



Geotechnical Consultants Australia

Matzo Co Constructions Pty Ltd

Preliminary Site Investigation

Proposed Development at:

21-23 Ellis Street

Condell Park NSW 2200

Lots 16 & 17/3/DP12103

E22103-1

15th June 2022

Report Distribution

Preliminary Site Investigation

Address: 21-23 Ellis Street Condell Park NSW 2200

GCA Report No.: E22103-1

Date: 15th June 2022

Copies	Recipient/Custodian
1 Soft Copy (PDF) – Secured and Issued by Email	Matzo Co Constructions Pty Ltd Berhan Kassem berhan@matzoco.com.au
1 Original – Saved to GCA Archives	Secured and Saved by GCA on Register

Version	Prepared By	Reviewed By	Date Issue
Draft	Ehsan Zare Environmental Consultant 	Nick Caltabiano Project Manager 	14 th June 2022
FINAL	Ehsan Zare Environmental Consultant 	Nick Caltabiano Project Manager 	15 th June 2022

Report Revision	Details	Report No.	Date	Amended By
0	FINAL Report	E22103-1	15 th June 2022	-
Issued By:			 Joe Nader	

Geotechnical Consultants Australia Pty Ltd

Suite 5, 5-7 Villiers Street
Parramatta NSW 2151
(02) 9788 2829
www.geoconsultants.com.au
info@geoconsultants.com.au

© Geotechnical Consultants Australia Pty Ltd

This report may only be reproduced or reissued in electronic or hard copy format by its rightful custodians listed above, with written permission by GCA. This report is protected by copyright law.

TABLE OF CONTENTS

1. Introduction.....	4
2. Scope of Work	4
3. Site Details	5
4. Site Condition.....	5
5. Site History.....	6
5.1 Review of Historical Aerial Photographs.....	6
5.2 Section 10.7 (2) Planning Certificate.....	6
5.3 NSW EPA Contaminated Land Register.....	6
5.4 Protection of the Environment Operations Act (POEO) Public Register.....	6
5.5 SafeWork NSW Hazardous Goods	6
5.6 Product Spill and Loss History	6
5.7 Dial Before You Dig	6
6. Site Geology and Hydrology.....	7
7. Acid Sulphate Soils	7
8. Areas of Environmental Concern	8
9. Conceptual Site Model	8
10. Assessment Criteria.....	10
10.1 NEPM Health Investigation Level A (HIL-A) – Residential	10
10.2 NEPM Health Screening Level A (HSL-A) – Residential	11
10.3 CRC Care – Residential	12
10.4 NEPM Ecological Investigation Level (EIL) – Urban Residential and Public Open Space	13
10.5 NEPM Ecological Screening Level (ESL) – Urban Residential and Public Open Space	14
10.6 NEPM Management Limits – Residential, Parkland and Public Open Space.....	14
10.7 NEPM Guidelines for Asbestos.....	15
11. Investigation Results	15
12. Data Gaps.....	17
13. Conclusion.....	17
14. Recommendations.....	18
References	19
Limitations.....	20

APPENDICES

Appendix A – Figures and Site Photographic Log

Appendix B – Data Quality Objectives

Appendix C – Laboratory Results and Chain of Custody (NATA)

Appendix D – Property Report and Relevant Information

Executive Summary

Geotechnical Consultants Australia Pty Ltd (GCA) were appointed by Berhan Kassem of Matzo Co Constructions Pty Ltd (the client) to undertake a Preliminary Site Investigation (PSI) for the site located at nos. 21-23 Ellis Street Condell Park NSW 2200 (the site). The site is legally identified as Lots 16 & 17/3/DP12103 and has an area of approximately 2,554m². The site is currently zoned as R2 - Low Density Residential.

GCA understands that the proposed development for this site includes:

- 1) Demolition of the existing onsite structures;
- 2) Subdivision of the properties to three (3) lots;
- 3) Construction of a double-storey childcare centre within the western portion; and
- 4) Construction of two (2) double-storey residential dwellings within the eastern portion.

The objective of this PSI was to provide a preliminary assessment of potentially contaminating activities which may have impacted the site. The scope of work undertaken includes:

- A site inspection to identify potential sources of contamination;
- Soil sampling to identify any contaminants (if present);
- Historical investigations relating to the site (if any);
- Local Council records and planning certificates;
- NSW Environment Protection Authority (EPA) environmental contaminated lands register;
- Protection of the Environment Operations (POEO) Act public register;
- Dial-Before-You-Dig enquiry for an evaluation into local underground services and assets;
- Review of local geological and hydrogeological information, including an evaluation of the WaterNSW registered groundwater bore database; and
- Acid Sulphate Soils (ASS) data maps.

A site investigation was undertaken on the 6th June 2022 by qualified environmental consultants. During the site inspection, a soil investigation program was undertaken with a judgemental approach in accessing locations across the site to identify areas of contamination.

Six (6) soil samples were obtained from the fill layer (0-0.5m). The samples were submitted to a National Association of Testing Authorities, Australia (NATA) accredited laboratory for analysis of Chemicals of Potential Concern (CoPC) that may have impacted the site during historical or present activities.

Based on the site investigation and analytical results, GCA considers that the potential for significant contamination of the soil within the property on No. 21 Ellis Street to be moderate. Benzo(a)Pyrene concentration above NEPM 2013 Ecological Screening Level (ESL) for Urban, Residential and Public Open Spaces (0.7mg/kg) was found in one (1) soil sample (BH6, 1.0mg/kg) obtained from the No. 23 Ellis Street lot.

Thus, A Targeted Detailed Site Investigation is required to identify the extent of Benzo(a)Pyrene contamination within this area. This area is limited to the eastern portion of the property near the stables and metal shed (Appendix A, Figure 2).

The rest of the analytes were below the NEPM and CRC Care Health and NEPM Ecological Assessment Criteria for Residential (A) developments. Therefore, GCA finds that the site can be made suitable for the proposed development and land use, providing that the recommendations within Section 14 of this report are undertaken.

1. Introduction

Geotechnical Consultants Australia Pty Ltd (GCA) were appointed by Berhan Kassem of Matzo Co Constructions Pty Ltd (the client) to undertake a Preliminary Site Investigation (PSI) for the site located at nos. 21-23 Ellis Street Condell Park NSW 2200 (the site). The site is legally identified as Lots 16 & 17/3/DP12103 and has an area of approximately 2,554m². The site is currently zoned as R2 - Low Density Residential.

GCA understands that the proposed development for this site includes:

- 1) Demolition of the existing onsite structures;
- 2) Subdivision of the properties to three (3) lots;
- 3) Construction of a double-storey childcare centre within the western portion; and
- 4) Construction of two (2) double-storey residential dwellings within the eastern portion.

This PSI report was aimed to provide a preliminary assessment of potentially contaminating activities which may have impacted the site. The format of this report follows the NSW EPA "*Consultants Reporting on Contaminated Lands: Contaminated Land Guidelines*" (2020). In addition, GCA will provide recommendations if further investigation on site is required.

A site inspection was undertaken on the 6th June 2022. A soil sampling program, reporting and site photographs were conducted on this day with reference to the relevant regulatory criteria. Further information of the inspection is described in Section 4 of this report.

2. Scope of Work

The PSI has been prepared in general accordance with the following regulatory framework:

- NSW Environmental Protection Authority (EPA) "*Consultants Reporting on Contaminated Lands: Contaminated Land Guidelines*" (2020);
- State Environment Protection Policy (Resilience and Hazard) 2021; and
- National Environmental Protection (Assessment of Site Contamination) Measure – National Environmental Protection Council 2013.

The scope of works required to complete the PSI includes:

- A site inspection for evidence of sources of potential contamination onsite and neighbouring properties;
- Soil sampling to identify any contaminants (if present);
- Historical investigations relating to the site (if any);
- Local Council records and planning certificates;
- NSW EPA environmental contaminated lands register;
- Protection of the Environment Operations (POEO) Act public register;
- Dial-Before-You-Dig enquiry for an evaluation into local underground services and assets;
- Review of local geological and hydrogeological information, including an evaluation of the WaterNSW registered groundwater bore database;
- Acid Sulphate Soils (ASS) data maps;
- Establish whether data gaps may exist within the investigation;
- Development of a Conceptual Site Model (CSM) to identify the connections between potential sources of contamination, exposure pathways, and human/ecological receptors; and
- Recommendations for additional investigations (if any), based on the identified data gaps and findings of the PSI.

3. Site Details

Table 1. Site Details

Address	21-23 Ellis Street Condell Park NSW 2200
Deposited Plan	Lots 16 & 17/3/DP12103
Zoning	R2 – Low Density Residential
Locality Map	Figure 1
Site Plan	Figure 2
Area (approx.)	2,554m ²

Table 2. Surrounding Land Use

Direction from Site	Land Use
North	Residential property
East	Residential property
South	Residential property
West	Ellis Street

4. Site Condition

A qualified environmental consultant inspected the site on the 6th June 2022. Site photographs are provided in **Appendix A**. Observations noted during the inspection are summarised below:

- The site consisted of two rectangular lots;
- The lot at No. 21 Ellis Street contained:
 - A front garden area with lawn groundcover;
 - A single-storey rendered brick dwelling within the western (front) portion;
 - A concrete rendered brick garage, metal shed, concrete driveway and lawn area within the central portion;
 - Multiple clad stables with concrete groundcover within the eastern portion; and
 - A small garden bed within the eastern portion;
- The lot at No. 23 Ellis Street contained:
 - A front garden area with lawn groundcover;
 - A single-storey fibrocement clad dwelling within the western (front) portion;
 - Lawn area within the central portion; and
 - A metal shed, concrete slab and stables within the eastern portion;
- The soil underlying the site consisted of a medium clay within the fill layer (0-0.5m) and natural brown heavy clay within the subsoil (>0.5m);
- The site was surrounded by metal and timber fences;
- There was a distinct change in elevation across the site area sloping from east (rear) to west (front); and
- No visual or aromatic indications of contamination were encountered within the unsealed areas.

The surrounding sites within a 500m radius include low density residential and commercial properties, Deverall Park (Approx. 400m to the south-west), Bankstown Airport (Approx. 800m to the west) and Bankstown City Paceway (Approx. 400m to the south).

The closest water body to the site is an un-named creek located approximately 400m to the south-west. The local topography surrounding the site gently slopes towards this waterway.

5. Site History

5.1 Review of Historical Aerial Photographs

Table 3. Historical Site Details

Year	Site and Surrounding Area
1943	The site was within a vegetated landscape and was free of infrastructures. The surrounding area was comprised low-density residential properties and vegetated landscapes.
1965	The site had been developed and was consisted of two residential lots. Both lots were contained a residential dwelling within the western portion. The northern lot was contained clad stables within the eastern portion. The surrounding area was largely increased in low-density residential properties.
1991	A new shed and concrete driveway had been built within the central portion of the northern lot. The eastern portion of the southern lot had been developed and contained clad stables and a concrete slab area. The properties within the surrounding area were developed they were contained clad stables within the backyards.
2009	A new shed had been built within the eastern portion of the southern lot. The surrounding had largely remained consistent with the image taken in 1991.
2022	The site has largely remained consistent with the image taken in 2009. The surrounding area is largely improved in residential developments.

