environmental Planning Policies as detailed in Appendix 2.

Affected by Bankstown Development Control Plan 2015 (refer to Appendix 3 which lists the contents chapters within the DCP).

2. ZONING AND LAND USE UNDER RELEVANT LEPs

Unless specified otherwise in this section of the certificate, the land does not include or comprise critical habitat, is not in a conservation area and has no environmental heritage item on the land.

The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent are specified in clause 3.1 of the LEP 2015 plan and the land use table as detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent are specified in Part 2 and clause 3.2 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

The purposes for which the plan or instrument provides that development is prohibited within the zone are specified in Part 2 and clauses 4.1A-2(c), 4.1B-2(4), 6.6 and 6.8 of the LEP 2015 plan and detailed in Appendix 4. Reference should be made to the LEP 2015 plan as a whole for details.

2A. ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

Unless specified otherwise in this section of the certificate, the land is not within any zone or land use under a Precinct Plan, a proposed Precinct Plan or Part 3 of State Environmental Planning Policy (Sydney Region Growth Centres) 2006.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

3. COMPLYING DEVELOPMENT

Housing Code

Complying development under the Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Alterations Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Subdivisions Code (strata subdivision)

Complying development under the Subdivisions Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Rural Housing Code

Complying development under the Rural Housing Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may not** be carried out on the land.

The land is non complying because the land has been identified by an environmental planning instrument as being either one of the following zones:-

- R2 Low Density Residential, R3 Medium Density Residential, R4 High Density Residential
- B1 Neighbourhood Centre, B2 Local Centre, B4 Mixed Use, B5 Business Development, B6 Enterprise Corridor, B7 Business Park
- IN1 General Industrial, IN2 Light Industrial
- SP1 Special Activities, SP2 Infrastructure
- RE1 Public Recreation, RE2 Private Recreation
- E1 National Park and Nature Reserves
- Land unzoned under LEP 2015.....*refer to the Land Zoning of this certificate on page 1.*

OR

The land is affected by one or more of the following 4 exemptions:-

- A Heritage item *refer to clause 2 of this certificate,*
- Land in the 25 or higher ANEF contour..... *refer to clause 7 of this certificate,*
(Unless the development is only for the erection of ancillary development, the alteration of or an addition to ancillary development or the alteration of a dwelling house)
- Acid sulfate soils class 1 or 2 *refer to clause 7 of this certificate,*
- Land in a vegetated buffer area *refer to clause 7 of this certificate,*

Note: If the land has been rendered non complying due to an exemption listed above, you are advised to check with Council for the extent of the exemption. The Code may render the land complying for any land which is outside the extent of the exemption. Reference should be made to the "Planning Maps" on Council's website www.bankstown.nsw.gov.au which identifies the land exemptions.

General Development Code

Complying development under the General Development Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code within "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **may** be carried out on the land.

Commercial and Industrial Alterations Code

The extent to which the land is land on which complying development may be carried out under the Commercial and Industrial Alterations Code of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" **is not restricted** by any of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Note: There are other provisions in "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" that must be complied with in order for development on the land to be complying development.

Commercial and Industrial (New Buildings and Additions) Code

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Complying development under the Commercial and Industrial (New Buildings and Additions) Code within the provisions of "State Environmental Planning Policy (Exempt and Complying Development Codes) 2008" may be carried out on the land.

4. COASTAL PROTECTION

Unless specified otherwise in this section of the certificate, the land is not affected by the operation of Section 38 or 39 of the Coastal Protection Act 1979.

4A. CERTAIN INFORMATION RELATING TO BEACHES AND COASTS

Unless specified otherwise in this section of the certificate, the land is not subject to an order under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works (or on public land adjacent to the land) and, Council has not been notified under Section 55X of the Coastal Protection Act 1979 that temporary coastal protection works have been placed on the land (or on public land adjacent to the land).

4B. ANNUAL CHARGES UNDER LOCAL GOVERNMENT ACT 1993 FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

Unless specified otherwise in this section of the certificate, the owner (or any previous owner) has not consented in writing that the land is subject to annual charges under Section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works.

5. MINE SUBSIDENCE

Not affected by Section 15 of the Mine Subsidence Compensation Act 1961, proclaiming land to be a mine subsidence district.

6. ROAD WIDENING AND REALIGNMENT

Not affected by any road widening or road realignment under (1) Division 2 of part 3 of the Roads Act 1993; or (2) any Environmental Planning Instrument; or (3) any resolution of Council. However, should your property be near an arterial or main road you should check with the Roads and Maritime Services for possible affectations.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Unless specified otherwise in this section of the certificate, the land is not affected by policies adopted by Council or by any other authority (that has notified Council of its adoption) that restricts development of the land. For bush fire prone land refer to section 11. For flood prone land refer to section 7A.

Affected by a resolution of Council adopting a policy concerning the management of contaminated land. That policy applies to all land in the City of Canterbury-Bankstown and will restrict development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Council's website at www.bankstown.nsw.gov.au or from the Customer Service Area.

Note: Additional information regarding contaminated land matters for this property may also be provided on part 5 of this section 10.7 planning certificate. For further information contact Council on 9707 9000.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

Unless specified otherwise in this section of the certificate, the land is not affected by flood related development controls.

8. LAND RESERVED FOR ACQUISITION

Not affected by either an Environmental Planning Instrument or proposed Environmental Planning Instrument referred to in clause 5.1 providing for the acquisition of the land or part of the land by a public authority, as referred to in Section 27 of the Environmental Planning & Assessment Act. Reference should be made to the LEP 2015 plan as a whole for details.

9. CONTRIBUTION PLANS

Affected by Bankstown City Council Section 94A Development Contributions Plan 2009 which allows Council to impose a levy on development within the City of Canterbury-Bankstown in accordance with Directions issued by the Minister for Planning. The levy will be spent on the provision of public works and infrastructure. Date of commencement 8th June 2009. For further details on the plan contact Council on 9707 9000 or visit Council's website – www.bankstown.nsw.gov.au

9A. BIODIVERSITY CERTIFIED LAND

Unless specified otherwise in this section of the certificate, the land is not biodiversity certified land within the meaning of Part 7AA of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Unless specified otherwise in this section of the certificate, the land is not subject to a Biobanking Agreement under Part 7A of the Threatened Species Conservation Act 1995, made by the Department of Environment, Climate Change and Water that has notified Council of the existence of the agreement.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

11. BUSHFIRE PRONE LAND

Unless specified otherwise in this section of the certificate, the land is not bushfire prone.

12. PROPERTY VEGETATION PLANS

Unless specified otherwise in this section of the certificate, the land is not subject to a Property Vegetation Plan under the Native Vegetation Act 2003, as approved by any other authority that has notified Council of the existence of the plan.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Unless specified otherwise in this section of the certificate, the land is not subject to a Tree Order under the Trees (Disputes Between Neighbours) Act 2006, made by an authority that has notified Council of the existence of the order.

14. DIRECTIONS UNDER PART 3A

Unless specified otherwise in this section of the certificate, the land is not subject to a Direction by the Minister under section 75P (2) (c1) of the Act that a provision of an EPI does not have an effect.

15. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR SENIORS HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application granted after 12.10.2007 under SEPP (Housing for Seniors or People with a Disability) 2004 setting out the terms of any conditions imposed under clause 18(2) or a current site compatibility certificate issued under clause 25 of the SEPP.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under clause 19 of SEPP (Infrastructure) 2007 where a valid site compatibility certificate has been issued.

17. SITE COMPATIBILITY CERTIFICATES & CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Unless specified otherwise in this section of the certificate, the land is not subject to a development application under SEPP (Affordable Rental Housing) 2009 where a valid site compatibility certificate and conditions have been issued.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

18. PAPER SUBDIVISION INFORMATION

Unless specified otherwise in this section of the certificate, the land is not subject to a paper subdivision or subdivision order.

19. SITE VERIFICATION CERTIFICATES

Unless specified otherwise in this section of the certificate, the land is not subject to a current site verification certificate of which the Council is aware in respect to Division 3 of Part 4AA of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

20. LOOSE-FILL ASBESTOS INSULATION

A residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill ceiling insulation. Contact NSW Fair Trading for more information.

MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT, 1997

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 59(2) of the Contaminated Land Management Act 1997.

MATTERS ARISING UNDER THE NATION BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT, 2009

Unless specified otherwise in this section of the certificate, there are no matters arising under Section 26 of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009.

This completes the prescribed matters for the certificate under section 10.7(2) of the Environmental Planning and Assessment Act 1979, as amended. While this certificate indicates the zoning of the land, it is suggested that the relevant Planning Instrument be inspected on Council's website under Development – Planning Maps or at Council's Customer Service Centre to provide an overall view of the area and the site's surrounding zonings.

SECTION 10.7(5) DETAILS

At the date of this certificate, the following relevant matters are provided in good faith in accordance with the requirements of Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Council has selected the following matters for checking as those most likely to be of concern and do not comprise an exhaustive list. The absence of any reference to any matter affecting the land shall not imply that any matter not referred to in this certificate does not affect the land.

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

ADDITIONAL INFORMATION

Unless specified otherwise in this section of the certificate, there are no relevant matters arising under Section 10.7(5) of the Environmental Planning and Assessment Act 1979.

Please contact Council's general enquiries number listed at the bottom of this sheet for further information about any matter referred to in this certificate.



Melissa Ratkun
Manager Information Management

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 1

Bankstown Local Environmental Plan 2015 Amendments & Planning Proposals.

(relating to general information only which may affect part or the whole of the City)

Note: As of 1 July 2009, Draft LEP's have been replaced with "Planning Proposals". A planning proposal is a document that explains the intended effect of, and justification for, a proposed LEP.

Nil

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 2

State Environmental Planning Policies (SEPP's), Proposed SEPP's and Deemed SEPP's

Note: The names of the relevant instrument's plus their gazettal dates are listed below. For further details please refer to the Department of Planning website www.planning.nsw.gov.au under the heading "Planning System – Legislation and Planning Instruments".

SEPP No.19 – Bushland in Urban Areas, gazetted 24.10.1986
SEPP No.21 – Caravan Parks, gazetted 24.4.1992
SEPP No.30 – Intensive Agriculture, gazetted 8.12.1989
SEPP No.32 – Urban Consolidation (Redevelopment of Urban Land), gazetted 15.11.1991
SEPP No.33 – Hazardous and Offensive Development, gazetted 13.3.1992
SEPP No.50 – Canal Estate Development, gazetted 10.11.1997
SEPP No.55 – Remediation of Land, gazetted 28.8.1998
SEPP No.62 – Sustainable Aquaculture, gazetted 25.8.2000
SEPP No.64 – Advertising and Signage, gazetted 16.3.2001
SEPP No.65 – Design Quality of Residential Flat Development, gazetted 26.7.2002
SEPP – (Housing for Seniors or People with a Disability) 2004, gazetted 31.3.2004
SEPP – (Building Sustainability Index: BASIX) 2004, gazetted 25.6.2004
SEPP – (Major Development) 2005, gazetted 1.8.2005
SEPP – (Mining, Petroleum Production and Extractive Industries) 2007, gazetted 16.2.2007
SEPP – (Miscellaneous Consent Provisions) 2007, gazetted 26.10.2007
SEPP – (Infrastructure) 2007, gazetted 21.12.2007
SEPP – (Exempt and Complying Development Codes) 2008, gazetted 12.12.2008
SEPP – (Affordable Rental Housing) 2009, gazetted 31.7.2009
SEPP – (Sydney Drinking Water Catchment) 2011, gazetted 21.1.2011

PROPOSED SEPP - Competition SEPP, 27.7.2010

Note: As of 1 July 2009, regional environmental plans (REPs) are no longer part of the hierarchy of environmental planning instruments in NSW. The removal of the REP layer is intended to simplify the State's planning system. All existing REPs (listed below) are now deemed State environmental planning policies (SEPPs).

Deemed SEPP – Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment, gazetted 5.2.1999

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 3

Bankstown Development Control Plan 2015

DATE OF COMMENCEMENT – 13th May 2015

The following is a list of the contents within Bankstown Development Control Plan 2015. If further information is required please contact Council on 9707 9000.