5.2 Section 10.7 (2) Planning Certificate

A Section 10.7 Planning Certificate describes how a property may be used and the restrictions on development. The Planning Certificate is issued under Section 149 of the Environmental Planning and Assessment Act 1979. At the time of reporting, GCA could not get access to the Planning Certificate.

5.3 NSW EPA Contaminated Land Register

A search within the NSW EPA contaminated land register was undertaken for the subject site. No results were found for this site.

5.4 Protection of the Environment Operations Act (POEO) Public Register

A search within the NSW EPA contaminated land register was undertaken for the subject site. No results were found for this site.

5.5 SafeWork NSW Hazardous Goods

A SafeWork search was not undertaken for the site.

5.6 Product Spill and Loss History

The site inspection carried out found no evidence to suggest major chemical contamination impact on the site.

5.7 Dial Before You Dig

A Dial-Before-You-Dig request suggests the potential for underground services and assets to be impacted or act as a portal to transport contamination offsite (**Appendix D**).

6. Site Geology and Hydrology

The Geological Map of Penrith (Geological Series Sheet 9030, Scale 1:100,000, Edition 1, 1991), published by the Department of Minerals and Energy indicates the site located within a geological region characterised by Bringelly Shale, which consists of shale with occasional calcareous claystone, laminate and infrequent coal, and Minchinbury Sandstone, which consists of fine to medium-grained quartz lithic sandstone.

A review of the regional maps by the NSW Department of Planning, Industry and Environment indicates the site is generally located within the Blacktown landscape group. Blacktown landscape group is normally recognised by undulating rises on the Wianamatta Group and Hawkesbury Sandstone. Local relief of Blacktown landscape is typically up to 30m, with slopes of usually less than 5%. Soils of Blacktown landscape group is generally consisting of shallow to moderately deep (< 100cm) Red and Brown Podzolic Soils on crests, upper slopes, and well-drained areas; deep (150-300 cm) Yellow Podzolic Soils and Soloths on lower slopes and in areas of poor drainage.

The site is located in the Bankstown Hydrogeological Landscape. It is an area of moderate to high rainfall (>800 mm) located on the west of the Sydney CBD. Water predominantly moves laterally through the shale layers (although vertical movement through fracturing does occur) and vertically through inter-bedded sandstone and sandstone fracturing.

The landscape has high levels of land salinisation; rivers and streams carry significant load from this landscape at periods of low flow. However, at periods of high flow, EC spikes and increased stream loading does occur. Groundwater systems are local with short to intermediate flow lengths and are loosely defined by topographic catchments. Water table depths are intermediate (2m to 6m).

A groundwater bore search was conducted on the 9th June 2022 and no bore was found within a 500m radius of the site. It was beyond the scope of works to study the groundwater flow direction. However, based on the regional topography, groundwater is expected to flow southwest towards an un-named local creek near Deverall Park.

7. Acid Sulphate Soils

To determine whether there is a potential for ASS to be present at the site, information was reviewed utilising the NSW Department of Planning, Industry and Environment eSPADE map viewer. The ASS risk maps show the chance of acid sulphate soil occurring.

This search indicated that there is "no known occurrence" of ASS underlying the soil at this site.

8. Areas of Environmental Concern

Based on the above information, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Potential Concern (CoPC) for the site were identified and summarised below.

Table 4. AEC and Associated CoPC

AEC	Potentially Contaminating/ Hazardous Activity	CoPC	Likelihood of Site Impact	Comments
Entire site	Importation of fill material from unknown origin and possible historical agricultural use	Metals, TRH, BTEX, PAH, OCPs, OPPs, Asbestos	Low	Based on site observations, the presence of imported fill material is possible. Historical operations may have given rise to contamination event/s.
Onsite structures	Hazardous materials	ACM, SMF, ODS, Lead (paint and/or dust), PCBs	Moderate	Based on the age of onsite structures, these CoPC are likely. A HMS is recommended in order to ascertain the presence or absence of these CoPC within onsite structures.
Eastern portion of the site	Use of horse stables disinfectants	BTEX	Moderate	Based on site observations, storage of washing and wrecked cars may have given rise to contamination event/s.

Abbreviations: Asbestos Containing Materials (ACM), Hazardous Materials Survey (HMS), Benzene Toluene Ethylbenzene and Xylene (BTEX), Ozone Depleting Substances (ODS), Polychlorinated Biphenyls (PCBs), Total Recoverable Hydrocarbons (TRH), Synthetic Mineral Fibres (SMF), Polycyclic Aromatic Hydrocarbons (PAH), Organochlorine Pesticides (OCPs), Organophosphorus Pesticides (OPP).

9. Conceptual Site Model

A Conceptual Site Model (CSM) has been developed and presented below and provides a representation of the potential risks associated with the connections between the following elements:

- Potential contamination sources and their associated CoPC;
- Potential human receptors that may be impacted by the site contamination are current and future site users including occupants to the dwellings/infrastructures onsite, site workers and the general public within the immediate vicinity of the site;
- Potential environmental receptors to the site including but not limited to: groundwater and surface water bodies, residual soils at and/or nearby the site.
- Potential exposure pathways; and
- Whether source-pathway-receptor connections are complete based on current and future site conditions.

Table 5. Conceptual Site Model

Potential Sources	Potential Receptor	Potential Exposure Pathway	Complete Connection	Risk	Justification/Control Measures
Contaminated soil from importation of uncontrolled fill across the site.	Site occupants, workers, general public	Dermal contact, inhalation/ ingestion of particulates	Complete (current)	Moderate	Exposure to potentially contaminated soils is likely due to unsealed surfaces.
			Limited (future)	Low	If present, impacted soils are likely to be disposed of offsite.
Contaminated soil from historical onsite operations	Natural soils	Migration of contamination from fill layer/ topsoil to underlying natural soils.	Limited (current)	Low	Migration through fill layer to natural soils is unlikely. Presence of cohesive soil (heavy clay and shale) below the site would likely inhibit the vertical migration.
Storage of old oil drums and wrecked cars within the southern portion of the site			Limited (future)	Low	If present, impacted soils are likely to be disposed of offsite.
ACM, lead-based paint and other trace metals in onsite structures.	Un-named creek 400m south-west of the site	Migration of impacted groundwater and surface water run-off.	Limited (current)	Moderate	The local topography surrounding the site falls toward an un-named creek 400m southwest of the site. It is likely surface waters from the site reach this waterway during heavy rainfall events and flooding.
			No (future)	Low	If present, contaminated soils and groundwater are likely to be remediated.
	Underlying aquifer	Leaching and migration of contaminants through groundwater infiltration.	Limited (current)	Low	Due to existing unsealed surfaces, leachability of CoPC is possible. However, the natural heavy clay may limit the leachability.
			Limited (future)	Low	If present, contaminated soil and/or groundwater is likely to be remediated.

10. Assessment Criteria

The following soil assessment criteria were adopted for the investigation.

10.1 NEPM Health Investigation Level A (HIL-A) – Residential

HILs are scientific, risk-based guidance levels to be used as in the primary stage of assessing soil contamination to evaluate the potential risks to human health from chronic exposure to contaminants. HILs are applicable to a broad range of metals and organic substances, and generally apply to depths up to 3m below the surface for residential use.

Tier 1 HILs are divided into sub-criteria. The sub-criteria appropriate to the site is HIL A – residential with garden/accessible soils.

Table 6. HIL-A

Assessment Criteria	NEPM 2013 Residential Soil HIL-A, mg/kg
Pesticides	
HCB	10
Heptachlor	6
Chlordane	50
Aldrin & Dieldrin	6
Endrin	10
DDD+DDE+DDT	240
Endosulfan	270
Methoxychlor	300
Mirex	10
Metals	
Arsenic, As	100
Cadmium, Cd	20
Chromium, Cr	100
Copper, Cu	6,000
Lead, Pb	300
Nickel, Ni	400
Zinc, Zn	7,400
Mercury, Hg	40
Polycyclic Aromatic Hydrocarbons	
Carcinogenic PAH (as BaP TEQ)	3
Total PAH (18)	300

10.2 NEPM Health Screening Level A (HSL-A) – Residential

HSLs have been developed for selected petroleum compounds and fractions and are used for the assessment of potential risks to human health from chronic inhalation and direct contact pathways of petroleum vapour emanating off petroleum contaminated soils (Vapour Risk). HSLs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to depths below surface to >4m.

Tier 1 HSLs are divided into sub-criteria. The sub-criteria appropriate to the site is HSL A – residential with garden/accessible soils.

Table 7. HSL-A

NEPM Assessment Criteria	NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, 0-<1m Depth, Clay, mg/kg	NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, >1-2m Depth, Clay, mg/kg
Monocyclic Aromatic Hydrocarbons		
Benzene	0.7	1
Toluene	480	NL
Ethylbenzene	NL	NL
Xylenes	110	310
Polycyclic Aromatic Hydrocarbons		
Naphthalene	5	NL
Total Recoverable Hydrocarbons		
TRH C ₆ -C ₁₀ - BTEX (F1)	50	90
TRH >C ₁₀ -C ₁₆ - N (F2)	280	NL

10.3 CRC Care – Residential

In accordance with the CRC for Contamination Assessment and Remediation of the Environment, Technical Report 10, *“Health screening levels for petroleum hydrocarbons in soil and groundwater”*, HSLs for direct contact are to be considered with soils and vapour intrusion.

Table 8. HSL-A

NEPM Assessment Criteria	CRC Care Residential Soil HSL-A for Direct Contact, mg/kg
Monocyclic Aromatic Hydrocarbons	
Benzene	100
Toluene	14,000
Ethylbenzene	4,500
Xylenes	12,000
Polycyclic Aromatic Hydrocarbons	
Naphthalene	1,400
Total Recoverable Hydrocarbons	
TRH C ₆ -C ₁₀	4,400
TRH >C ₁₀ -C ₁₆	3,300
TRH >C ₁₆ -C ₃₄ (F3)	4,500
TRH >C ₃₄ -C ₄₀ (F4)	6,300

10.4 NEPM Ecological Investigation Level (EIL) – Urban Residential and Public Open Space

Ecological investigation levels (EILs) have been developed to assess the risk for the presence of metals and organic substance in a terrestrial ecosystem. EILs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to the top 2m of soil.

EILs can be applied for arsenic (As), copper (Cu), chromium III (Cr(III)), dichlorodiphenyltrichloroethane (DDT), naphthalene, nickel (Ni), lead (Pb) and zinc (Zn). The NEPM Soil Quality Guidelines (SQG) for EILs are calculated using the Added Contamination Limit (ACL) to determine the amount of contamination that had to be added to the soil to cause toxicity, including ambient background concentration (ABC).

Table 9. Generic and Calculated EIL

NEPM Assessment Criteria	NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg
Metals	
Arsenic, As	100
Chromium, Cr	580*
Copper, Cu	230*
Lead, Pb	1100
Nickel, Ni	280*
Zinc, Zn	750*
Pesticides	
DDT	180
Polycyclic Aromatic Hydrocarbons	
Naphthalene	170

*Calculated based on estimated CEC of 20 cmol(+)/kg, pH of 7 and Clay content of 30%.