INTRODUCTION	
PART A	PRECINCT CONTROLS
A1	Centres
A2	Corridors
A3	Key infill development sites
PART B	GENERAL CONTROLS
B1	Residential development
B2	Commercial centres
B3	Industrial precincts
B4	Sustainable development
B5	Parking
B6	Child care centres
B7	Educational establishments
B8	Places of public worship
B9	Sex services premises
B10	Telecommunications facilities
B11	Tree preservation order
B12	Flood risk management

Please note: Council may from time to time exhibit draft changes to the development control plan that may affect your land. To find out more, please contact Council on 9707 9000 or view Council's website and refer to the Development Control Plan - www.bankstown.nsw.gov.au

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Appendix 4

Land Use Table

Note. A type of development referred to in the Land Use Table is a reference to that type of development only to the extent it is not regulated by an applicable State environmental planning policy. The following State environmental planning policies in particular may be relevant to development on land to which this Plan applies:

State Environmental Planning Policy (Affordable Rental Housing) 2009 (including provision for secondary dwellings)
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Infrastructure) 2007 (relating to public facilities such as those for air transport, correction, education, electricity generation, health services, ports, railways, roads, waste management and water supply systems)
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Rural Lands) 2008
State Environmental Planning Policy No 33—Hazardous and Offensive Development
State Environmental Planning Policy No 50—Canal Estate Development
State Environmental Planning Policy No 62—Sustainable Aquaculture
State Environmental Planning Policy No 64—Advertising and Signage

Zone RU4 Primary Production Small Lots
Permitted without consent Home occupations
Permitted with consent Agriculture; Animal boarding or training establishments; Building identification signs; Business identification signs; Dwelling houses; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Flood mitigation works; Intensive plant agriculture; Kiosks; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Roads; Roadside stalls; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R2 Low Density Residential
Permitted without consent Home occupations
Permitted with consent Bed and breakfast accommodation; Boarding houses; Boat sheds; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Health consulting rooms; Home-based child care; Hospitals; Information and education facilities; Jetties; Multi dwelling housing; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Seniors housing; Water recreation structures; Water supply systems
Prohibited Any development not specified in item 2 or 3
Zone R3 Medium Density Residential
Permitted without consent Nil
Permitted with consent Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Group homes; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Water supply systems
Prohibited Any development not specified in item 2 or 3

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone R4 High Density Residential
Permitted without consent
Nil
Permitted with consent
Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Information and education facilities; Multi dwelling housing; Neighbourhood shops; Places of public worship; Public administration buildings; Recreation areas; Residential flat buildings; Respite day care centres; Roads; Secondary dwellings; Seniors housing; Serviced apartments; Shop top housing; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B1 Neighbourhood Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Bulky goods premises; Business identification signs; Business premises; Car parks; Child care centres; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Garden centres; Hardware and building supplies; Health services facilities; Information and education facilities; Kiosks; Landscaping material supplies; Markets; Medical centres; Neighbourhood shops; Office premises; Places of public worship; Plant nurseries; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Research stations; Residential flat buildings; Respite day care centres; Restaurants or cafes; Roads; Seniors housing; Service stations; Shop top housing; Shops; Take away food and drink premises; Timber yards; Tourist and visitor accommodation; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Water supply systems
Prohibited
Any development not specified in item 2 or 3

Zone B2 Local Centre
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Shop top housing; Tourist and visitor accommodation; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone B4 Mixed Use
Permitted without consent
Nil
Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse and distribution centres; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B5 Business Development
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Child care centres; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Markets; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Respite day care centres; Roads; Serviced apartments; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone B6 Enterprise Corridor
Permitted without consent
Nil
Permitted with consent
Building identification signs; Bulky goods premises; Business identification signs; Business premises; Community facilities; Food and drink premises; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Kiosks; Landscaping material supplies; Light industries; Markets; Multi dwelling housing; Neighbourhood shops; Office premises; Passenger transport facilities; Plant nurseries; Residential flat buildings; Roads; Seniors housing; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone B7 Business Park
Permitted without consent
Nil
Permitted with consent
Building identification signs; Business identification signs; Child care centres; Light industries; Neighbourhood shops; Office premises; Passenger transport facilities; Respite day care centres; Roads; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Places of public worship; Port facilities; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Resource recovery facilities; Restricted premises; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN1 General Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Port facilities; Residential accommodation; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

Zone IN2 Light Industrial
Permitted without consent
Nil
Permitted with consent
Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Garden centres; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Plant nurseries; Roads; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4
Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Residential accommodation; Resource recovery facilities; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Waste disposal facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies

PLANNING CERTIFICATE

UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Zone SP1 Special Activities
Permitted without consent Nil
Permitted with consent The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone SP2 Infrastructure
Permitted without consent Nil
Permitted with consent Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited Any development not specified in item 2 or 3

Zone RE1 Public Recreation
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Car parks; Caravan parks; Charter and tourism boating facilities; Child care centres; Community facilities; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Flood mitigation works; Food and drink premises; Function centres; Information and education facilities; Intensive plant agriculture; Jetties; Kiosks; Marinas; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Roads; Water recreation structures; Water supply systems; Wharf or boating facilities
Prohibited Any development not specified in item 2 or 3

Zone RE2 Private Recreation
Permitted without consent Nil
Permitted with consent Building identification signs; Business identification signs; Car parks; Community facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Helipads; Kiosks; Marinas; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Roads; Water supply systems
Prohibited Any development not specified in item 2 or 3

Zone E1 National Parks and Nature Reserves
Permitted without consent Uses authorised under the National Parks and Wildlife Act 1974
Permitted with consent Nil
Prohibited Any development not specified in item 2 or 3


Zone W1 Natural Waterways
Permitted without consent Nil
Permitted with consent Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Jetties; Marinas; Mooring pens; Moorings; Water recreation structures; Wharf or boating facilities
Prohibited Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

APPENDIX C – AERIAL PHOTOS

1930 Aerial Photograph Showing the Site and Surrounds



Legend

 Site Boundary



Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW

STS
GeoEnvironmental
Pty Ltd
Geotechnical and Environmental Solutions

1956 Aerial Photograph Showing the Site and Surrounds




Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW

1965 Aerial Photograph Showing the Site and Surrounds



Legend

 Site Boundary



Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW

STS
GeoEnvironmental
Pty Ltd
Geotechnical and Environmental Solutions

1975 Aerial Photograph Showing the Site and Surrounds



Legend

Site Boundary



Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW



1986 Aerial Photograph Showing the Site and Surrounds



Legend

Site Boundary



Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW

STS
GeoEnvironmental
Pty Ltd
Geotechnical and Environmental Solutions

1994 Aerial Photograph Showing the Site and Surrounds



Legend

Site Boundary



Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW


2007 Aerial Photograph Showing the Site and Surrounds



2018 Aerial Photograph Showing the Site and Surrounds



Legend

 Site Boundary



Approximate Scale 1:2,500

Image Copyright © Land and Property Information, NSW

STS
GeoEnvironmental
Pty Ltd
Geotechnical and Environmental Solutions

APPENDIX D – HISTORICAL LAND TITLES

SEARCH REPORT

DATE: 17/12/2018

MATTER: 21794/1294D

ORDER NUMBER: 54696973

RE: 46 MEREDITH ST, BANKSTOWN NSW 2200



Disclaimer

While all due skill and care has been taken in the preparation of this report, SAI Global Property Division Pty Ltd does not warrant that its contents (that have been obtained from publicly available resources at a particular point in time) are accurate, complete, up to date or fit for any particular purpose



**LAND
REGISTRY
SERVICES**



CERTIFICATE ORDER SUMMARY

Transaction Details

Date: 17/12/2018

Order No.: 54696973

Certificate No: 85371806

Your Reference: 21794/1294D

Certificate Ordered:

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SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

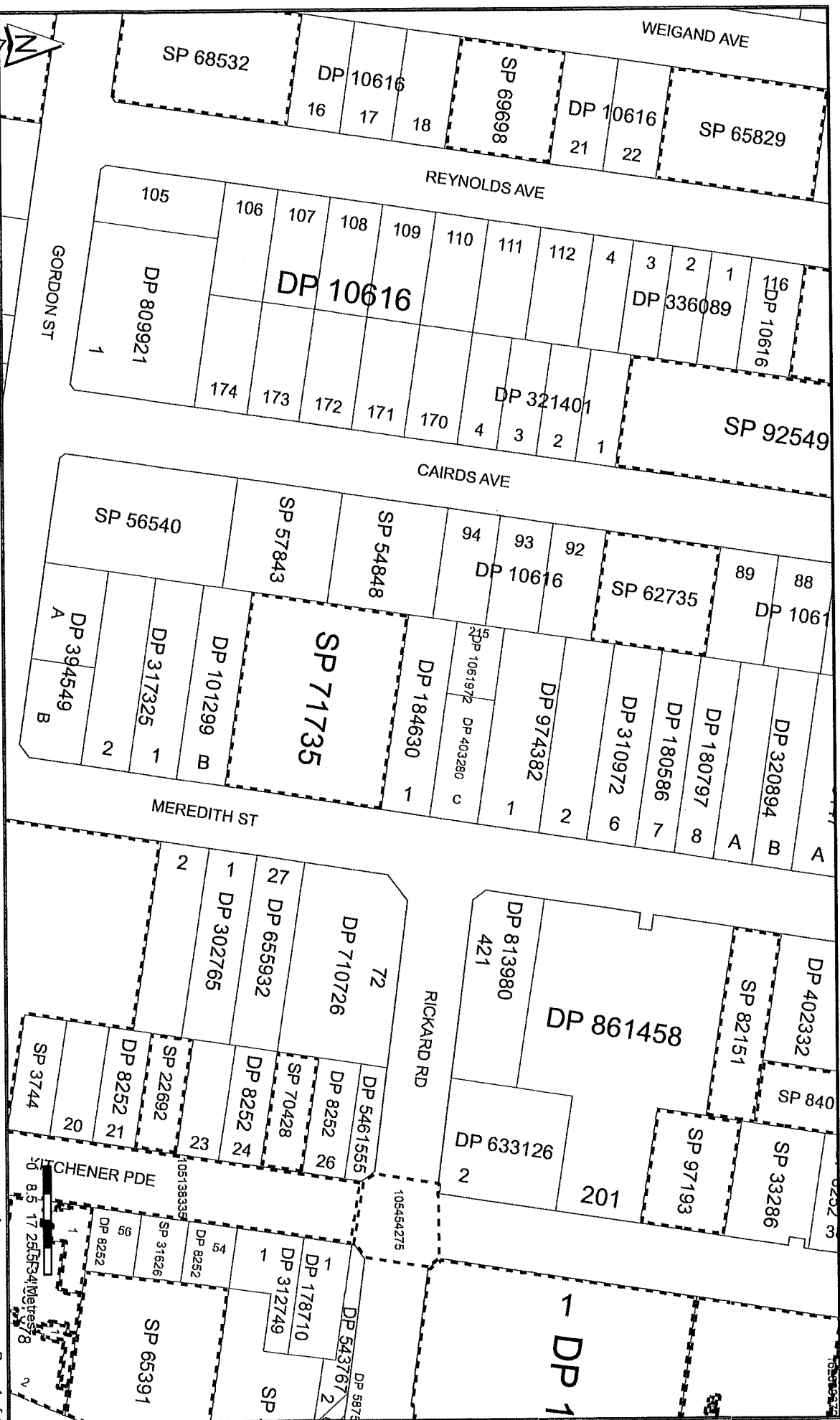


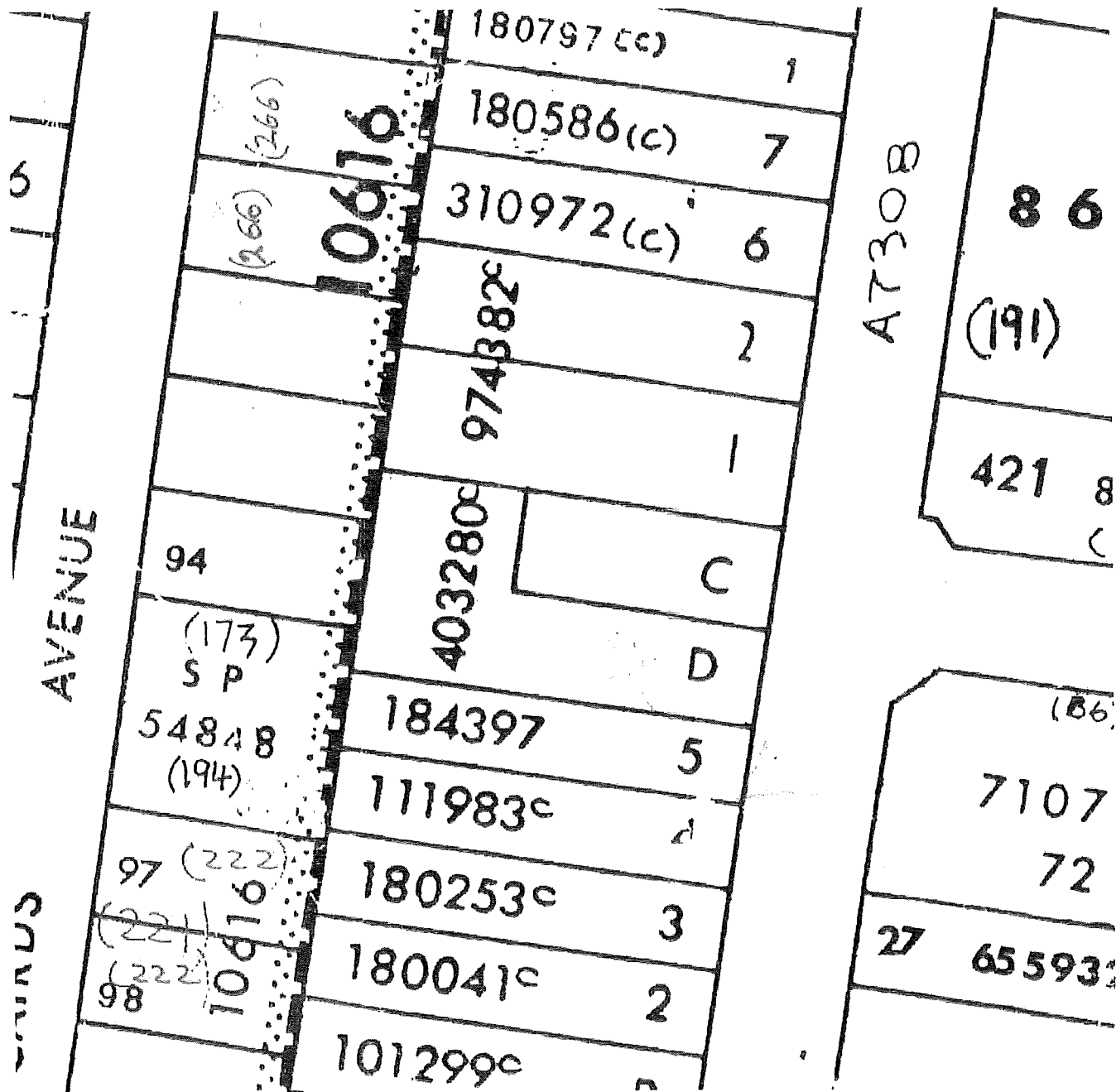
Locality : BANKSTOWN

LGA: CANTERBURY-BANKSTOWN

Parish : BANKSTOWN
County : CUMBERLAND

Ref: NOUSER





Zoom 2

Search results: (1 document found)	
Image name: U0045-74	Res: 1:1.10

SEARCH REPORT

NSW LAND REGISTRY SERVICES

RECORDS BRANCH

17th December 2018

SUBJECT LAND: HISTORICAL TITLE SEARCH

Lot 1 in DP 184630

Lot 215 in DP 1061972

Lot C in DP 403280

Lot 1 in DP 974382

46-50 Meredeith Street, Bankstown

Re: Lot 1 in DP 184630

OWNERSHIP:

From 12/8/1932 to 30/9/1936 - Eric Roy Childs of Bankstown, Electrician

From 30/9/1936 to 16/8/1965 - Herbert John Smith of Bankstown, Pastrycook

From 16/8/1965 to 25/5/1981 - Thora Teresa Corstorphon of Bardwell Park, Married Woman

From 25/5/1981 to 9/3/1988 - Roy Vitetta, Matthew Vitetta & Provvidenza Vitetta

From 9/3/1988 to 12/12/1991 - Colin John Bova & John Anthony Bova

From 12/12/1991 to date - C. J. Bova Pty Ltd & John Anthony Bova (CURRENT OWNERS)

LEASES – NIL

Re: Lot 215 in DP 1061972

OWNERSHIP:

From 9/10/1912 to 13/12/1937 - Steward Mc Donald of Bankstown, Labourer

From 13/12/1937 to 5/6/1938 - Lilian Mary Jones, wife of William John Francis Jones of Bankstown,
Railway Employee

From 5/6/1938 to 21/2/1940 - William John Francis Jones of Bankstown, Railway Employee

From 21/2/1940 to 31/8/1942 - William John Francis Jones of Bankstown, Railway Employee &
Lilian Mary Jones, his wife

From 31/8/1942 to 13/9/1957 - Arthur George Williamson of Canterbury, Machine Shop Foreman

From 13/9/1957 to 24/12/1980 - Herbert John Smith of Bankstown, Retired

From 24/12/1980 to 25/5/1981 - Thora Teresa Corstorphan

From 25/5/1981 to 9/3/1988 - Roy Vitetta, Matthew Vitetta & Provvidenza Vitetta

From 9/3/1988 to 12/12/1991 - Colin John Bova & John Anthony Bova

From 12/12/1991 to date - C. J. Bova Pty Ltd & John Anthony Bova (CURRENT OWNERS)

LEASES - NIL

Re: Lot C in DP 403280

OWNERSHIP:

From 9/10/1912 to 13/12/1937 - Steward Mc Donald of Bankstown, Labourer

From 13/12/1937 to 5/6/1938 - Lilian Mary Jones, wife of William John Francis Jones of Bankstown,
Railway Employee

From 5/6/1938 to 21/2/1940 - William John Francis Jones of Bankstown, Railway Employee

From 21/2/1940 to 31/8/1942 - William John Francis Jones of Bankstown, Railway Employee &
Lilian Mary Jones, his wife

From 31/8/1942 to 18/11/1977 - Arthur George Williamson of Bankstown, Foreman

From 18/11/1977 to 6/1/1978 - Simon Brook Hinchcliffe of Carlingford, Company Director

From 6/1/1978 to 14/1/1988 - Georges Hall Medical Management Services Pty Ltd

From 14/1/1988 to 18/6/2001 - C. J. Bova Investments Pty Ltd

From 18/6/2001 to date - C. J. Bova Pty Ltd (CURRENT OWNER)

LEASES

From 17/6/2004 to 16/6/2007 - Geoffrey Needham Pty Ltd

From 6/5/2013 to 5/5/2016 - AL FITRA Centre Inc.

Re: Lot 1 in DP 974382

OWNERSHIP:

From 9/11/1913 to 9/7/1946 - Frederick McDonald of Bankstown, Landowner

From 9/7/1946 to 12/8/1946 - Elizabeth McDonald of Bankstown, Widow

From 12/8/1946 to 3/5/1973 - Frederick Arthur McDonald of Bankstown, Ice Vendor

From 3/5/1973 to 17/4/1978 - Antoine Ghanem of Greenacre, Salesman & Nahad Ghanem, his wife

From 17/4/1978 to 20/10/1983 - Isidora Tizzzone of Marrickville, Plasterer & Maria Tizzzone, his wife

From 20/10/1983 to 18/10/1996 - Christos Mitrofanis

From 18/10/1996 to 23/9/1999 - LIGON 268 Pty Ltd

From 23/9/1999 to date - C & J Bova Investments Pty Ltd (CURRENT OWNER)

LEASES:

From 1/12/2013 to 30/11/2016 - AL FITRA Centre Inc.

SAI GLOBAL

per *R. Williamson*

Appl. No. 7203

Reference to Last Certificate,

Vol. 2299 Fol. 251

New South Wales.



[CERTIFICATE OF TITLE]

Reference Book,

Vol. 4541 Fol. 66

CANCELLED



ON ISSUE OF NEW FOLIO 1/124630

ERIC ROY CHILDS of Bankstown, Electrician, Transferee under Instrument of Transfer No. C 131990 is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in that piece of land situated in the Municipality of Bankstown Parish of Bankstown, and County of Cumberland containing Thirty seven and one quarter perches or thereabouts, as shown in the Plan heron and therein scheduled, being part of 60 acres (Portion 49 of Parish) originally granted to Frederick Meredith by Crown Grant dated the 5th day of March 1832.

In witness whereof I have hereunto signed my name and affixed my Seal, this

Twentyfour

day of August

1932

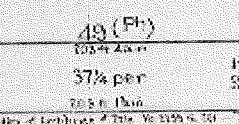
Signed in the presence of

Meredith

Meredith



Acting Registrar General



Meredith St

No. 81936 DISCHARGE of which mortgage
C 131990 dated 20 August 1932
Produced and entered 20 August 1932
at 10.15 o'clock in the afternoon.
By W. L. Miles
REGISTRAR GENERAL

THORA TERESA CORSTORPHAN OF BARDWELL PARK

MARRIED WOMAN
now the registered proprietor of the land within described.
See Section 94 Application No. 225277
Entered 16/8/1965
By W. L. Miles
REGISTRAR GENERAL

No. 225277 CAVEAT by the Registrar General.
Entered 16 August 1965
By W. L. Miles
REGISTRAR GENERAL

No. 81936 TRANSFER dated 30 September 1932
from the said Eric Roy Childs to Herbert John Smith of Bankstown
TO HERBERT JOHN SMITH OF BANKSTOWN
Produced on 30 September 1932
at 10.15 o'clock in the afternoon.
By W. L. Miles
REGISTRAR GENERAL

No. 81936 MORTGAGE dated 12 December 1932
from the said Herbert John Smith to Commonwealth Bank of Australia
Produced and entered 23 December 1932
at 10.15 o'clock in the afternoon.
By W. L. Miles
REGISTRAR GENERAL

ROY VITETTA MATTHEW VITETTA

REGISTERED PROPRIETOR Roy Vitetta and Matthew Vitetta
 4 PROVVIDENZA VITETTA
 25/5/1981
 REGISTRAR GENERAL

REGISTERED PROPRIETOR Roy Vitetta and Matthew Vitetta
 4 PROVVIDENZA VITETTA
 REGISTRAR GENERAL

REGISTERED PROPRIETOR Roy Vitetta and Matthew Vitetta
 4 PROVVIDENZA VITETTA
 REGISTRAR GENERAL

COLIN JOHN BOVA &
 JOHN ANTHONY BOVA
 4/3/1980
 REGISTRAR GENERAL

COMPUTER FOR
 DEALINGS TO EX INDUSTRY

NO FURTHER



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

13/12/2018 2:19PM

FOLIO: 1/184630

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4541 FOL 66

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
20/2/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
12/12/1991	E91822	TRANSFER TO <i>C J BOVA PTY LTD</i>	EDITION 1
19/1/1994	I959306	DEPARTMENTAL DEALING	<i>& JOHN ANTHONY BOVA</i>

*** END OF SEARCH ***

jennfib

PRINTED ON 13/12/2018

Obtained from NSW LRS on 13 December 2018 01:19 PM AEST

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SIGMO

[illegible]

VOL. 2299 PAGE 201


No. 0 131790 TRANSFER dated 14th July 1932
from the said Stewart M. McDonald to Eric Ray
of the said

Produced _____ of the land within described
entered _____ and
at _____ noon,
As to land in this transfer
this _____ is cancelled
and new Certificate issued
Vol. _____ Fol. _____
REGISTRAR GENERAL



No. C 50369 TRANSFER dated 12th December 1931
from the said Edward McNamee to Ella Mary Jones
of the said

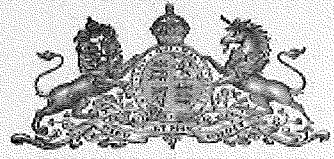
Produced _____ of the land within described
entered _____ and
at _____ noon,
As to land in this transfer
this _____ is cancelled
and new Certificate issued
Vol. _____ Fol. _____
REGISTRAR GENERAL



201.

Appn. No. 7305
Reference to last certificate
Vol. 2299 Fol. 201

New South Wales.



[CERTIFICATE OF TITLE]

Passbook Book.
Vol. 4807 Fol. 192

CANCELLED

LILIAN MARY JONES, wife of William John Francis Jones, of Bankstown, Railway Employee, Transferee under Instrument of Transfer No. 0611369 is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified herein, in That piece of land situated in the Municipality of Bankstown Parish of Bankstown, and County of Cumberland containing Thirty seven and one quarter perches or thereabouts as shown in the plan hereon and therein edged red being part of 60 acres (Portion 19 of Parish) originally granted to Frederick Meredith by Crown Grant dated the 8th day of March 1831.

In witness whereof I have hereunto signed my name and affixed my Seal, this 14th day of February 1898.

Signed in the presence of

M. Capard

Registrar General.



No. 065172. MORTGAGE dated 26th July 1898 from the said William John Francis Jones to the said William John Francis Jones and his wife Lilian Mary Jones his wife and joint tenants. Produced and entered 27th July 1898 at 4.15 p.m. in the afternoon. Registrar General.

No. 077650. TRANSFER dated 2nd January 1899 from the said William John Francis Jones to the said William John Francis Jones and his wife Lilian Mary Jones his wife and joint tenants. Produced and entered 3rd January 1899 at 10.15 a.m. in the forenoon. Registrar General.

No. 0152768. TRANSFER dated 24th June 1942 from the said William John Francis Jones and his wife Lilian Mary Jones to the said William John Francis Jones and his wife Lilian Mary Jones his wife and joint tenants. Produced and entered 24th June 1942 at 1.15 p.m. in the afternoon. Registrar General.

No. C 142235. TRANSFER dated 16th June 1898 from the said Lilian Mary Jones to William John Francis Jones of Bankstown Railway Employee. Produced and entered 17th June 1898 at 1.15 p.m. in the afternoon. Registrar General.

MORTGAGE No. 1000000. Secured by the said William John Francis Jones and his wife Lilian Mary Jones his wife and joint tenants. Produced and entered 17th June 1898 at 1.15 p.m. in the afternoon. Registrar General.

As to the residence
this land is excepted and new Certificate of Title issued
Vol 7746 for 79
Sice 0424324
J. Johnson
Register General

202 Primary Appn. No. 7308
Reference to Last Title
Vol. 4907 Fol. 197

New South Wales.



[CERTIFICATE OF TITLE]

Registered Book
7447 215
Vol. Fol.
Issue on Transfer No. 0801768

CANCELLED ☒ W
ON ISSUE OF NEW FOLIO 1/666499
215/1061914

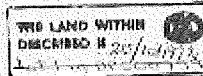
HERBERT JOHN SMITH, of Bankstown, Retired, is now the proprietor of an Estate in Fee Simple,
subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances,
liens, and interests as are notified herein, in That piece of land
in the Municipality of Bankstown Parish of Bankstown, and County of Cumberland
shown in the plan hereon and therein edged red being part of lot D in plan lodged with Transfer No. 0801768 and being
also part of Portion 49 granted to Frederick Meredith on 8th March 1831.

In witness whereof I have hereunto signed my name and affixed my Seal, this

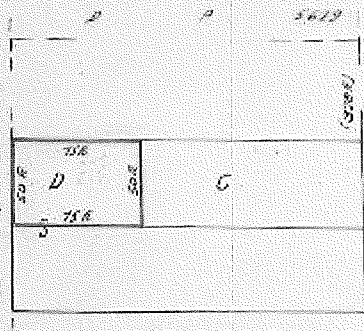
day of February, 1958

Signed in the presence of

Appointer



J. H. Pells
Registrar General
ROY VITETTA



Area: 13 1/2 per
Scale: 60 feet to one inch

NOTIFICATION REFERRED TO

Covenant contained in Transfer No. 0801768.

J. H. Pells
Registrar General.



THORA TERESA CORSTORPHAN

Particulars of Bankstown Road, Bankstown
by Transfer No. 0801768 Registered 24/12/1980
24/12/1980
Registrar General

REGISTERED PROPRIETOR *ROY VITETTA*
MARTIN VITETTA & PROXIMENDA VITETTA
Registered 25/5/1981
Registrar General

Registered 25/5/1981
Registrar General

Registered 25/5/1981
Registrar General

REGISTERED PROPRIETOR *COLIN JOHN BOVA*
JOHN ANTHONY BOVA
Registered 9/3/1988
Registrar General

Persons are cautioned against altering or adding to this Certificate or any notification thereon.

REGISTERED PROPRIETOR *C J Bova Pty Limited*
by Transfer E 9832 Registered
12-12-1991

REGISTERED PROPRIETOR *C J Bova Pty Limited*
and John Anthony Bova as tenants
in common in equal shares
by Transfer E 9832 Registered
12-12-1991

COMPUTER FOLIO NO FURTHER
DEMANDS TO BE REGISTERED.

*action of CT
for lot D
12-12-1991
at 12.00*



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

13/12/2018 2:19PM

FOLIO: 215/1061972

First Title(s): OLD SYSTEM
Prior Title(s): VOL 7447 FOL 215

<u>Recorded</u>	<u>Number</u>	<u>Type of Instrument</u>	<u>C.T. Issue</u>
13/11/2003	DP1061972	DEPOSITED PLAN	FOLIO CREATED CT NOT ISSUED

*** END OF SEARCH ***

jennfib

PRINTED ON 13/12/2018

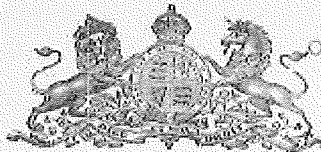
Obtained from NSW LRS on 13 December 2018 01:19 PM AEST

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202

Primary Appn. No. 7308
 Reference to Last Title
 Vol. 4967 Fol. 192
 Charting Map Bankstown Sheet 60

New South Wales



[CERTIFICATE OF TITLE.]