10.5 NEPM Ecological Screening Level (ESL) – Urban Residential and Public Open Space

ESLs have been developed for selected petroleum hydrocarbons (BTEX, benzo(a)pyrene, TRH F1 and F2) in soil, based on fresh contamination. These parameters are applicable to coarse and fine-grained soil and apply from the surface of the soil to 2m below ground level (bgl), which corresponds with the root and habitat zone for many species.

Table 10. ESL

NEPM Assessment Criteria	NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces, Fine-Grained Soil, mg/kg
Monocyclic Aromatic Hydrocarbons	
Benzene	65
Toluene	105
Ethylbenzene	125
Xylenes	45
Polycyclic Aromatic Hydrocarbons	
BaPyr (BaP)	0.7
Total Recoverable Hydrocarbons	
TRH C ₆ -C ₁₀	180
TRH >C ₁₀ -C ₁₆	120
TRH >C ₁₆ -C ₃₄ (F3)	1,300
TRH >C ₃₄ -C ₄₀ (F4)	5,600

10.6 NEPM Management Limits – Residential, Parkland and Public Open Space

Management Limits for petroleum have been developed for prevention of explosive vapour accumulation, prevention of the formation of observable Light Non-Aqueous Phase Liquids (LNAPL) and protection against effects on buried infrastructure. Residential, parkland and public open space limits have been adopted based on the proposed land use.

Table 11. Management Limits

NEPM Assessment Criteria	NEPM 2013 Management Limits for Residential, Parkland and Public Open Space, Fine-Grained Soil, mg/kg
Total Recoverable Hydrocarbons	
TRH C ₆ -C ₁₀	800
TRH >C ₁₀ -C ₁₆	1,000
TRH >C ₁₆ -C ₃₄ (F3)	3,500
TRH >C ₃₄ -C ₄₀ (F4)	10,000

10.7 NEPM Guidelines for Asbestos

The assessed soil must not contain Asbestos Containing Materials (ACM) in the excess of 0.01%w/w and surface soil within the site must be free of visible ACM, Asbestos Fines (AF) and Fibrous Asbestos (FA).

11. Investigation Results

The soil analytical results are summarised below. Soil analytical results are presented in the laboratory reports in **Appendix C**.

Results Indicator	
	Exceedance of guideline limit for one or more samples.
	No exceedance of guideline limit for all samples.

Table 12. Total Recoverable Hydrocarbons (TRH) and Benzene Toluene Ethylbenzene Xylene (BTEX) Analytical Results

Total Recoverable Hydrocarbons (TRH) and Benzene Toluene, Ethylbenzene and Xylene (BTEX)	NEPM 2013 HSL-A for Vapour Intrusion, 0-<1m Depth, Clay, mg/kg	NEPM 2013 HSL-A for Vapour Intrusion, 1-<2m Depth, Clay, mg/kg	CRC Care HSL-A for Direct Contact, mg/kg	NEPM 2013 ESL for Urban, Residential and Public Open Spaces, Fine-Grained Soil, mg/kg	NEPM 2013 Management Limits for Residential, Parkland and Public Open Space, Fine-Grained Soil, mg/kg
Benzene		Not Analysed			
Toluene		Not Analysed			
Ethylbenzene		Not Analysed			
Xylenes		Not Analysed			
TRH C ₆ -C ₁₀					
TRH C ₆ -C ₁₀ - BTEX (F1)		Not Analysed			
TRH >C ₁₀ -C ₁₆					
TRH >C ₁₀ -C ₁₆ - N (F2)		Not Analysed			
TRH >C ₁₆ -C ₃₄ (F3)					
TRH >C ₃₄ -C ₄₀ (F4)					

Table 13. Analytical Results for Polycyclic Aromatic Hydrocarbons (PAH)

Polycyclic Aromatic Hydrocarbons (PAH)	NEPM 2013 HSL-A for Vapour Intrusion, 0- <1m Depth, Clay, mg/kg	NEPM 2013 HSL-A for Vapour Intrusion, 1- <2m Depth, Clay, mg/kg	CRC Care HSL-A for Direct Contact, mg/kg	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces for Fine-Grained Soil, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
Naphthalene	▼	Not Analysed	▼			▼
Benzo[a]pyrene					▼	
Carcinogenic PAH (as BaP TEQ)				▲		
Total PAH (18)				▼		

Table 14. Analytical Results for Pesticides

Pesticides	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
HCB	▼	
Heptachlor	▼	
Chlordane	▼	
Aldrin & Dieldrin	▼	
Endrin	▼	
DDT		▼
DDD+DDE+DDT	▼	
Endosulfan	▼	
Methoxychlor	▼	
Mirex	▼	

Table 15. Analytical Results for Heavy Metals

Metals	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
Arsenic, As	▼	▼
Cadmium, Cd	▼	
Chromium, Cr	▼	▼
Copper, Cu	▼	▼
Lead, Pb	▼	▼
Nickel, Ni	▼	▼
Zinc, Zn	▼	▼
Mercury, Hg	▼	

Table 16. Analytical Results for Asbestos

HSL-A	All Samples
Asbestos	Not detected

12. Data Gaps

The following data gaps have been identified at the site:

- Presence and extent of CoPC within the onsite structures;
- Extent of Benzo(a)Pyrene contamination around BH6 located on the eastern portion of the No. 23 Ellis Street lot.

13. Conclusion

Based on the site investigation and analytical results, GCA considers that the potential for significant contamination of the soil within the property on No. 21 Ellis Street to be moderate. Benzo(a)Pyrene concentration above NEPM 2013 Ecological Screening Level (ESL) for Urban, Residential and Public Open Spaces (0.7mg/kg) were identified in one (1) soil sample (BH6, 1.0mg/kg) obtained from the No. 23 Ellis Street lot.

Thus, A Targeted Detailed Site Investigation is required to map the extent of Benzo(a)Pyrene contamination within this area. This area is limited to the eastern portion of the property near the stables and metal shed (Appendix A, Figure 2).

All other analytes were below the NEPM and CRC Care Health and NEPM Ecological Assessment Criteria for Residential (A) developments. Therefore, GCA finds that the site can be made suitable for the proposed development and land use, providing that the recommendations within Section 14 below are undertaken.

14. Recommendations

Based on the information collected and available during this investigation, the following recommendations have been made:

- A Targeted Detailed Site Investigation is required to identify the extent of Benzo(a)Pyrene contamination within the eastern portion of the property on No. 23 Ellis Street;
- Any soils requiring excavation, onsite reuse and/or removal must be classified in accordance with "Waste Classification Guidelines Part 1: Classifying Waste" NSW EPA (2014);
- All structures onsite should have a Hazardous Materials Survey (HMS) conducted by a qualified occupational hygienist and/or environmental consultant for the site prior to any demolition or renovation works in accordance with relevant Australian Standards, SafeWork NSW codes of practice and any other applicable requirements;
- An Asbestos Clearance Certificate is required to be completed once all existing buildings and structures have been demolished;
- The demolition of structures and excavation activity on site be undertaken in accordance with relevant Australian Standards, SafeWork NSW codes of practice and any other applicable requirements; and
- A site specific 'Unexpected Finds Protocol' is to be made available for reference for all occupants and/or site workers in the event unanticipated contamination is discovered, including asbestos.

References

- NSW Department of Mineral Resources, Penrith Area 1:100,000, Geological Survey of New South Wales. Department of Mineral Resources.
- National Environment Protection Measures (2013), Schedule B1 – *Guideline on Investigation Levels for Soil and Groundwater*.
- National Environment Protection Measures (2013), Schedule B2 – *Guideline on Site Characterisation*.
- NSW EPA- Contaminated land register, <https://apps.epa.nsw.gov.au/prclmapp/sitedetails.aspx>, accessed on 9th June 2022;
- NSW Environmental Protection Authority, *Waste Classification Guidelines Part 1: Classifying Waste*, 2014.
- NSW Environmental Protection Authority, *Consultants Reporting on Contaminated Lands: Contaminated Land Guidelines*, 2020.
- Protection of the Environment Operations Act (POEO) Public Register, <https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers>, accessed on 9th June 2022.
- SafeWork NSW, *Site Search for Schedule 11 Hazardous Chemical on Premises*.
- State Environment Protection Policy (Resilience and Hazard) 2021.
- Topography – map.com, <https://en-au.topographic-map.com/>, accessed on 9th June 2022.
- WaterNSW, <https://realtimedata.watarnsw.com.au/>, accessed on 9th June 2022.

Limitations

The findings of this report are based on the scope of work outlined in Section 2. GCA performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental consulting profession. No warranties, express or implied are made.

The results of this assessment are based upon the information documented and presented in this report. All conclusions and recommendations regarding the site are the professional opinions of GCA personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, GCA assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of GCA, or developments resulting from situations outside the scope of this project.

The results of this assessment are based on the site conditions identified at the time of the site inspection and validation sampling. GCA will not be liable to revise the report to account for any changes in site characteristics, regulatory requirements, assessment criteria or the availability of additional information, subsequent to the issue date of this report.

GCA is not engaged in environmental consulting and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes.

Geotechnical Consultants Australia Pty Ltd (GCA)

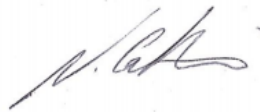
Prepared by:



Ehsan Zare

Environmental Consultant

Reviewed by:



Nick Caltabiano

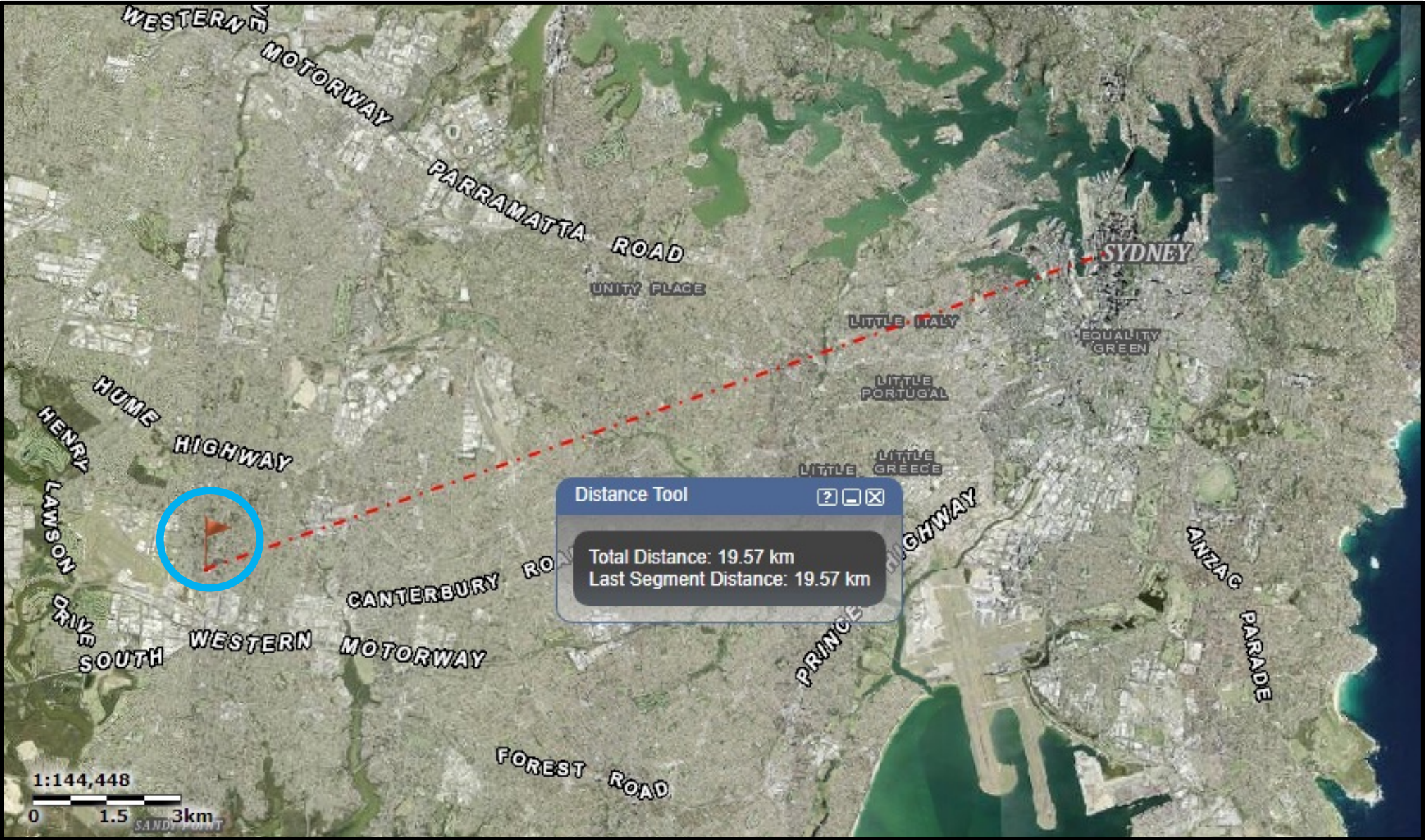
Project Manager

APPENDIX A

Figures and Site Photographic Log



Figure 1. The site is located approximately 19.5 km southwest of Sydney CBD.



Site location

Source: Six Maps 2022

Figure 1	Locality Map
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 2. The approximate area of the site is 2,554m². Six (6) soil samples were obtained from this site.

Sample	Depth (m)	Texture	Matrix
BH1	0.5	Medium Clay	Fill
BH2	0.5	Medium Clay	Fill
BH3	0.5	Medium Clay	Fill
BH4	0.5	Medium Clay	Fill
BH5	0.5	Medium Clay	Fill
BH6	0.5	Medium Clay	Fill

⊗ Soil Sample Location

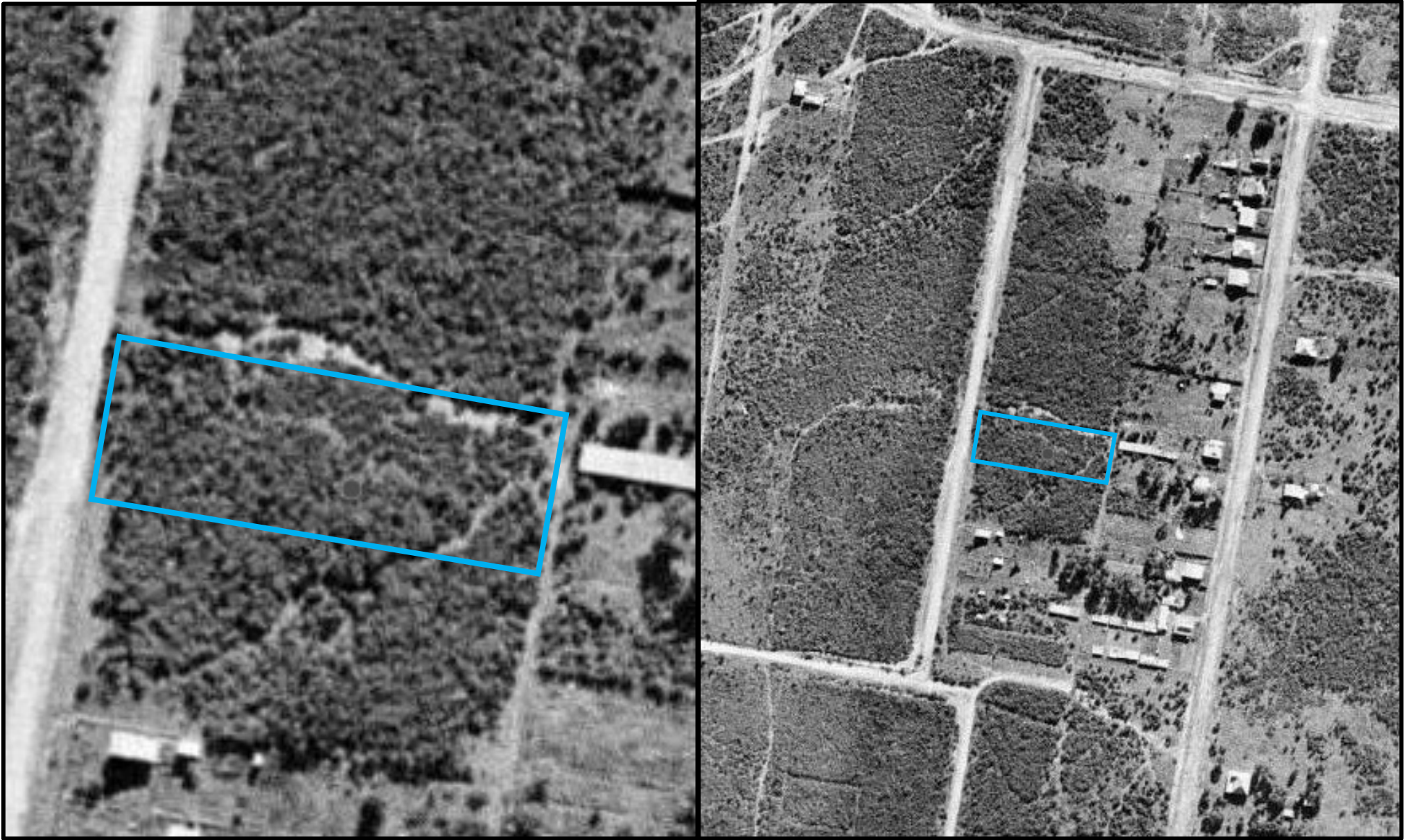


Source: Nearmap 2022

Figure 2	Site Area
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 3: Aerial image of the site and surrounding area 1943. The site was within a vegetated landscape and was free of infrastructures. The surrounding area was comprised low-density residential properties and vegetated landscapes.



Source: NSW Historical Imagery 2022

Figure 3	Aerial Image 1943
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 4: Aerial image of the site and surrounding area 1965. The site had been developed and was consisted of two residential lots. Both lots were contained a residential dwelling within the western portion. The northern lot was contained clad stables within the eastern portion. The surrounding area was largely increased in low-density residential properties.

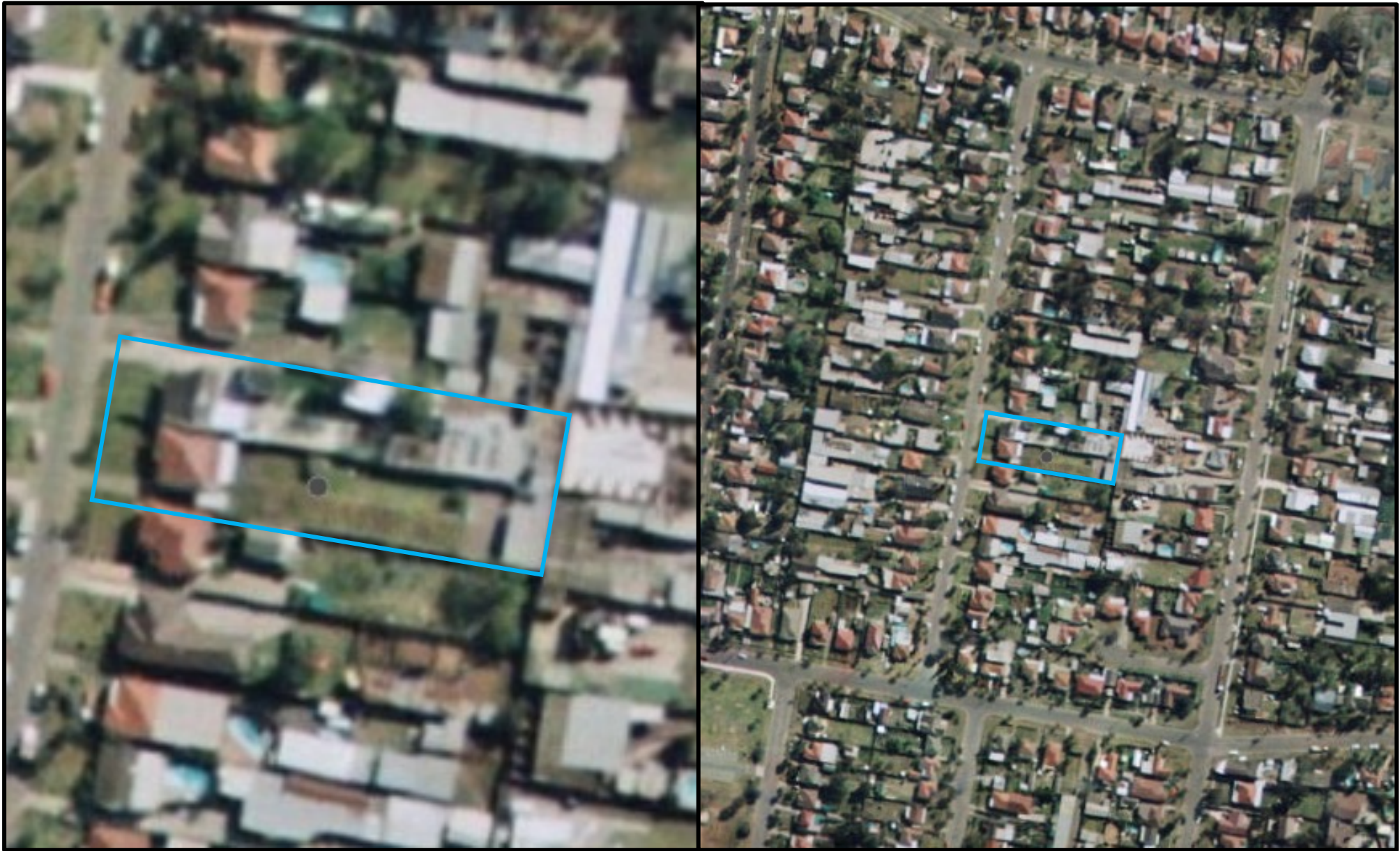


Source: NSW Historical
Imagery 2022

Figure 4	Aerial Image 1965
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 5: Aerial image of the site and surrounding area 1991. A new shed and concrete driveway had been built within the central portion of the northern lot. The eastern portion of the southern lot had been developed and contained clad stables and a concrete slab area. The properties within the surrounding area were developed they were contained clad stables within the backyards.



Source: NSW Historical Imagery 2022

Figure 5	Aerial Image 1991
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 6: Aerial image of the site and surrounding area in 2009. A new shed had been built within the eastern portion of the southern lot. The surrounding had largely remained consistent with the image taken in 1991.

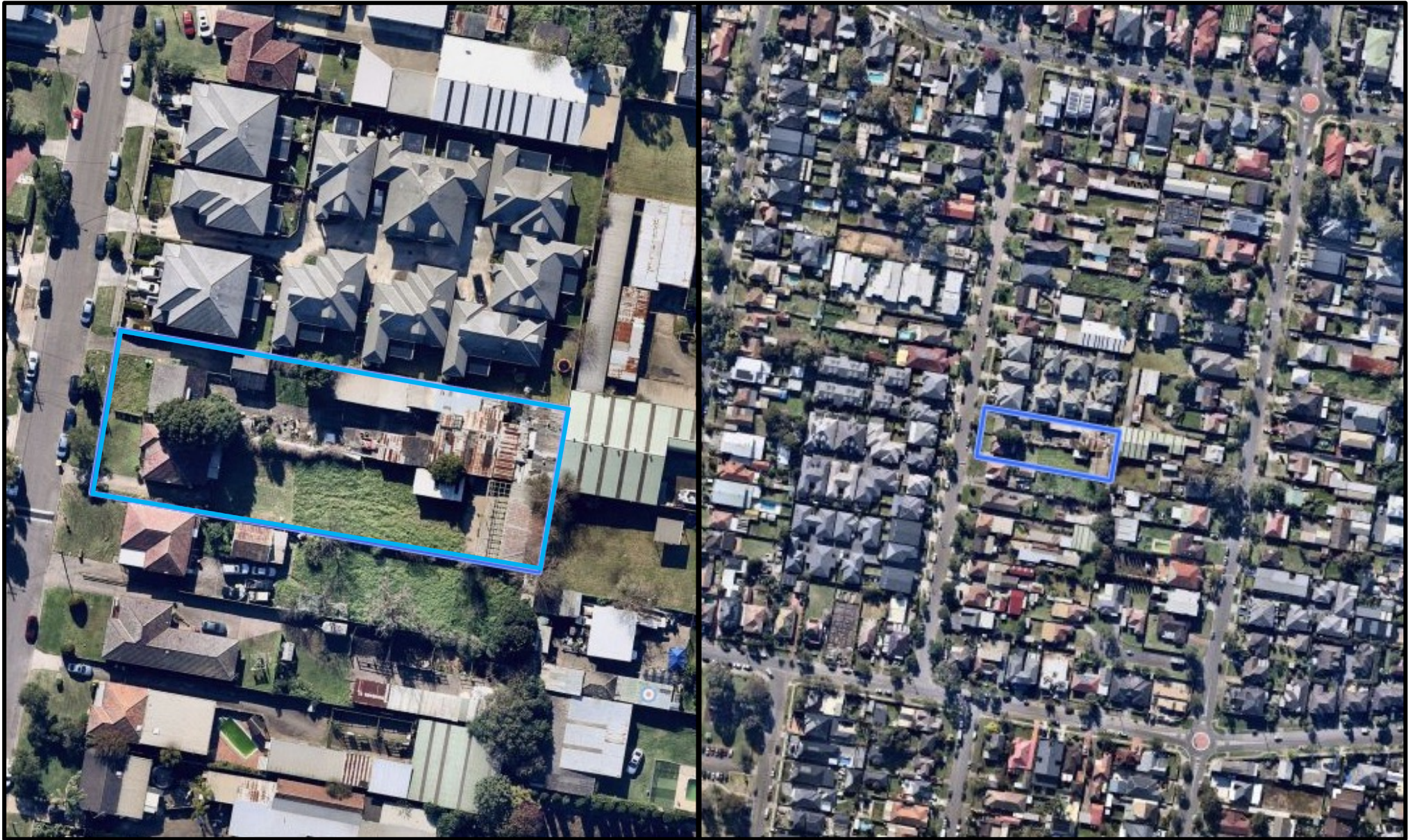


Source: Nearmap 2022

Figure 6	Aerial Image 2009
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 7: Aerial image of the site and surrounding area in 2022. The site has largely remained consistent with the image taken in 2009. The surrounding area is largely improved in residential developments.



Source: Nearmap 2022

Figure 7	Aerial Images: 2022
Project	21-23 Ellis Street, Condell Park NSW 2200



Figure 8. Front view of the rendered brick dwelling within the property on No. 21 Ellis Street.



Figure 9. Front view of the fibrocement clad dwelling within the property on No. 23 Ellis Street.



Figure 10. Driveway and rendered brick garage within the the property on No. 21 Ellis Street.



Figure 11. Driveway within the the property on No. 23 Ellis Street.



Figure 12. Driveway within the central portion of the property on No. 21 Ellis Street.



Figure 13. Lawn area within the central portion of the property on No. 23 Ellis Street.



Figure 14. Lawn area within the central portion of the property on No. 21 Ellis Street.



Figure 15. Metal and fibrocement clad awnings and stables within the eastern portion of the property on No. 21 Ellis Street.



Figure 16. Inside of the stables within the property on No. 21 Ellis Street.



Figure 17. Garden area within the eastern portion of the property on No. 21 Ellis Street.



Figure 18. Rear view of the dwelling and garage shed within the property on No. 21 Ellis Street.



Figure 19. Rear view of the dwelling and lawn area within the property on No. 23 Ellis Street.



Figure 20. The clad stables and concrete slab with the eastern portion of the property on No. 23 Ellis Street.



Figure 21. Metal shed within the eastern portion of the property at No. 23 Ellis Street.



Figure 22. BH3 sample profile consisted of brown, sandy clay and moist soil.



Figure 23. BH5 sample profile consisted of brown medium clay and moist soil.

APPENDIX B

Data Quality Objectives

Data Quality Objectives (DQOs)

The DQOs have been developed in accordance with the NEPM Appendix B of Schedule B2 and provide the type, quantity and quality of data to support decisions regarding the environmental conditions of this site.

Table 17. DQOs

Step 1: State the problem	GCA have identified the following risks to human and environmental receptors: - The proposed development includes the construction of a childcare facility and residential buildings. All stages of development may give rise to contamination events. Additionally, the intended future use of the site is considered a sensitive human health risk setting.
Step 2: Identify the decision/goal of the study	GCA considered the site history, the use of this site, and the NEPM Guidelines, when identifying the decisions required for the site to be considered suitable for its continued land use. The decisions required to meet these decisions are as follows: - Was the sampling, analysis and quality plan designed appropriate to achieve the aim of the ESA? - If present, is on-site contamination capable of migrating off-site? - Are there any unacceptable risks to the future on site or off-site receptors in the soil or groundwater? - Is the site suitable for its continued land use?
Step 3: Identify the information inputs	GCA has identified issues of potential environmental concern; - Appropriate identification of COPC; - Soil sampling and analysis programs across the site; - Appropriate quality assurance/quality control to enable an evaluation of the reliability of the analytical data; and - Screening sampler analytical results against appropriate assessment criteria for the intended land use.
Step 4: Define the boundaries of the study	The study boundaries are: - Lateral boundary: The legally defined area of the site; - Vertical boundary: The soil interface to the maximum depth reached during soil sampling; and - Temporal boundary: Constrained to a single visit to the site.
Step 5: Develop the analytical approach	Here, GCA integrate the information from steps 1 – 4 to support and justify our proposed analytical approach. Our aim is to confirm if the site is suitable for the proposed development. If the findings of the SAQP identify; - Any exceedance of the adopted assessment criteria for soil;

	- Professional opinion that further assessment is required; and/or - Adopted RPD for QC data not met. Further assessment may be required to confirm suitability of the site in the form of; Data Gap investigation, Remediation Action Plan and Site Validation.
Step 6: Specify performance or acceptance criteria	For judgemental soil sampling the data must meet the following qualifiers; - Acceptable recovery on all surrogate spikes used in laboratory analyses; - Acceptable analytical method to ensure detection limit appropriate for all analytes; If these conditions are not met, then chemical analysis will require re-testing for all samples with fresh aliquot.
Step 7: Optimise the design for obtaining data	Judgemental sampling pattern within the AEC will provide suitable coverage of the site to produce reliable data in alignment with the Data Quality Indicators (DQIs) to cover precision, accuracy, representativeness, completeness and comparability (PARCC). This sampling pattern will ensure that critical locations are assessed and analysed appropriately for COPC.
The DQOs align with CSM	Yes

APPENDIX C

Laboratory Results and Chain of Custody (NATA)

Table 18. Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and TRH Fraction analytical results. F1 is calculated by subtracting the sum of BTEX concentrations from the C₆-C₁₀ aliphatic hydrocarbon fraction. F2 is calculated by subtracting Naphthalene from the >C₁₀-C₁₆ aliphatic hydrocarbon fraction. NL = Not Limiting. Values are presented as mg/kg.

Assessment Criteria		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	TRH C ₆ -C ₁₀	TRH C ₆ -C ₁₀ - BTEX (F1)	TRH >C ₁₀ - C ₁₆	TRH >C ₁₀ - C ₁₆ - N (F2)	TRH >C ₁₆ - C ₃₄ (F3)	TRH >C ₃₄ - C ₄₀ (F4)
NEPM 2013 Soil HSL-A for Vapour Intrusion, 0-<1m depth, Clay, mg/kg		0.7	480	NL	110	5		50		280		
CRC Care Soil HSL-A for direct contact, mg/kg		100	14 000	4500	12 000	NL	4400		3300		4500	6300
NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces for fine-grained soil, mg/kg		65	105	125	45		180		120		1300	5600
NEPM 2013 Management Limits for Residential, Parkland and Public Open Space for fine-grained soil, mg/kg							800		1000		3500	10000
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg						170						
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH2	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH3	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH4	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH5	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH6	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	98	<120

Table 19. Polycyclic Aromatic Hydrocarbons (PAH) analytical results. The carcinogenic PAHs (Benzo(a)anthracene (BaAnt); Benzo(a)pyrene (BaPyr); Benzo(b+j)fluoranthene (BbjFl); Benzo(k)fluoranthene (BkFl); Benzo(g,h,i)perylene (BgHiPer); Chrysene (Chr); Dibenz(a,h)anthracene (DBahAnt); and Indeno(1,2,3-c,d)pyrene (Ipyr)) potency is calculated relative to Benzo(a)pyrene to produce a Toxicity Equivalent Factor (TEF). The Toxicity Equivalent Quotient (TEQ) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its Benzo(a)pyrene (B(a)P) TEF. Total PAH includes Naphthalene (N), 2-methylnaphthalene (2-MN), 1-methylnaphthalene (1-MN), Acenaphthylene (Acy), Acenaphthene (Ace), Fluorene (F), Phenanthrene (P), Anthracene (Ant), Fluoranthene (Fl), Pyrene (Pyr) and the carcinogenic PAH. Values are presented as mg/kg.