CANCELLED

ON ISSUE OF NEW FOLIO 6/403280

REGISTER BOOK.

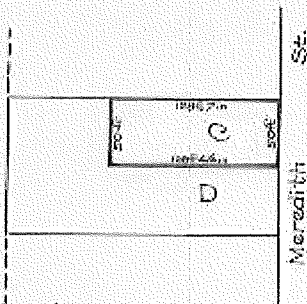
Vol. 7746 Fol. 72

Issued on Order No. E233347

ARTHUR GEORGE WILLIAMSON, of Bankstown, Foreman, is now the proprietor of an Estate in Fee Simple,
 subject nevertheless to the reservations and conditions, if any, contained in the Grants hereinafter referred to, and also subject to such encumbrances,
 liens, and interests as are notified herein, in That piece of land
 in the Municipality of Bankstown Parish of Bankstown, and County of Cumberland
 shown in the plan heron and therein edged red being Lot C in plan lodged with Transfer No. 3801760 and being part of
 Portion 49 granted to Frederick Meredith on 8th March 1831.

In witness whereof I have hereunto signed my name and affixed my Seal, this

Signed in the presence of *Arthur George Williamson*



Area: 23 1/2 per

Scale: 80 feet to one inch.

H 233347

Persons are cautioned against relying on this Certificate or any notification hereon

day of August, 19 59

Registrar General.



GEORGE HALL MEDICAL MANAGEMENT

TRANSFER NO. *6/403280*
SERVICES PTY LTD
 now the registered proprietor of the land within described
 Registered *6/1/1970*
 REGISTRAR GENERAL

RETRICEDLY REFERRED TO

SIMON BROOK

TRANSMISSION NO. *12/44/3341*
WIN CHCLIFFE of Caningford, Co. Dir.
 now the registered proprietor of the land within described
 Registered *18/11/1977*
 REGISTRAR GENERAL

REGISTERED PROPRIETOR *C. J. Bova Investments*
He limited by Transfer X380742 Registered
11-1-1988

X3894760 Mortgage to Australia and
New Zealand Banking Group Limited
Registered 10-12-1988



LAND
REGISTRY
SERVICES

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

13/12/2018 2:19PM

FOLIO: C/403280

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 7746 FOL 72

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
22/5/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/9/1999	6222075	DISCHARGE OF MORTGAGE	
23/9/1999	6222076	MORTGAGE	EDITION 1
18/6/2001	7694334	DISCHARGE OF MORTGAGE	
18/6/2001	7694335	TRANSFER TO CJ BOVA PTY LTD	EDITION 2
24/2/2005	AB311588	LEASE TO GEOFFREY NEEDHAM PTY LTD	EDITION 3 3 YEARS from 17-6-2004
27/8/2013	AH975482	LEASE TO AL FITRA CENTRE INC	EDITION 4 3 YEARS from 6-5-2013

*** END OF SEARCH ***

jennfib

PRINTED ON 13/12/2018

Obtained from NSW LRS on 13 December 2018 01:19 PM AEST

© Office of the Registrar-General 2018

No. 2516997 APPLICATION BY TRANSMISSION
Elizabeth McDonald of Banksstown, Widow
 Proprietor of the land within described in pursuance of the above
 Application Produced 17/10/1983 and
 entered at 17/10/1983 of clock in the noon.
J. Wells
 REGISTRAR GENERAL

No. 2516997 RECEIPT
 by the Registrar General
 Produced 17/10/1983
 entered at 17/10/1983
J. Wells
 REGISTRAR GENERAL

The within Land No. 2516997 is hereby sold to
17/10/1983
J. Wells
 REGISTRAR GENERAL

Discharge No. 30/6/1946
FREDERICK ARTHUR McDONALD of
Banksstown, Ice Vendor
 Produced 17/10/1983 and entered at 17/10/1983
J. Wells
 REGISTRAR GENERAL

ANTOINETTE GHANEM of Greenacre Salesman
Antoinette Ghahem of Greenacre Salesman and Mahad
MAHAD GHANEM his wife
 now the registered proprietor of the land within described.
 See TRANSFER No. N250285 dated 3/5/1973
 Entered 30th May 19 73
J. Wells
 REGISTRAR GENERAL

TRANSFER NO. ESIDORA TIZZONE of Marrickville, Plasterer.
MARIA TIZZONE his wife
 now the registered proprietor of the land within described
 Registered 17/4/1978
J. Wells
 REGISTRAR GENERAL

MORTGAGE No. W407926
 Registered 17/4/1978
J. Wells
 REGISTRAR GENERAL

CHRISTOS MITROFANIS
 REGISTERED PROPRIETOR Christos Mitrofanis of Sydney
 Registered 20/10/1983
J. Wells
 REGISTRAR GENERAL

Discharge No. W407926
W407926 Mortgage to C.A. Mitrofanis Pty. Limited.
Superannuation Fund. Registered 19-8-1986
J. Wells
 REGISTRAR GENERAL

W407926 Mortgage to C.A. Mitrofanis Pty. Limited.
Superannuation Fund. Registered 19-8-1986
J. Wells
 REGISTRAR GENERAL

W407926 Mortgage W407926 Variation
Registered 30-6-1987
J. Wells
 REGISTRAR GENERAL

W407926 Mortgage, X524220 Variation.
Registered 9-5-1988
J. Wells
 REGISTRAR GENERAL

COULD NOT BE REGISTERED
 NO FURTHER
 DEALINGS TO BE REGISTERED



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

13/12/2018 2:19PM

FOLIO: 1/974382

First Title(s): OLD SYSTEM

Prior Title(s): VOL 2311 FOL 232

Recorded	Number	Type of Instrument	C.T. Issue
16/3/1994		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
18/10/1996	2546882	TRANSFER <i>TO LIGON 268 PTY LTD</i>	EDITION 1
25/7/1997	3266268	MORTGAGE	EDITION 2
23/9/1999	6222057	DISCHARGE OF MORTGAGE	
23/9/1999	6222058	TRANSFER <i>TO L²J BOVA INVESTMENTS PTY LTD</i>	
23/9/1999	6222059	MORTGAGE	EDITION 3
14/4/2014	AI407782	DISCHARGE OF MORTGAGE	
14/4/2014	AI407783	LEASE <i>TO AL FITRA CENTRE INC</i>	EDITION 4 <i>3 YEARS From 1-12-2013</i>

*** END OF SEARCH ***

jennfib

PRINTED ON 13/12/2018

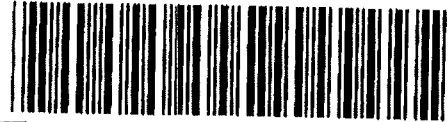
Obtained from NSW LRS on 13 December 2018 01:19 PM AEST

© Office of the Registrar-General 2018

Form: 97-01T
Licence: 10V/0096/96
Edition: 9804

TRANSFER
New South Wales
Real Property Act 1900

6222058B



STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
28-04-1999 0000021828-001

(A) **TORRENS TITLE**

If appropriate, specify the part or share transferred
1/974382

SECTION 18(2)
DUTY \$ *****2.00

(B) **LODGED BY**

LTO Box

45A

Name, Address or DX and Telephone

NATIONAL AUSTRALIA BANK LIMITED
NATIONAL AUSTRALIA BANK HOUSE,
George Street, SYDNEY
237-1111

Reference (optional):

45A

MLO802

CODES

T
TS (\$713)
TW (Sheriff)

(C) **TRANSFEROR**

LIGON 268 PTY LIMITED ACN 051 824 081

(D) The transferor acknowledges receipt of the consideration of \$405,000.00 and as regards the land specified above transfers to the transferee an estate in fee simple.

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

(F) **TRANSFEE**

C & J BOVA INVESTMENTS PTY LTD ACN 000 927 355 Trust For BOVA FAMILY TRUST

~~PROPERTY~~

(G) **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.

THIS COMMON SEAL OF LIGON 268 PTY LIMITED
WAS HERETO AFFIXED IN ACCORDANCE WITH
ITS CONSTITUTION AND IN THE PRESENCE OF:
Signature of witness: Director

Signature of transferor: Director

Name of witness:

Address of witness:

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

Signature of witness:

Name of witness:

Address of witness:

Signature of transferee:

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name and capacity below:
JOHN SEBASTIAN LUKAS, SOLICITOR FOR THE TRANSFEE

All handwriting must be in block capitals.
A set of notes on this form (97-01T-2)
is available from the Land Titles Office.

Page 1 of 1
number additional pages sequentially

Checked by (LTO use): 71

Ref:jennfib /Sro:P

Form: 01T

Licence: 98M111

Edition: 0011

TRANSFER

7694335P

New South Wales
Real Property Act 1900



PRIVACY NOTE: this information is legally required and

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY

18-06-2001

0000650115-001

SECTION 18(2)

DUTY

\$ 2.00

(A) TORRENS TITLE

If appropriate, specify the part transferred
Folio Identifier C/403280

(B) LODGED BY

Delivery Box
Name, Address or DX and Telephone

97811

P. Presite & Ass.

Reference (optional):

CODES

T

TW

(Sheriff)

(C)



C J BOVA INVESTMENTS PTY LIMITED T/T CAN FAMILY TRUST

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 350,000.00 and as regards

(E) ESTATE

the land specified above transfers to the transferee an estate in fee simple.

(F) SHARE

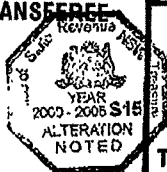
TRANSFERRED

(G)

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

(H)

TRANSFEE



C J BOVA PTY LIMITED T/T C J BOVA RETIREMENT FUND

003 260 991

eps. NB.

(I)

TENANCY:

DATE

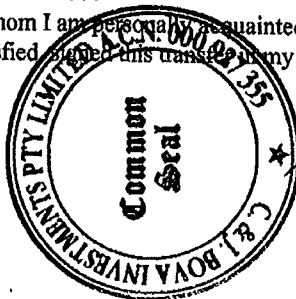
16 / 06 / 2001
dd mm yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness:

Name of witness:

Address of witness:



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

Signature of transferor:

Colin John Bova
Director
Miriam Bova

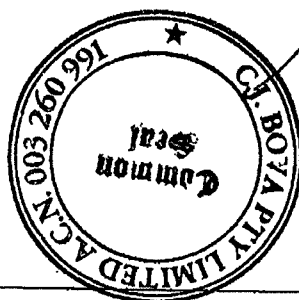


I certify that the transferee, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness:

Name of witness:

Address of witness:



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

Signature of transferee:

Colin John Bova
Director
Miriam Bova

signed on the transferee's behalf by a solicitor or licensed conveyancer, insert the signatory's full name and capacity below:

Page 1 of
number additional
pages sequentially

All handwriting must be in block capitals.

A set of notes on this form (01T-2) is available from Land and Property Information NSW.

Form: 07L
Licence: 98M111
Edition: 0106

LEASE
New South Wales
Real Property Act 1900



AB311588Y

PRIVACY NOTE: this information is legally required and will be

STAMP DUTY

Office of State Revenue use only

Client No: 63632007

1123

Duty: **\$306.60**

Trans No: **2019674**

Asst details:

(A) **TORRENS TITLE**

Property leased: if appropriate, specify the part or premises

Known as 48 Meredith Street, Bankstown NSW 2200

C/ 403280

(B) **LODGED BY**

Delivery
Box

978V

Name, Address or DX and Telephone

LHPN 123699m

P. Pringle & Assoc

P.O. Box 20

RIVE DOCK 2046

Reference (optional):

97132111

CODE

L

(C) **LESSOR**

C.J. BOVA PTY LIMITED (ACN 003 260 991)

The lessor leases to the lessee the property referred to above.

(D)

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

(E) **LESSEE**

GEOFFREY NEEDHAM PTY LIMITED (ACN 003 078 804)

(F)

TENANCY:

(G) 1

Three (3) years

COMMENCING DATE 1/6/2004

TERMINATING DATE 31/5/2007

With an **OPTION TO RENEW** for a period of **Three years** set out in cl. 49

5. With an **OPTION TO PURCHASE** set out in **Not applicable**

6. Together with and reserving the **RIGHTS** set out in **cl. 47**

7. Incorporates the provisions or additional material set out in **ANNEXURE(S) "A"** hereto.

8. Incorporates the provisions set out in **MEMORANDUM** filed at Land and Property Information New South Wales as No. **Not applicable**

9. The **RENT** is set out in item/para **3** of the **Reference Schedule**

All handwriting must be in block capitals.

Page 1 of **22**

A set of notes on this form (07L-2) is available from Land and Property Information NSW.

Form: 07L
Release: 4-3

LEASE

New South Wales
Real Property Act 1900



AH975482K

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

(A) TORRENS TITLE

Property leased
C/403280

(B) LODGED BY

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any 124E LLPN : 123820V SYDNEY 2000 Ph: (02) 9230 6900	CODE L
Reference: NBLE 14582326		

(C) LESSOR

C J Bova Pty Limited ACN 003 260 991

The lessor leases to the lessee the property referred to above.

(D)

Encumbrances (if applicable):

(E) LESSEE

AL FITRA CENTRE INC ABN 52 684 828 296

(F)

TENANCY:

(G) 1. TERM 3 years

2. COMMENCING DATE 6 May 2013

3. TERMINATING DATE 5 May 2016

4. With an **OPTION TO RENEW** for a period of 3 years
set out in clause 4 of Annexure B

5. ~~With an **OPTION TO PURCHASE** set out in clause~~ of

6. ~~Together with and reserving the **RIGHTS** set out in clause~~ of

7. Incorporates the provisions or additional material set out in **ANNEXURE(S)** A & B hereto.

8. ~~Incorporates the provisions set out in~~

~~No.~~

9. The **RENT** is set out in item No. 1(c) of Annexure A



Form: 07L
Licence: 01-05-028
Licensee: LEAP Legal Software Pty Limited
Firm name: NB Legal

LEASE

AI407783S

New South Wales
Real Property Act 1900

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 01: Office of State Revenue use only

Tilvit. 930

(A) **TORRENS TITLE**

Property leased: if appropriate, specify the part or premises

1/974328 1/974382

Marie Young

(B) **LODGED BY**

Document Collection Bd 124E	Name, Address or DX, Telephone and Customer Account Number if any LLPN : 123820V 1/3, 175 Castlereagh Street SYDNEY 2000 Ph: (02) 9230 6900	CODE L
Reference: NBLE 14664502		

(C) **LESSOR**

C J Bova Pty Ltd ACN 003 260 991

C J BOVA INVESTMENT PTY LIMITED ACN 000 927 355

The lessor leases to the lessee the property referred to above.

(D)

Encumbrances (if applicable):

(E) **LESSEE**

AL FITRA CENTRE INC ABN 52 684 828 296

(F)

TENANCY:

(G)

1. **TERM:** 3 Years
2. **COMMENCING DATE:** 1 December 2013
3. **TERMINATING DATE:** 30 November 2016
4. With an **OPTION TO RENEW** for a period of 3 years set out in Clause 4 of ANNEXURE A.
5. With an **OPTION TO PURCHASE** set out in clause of
6. Together with and reserving the **RIGHTS** set out in clause of
7. Incorporates the provisions or additional material set out in ANNEXURE(S) A & B hereto.
8. Incorporates the provisions set out in N/A No.
9. The **RENT** is set out in clause No 5 of ANNEXURE A

RELODGED

09 APR 2014

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

Page 1 of 22

TIME: 1.26

APPENDIX E – NSW EPA SEARCH RESULTS

Search results

Your search for: LGA: Bankstown City Council

Matched 31 notices relating to 9 sites.

Notice Type: Preliminary Investigation Order

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
CHESTER HILL	127 Orchard ROAD	Former Orica, Chester Hill	4 former
PADSTOW	55 Bryant STREET	Former Exide Battery Manufacturing & Recycling	2 current and 1 former
REVESBY	33-35 Violet STREET	Bituminous Products	2 current and 1 former
REVESBY	21 Marigold STREET	Mirotone Pty Ltd	2 current
VILLAWOOD	66 Christina ROAD	Former Electrical Component Manufacturer	1 current and 4 former
VILLAWOOD	2 Christina ROAD	Former Orica Crop Care	2 current and 1 former
VILLAWOOD	49 Miowera ROAD	Former Siemens/Westinghouse	9 former
VILLAWOOD	110A Christina ROAD	Nepotian (Former Toll) Site	1 current
YAGOONA	117-153 Rookwood ROAD	Galserv Galvanising Services	1 current

APPENDIX F – BOREHOLE LOGS

[illegible]

[illegible]

Revision 7

Client: C & J Bova Property Investments Pty Ltd		Project / STS No.: 21794/1294D		BOREHOLE NO.: BH 104		
Project: 46-50 Meredith Street, Bankstown		Date: November 22, 2018				
Location: Refer to Drawing No. 18/3620		Logged: DL Checked By: JAP		Sheet 1 of 1		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	S110 @ 0.1 m S111 @ 0.2 m		SILTY SANDY CLAY: dark grey with grey brown, low to medium plasticity, trace of gravel PID=4ppm FILL	CL		D-M
			SILTY CLAY: orange brown with light brown, medium to high plasticity, trace of gravel	CL/CH		M
		0.5	SILTY CLAY: orange brown with light grey, medium to high plasticity, trace of gravel	CL/CH		M
			SILTY CLAY: red orange brown with light grey and light brown, medium to high plasticity, trace of gravel	CL/CH		M
	S112 @ 1.0 m	1.0	SILTY CLAY: light brown with light grey, medium to high plasticity, trace of gravel	CL/CH		M
		1.5	BOREHOLE DISCONTINUED AT 1.5 M			
		2.0				
		2.5				
D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT) S - jar sample				Contractor: STS Equipment: Chris Hole Diameter (mm): 100 Angle from Vertical (°): Drill Bit: V/Spiral/Two Prong		
NOTES: See explanation sheets for meaning of all descriptive terms and symbols						

Revision 7

Client: C & J Bova Property Investments Pty Ltd		Project / STS No.: 21794/1294D		BOREHOLE NO.: BH 106		
Project: 46-50 Meredith Street, Bankstown		Date: November 22, 2018				
Location: Refer to Drawing No. 18/3620		Logged: DL Checked By: JAP		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	S116, S117 @ 0.1 m		SILTY CLAY: dark brown with brown, low to medium plasticity, trace of gravel	CL		D
			PID=0ppm FILL			
	S118 @ 0.3 m		SILTY CLAY: red orange brown with light grey, medium to high plasticity, trace of gravel	CL/CH		M
		0.5	BOREHOLE DISCONTINUED AT 0.5 M			
		1.0				
		1.5				
		2.0				
		2.5				
D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT) S - jar sample				Contractor: STS Equipment: Hand Auger Hole Diameter (mm): 100		
NOTES: See explanation sheets for meaning of all descriptive terms and symbols				Angle from Vertical (°): Drill Bit: V/Spiral/Two Prong		

Client: C & J Bova Property Investments Pty Ltd		Project / STS No.: 21794/1294D		BOREHOLE NO.: BH 107		
Project: 46-50 Meredith Street, Bankstown		Date: November 22, 2018				
Location: Refer to Drawing No. 18/3620		Logged: DL Checked By: JAP		Sheet 1 of 1		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	S119 @ 0.1 m		SILTY CLAY: dark brown with brown, low to medium plasticity, trace of gravel	CL		D
	S120 @ 0.4 m		PID=2ppm FILL			
		0.5	AUGER REFUSAL AT 0.5 ON CONCRETE IN FILL			
		1.0				
		1.5				
		2.0				
		2.5				
D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT) S - jar sample				Contractor: STS Equipment: Chris Hole Diameter (mm): 100 Angle from Vertical (°): Drill Bit: V/Spiral/Two Prong		
NOTES: See explanation sheets for meaning of all descriptive terms and symbols						

APPENDIX G – CHAIN OF CUSTODY

STS GeoEnvironmental Pty Ltd Job No: 21794/1294D
PO Box 6989 (postal)
14/1 Cowpasture Place (office), Wetherill Park NSW 2164
Telephone: (02) 9756 2166 Fax: (02) 9756 1137
E-Mail: apierre@stsgeo.com.au Contact: Alex Pierre
Laboratory: ALS Laboratory Group - Sydney Environmental Division
277-289 Woodpark Road, SMITHFIELD NSW 2164
Telephone: (02) 8784 6555 Fax: (02) 8784 8500

STS
GeoEnvironmental
Geotechnical and Environmental Solutions
Jacob Waugh

ANALYSIS

Laboratory number	Sample number	jar/ bottle	bag	Date sampled	Composite number	Sample type	Comments	\$-2	\$-12	\$-19	CEC +pH	M-S	M Asbestos
1	S101	1	1	22-November-2018		soil				X			X
2	S102	1		22-November-2018		soil		X			X		
3	S103	1		22-November-2018		soil	HOLD	X			X		
4	S104	1	1	22-November-2018		soil		X			X		
5	S105	1		22-November-2018		soil		X			X		
6	S106	1		22-November-2018		soil		X			X		
7	S107	1	1	22-November-2018		soil		X			X		
8	S108	1		22-November-2018		soil		X					
9	S109	1		22-November-2018		soil		X					
10	S110	1	1	22-November-2018		soil				X			X
11	S111	1		22-November-2018		soil		X					
12	S112	1		22-November-2018		soil	HOLD						
13	S113	1	1	22-November-2018		soil				X			X
14	S114	1		22-November-2018		soil		X	X				
15	S115	1		22-November-2018		soil		X					
16	S116	1	1	22-November-2018		soil				X			X
17	S117	1		22-November-2018		soil	Please forward to ALS Brisbane	X	X				
18	S118	1		22-November-2018		soil		X			X		
TOTAL	18	12	6					13	2	4	8		4

Organised By / Date:


Relinquished By / Date:

Commo / Courier:

WO No: E-1835177

Attached By: PG / Internal Sheet

Environment
Brisbane
Work Order
EB18



Telephone : + 61-7-

AKBES TCS VALS NEWCASTLE
SIL 7 / ACS BROBAND
Subcon / Forward Lab / Split WO
Lab / Analysis: 4 / 1, 10, 13, 16
Organised By / Date:
Relinquished By / Date:
Common / Counter:
WO No: E-10635177
Attached By PO / Internal Share:

Environmental Division
Brisbane
Work Order Reference
EB1829013



Telephone : + 61-7-3243 7222

Released by STS GeoEnvironmental
Alex Pierre

Date:

23-Nov-18

Time:

9:00 AM

CoC Number: 217944 - COC1

Signed:

Alex Pierre

Received by:

Date:

23/11/2018

Time:

12:10 pm

Your quotation:

STS Geo 2017-2018 (EN/222/17)

Preliminary results by:

Thursday 30 November 2018

Final results by:	
-------------------	--

Thursday 30 November 2018

Standard Detection Limits Apply, Standard Turnaround Required on Results

PLEASE FORWARD S5 TO ALS BRISBANE

RCC CHAS PERRY

27/11/08

10-05

HT

Page 1 of 1

Order No: E-2018-576

Contact: Alex Pierre

Fax: (02) 8784 8500

Contact: Jacob Waugh




Geotechnical and Environmental Solutions

ANALYSIS

Laboratory number	Sample number	jar/ bottle	bag	Date sampled	Composite number	Sample type	Comments	S-2	CO-100/PAH	S-19	CEC +PH	W-5	Asbestos
	S119	1	1	22-November-2018		soil		X	X				X
<p>ASBESTOS TALC NEWCASTLE</p> <p>Subcon / Forward Lab / Split WO _____</p> <p>Lab / Analysis _____</p> <p>Organised By / Date: _____</p> <p>Relinquished By / Date: _____</p> <p>Connote / Courier: _____</p> <p>WO No: ES1837882</p> <p>Attached By PO / Internal Sheet: _____</p>													
TOTAL		1	1										

Environmental Division
Sydney
 Work Order Reference
ES1837882



Telephone : + 61-2-8784 8555

CoC Number: 217944 - COC1

9:00 AM

Time: 12:00pm

Your quotation:

STS Geo 2017-2018 (EN/222/17)

Preliminary results by:	
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Final results by:

Thursday 30 November 2018

Thursday 30 November 2018

Standard Detection Limits Apply, Standard Turnaround Required on Results

PLEASE FORWARD S5 TO ALS BRISBANE

Environmental Division
Sydney
Work Order Reference
ES1837882



Telephone : + 61-2-8784 8555

APPENDIX H – LABORATORY RESULTS

CERTIFICATE OF ANALYSIS

Work Order : **ES1835177**
Client : **SMEC TESTING SERVICES PTY LTD**
Contact : ALEX PIERRE
Address : P O BOX 6989
 WETHERILL PARK NSW, AUSTRALIA 2164
Telephone : ----
Project : 21794/1294D
Order number : E-2018-576
C-O-C number : 21794 - COC1
Sampler : ----
Site : ----
Quote number : EN/222
No. of samples received : 19
No. of samples analysed : 17

Page : 1 of 22
Laboratory : Environmental Division Sydney
Contact : Customer Services ES
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61-2-8784 8555
Date Samples Received : 23-Nov-2018 12:10
Date Analysis Commenced : 26-Nov-2018
Issue Date : 30-Nov-2018 18:49



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Dian Dao		Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- EG005T: Poor precision was obtained for (Zinc and Lead) on sample ES1835035-3 and results have been confirmed by re-extraction and reanalysis.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR.
Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.



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- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S101	S102	S104	S105	S106
Client sampling date / time				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	
Compound	CAS Number	LOR	Unit	ES1835177-001	ES1835177-002	ES1835177-004	ES1835177-005	ES1835177-006	
				Result	Result	Result	Result	Result	
EA002: pH 1:5 (Soils)									
pH Value	----	0.1	pH Unit	----	5.3	6.1	5.5	5.5	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	11.6	17.3	12.8	17.9	16.6	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----	
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	----	----	
Asbestos Type	1332-21-4	-	--	-	----	----	----	----	
Sample weight (dry)	----	0.01	g	540	----	----	----	----	
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----	
EA200N: Asbestos Quantification (non-NATA)									
∅ Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	----	----	----	----	
∅ Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	----	----	----	----	
∅ Asbestos Containing Material	1332-21-4	0.1	g	<0.1	----	----	----	----	
∅ Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	----	----	----	----	
∅ Weight Used for % Calculation	----	0.0001	kg	0.540	----	----	----	----	
∅ Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	----	----	----	----	
ED007: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g	----	2.6	6.0	2.8	0.6	
Exchangeable Magnesium	----	0.1	meq/100g	----	7.3	2.2	4.7	12.4	
Exchangeable Potassium	----	0.1	meq/100g	----	0.4	0.5	0.3	0.4	
Exchangeable Sodium	----	0.1	meq/100g	----	1.8	0.5	1.1	3.8	
Cation Exchange Capacity	----	0.1	meq/100g	----	12.5	9.2	10.9	17.2	
Exchangeable Sodium Percent	----	0.1	%	----	14.9	5.3	12.2	21.9	
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	42	13	9	6	<5	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	19	16	15	14	8	
Copper	7440-50-8	5	mg/kg	20	22	17	16	21	
Lead	7439-92-1	5	mg/kg	148	49	63	14	12	
Nickel	7440-02-0	2	mg/kg	7	4	8	4	4	
Zinc	7440-66-6	5	mg/kg	209	82	124	33	30	
EG035T: Total Recoverable Mercury by FIMS									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S101	S102	S104	S105	S106
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-001	ES1835177-002	ES1835177-004	ES1835177-005	ES1835177-006
					Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued									
Mercury	7439-97-6	0.1	mg/kg		0.2	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				S101	S102	S104	S105	S106
Client sampling date / time				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit	ES1835177-001	ES1835177-002	ES1835177-004	ES1835177-005	ES1835177-006
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S101	S102	S104	S105	S106
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-001	ES1835177-002	ES1835177-004	ES1835177-005	ES1835177-006
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S101	S102	S104	S105	S106
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-001	ES1835177-002	ES1835177-004	ES1835177-005	ES1835177-006
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		106	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		105	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		114	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		90.9	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		87.2	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		55.4	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		87.8	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		92.2	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		93.4	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		85.1	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		97.9	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		77.3	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S107	S108	S109	S110	S111
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-007	ES1835177-008	ES1835177-009	ES1835177-010	ES1835177-011
					Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)									
pH Value	----	0.1	pH Unit		8.2	----	5.7	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		8.9	12.0	19.9	24.8	17.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	Yes	----
Asbestos (Trace)	1332-21-4	5	Fibres		----	----	----	No	----
Asbestos Type	1332-21-4	-	--		----	----	----	Ch	----
Sample weight (dry)	----	0.01	g		----	----	----	385	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	A. SMYLLIE	----
EA200N: Asbestos Quantification (non-NATA)									
∅ Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g		----	----	----	0.181	----
∅ Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)		----	----	----	0.047	----
∅ Asbestos Containing Material	1332-21-4	0.1	g		----	----	----	14.2	----
∅ Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)		----	----	----	0.55	----
∅ Weight Used for % Calculation	----	0.0001	kg		----	----	----	0.385	----
∅ Fibrous Asbestos >7mm	----	0.0004	g		----	----	----	<0.0004	----
ED006: Exchangeable Cations on Alkaline Soils									
Exchangeable Calcium	----	0.2	meq/100g		8.0	----	----	----	----
Exchangeable Magnesium	----	0.2	meq/100g		0.6	----	----	----	----
Exchangeable Potassium	----	0.2	meq/100g		0.7	----	----	----	----
Exchangeable Sodium	----	0.2	meq/100g		<0.2	----	----	----	----
Cation Exchange Capacity	----	0.2	meq/100g		9.4	----	----	----	----
Exchangeable Sodium Percent	----	0.2	%		<0.2	----	----	----	----
ED007: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		----	----	5.3	----	----
Exchangeable Magnesium	----	0.1	meq/100g		----	----	9.4	----	----
Exchangeable Potassium	----	0.1	meq/100g		----	----	0.4	----	----
Exchangeable Sodium	----	0.1	meq/100g		----	----	1.7	----	----
Cation Exchange Capacity	----	0.1	meq/100g		----	----	16.9	----	----
Exchangeable Sodium Percent	----	0.1	%		----	----	10.3	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		10	13	5	8	13