Assessment Criteria		Naphthalene	BaAnt	Chr	BbjFl	BkFl	BaPyr (B(a)P)	Ipyr	DBahAnt	BgHiPer	Carcinogenic PAHs (as BaP TEQ)	Total PAH (18)
NEPM 2013 Soil HSL-A for Vapour Intrusion, 0-<1m depth, Clay, mg/kg		5										
CRC Care Soil HSL-A for direct contact, mg/kg		1400										
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg		170										
NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces for fine-grained soil, mg/kg												
NEPM 2013 Residential Soil HIL-A, mg/kg			0.10 TEF	0.01 TEF	0.10 TEF	0.10 TEF	1.00 TEF	0.1 TEF	1.00 TEF	0.10 TEF	3	300
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	TEQ (mg/kg)	mg/kg
BH1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.8
BH2	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.8
BH3	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.8
BH4	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.8
BH5	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.8
BH6	0.5	<0.1	1.4	1.1	1.1	0.4	1.0	0.6	0.1	0.6	1.4	17

Table 20. Heavy Metal analytical results. Values are presented as mg/kg.

Assessment Criteria		Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg
NEPM 2013 Soil HIL-A, mg/kg		100	20	100	6000	300	400	7400	40
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg		100		580*	230*	1100	280*	750*	
Sample	Sample Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.5	6	<0.3	10	18	38	9.1	77	<0.05
BH2	0.5	8	<0.3	15	21	41	10	99	<0.05
BH3	0.5	12	<0.3	17	16	20	7.2	40	<0.05
BH4	0.5	9	<0.3	13	9.4	20	4.0	13	<0.05
BH5	0.5	10	0.4	19	12	91	7.9	43	<0.05
BH6	0.5	8	0.6	19	14	42	8.2	49	<0.05

*Calculated based on estimated CEC of 20 cmol(+)/kg, pH of 7 and Clay content of 30%.

Table 21. Pesticides analytical results. Values are presented as mg/kg.

Assessment Criteria		HCB	Heptachlor	Chlordane	Aldrin & Dieldrin	Endrin	DDT	DDT+DDE +DDT	Endosulfan	Methoxychlor	Mirex
NEPM 2013 Soil HIL-A, mg/kg		10	6	50	6	10		240	270	300	10
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg							180				
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
BH2	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
BH3	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
BH4	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
BH5	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
BH6	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1

SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 1 of 1

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015

Telephone No: (02) 85940400

Facsimile No: (02) 85940499

Email: au.samplerreceiptpt.sydney@sgs.com

Company Name: NEO Consulting Pty Ltd
Address: 186 Riverstone Parade,
Riverstone, NSW, 2765

Contact Name: Nick Calabiano
Luke Breva

Project Name/No: N 6152
Purchase Order No: QUOTE: 322722
Results Required By: Next day / 3 days / Standard
Telephone: (Mobile) 0416 690 375 (Home) 0455 405 502
Facsimile:
Email Results: [Read Comment section]

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	NEO1	NEO2	NEO3	NEO4	Asbestos ID
BH1	6/6/12	1		/		1		/			/
BH2	2	2		/		1		/			/
BH3	2	3		/		1		/			/
BH4	1	4		/		1		/			/
BH5	1	5		/		1		/			/
BH6	1	6		/		1		/			/

SGS EHS Sydney COC
SE232821



Relinquished By:	Date/Time:	Received By: <i>Emily</i>	Date/Time: 6/6/12 4:20
Relinquished By:	Date/Time:	Received By:	Date/Time:
Samples Intact: Yes/No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/No	Laboratory Quotation No:
Comments: Email Report and Invoices to all emails => ① nick@neoconsulting.com.au ② admin@neoconsulting.com.au ③ Sarah@neoconsulting.com.au ④ Luke@neoconsulting.com.au ⑤ Oskar@neoconsulting.com.au ⑥ Ehsan@neoconsulting.com.au			

CLIENT DETAILS

Contact Admin
Client NEO CONSULTING PTY LTD
Address PO BOX 279
RIVERSTONE NSW 2765

Telephone 0416 680 375
Facsimile (Not specified)
Email admin@neoconsulting.com.au

Project N6152
Order Number N6152
Samples 6

LABORATORY DETAILS

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

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

SGS Reference SE232821 R0
Date Received 6/6/2022
Date Reported 14/6/2022

COMMENTS

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

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

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Akheeque BENIAEEN
Chemist



Bennet LO
Senior Chemist



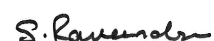
Dong LIANG
Metals/Inorganics Team Leader



Huong CRAWFORD
Production Manager



Ly Kim HA
Organic Section Head



Ravee SIVASUBRAMANIAM
Hygiene Team Leader

VOC's in Soil [AN433] Tested: 8/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			6/6/2022 SE232821.001	6/6/2022 SE232821.002	6/6/2022 SE232821.003	6/6/2022 SE232821.004	6/6/2022 SE232821.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH6
			SOIL
			6/6/2022 SE232821.006
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 8/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 6/6/2022 SE232821.001	- 6/6/2022 SE232821.002	- 6/6/2022 SE232821.003	- 6/6/2022 SE232821.004	- 6/6/2022 SE232821.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH6
			SOIL
			- 6/6/2022 SE232821.006
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 8/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL - 6/6/2022 SE232821.001	SOIL - 6/6/2022 SE232821.002	SOIL - 6/6/2022 SE232821.003	SOIL - 6/6/2022 SE232821.004	SOIL - 6/6/2022 SE232821.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH6
			SOIL - 6/6/2022 SE232821.006
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	75
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	98
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 8/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			6/6/2022 SE232821.001	6/6/2022 SE232821.002	6/6/2022 SE232821.003	6/6/2022 SE232821.004	6/6/2022 SE232821.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH6
			SOIL
			6/6/2022 SE232821.006
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	0.3
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	3.3
Anthracene	mg/kg	0.1	0.6
Fluoranthene	mg/kg	0.1	3.2
Pyrene	mg/kg	0.1	3.1
Benzo(a)anthracene	mg/kg	0.1	1.4
Chrysene	mg/kg	0.1	1.1
Benzo(b&j)fluoranthene	mg/kg	0.1	1.1
Benzo(k)fluoranthene	mg/kg	0.1	0.4
Benzo(a)pyrene	mg/kg	0.1	1.0
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.6
Dibenzo(ah)anthracene	mg/kg	0.1	0.1
Benzo(ghi)perylene	mg/kg	0.1	0.6
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	1.4
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	1.4
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	1.4
Total PAH (18)	mg/kg	0.8	17
Total PAH (NEPM/WHO 16)	mg/kg	0.8	17

OC Pesticides in Soil [AN420] Tested: 8/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL - 6/6/2022 SE232821.001	SOIL - 6/6/2022 SE232821.002	SOIL - 6/6/2022 SE232821.003	SOIL - 6/6/2022 SE232821.004	SOIL - 6/6/2022 SE232821.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 8/6/2022 (continued)

			BH6
			SOIL
			-
			6/6/2022
PARAMETER	UOM	LOR	SE232821.006
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 8/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			6/6/2022 SE232821.001	6/6/2022 SE232821.002	6/6/2022 SE232821.003	6/6/2022 SE232821.004	6/6/2022 SE232821.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH6
			SOIL
			6/6/2022 SE232821.006
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 11/6/2022

PARAMETER	UOM	LOR	BH1	BH2	BH3	BH4	BH5
			SOIL - 6/6/2022 SE232821.001	SOIL - 6/6/2022 SE232821.002	SOIL - 6/6/2022 SE232821.003	SOIL - 6/6/2022 SE232821.004	SOIL - 6/6/2022 SE232821.005
Arsenic, As	mg/kg	1	6	8	12	9	10
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	0.4
Chromium, Cr	mg/kg	0.5	10	15	17	13	19
Copper, Cu	mg/kg	0.5	18	21	16	9.4	12
Lead, Pb	mg/kg	1	38	41	20	20	91
Nickel, Ni	mg/kg	0.5	9.1	10	7.2	4.0	7.9
Zinc, Zn	mg/kg	2	77	99	40	13	43

PARAMETER	UOM	LOR	BH6
			SOIL - 6/6/2022 SE232821.006
Arsenic, As	mg/kg	1	8
Cadmium, Cd	mg/kg	0.3	0.6
Chromium, Cr	mg/kg	0.5	19
Copper, Cu	mg/kg	0.5	14
Lead, Pb	mg/kg	1	42
Nickel, Ni	mg/kg	0.5	8.2
Zinc, Zn	mg/kg	2	49



ANALYTICAL RESULTS

SE232821 R0

Mercury in Soil [AN312] Tested: 11/6/2022

			BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			6/6/2022	6/6/2022	6/6/2022	6/6/2022	6/6/2022
PARAMETER	UOM	LOR	SE232821.001	SE232821.002	SE232821.003	SE232821.004	SE232821.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH6
			SOIL
			-
			6/6/2022
PARAMETER	UOM	LOR	SE232821.006
Mercury	mg/kg	0.05	<0.05

Moisture Content [AN002] Tested: 10/6/2022

			BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			6/6/2022	6/6/2022	6/6/2022	6/6/2022	6/6/2022
PARAMETER	UOM	LOR	SE232821.001	SE232821.002	SE232821.003	SE232821.004	SE232821.005
% Moisture	%w/w	1	21.0	30.4	21.8	22.9	24.1

			BH6
			SOIL
			-
			6/6/2022
PARAMETER	UOM	LOR	SE232821.006
% Moisture	%w/w	1	18.6

Fibre Identification in soil [AN602] Tested: 10/6/2022

			BH1	BH2	BH3	BH4	BH5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			6/6/2022	6/6/2022	6/6/2022	6/6/2022	6/6/2022
PARAMETER	UOM	LOR	SE232821.001	SE232821.002	SE232821.003	SE232821.004	SE232821.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			BH6
			SOIL
			-
			6/6/2022
PARAMETER	UOM	LOR	SE232821.006
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

METHOD

METHODOLOGY SUMMARY

- AN002** The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
- AN040/AN320** A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
- AN040** A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
- AN312** Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
- AN403** Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
- AN403** Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
- AN403** The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
- AN420** (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
- AN420** SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
- AN433** VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
- AN602** Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
- AN602** Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
- AN602** AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
- AN602** The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-
- no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);
 - the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
 - these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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

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

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

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

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

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

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

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

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

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

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This report must not be reproduced, except in full.

CLIENT DETAILS

Contact Admin
Client NEO CONSULTING PTY LTD
Address PO BOX 279
RIVERSTONE NSW 2765

Telephone 0416 680 375
Facsimile (Not specified)
Email admin@neoconsulting.com.au

Project **N6152**
Order Number **N6152**
Samples 6

LABORATORY DETAILS

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

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

SGS Reference **SE232821 R0**
Date Received 06 Jun 2022
Date Reported 14 Jun 2022

COMMENTS

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

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

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE232821.001	BH1	Soil	82g Clay,Sand,Soil, Rocks	06 Jun 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE232821.002	BH2	Soil	89g Clay,Sand,Soil, Rocks	06 Jun 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE232821.003	BH3	Soil	77g Clay,Sand,Soil, Rocks	06 Jun 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE232821.004	BH4	Soil	92g Clay,Sand,Soil, Rocks	06 Jun 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE232821.005	BH5	Soil	82g Clay,Sand,Soil, Rocks	06 Jun 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE232821.006	BH6	Soil	77g Clay,Sand,Soil, Rocks	06 Jun 2022	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD

METHODOLOGY SUMMARY

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

FOOTNOTES

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

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

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

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

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

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

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

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

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

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This test report shall not be reproduced, except in full.