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				S107	S108	S109	S110	S111
Client sampling date / time				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit	ES1835177-007	ES1835177-008	ES1835177-009	ES1835177-010	ES1835177-011
				Result	Result	Result	Result	Result
EG005T: Total Metals by ICP-AES - Continued								
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	16	15	9	14	12
Copper	7440-50-8	5	mg/kg	32	34	38	16	20
Lead	7439-92-1	5	mg/kg	186	217	27	47	16
Nickel	7440-02-0	2	mg/kg	7	8	4	12	6
Zinc	7440-66-6	5	mg/kg	310	326	49	67	31
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	----	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg	----	----	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	----	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	<0.05	----
4,4'-DDD	72-54-8	0.05	mg/kg	----	----	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	<0.05	----
4,4'-DDT	50-29-3	0.2	mg/kg	----	----	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	<0.2	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				S107	S108	S109	S110	S111
Client sampling date / time				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit	ES1835177-007	ES1835177-008	ES1835177-009	ES1835177-010	ES1835177-011
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	----	----	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	----	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	----	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	----	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	<0.5	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	<0.5	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	<0.5	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	<0.5	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	<0.5	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	<0.5	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	<0.5	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID				
Client sampling date / time				S107	S108	S109	S110	S111
22-Nov-2018 00:00				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit	ES1835177-007	ES1835177-008	ES1835177-009	ES1835177-010	ES1835177-011
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	0.6	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	1.2	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S107	S108	S109	S110	S111
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-007	ES1835177-008	ES1835177-009	ES1835177-010	ES1835177-011
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		----	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	113	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	119	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	----	118	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	93.9	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	86.6	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	67.5	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	88.1	----
Anthracene-d10	1719-06-8	0.5	%		----	----	----	83.3	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	----	78.4	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	81.6	----
Toluene-D8	2037-26-5	0.2	%		----	----	----	87.1	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	----	79.9	----

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID		S113		S114		S115		S116		S118	
Client sampling date / time				22-Nov-2018 00:00		22-Nov-2018 00:00		22-Nov-2018 00:00		22-Nov-2018 00:00		22-Nov-2018 00:00		22-Nov-2018 00:00	
Compound		CAS Number	LOR	Unit	ES1835177-013	ES1835177-014	ES1835177-015	ES1835177-016	ES1835177-017						
					Result	Result	Result	Result	Result						
EA002: pH 1:5 (Soils)															
pH Value		----	0.1	pH Unit	----	----	----	----	6.2						
EA055: Moisture Content (Dried @ 105-110°C)															
Moisture Content		----	1.0	%	10.6	12.3	16.5	11.0	15.9						
EA200: AS 4964 - 2004 Identification of Asbestos in Soils															
Asbestos Detected		1332-21-4	0.1	g/kg	No	----	----	No	----						
Asbestos (Trace)		1332-21-4	5	Fibres	No	----	----	No	----						
Asbestos Type		1332-21-4	-	--	-	----	----	-	----						
Sample weight (dry)		----	0.01	g	482	----	----	360	----						
APPROVED IDENTIFIER:		----	-	--	A. SMYLIE	----	----	A. SMYLIE	----						
EA200N: Asbestos Quantification (non-NATA)															
Ø Asbestos (Fines and Fibrous <7mm)		1332-21-4	0.0004	g	<0.0004	----	----	<0.0004	----						
Ø Asbestos (Fines and Fibrous FA+AF)		----	0.001	% (w/w)	<0.001	----	----	<0.001	----						
Ø Asbestos Containing Material		1332-21-4	0.1	g	<0.1	----	----	<0.1	----						
Ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)		1332-21-4	0.01	% (w/w)	<0.01	----	----	<0.01	----						
Ø Weight Used for % Calculation		----	0.0001	kg	0.482	----	----	0.360	----						
Ø Fibrous Asbestos >7mm		----	0.0004	g	<0.0004	----	----	<0.0004	----						
ED007: Exchangeable Cations															
Exchangeable Calcium		----	0.1	meq/100g	----	----	----	----	3.6						
Exchangeable Magnesium		----	0.1	meq/100g	----	----	----	----	2.2						
Exchangeable Potassium		----	0.1	meq/100g	----	----	----	----	0.6						
Exchangeable Sodium		----	0.1	meq/100g	----	----	----	----	0.4						
Cation Exchange Capacity		----	0.1	meq/100g	----	----	----	----	6.8						
Exchangeable Sodium Percent		----	0.1	%	----	----	----	----	6.5						
EG005T: Total Metals by ICP-AES															
Arsenic		7440-38-2	5	mg/kg	5	6	6	<5	5						
Cadmium		7440-43-9	1	mg/kg	<1	<1	<1	<1	<1						
Chromium		7440-47-3	2	mg/kg	11	10	13	11	9						
Copper		7440-50-8	5	mg/kg	21	22	26	17	26						
Lead		7439-92-1	5	mg/kg	109	101	15	82	19						
Nickel		7440-02-0	2	mg/kg	7	6	9	5	4						
Zinc		7440-66-6	5	mg/kg	119	112	46	159	65						
EG035T: Total Recoverable Mercury by FIMS															



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S113	S114	S115	S116	S118
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-013	ES1835177-014	ES1835177-015	ES1835177-016	ES1835177-017
					Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued									
Mercury	7439-97-6	0.1	mg/kg		0.1	0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	----	<0.2	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				S113	S114	S115	S116	S118
Client sampling date / time				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit	ES1835177-013	ES1835177-014	ES1835177-015	ES1835177-016	ES1835177-017
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	<0.5	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	<0.5	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	<0.5	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	<0.5	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	<0.5	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	<0.5	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	<0.5	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				S113	S114	S115	S116	S118
Client sampling date / time				22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit	ES1835177-013	ES1835177-014	ES1835177-015	ES1835177-016	ES1835177-017
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	----	0.6	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	----	1.2	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	<0.5	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S113	S114	S115	S116	S118
Client sampling date / time					22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00	22-Nov-2018 00:00
Compound	CAS Number	LOR	Unit		ES1835177-013	ES1835177-014	ES1835177-015	ES1835177-016	ES1835177-017
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		111	----	----	98.2	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		108	117	----	94.6	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		82.7	100	----	125	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		89.3	----	----	90.8	----
2-Chlorophenol-D4	93951-73-6	0.5	%		90.1	----	----	88.0	----
2,4,6-Tribromophenol	118-79-6	0.5	%		54.5	----	----	59.8	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		89.8	----	----	89.4	----
Anthracene-d10	1719-06-8	0.5	%		93.4	----	----	96.9	----
4-Terphenyl-d14	1718-51-0	0.5	%		95.8	----	----	95.6	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		81.8	----	----	102	----
Toluene-D8	2037-26-5	0.2	%		86.6	----	----	87.0	----
4-Bromofluorobenzene	460-00-4	0.2	%		87.4	----	----	88.0	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	TB01	----	----	----	----
Client sampling date / time					22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1835177-018	-----	-----	-----	-----
					Result	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		86.4	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		82.0	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		87.4	----	----	----	----



Analytical Results

Sub-Matrix: **WASTEWATER - MIXED**
 (Matrix: **WATER**)

Client sample ID

				RB01	----	----	----	----
Client sampling date / time				22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES1835177-019	-----	-----	-----	-----
				Result	----	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	----	----	----
Toluene	108-88-3	2	µg/L	<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----
^ Total Xylenes	----	2	µg/L	<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----



Analytical Results

Sub-Matrix: **WASTEWATER - MIXED**
 (Matrix: **WATER**)

Client sample ID

				RB01	----	----	----	----
				Client sampling date / time	22-Nov-2018 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES1835177-019	-----	-----	-----	-----
				Result	----	----	----	----

EP080S: TPH(V)/BTEX Surrogates

1,2-Dichloroethane-D4	17060-07-0	2	%	94.6	----	----	----	----
Toluene-D8	2037-26-5	2	%	101	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	103	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	S101 - 22-Nov-2018 00:00	Mid brown sandy soil.
EA200: Description	S110 - 22-Nov-2018 00:00	Mid brown sandy soil with one piece of asbestos cement sheeting approximately 70x50x5mm and several pieces of asbestos cement sheeting approximately 5x3x2mm plus several degraded asbestos fibre board fragments and loose asbestos fibre bundles.
EA200: Description	S113 - 22-Nov-2018 00:00	Mid brown sandy soil.
EA200: Description	S116 - 22-Nov-2018 00:00	Mid brown sandy soil.



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Sub-Matrix: WASTEWATER - MIXED		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

QUALITY CONTROL REPORT

Work Order	: ES1835177	Page	: 1 of 14
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ALEX PIERRE	Contact	: Customer Services ES
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 21794/1294D	Date Samples Received	: 23-Nov-2018
Order number	: E-2018-576	Date Analysis Commenced	: 26-Nov-2018
C-O-C number	: 21794 - COC1	Issue Date	: 30-Nov-2018
Sampler	: ----		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 19		
No. of samples analysed	: 17		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Dian Dao		Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA002: pH 1:5 (Soils) (QC Lot: 2061508)									
ES1835217-004	Anonymous	EA002: pH Value	----	0.1	pH Unit	7.4	7.5	0.00	0% - 20%
ES1835217-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	6.5	6.5	0.00	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2060848)									
ES1835177-001	S101	EA055: Moisture Content	----	0.1	%	11.6	12.5	7.82	0% - 50%
ES1835177-011	S111	EA055: Moisture Content	----	0.1	%	17.2	17.6	2.05	0% - 50%
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 2062354)									
ES1835177-007	S107	ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	<0.2	0.00	No Limit
		ED006: Exchangeable Calcium	----	0.2	meq/100g	8.0	8.5	5.20	0% - 20%
		ED006: Exchangeable Magnesium	----	0.2	meq/100g	0.6	0.6	0.00	No Limit
		ED006: Exchangeable Potassium	----	0.2	meq/100g	0.7	0.8	0.00	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	<0.2	0.00	No Limit
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	9.4	9.8	4.84	0% - 20%
ED007: Exchangeable Cations (QC Lot: 2062345)									
ES1835177-002	S102	ED007: Exchangeable Sodium Percent	----	0.1	%	14.9	14.7	1.12	0% - 20%
		ED007: Exchangeable Calcium	----	0.1	meq/100g	2.6	2.5	0.00	0% - 20%
		ED007: Exchangeable Magnesium	----	0.1	meq/100g	7.3	7.2	0.00	0% - 20%
		ED007: Exchangeable Potassium	----	0.1	meq/100g	0.4	0.4	0.00	No Limit
		ED007: Exchangeable Sodium	----	0.1	meq/100g	1.8	1.8	0.00	0% - 50%
		ED007: Cation Exchange Capacity	----	0.1	meq/100g	12.5	12.3	1.29	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 2059092)									
ES1835035-003	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	11	14	29.9	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	11	11.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit

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Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 2059092) - continued									
ES1835035-003	Anonymous	EG005T: Copper	7440-50-8	5	mg/kg	86	104	19.4	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	39	# 87	77.1	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	345	# 577	50.2	0% - 20%
ES1835177-007	S107	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	16	15	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	8	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	8	17.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	32	33	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	186	178	4.08	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	310	311	0.460	0% - 20%
		EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2059093)							
ES1835035-003	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.4	0.8	59.7	No Limit
ES1835177-007	S107	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2056475)									
ES1835177-001	S101	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2056474)									
ES1835177-001	S101	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2056474)									
ES1835177-001	S101	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2056474) - continued									
ES1835177-001	S101	EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 2056473)									
ES1835177-001	S101	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2056473)									
ES1835177-001	S101	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2056473) - continued									
ES1835177-001	S101	EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2056204)									
ES1835176-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES1835177-016	S116	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2056472)									
ES1835177-001	S101	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2056204)									
ES1835176-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES1835177-016	S116	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2056472)									
ES1835177-001	S101	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 2056204)									
ES1835176-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES1835177-016	S116	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						

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Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 2056204) - continued									
ES1835177-016	S116	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 2058632)									
ES1835109-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0010	<0.0010	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.010	<0.010	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.052	<0.052	0.00	No Limit
EW1804869-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.008	0.008	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.004	0.003	46.3	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.100	0.099	0.00	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.011	0.011	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2059164)									
ES1834846-027	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
ES1835109-002	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2059824)									
ES1835000-021	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
ES1835153-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2059824)									
ES1835000-021	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
ES1835153-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 2059824)									
ES1835000-021	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit
ES1835153-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 2059824) - continued									
ES1835153-001	Anonymous	EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 2062354)								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	2.5 meq/100g	100	80	110
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	4.17 meq/100g	99.3	80	110
ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	1.28 meq/100g	84.4	80	110
ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	2.17 meq/100g	96.8	80	110
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED007: Exchangeable Cations (QCLot: 2062345)								
ED007: Exchangeable Calcium	----	0.1	meq/100g	<0.1	1 meq/100g	97.0	76	120
ED007: Exchangeable Magnesium	----	0.1	meq/100g	<0.1	1.67 meq/100g	96.4	75	115
ED007: Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.51 meq/100g	106	80	120
ED007: Exchangeable Sodium	----	0.1	meq/100g	<0.1	0.87 meq/100g	98.8	80	120
ED007: Cation Exchange Capacity	----	0.1	meq/100g	<0.1	----	----	----	----
ED007: Exchangeable Sodium Percent	----	0.1	%	<0.1	----	----	----	----
EG005T: Total Metals by ICP-AES (QCLot: 2059092)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	105	86	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	106	83	113
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	97.4	76	128
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	104	86	120
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	104	80	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	107	87	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	109	80	122
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2059093)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	80.0	70	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2056475)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	92.0	62	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 2056474)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	69	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	101	65	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	67	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	68	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	65	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	67	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	100	69	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	101	62	118



Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 2056474) - continued								
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	109	63	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	66	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	64	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	103	66	116
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	67	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	69	115
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	69	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	88.7	56	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	62	124
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	90.4	66	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	100	64	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	84.0	54	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2056474)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	95.7	59	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.4	62	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	95.8	54	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	67	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	70	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	72	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	87.0	68	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	78.3	68	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	69	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	76	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	80.4	64	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	70	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	79.9	69	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	107	66	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	100	68	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	101	62	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	106	68	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	65	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.0	41	123
EP075(SIM)A: Phenolic Compounds (QCLot: 2056473)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	107	71	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	111	72	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	108	71	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	116	67	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	68.6	54	114

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2056473) - continued								
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	107	68	126
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	93.7	66	120
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	102	70	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	102	70	116
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	92.2	54	114
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	93.8	60	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	17.3	10	57
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2056473)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	113	77	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	122	72	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	102	73	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	117	72	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	114	75	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.8	77	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	117	73	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	114	74	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	109	69	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	108	75	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	103	68	116
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	103	74	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	107	70	126
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	84.8	61	121
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	82.7	62	118
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	83.3	63	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2056204)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	89.4	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2056472)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	104	75	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	107	77	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	96.0	71	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2056204)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	99.0	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2056472)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	97.6	77	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	98.2	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	95.3	63	131
EP080: BTEXN (QCLot: 2056204)								



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP080: BTEXN (QCLot: 2056204) - continued								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.9	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.5	67	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	90.3	65	117
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	95.4	66	118
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	95.4	68	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	95.8	63	119
Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG020T: Total Metals by ICP-MS (QCLot: 2058632)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	89.1	82	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	94.4	84	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	102	86	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	92.9	83	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	90.8	85	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	93.6	84	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	91.4	79	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2059164)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	98.9	77	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2055898)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	2000 µg/L	84.1	76	116
EP071: C15 - C28 Fraction	----	100	µg/L	<100	3000 µg/L	88.0	83	109
EP071: C29 - C36 Fraction	----	50	µg/L	<50	2000 µg/L	87.9	75	113
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2059824)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	85.8	75	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2055898)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	2500 µg/L	107	76	114
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	3500 µg/L	98.8	81	111
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	1500 µg/L	86.4	77	119
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2059824)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	92.9	75	127
EP080: BTEXN (QCLot: 2059824)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	95.8	70	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	95.4	69	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	91.5	70	120



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			LCS	Low
EP080: BTEXN (QCLot: 2059824) - continued								
EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	10 µg/L	91.7	69	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	95.8	72	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	101	70	120

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2059092)							
ES1835035-003	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.7	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.8	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.6	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	83.9	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	105	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	99.2	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	130	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2059093)							
ES1835035-003	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	99.5	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2056475)							
ES1835177-001	S101	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	93.0	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2056474)							
ES1835177-001	S101	EP068: gamma-BHC	58-89-9	0.5 mg/kg	107	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	93.7	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	90.1	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	110	70	130
		EP068: Endrin	72-20-8	2 mg/kg	95.7	70	130
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	86.5	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2056474)							
ES1835177-001	S101	EP068: Diazinon	333-41-5	0.5 mg/kg	74.0	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	73.3	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	74.1	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	85.5	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	96.6	70	130



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2056473)							
ES1835177-001	S101	EP075(SIM): Phenol	108-95-2	10 mg/kg	120	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	117	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	99.2	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	103	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	52.0	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2056473)							
ES1835177-001	S101	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	106	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	126	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2056204)							
ES1835176-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	111	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2056472)							
ES1835177-001	S101	EP071: C10 - C14 Fraction	----	523 mg/kg	95.9	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	109	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	117	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2056204)							
ES1835176-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	130	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2056472)							
ES1835177-001	S101	EP071: >C10 - C16 Fraction	----	860 mg/kg	98.7	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	114	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	114	52	132
EP080: BTEXN (QCLot: 2056204)							
ES1835176-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	124	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	123	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	126	70	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	125	70	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	124	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	108	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2058632)							
ES1835109-002	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	112	70	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	105	70	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	103	70	130
		EG020A-T: Copper	7440-50-8	1 mg/L	105	70	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2058632) - continued							
ES1835109-002	Anonymous	EG020A-T: Lead	7439-92-1	1 mg/L	99.6	70	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	105	70	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	105	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2059164)							
ES1834846-061	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	90.0	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2059824)							
ES1835000-021	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	113	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2059824)							
ES1835000-021	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	124	70	130
EP080: BTEXN (QCLot: 2059824)							
ES1835000-021	Anonymous	EP080: Benzene	71-43-2	25 µg/L	113	70	130
		EP080: Toluene	108-88-3	25 µg/L	108	70	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	109	70	130
		EP080: meta- & para-Xylene	108-38-3	25 µg/L	109	70	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	25 µg/L	110	70	130
		EP080: Napthalene	91-20-3	25 µg/L	101	70	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES1835177	Page	: 1 of 10
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ALEX PIERRE	Telephone	: +61-2-8784 8555
Project	: 21794/1294D	Date Samples Received	: 23-Nov-2018
Site	: ----	Issue Date	: 30-Nov-2018
Sampler	: ----	No. of samples received	: 19
Order number	: E-2018-576	No. of samples analysed	: 17

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- Duplicate outliers exist - please see following pages for full details.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	ES1835035--003	Anonymous	Lead	7439-92-1	77.1 %	0% - 50%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	ES1835035--003	Anonymous	Zinc	7440-66-6	50.2 %	0% - 20%	RPD exceeds LOR based limits

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
TRH - Semivolatile Fraction	0	14	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
TRH - Semivolatile Fraction	0	14	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for **VOC in soils** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002: pH 1:5 (Soils)								
Soil Glass Jar - Unpreserved (EA002)		22-Nov-2018	28-Nov-2018	29-Nov-2018	✔	28-Nov-2018	28-Nov-2018	✔
S102,	S104,							
S105,	S106,							
S107,	S109,							
S118								
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)		22-Nov-2018	----	----	----	28-Nov-2018	06-Dec-2018	✔
S101,	S102,							
S104,	S105,							
S106,	S107,							
S108,	S109,							
S110,	S111,							
S113,	S114,							
S115,	S116,							
S118								



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)								
S101, S113,	S110, S116	22-Nov-2018	----	----	----	27-Nov-2018	21-May-2019	✓
EA200N: Asbestos Quantification (non-NATA)								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)								
S101, S113,	S110, S116	22-Nov-2018	----	----	----	27-Nov-2018	21-May-2019	✓
ED006: Exchangeable Cations on Alkaline Soils								
Soil Glass Jar - Unpreserved (ED006)								
S107		22-Nov-2018	28-Nov-2018	20-Dec-2018	✓	28-Nov-2018	20-Dec-2018	✓
ED007: Exchangeable Cations								
Soil Glass Jar - Unpreserved (ED007)								
S102, S105, S109,	S104, S106, S118	22-Nov-2018	28-Nov-2018	20-Dec-2018	✓	28-Nov-2018	20-Dec-2018	✓
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
S101, S104, S106, S108, S110, S113, S115, S118,	S102, S105, S107, S109, S111, S114, S116,	22-Nov-2018	27-Nov-2018	21-May-2019	✓	27-Nov-2018	21-May-2019	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
S101, S104, S106, S108, S110, S113, S115, S118,	S102, S105, S107, S109, S111, S114, S116,	22-Nov-2018	27-Nov-2018	20-Dec-2018	✓	28-Nov-2018	20-Dec-2018	✓
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
S101, S113,	S110, S116	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓



Matrix: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
S101, S113, S116	S110, S114,	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
S101, S113, S116	S110, S114,	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
S101, S113,	S110, S116	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
S101, S113,	S110, S116	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080)								
S101, S113, TB01	S110, S116,	22-Nov-2018	26-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Dec-2018	✓
Soil Glass Jar - Unpreserved (EP071)								
S101, S113,	S110, S116	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080)								
S101, S113, TB01	S110, S116,	22-Nov-2018	26-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Dec-2018	✓
Soil Glass Jar - Unpreserved (EP071)								
S101, S113,	S110, S116	22-Nov-2018	27-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Jan-2019	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
S101, S113, TB01	S110, S116,	22-Nov-2018	26-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Dec-2018	✓

Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unspecified (EG020A-T) RB01	22-Nov-2018	27-Nov-2018	21-May-2019	✓	27-Nov-2018	21-May-2019	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unspecified (EG035T) RB01	22-Nov-2018	----	----	----	28-Nov-2018	20-Dec-2018	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) RB01	22-Nov-2018	26-Nov-2018	29-Nov-2018	✓	27-Nov-2018	05-Jan-2019	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB01	22-Nov-2018	28-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Dec-2018	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) RB01	22-Nov-2018	26-Nov-2018	29-Nov-2018	✓	27-Nov-2018	05-Jan-2019	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB01	22-Nov-2018	28-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Dec-2018	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) RB01	22-Nov-2018	28-Nov-2018	06-Dec-2018	✓	28-Nov-2018	06-Dec-2018	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Exchangeable Cations	ED007	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Exchangeable Cations	ED007	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Exchangeable Cations	ED007	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	9.09	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	9	22.22	10.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	14	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	14	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (2013) Schedule B(3)
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM 2013 with Confirmation of Identification by AS 4964 - 2004 Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
Exchangeable Cations on Alkaline Soils	ED006	SOIL	In house: Referenced to Soil Survey Test Method C5. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with alcoholic ammonium chloride at pH 8.5. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil.
Exchangeable Cations	ED007	SOIL	In house: Referenced to Rayment & Lyons (2011) Method 15A1. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM (2013) Schedule B(3) (Method 301)
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)



Analytical Methods	Method	Matrix	Method Descriptions
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Exchangeable Cations Preparation Method (Alkaline Soils)	ED006PR	SOIL	In house: Referenced to Rayment and Lyons 2011 method 15C1.
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Higginson (1992) method 15A1. A 1M NH ₄ Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)

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Work Order : ES1835177
Client : SMEC TESTING SERVICES PTY LTD
Project : 21794/1294D



Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

CERTIFICATE OF ANALYSIS

Work Order : **ES1837882**
Client : **SMEC TESTING SERVICES PTY LTD**
Contact : ALEX PIERRE
Address : P O BOX 6989
 WETHERILL PARK NSW, AUSTRALIA 2164
Telephone : ----
Project : 21794/1294D
Order number : E-2018-576
C-O-C number : 217944 - COC1
Sampler : ----
Site : ----
Quote number : EN/222
No. of samples received : 1
No. of samples analysed : 1

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : Customer Services ES
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61-2-8784 8555
Date Samples Received : 13-Dec-2018 11:00
Date Analysis Commenced : 17-Dec-2018
Issue Date : 20-Dec-2018 17:53



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG005: Poor precision was obtained for Copper, Lead and Zinc on sample ES1837756-3. Results have been confirmed by re-extraction and re-analysis.
- EG005: Poor precision was obtained for Zinc on sample ES1837876-23. Result has been confirmed by re-extraction and re-analysis.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR.
Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S119	----	----	----	----
Client sampling date / time				22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES1837882-001	-----	-----	-----	-----
Result				----	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	7.6	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Sample weight (dry)	----	0.01	g	382	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----
EA200N: Asbestos Quantification (non-NATA)								
∅ Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	----	----	----	----
∅ Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	----	----	----	----
∅ Asbestos Containing Material	1332-21-4	0.1	g	<0.1	----	----	----	----
∅ Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	----	----	----	----
∅ Weight Used for % Calculation	----	0.0001	kg	0.382	----	----	----	----
∅ Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	16	----	----	----	----
Copper	7440-50-8	5	mg/kg	17	----	----	----	----
Lead	7439-92-1	5	mg/kg	78	----	----	----	----
Nickel	7440-02-0	2	mg/kg	7	----	----	----	----
Zinc	7440-66-6	5	mg/kg	153	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S119	----	----	----	----
Client sampling date / time					22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1837882-001	-----	-----	-----	-----
				Result	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S119	----	----	----	----
Client sampling date / time					22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1837882-001	-----	-----	-----	-----
Result						----	----	----	----
EP080: BTEXN - Continued									
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		89.8	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		95.1	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		64.1	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		85.6	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		93.3	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		87.0	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		118	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		108	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		98.0	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: SOIL		
Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	S119 - 22-Nov-2018 00:00	Mid brown sandy soil.