STATEMENT OF QA/QC PERFORMANCE

SE232821 R0

CLIENT DETAILS

Contact Admin
Client NEO CONSULTING PTY LTD
Address PO BOX 279
RIVERSTONE NSW 2765

Telephone 0416 680 375
Facsimile (Not specified)
Email admin@neoconsulting.com.au

Project **N6152**
Order Number **N6152**
Samples 6

LABORATORY DETAILS

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

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

SGS Reference **SE232821 R0**
Date Received 06 Jun 2022
Date Reported 14 Jun 2022

COMMENTS

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

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

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

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

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

Matrix Spike

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

2 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	6 Soil
Date documentation received	6/6/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	14°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

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

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

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250634	06 Jun 2022	06 Jun 2022	06 Jun 2023	10 Jun 2022	06 Jun 2023	14 Jun 2022
BH2	SE232821.002	LB250634	06 Jun 2022	06 Jun 2022	06 Jun 2023	10 Jun 2022	06 Jun 2023	14 Jun 2022
BH3	SE232821.003	LB250634	06 Jun 2022	06 Jun 2022	06 Jun 2023	10 Jun 2022	06 Jun 2023	14 Jun 2022
BH4	SE232821.004	LB250634	06 Jun 2022	06 Jun 2022	06 Jun 2023	10 Jun 2022	06 Jun 2023	14 Jun 2022
BH5	SE232821.005	LB250634	06 Jun 2022	06 Jun 2022	06 Jun 2023	10 Jun 2022	06 Jun 2023	14 Jun 2022
BH6	SE232821.006	LB250634	06 Jun 2022	06 Jun 2022	06 Jun 2023	10 Jun 2022	06 Jun 2023	14 Jun 2022

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250714	06 Jun 2022	06 Jun 2022	04 Jul 2022	11 Jun 2022	04 Jul 2022	14 Jun 2022
BH2	SE232821.002	LB250714	06 Jun 2022	06 Jun 2022	04 Jul 2022	11 Jun 2022	04 Jul 2022	14 Jun 2022
BH3	SE232821.003	LB250714	06 Jun 2022	06 Jun 2022	04 Jul 2022	11 Jun 2022	04 Jul 2022	14 Jun 2022
BH4	SE232821.004	LB250714	06 Jun 2022	06 Jun 2022	04 Jul 2022	11 Jun 2022	04 Jul 2022	14 Jun 2022
BH5	SE232821.005	LB250714	06 Jun 2022	06 Jun 2022	04 Jul 2022	11 Jun 2022	04 Jul 2022	14 Jun 2022
BH6	SE232821.006	LB250714	06 Jun 2022	06 Jun 2022	04 Jul 2022	11 Jun 2022	04 Jul 2022	14 Jun 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250633	06 Jun 2022	06 Jun 2022	20 Jun 2022	10 Jun 2022	15 Jun 2022	14 Jun 2022
BH2	SE232821.002	LB250633	06 Jun 2022	06 Jun 2022	20 Jun 2022	10 Jun 2022	15 Jun 2022	14 Jun 2022
BH3	SE232821.003	LB250633	06 Jun 2022	06 Jun 2022	20 Jun 2022	10 Jun 2022	15 Jun 2022	14 Jun 2022
BH4	SE232821.004	LB250633	06 Jun 2022	06 Jun 2022	20 Jun 2022	10 Jun 2022	15 Jun 2022	14 Jun 2022
BH5	SE232821.005	LB250633	06 Jun 2022	06 Jun 2022	20 Jun 2022	10 Jun 2022	15 Jun 2022	14 Jun 2022
BH6	SE232821.006	LB250633	06 Jun 2022	06 Jun 2022	20 Jun 2022	10 Jun 2022	15 Jun 2022	14 Jun 2022

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH2	SE232821.002	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH3	SE232821.003	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH4	SE232821.004	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH5	SE232821.005	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH6	SE232821.006	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH2	SE232821.002	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH3	SE232821.003	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH4	SE232821.004	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH5	SE232821.005	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH6	SE232821.006	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH2	SE232821.002	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH3	SE232821.003	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH4	SE232821.004	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH5	SE232821.005	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH6	SE232821.006	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250713	06 Jun 2022	06 Jun 2022	03 Dec 2022	11 Jun 2022	03 Dec 2022	14 Jun 2022
BH2	SE232821.002	LB250713	06 Jun 2022	06 Jun 2022	03 Dec 2022	11 Jun 2022	03 Dec 2022	14 Jun 2022
BH3	SE232821.003	LB250713	06 Jun 2022	06 Jun 2022	03 Dec 2022	11 Jun 2022	03 Dec 2022	14 Jun 2022
BH4	SE232821.004	LB250713	06 Jun 2022	06 Jun 2022	03 Dec 2022	11 Jun 2022	03 Dec 2022	14 Jun 2022
BH5	SE232821.005	LB250713	06 Jun 2022	06 Jun 2022	03 Dec 2022	11 Jun 2022	03 Dec 2022	14 Jun 2022
BH6	SE232821.006	LB250713	06 Jun 2022	06 Jun 2022	03 Dec 2022	11 Jun 2022	03 Dec 2022	14 Jun 2022

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref
-------------	------------	--------

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH2	SE232821.002	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH3	SE232821.003	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH4	SE232821.004	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH5	SE232821.005	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022
BH6	SE232821.006	LB250441	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	18 Jul 2022	14 Jun 2022

VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH2	SE232821.002	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH3	SE232821.003	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH4	SE232821.004	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH5	SE232821.005	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH6	SE232821.006	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE232821.001	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH2	SE232821.002	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH3	SE232821.003	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH4	SE232821.004	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH5	SE232821.005	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022
BH6	SE232821.006	LB250461	06 Jun 2022	06 Jun 2022	20 Jun 2022	08 Jun 2022	20 Jun 2022	14 Jun 2022

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH1	SE232821.001	%	60 - 130%	103
	BH2	SE232821.002	%	60 - 130%	107
	BH3	SE232821.003	%	60 - 130%	103
	BH4	SE232821.004	%	60 - 130%	101
	BH5	SE232821.005	%	60 - 130%	107
	BH6	SE232821.006	%	60 - 130%	102

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1	SE232821.001	%	60 - 130%	78
	BH2	SE232821.002	%	60 - 130%	80
	BH3	SE232821.003	%	60 - 130%	80
	BH4	SE232821.004	%	60 - 130%	76
	BH5	SE232821.005	%	60 - 130%	82
	BH6	SE232821.006	%	60 - 130%	82
d14-p-terphenyl (Surrogate)	BH1	SE232821.001	%	60 - 130%	94
	BH2	SE232821.002	%	60 - 130%	94
	BH3	SE232821.003	%	60 - 130%	88
	BH4	SE232821.004	%	60 - 130%	94
	BH5	SE232821.005	%	60 - 130%	90
	BH6	SE232821.006	%	60 - 130%	90

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1	SE232821.001	%	70 - 130%	78
	BH2	SE232821.002	%	70 - 130%	80
	BH3	SE232821.003	%	70 - 130%	80
	BH4	SE232821.004	%	70 - 130%	76
	BH5	SE232821.005	%	70 - 130%	82
	BH6	SE232821.006	%	70 - 130%	82
d14-p-terphenyl (Surrogate)	BH1	SE232821.001	%	70 - 130%	94
	BH2	SE232821.002	%	70 - 130%	94
	BH3	SE232821.003	%	70 - 130%	88
	BH4	SE232821.004	%	70 - 130%	94
	BH5	SE232821.005	%	70 - 130%	90
	BH6	SE232821.006	%	70 - 130%	90
d5-nitrobenzene (Surrogate)	BH1	SE232821.001	%	70 - 130%	86
	BH2	SE232821.002	%	70 - 130%	84
	BH3	SE232821.003	%	70 - 130%	82
	BH4	SE232821.004	%	70 - 130%	82
	BH5	SE232821.005	%	70 - 130%	82
	BH6	SE232821.006	%	70 - 130%	86

VOC's in Soil

Method: ME-(AU)-[ENV]AN430

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1	SE232821.001	%	60 - 130%	79
	BH2	SE232821.002	%	60 - 130%	81
	BH3	SE232821.003	%	60 - 130%	126
	BH4	SE232821.004	%	60 - 130%	81
	BH5	SE232821.005	%	60 - 130%	87
	BH6	SE232821.006	%	60 - 130%	81
d4-1,2-dichloroethane (Surrogate)	BH1	SE232821.001	%	60 - 130%	79
	BH2	SE232821.002	%	60 - 130%	86
	BH3	SE232821.003	%	60 - 130%	110
	BH4	SE232821.004	%	60 - 130%	80
	BH5	SE232821.005	%	60 - 130%	88
	BH6	SE232821.006	%	60 - 130%	81
d8-toluene (Surrogate)	BH1	SE232821.001	%	60 - 130%	82
	BH2	SE232821.002	%	60 - 130%	89
	BH3	SE232821.003	%	60 - 130%	115
	BH4	SE232821.004	%	60 - 130%	83
	BH5	SE232821.005	%	60 - 130%	92

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BH6	SE232821.006	%	60 - 130%	83

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1	SE232821.001	%	60 - 130%	79
	BH2	SE232821.002	%	60 - 130%	81
	BH3	SE232821.003	%	60 - 130%	126
	BH4	SE232821.004	%	60 - 130%	81
	BH5	SE232821.005	%	60 - 130%	87
	BH6	SE232821.006	%	60 - 130%	81
d4-1,2-dichloroethane (Surrogate)	BH1	SE232821.001	%	60 - 130%	79
	BH2	SE232821.002	%	60 - 130%	86
	BH3	SE232821.003	%	60 - 130%	110
	BH4	SE232821.004	%	60 - 130%	80
	BH5	SE232821.005	%	60 - 130%	88
	BH6	SE232821.006	%	60 - 130%	81
d8-toluene (Surrogate)	BH1	SE232821.001	%	60 - 130%	82
	BH2	SE232821.002	%	60 - 130%	89
	BH3	SE232821.003	%	60 - 130%	115
	BH4	SE232821.004	%	60 - 130%	83
	BH5	SE232821.005	%	60 - 130%	92
	BH6	SE232821.006	%	60 - 130%	83

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

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

Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Number	Parameter	Units	LOR	Result
LB250714.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB250441.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
Surrogates	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	93

OP Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB250441.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Surrogates	2-fluorobiphenyl (Surrogate)	%	-	94
	d14-p-terphenyl (Surrogate)	%	-	88

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB250441.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB250441.001	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	82
	2-fluorobiphenyl (Surrogate)	%	-	94
	d14-p-terphenyl (Surrogate)	%	-	88

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

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

Sample Number	Parameter	Units	LOR	Result
LB250713.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB250441.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB250461.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	85
		d8-toluene (Surrogate)	%	-	87
		Bromofluorobenzene (Surrogate)	%	-	81
	Totals	Total BTEX	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB250461.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-

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

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

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

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

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

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232821.006	LB250714.022	Mercury	mg/kg	0.05	<0.05	<0.05	165	0
SE232984.005	LB250714.014	Mercury	mg/kg	0.05	<0.05	<0.05	159	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232821.006	LB250633.022	% Moisture	%w/w	1	18.6	22.6	35	20
SE232825.002	LB250633.025	% Moisture	%w/w	1	11.9	10.4	39	13
SE232862.007	LB250633.011	% Moisture	%w/w	1	9.3	11.8	39	24