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

QUALITY CONTROL REPORT

Work Order	: ES1837882	Page	: 1 of 7
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ALEX PIERRE	Contact	: Customer Services ES
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 21794/1294D	Date Samples Received	: 13-Dec-2018
Order number	: E-2018-576	Date Analysis Commenced	: 17-Dec-2018
C-O-C number	: 217944 - COC1	Issue Date	: 20-Dec-2018
Sampler	: ----		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2101492)									
ES1837876-058	Anonymous	EA055: Moisture Content	----	0.1	%	10.9	11.4	4.62	0% - 20%
ES1837925-004	Anonymous	EA055: Moisture Content	----	0.1	%	15.2	15.1	0.00	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2104807)									
ES1837756-003	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	7	36.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	9	64.5	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	74	# 40	58.8	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	135	# 66	68.4	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	487	# 1110	78.0	0% - 20%
ES1837876-023	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	16	45.5	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	44	37	16.7	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	69	76	8.89	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	71	86	19.1	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	88	# 114	25.6	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2104808)									
ES1837756-003	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	1.8	2.1	17.6	0% - 20%
ES1837876-023	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2097598)									
ES1837756-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2097598) - continued									
ES1837756-001	Anonymous	EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES1837925-003	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2097368)							
ES1837595-055	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ET1803211-025	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2097597)									
ES1837756-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES1837925-003	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2097368)									
ES1837595-055	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ET1803211-025	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2097597)									
ES1837756-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES1837925-003	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 2097368)									
ES1837595-055	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ET1803211-025	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method Blank (MB) Report

Spike

Spike Recovery (%)

Recovery Limits (%)

[illegible]

Matrix Spike (MS) Report

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2104807)							
ES1837756-003	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	95.4	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	97.5	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	89.9	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	93.8	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	73.1	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	93.9	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	94.9	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2104808)							
ES1837756-003	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	106	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2097598)							
ES1837756-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	83.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.7	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2097368)							
ES1837595-055	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	115	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2097597)							

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 Client : SMEC TESTING SERVICES PTY LTD
 Project : 21794/1294D



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2097597) - continued							
ES1837756-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	91.0	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	106	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	116	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2097368)							
ES1837595-055	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	106	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2097597)							
ES1837756-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	109	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	117	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	104	52	132
EP080: BTEXN (QCLot: 2097368)							
ES1837595-055	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	111	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	118	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	116	70	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	113	70	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	116	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	106	70	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES1837882	Page	: 1 of 6
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ALEX PIERRE	Telephone	: +61-2-8784 8555
Project	: 21794/1294D	Date Samples Received	: 13-Dec-2018
Site	: ----	Issue Date	: 20-Dec-2018
Sampler	: ----	No. of samples received	: 1
Order number	: E-2018-576	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- Duplicate outliers exist - please see following pages for full details.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	ES1837756--003	Anonymous	Copper	7440-50-8	58.8 %	0% - 50%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	ES1837756--003	Anonymous	Lead	7439-92-1	68.4 %	0% - 20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	ES1837756--003	Anonymous	Zinc	7440-66-6	78.0 %	0% - 20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	ES1837876--023	Anonymous	Zinc	7440-66-6	25.6 %	0% - 20%	RPD exceeds LOR based limits

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)						
Soil Glass Jar - Unpreserved S119	----	----	----	18-Dec-2018	06-Dec-2018	12
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved S119	18-Dec-2018	06-Dec-2018	12	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
Soil Glass Jar - Unpreserved S119	17-Dec-2018	06-Dec-2018	11	19-Dec-2018	06-Dec-2018	13
Soil Glass Jar - Unpreserved S119	18-Dec-2018	06-Dec-2018	12	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Soil Glass Jar - Unpreserved S119	17-Dec-2018	06-Dec-2018	11	19-Dec-2018	06-Dec-2018	13
Soil Glass Jar - Unpreserved S119	18-Dec-2018	06-Dec-2018	12	----	----	----
EP080: BTEXN						
Soil Glass Jar - Unpreserved S119	17-Dec-2018	06-Dec-2018	11	19-Dec-2018	06-Dec-2018	13

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) S119	22-Nov-2018	----	----	----	18-Dec-2018	06-Dec-2018	✘
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) S119	22-Nov-2018	----	----	----	18-Dec-2018	21-May-2019	✔
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N) S119	22-Nov-2018	----	----	----	18-Dec-2018	21-May-2019	✔
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) S119	22-Nov-2018	19-Dec-2018	21-May-2019	✔	19-Dec-2018	21-May-2019	✔
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) S119	22-Nov-2018	19-Dec-2018	20-Dec-2018	✔	19-Dec-2018	20-Dec-2018	✔
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) S119	22-Nov-2018	18-Dec-2018	06-Dec-2018	✘	19-Dec-2018	27-Jan-2019	✔
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) S119	22-Nov-2018	17-Dec-2018	06-Dec-2018	✘	19-Dec-2018	06-Dec-2018	✘
Soil Glass Jar - Unpreserved (EP071) S119	22-Nov-2018	18-Dec-2018	06-Dec-2018	✘	19-Dec-2018	27-Jan-2019	✔
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) S119	22-Nov-2018	17-Dec-2018	06-Dec-2018	✘	19-Dec-2018	06-Dec-2018	✘
Soil Glass Jar - Unpreserved (EP071) S119	22-Nov-2018	18-Dec-2018	06-Dec-2018	✘	19-Dec-2018	27-Jan-2019	✔
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) S119	22-Nov-2018	17-Dec-2018	06-Dec-2018	✘	19-Dec-2018	06-Dec-2018	✘



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM 2013 with Confirmation of Identification by AS 4964 - 2004 Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

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Client : SMEC TESTING SERVICES PTY LTD
Project : 21794/1294D



CERTIFICATE OF ANALYSIS

Work Order : **EB1829013**
Client : **SMEC TESTING SERVICES PTY LTD**
Contact : ALEX PIERRE
Address : P O BOX 6989
 WETHERILL PARK NSW, AUSTRALIA 2164
Telephone : ----
Project : 21794/1294D
Order number : E-2018-576
C-O-C number : 217944-COC1
Sampler : ----
Site : ----
Quote number : EN/222
No. of samples received : 1
No. of samples analysed : 1

Page : 1 of 5
Laboratory : Environmental Division Brisbane
Contact : Customer Services EB
Address : 2 Byth Street Stafford QLD Australia 4053
Telephone : +61-7-3243 7222
Date Samples Received : 27-Nov-2018 10:05
Date Analysis Commenced : 28-Nov-2018
Issue Date : 04-Dec-2018 14:40



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Diana Mesa	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG005T (Total Metals): Sample EB1829014-012 shows poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.
- EP068: High LCS and matrix spike deemed acceptable as all associated analyte results are less than LOR.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S117	----	----	----	----
Client sampling date / time				22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB1829013-001	-----	-----	-----	-----
Result				----	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	11.6	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	6	----	----	----	----
Copper	7440-50-8	5	mg/kg	15	----	----	----	----
Lead	7439-92-1	5	mg/kg	73	----	----	----	----
Nickel	7440-02-0	2	mg/kg	4	----	----	----	----
Zinc	7440-66-6	5	mg/kg	135	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S117	----	----	----	----
Client sampling date / time					22-Nov-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB1829013-001	-----	-----	-----	-----
				Result	----	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5	0.05	mg/kg		<0.05	----	----	----	----
	0-2								
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		86.9	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		80.0	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	138
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	23	135

QUALITY CONTROL REPORT

Work Order	: EB1829013	Page	: 1 of 7
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: ALEX PIERRE	Contact	: Customer Services EB
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61-7-3243 7222
Project	: 21794/1294D	Date Samples Received	: 27-Nov-2018
Order number	: E-2018-576	Date Analysis Commenced	: 28-Nov-2018
C-O-C number	: 217944-COC1	Issue Date	: 04-Dec-2018
Sampler	: ----		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Diana Mesa	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2061173)									
EB1829013-001	S117	EA055: Moisture Content	----	0.1	%	11.6	12.1	4.34	0% - 50%
EB1829014-012	Anonymous	EA055: Moisture Content	----	0.1	%	6.3	6.6	4.86	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2061168)									
EB1829013-001	S117	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	9	30.7	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	4	5	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	16	7.45	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	73	82	11.2	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	135	154	13.0	0% - 20%
EB1829014-012	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	66	# 31	71.2	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	34	21	46.3	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	5	19.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	157	# 80	64.9	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	39	34	12.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	695	# 426	48.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2061169)									
EB1829013-001	S117	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EB1829014-012	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2061170)									
EB1829013-001	S117	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2061170) - continued									
EB1829013-001	S117	EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2061170)									
EB1829013-001	S117	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2061170) - continued									
EB1829013-001	S117	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005T: Total Metals by ICP-AES (QCLot: 2061168)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	106 mg/kg	97.8	84	123
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
EG005T: Chromium	7440-47-3	2	mg/kg	<2	16.5 mg/kg	104	83	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	50.6 mg/kg	99.1	86	122
EG005T: Lead	7439-92-1	5	mg/kg	<5	64.4 mg/kg	86.0	84	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	13.3 mg/kg	94.7	89	126
EG005T: Zinc	7440-66-6	5	mg/kg	<5	118 mg/kg	104	87	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2061169)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	96.2	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2061170)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	120	54	121
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	# 120	54	112
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	# 125	49	121
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	122	55	129
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	113	61	122
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	122	65	130
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	113	70	130
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	# 127	58	118
EP068: Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	# 120	56	119
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	121	51	125
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	# 124	57	118
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	105	67	129
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	62	121
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	113	60	137
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	61	122
EP068: Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	60	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	100	52	125
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	109	55	125
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	112	80	142
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	126	55	129
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	116	53	136



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 2061170) - continued								
EP068: Sum of DDD + DDE + DDT	72-54-8/72-5 5-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
EP068: Sum of Aldrin + Dieldrin	309-00-2/60- 57-1	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2061170)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	# 119	41	114
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	# 138	25	120
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	118	35	135
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	# 137	44	131
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	# 156	70	131
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	127	70	130
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	120	60	122
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	114	64	125
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	# 123	69	115
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	112	66	120
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	# 125	57	118
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	121	70	130
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	112	62	127
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	111	80	130
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	# 113	55	106
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	116	80	134
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	114	61	123
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	119	57	124
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	100.0	35	127

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number			Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2061168)							
EB1829014-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	84.7	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	80.4	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.5	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	100	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	82.8	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.5	70	130

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 Work Order : EB1829013
 Client : SMEC TESTING SERVICES PTY LTD
 Project : 21794/1294D



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2061168) - continued							
EB1829014-001	Anonymous	EG005T: Zinc	7440-66-6	50 mg/kg	114	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2061169)							
EB1829014-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	75.1	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2061170)							
EB1829014-007	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	122	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	123	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	117	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	112	70	130
		EP068: Endrin	72-20-8	0.5 mg/kg	118	70	130
		EP068: 4,4'-DDT	50-29-3	0.5 mg/kg	95.6	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2061170)							
EB1829014-007	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	# 154	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	127	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	126	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	119	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	121	70	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EB1829013	Page	: 1 of 5
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: ALEX PIERRE	Telephone	: +61-7-3243 7222
Project	: 21794/1294D	Date Samples Received	: 27-Nov-2018
Site	: ----	Issue Date	: 04-Dec-2018
Sampler	: ----	No. of samples received	: 1
Order number	: E-2018-576	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- Duplicate outliers exist - please see following pages for full details.
- Laboratory Control outliers exist - please see following pages for full details.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	EB1829014--012	Anonymous	Chromium	7440-47-3	71.2 %	0% - 20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1829014--012	Anonymous	Copper	7440-50-8	64.9 %	0% - 20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1829014--012	Anonymous	Zinc	7440-66-6	48.0 %	0% - 20%	RPD exceeds LOR based limits
Laboratory Control Spike (LCS) Recoveries							
EP068A: Organochlorine Pesticides (OC)	QC-2061170-002	----	Hexachlorobenzene (HCB)	118-74-1	120 %	54-112%	Recovery greater than upper control limit
EP068A: Organochlorine Pesticides (OC)	QC-2061170-002	----	beta-BHC	319-85-7	125 %	49-121%	Recovery greater than upper control limit
EP068A: Organochlorine Pesticides (OC)	QC-2061170-002	----	Heptachlor epoxide	1024-57-3	127 %	58-118%	Recovery greater than upper control limit
EP068A: Organochlorine Pesticides (OC)	QC-2061170-002	----	trans-Chlordane	5103-74-2	120 %	56-119%	Recovery greater than upper control limit
EP068A: Organochlorine Pesticides (OC)	QC-2061170-002	----	cis-Chlordane	5103-71-9	124 %	57-118%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Dichlorvos	62-73-7	119 %	41-114%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Demeton-S-methyl	919-86-8	138 %	25-120%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Dimethoate	60-51-5	137 %	44-131%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Diazinon	333-41-5	156 %	70-131%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Fenthion	55-38-9	123 %	69-115%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Parathion	56-38-2	125 %	57-118%	Recovery greater than upper control limit
EP068B: Organophosphorus Pesticides (OP)	QC-2061170-002	----	Fenamiphos	22224-92-6	113 %	55-106%	Recovery greater than upper control limit
Matrix Spike (MS) Recoveries							
EP068B: Organophosphorus Pesticides (OP)	EB1829014--007	Anonymous	Diazinon	333-41-5	154 %	70-130%	Recovery greater than upper data quality objective



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) S117	22-Nov-2018	----	----	----	28-Nov-2018	06-Dec-2018	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) S117	22-Nov-2018	28-Nov-2018	21-May-2019	✓	01-Dec-2018	21-May-2019	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) S117	22-Nov-2018	28-Nov-2018	20-Dec-2018	✓	03-Dec-2018	20-Dec-2018	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) S117	22-Nov-2018	28-Nov-2018	06-Dec-2018	✓	30-Nov-2018	07-Jan-2019	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) S117	22-Nov-2018	28-Nov-2018	06-Dec-2018	✓	30-Nov-2018	07-Jan-2019	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Pesticides by GCMS	EP068	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Pesticides by GCMS	EP068	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Pesticides by GCMS	EP068	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.