OC Pesticides in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232825.002	LB250441.025	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
SE232862.006	LB250441.027	Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0

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

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

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

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

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

OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232862.006	LB250441.027	p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	0

OP Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232825.002	LB250441.025	Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	7

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232825.002	LB250441.025	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	0.1	0.2	93	25
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	0.2	0.3	67	30
		Pyrene	mg/kg	0.1	0.2	0.4	62	60
		Benzo(a)anthracene	mg/kg	0.1	0.1	0.2	97	53
		Chrysene	mg/kg	0.1	0.1	0.2	95	71
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	0.2	87	51
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	173	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	0.2	101	62
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.1	173	10
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.1	130	26
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	0.3	151	23
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	0.4	111	16
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	0.3	101	41
		Total PAH (18)	mg/kg	0.8	1.0	2.0	83	68
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	5
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	7
SE232862.007	LB250441.014	Naphthalene	mg/kg	0.1	1.1	1.4	38	20
		2-methylnaphthalene	mg/kg	0.1	0.4	0.5	52	22
		1-methylnaphthalene	mg/kg	0.1	0.2	0.3	69	12
		Acenaphthylene	mg/kg	0.1	3.9	4.0	33	3
		Acenaphthene	mg/kg	0.1	0.2	0.2	95	6
		Fluorene	mg/kg	0.1	0.9	0.9	41	6

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

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232862.007	LB250441.014	Phenanthrene	mg/kg	0.1	18	18	31	2
		Anthracene	mg/kg	0.1	5.1	5.0	32	3
		Fluoranthene	mg/kg	0.1	48	47	30	3
		Pyrene	mg/kg	0.1	52	50	30	3
		Benzo(a)anthracene	mg/kg	0.1	30	28	30	8
		Chrysene	mg/kg	0.1	24	23	30	2
		Benzo(b&j)fluoranthene	mg/kg	0.1	21	20	30	4
		Benzo(k)fluoranthene	mg/kg	0.1	6.8	6.8	31	0
		Benzo(a)pyrene	mg/kg	0.1	18	17	31	3
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	11	10	31	4
		Dibenzo(ah)anthracene	mg/kg	0.1	2.3	2.1	34	8
		Benzo(ghi)perylene	mg/kg	0.1	9.6	9.2	31	5
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	27	26	11	1
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	27	26	11	1
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	27	26	11	1
		Total PAH (18)	mg/kg	0.8	240	240	30	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

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

Method: ME-(AU)-[ENV]JAN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232821.006	LB250713.022	Arsenic, As	mg/kg	1	8	9	42	8
		Cadmium, Cd	mg/kg	0.3	0.6	0.4	95	44
		Chromium, Cr	mg/kg	0.5	19	22	32	15
		Copper, Cu	mg/kg	0.5	14	12	34	16
		Nickel, Ni	mg/kg	0.5	8.2	5.9	37	32
		Lead, Pb	mg/kg	1	42	31	33	32
		Zinc, Zn	mg/kg	2	49	38	35	25
SE232984.005	LB250713.014	Arsenic, As	mg/kg	1	4	5	50	19
		Cadmium, Cd	mg/kg	0.3	0.3	0.4	119	9
		Chromium, Cr	mg/kg	0.5	5.7	5.9	39	3
		Copper, Cu	mg/kg	0.5	18	19	33	7
		Nickel, Ni	mg/kg	0.5	13	12	34	7
		Lead, Pb	mg/kg	1	20	24	35	15
		Zinc, Zn	mg/kg	2	67	62	33	8

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]JAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232825.002	LB250441.025	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
	TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE232862.006	LB250441.027	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	780	800	36	3
		TRH C29-C36	mg/kg	45	390	370	42	4
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	1200	1200	39	1
		TRH >C10-C40 Total (F bands)	mg/kg	210	1100	1100	49	1
	TRH F Bands	TRH >C10-C16	mg/kg	25	27	26	124	4
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	27	26	125	3
		TRH >C16-C34 (F3)	mg/kg	90	1100	1100	38	1
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]JAN433

Original	Duplicate	Parameter	Units	LOR
----------	-----------	-----------	-------	-----

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

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

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

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

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

VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE232825.002	LB250461.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	8.4	50	3
			d8-toluene (Surrogate)	mg/kg	-	8.5	8.5	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	8.4	50	1
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
		SE232862.007	LB250461.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1
Aromatic	Toluene				mg/kg	0.1	<0.1	<0.1	200
	Ethylbenzene			mg/kg	0.1	<0.1	<0.1	200	0
	m/p-xylene			mg/kg	0.2	<0.2	<0.2	200	0
	o-xylene			mg/kg	0.1	<0.1	<0.1	200	0
Polycyclic	Naphthalene (VOC)			mg/kg	0.1	0.2	0.2	90	2
Surrogates	d4-1,2-dichloroethane (Surrogate)			mg/kg	-	8.3	8.8	50	6
	d8-toluene (Surrogate)			mg/kg	-	8.5	9.1	50	7
	Bromofluorobenzene (Surrogate)			mg/kg	-	8.2	8.8	50	7
Totals	Total Xylenes			mg/kg	0.3	<0.3	<0.3	200	0
	Total BTEX			mg/kg	0.6	<0.6	<0.6	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE232825.002	LB250461.025	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	8.4	30	3
		d8-toluene (Surrogate)	mg/kg	-	8.5	8.5	30	1	
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	8.4	30	1	
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0	
SE232862.007	LB250461.014	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	8.8	30	6
		d8-toluene (Surrogate)	mg/kg	-	8.5	9.1	30	7	
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.8	30	7	
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0	

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250714.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	101

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250441.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	105
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	100
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	102
	Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	99
	Endrin	mg/kg	0.2	0.2	0.2	60 - 140	114
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	99
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130

OP Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250441.002	Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	86
	Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	89
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	2	60 - 140	91
	Ethion	mg/kg	0.2	1.6	2	60 - 140	79
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	84

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250441.002	Naphthalene	mg/kg	0.1	3.8	4	60 - 140	95
	Acenaphthylene	mg/kg	0.1	3.5	4	60 - 140	88
	Acenaphthene	mg/kg	0.1	3.5	4	60 - 140	87
	Phenanthrene	mg/kg	0.1	3.8	4	60 - 140	95
	Anthracene	mg/kg	0.1	3.5	4	60 - 140	89
	Fluoranthene	mg/kg	0.1	3.6	4	60 - 140	89
	Pyrene	mg/kg	0.1	3.8	4	60 - 140	95
	Benzo(a)pyrene	mg/kg	0.1	3.9	4	60 - 140	97
Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	84

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250713.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	111
	Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	85
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
	Copper, Cu	mg/kg	0.5	330	290	80 - 120	114
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	109
	Lead, Pb	mg/kg	1	99	89.9	80 - 120	110
	Zinc, Zn	mg/kg	2	290	273	80 - 120	108

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB250441.002	TRH C10-C14	mg/kg	20	49	40	60 - 140	123	
	TRH C15-C28	mg/kg	45	50	40	60 - 140	125	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	103	
	TRH F Bands	TRH >C10-C16	mg/kg	25	49	40	60 - 140	123
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	113
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	105

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250461.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.6	5	60 - 140	92
		Toluene	mg/kg	0.1	4.5	5	60 - 140	91
		Ethylbenzene	mg/kg	0.1	4.8	5	60 - 140	95
		m/p-xylene	mg/kg	0.2	9.2	10	60 - 140	92
		o-xylene	mg/kg	0.1	5.0	5	60 - 140	100
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.7	10	70 - 130	97

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

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

VOC's in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250461.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	9.9	10	70 - 130 99
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	10	70 - 130 94

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB250461.002		TRH C6-C10	mg/kg	25	68	92.5	60 - 140 74
		TRH C6-C9	mg/kg	20	61	80	60 - 140 76
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.7	10	70 - 130 97
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	10	70 - 130 94
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	40	62.5	60 - 140 64

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

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

OC Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250441.004	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	0	-	-
		Alpha BHC	mg/kg	0.1	<0.1	0.00020498295	-	-
		Lindane	mg/kg	0.1	<0.1	0.00205318827	-	-
		Heptachlor	mg/kg	0.1	0.2	0.00076662574	0.2	105
		Aldrin	mg/kg	0.1	0.2	0.00088047236	0.2	99
		Beta BHC	mg/kg	0.1	<0.1	5.11408749736	-	-
		Delta BHC	mg/kg	0.1	0.2	0.00022124758	0.2	103
		Heptachlor epoxide	mg/kg	0.1	<0.1	0	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	0	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	0	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	0.0022849463	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	3.85584850826	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	0.00120062416	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	0.00015392079	-	-
		Dieldrin	mg/kg	0.2	0.2	0.00383842618	0.2	101
		Endrin	mg/kg	0.2	0.2	0	0.2	114
		o,p'-DDD	mg/kg	0.1	<0.1	0	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	0	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	0	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	0	-	-
		p,p'-DDT	mg/kg	0.1	0.2	0	0.2	100
		Endosulfan sulphate	mg/kg	0.1	<0.1	0.00197589858	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	0	-	-
		Methoxychlor	mg/kg	0.1	<0.1	0.00270114473	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	0	-	-
		Isodrin	mg/kg	0.1	<0.1	0	-	-
		Mirex	mg/kg	0.1	<0.1	0.00388121655	-	-
		Total CLP OC Pesticides	mg/kg	1	1	0	-	-
		Total OC VIC EPA	mg/kg	1	1	0	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15059479051	-	93

OP Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250441.004	Dichlorvos	mg/kg	0.5	1.5	0	2	76
		Dimethoate	mg/kg	0.5	<0.5	0	-	-
		Diazinon (Dimpylate)	mg/kg	0.5	1.7	0	2	83
		Fenitrothion	mg/kg	0.2	<0.2	0	-	-
		Malathion	mg/kg	0.2	<0.2	0	-	-
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	0.02	2	87
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	0	-	-
		Bromophos Ethyl	mg/kg	0.2	<0.2	0	-	-
		Methidathion	mg/kg	0.5	<0.5	0	-	-
		Ethion	mg/kg	0.2	1.6	0.1	2	77
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	0	-	-
		Total OP Pesticides*	mg/kg	1.7	6.6	0	-	-
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.41	-	96
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.47	-	94

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250441.004	Naphthalene	mg/kg	0.1	3.9	0.04	4	96
		2-methylnaphthalene	mg/kg	0.1	<0.1	0.02	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	0.02	-	-
		Acenaphthylene	mg/kg	0.1	3.6	0.1	4	89
		Acenaphthene	mg/kg	0.1	3.5	0.01	4	87
		Fluorene	mg/kg	0.1	<0.1	0.04	-	-
		Phenanthrene	mg/kg	0.1	4.4	0.55	4	96
		Anthracene	mg/kg	0.1	3.6	0.11	4	87
		Fluoranthene	mg/kg	0.1	4.5	1.06	4	86
		Pyrene	mg/kg	0.1	4.7	1.08	4	91
		Benzo(a)anthracene	mg/kg	0.1	0.5	0.59	-	-
		Chrysene	mg/kg	0.1	0.4	0.47	-	-

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250441.004	Benzo(b&j)fluoranthene	mg/kg	0.1	0.4	0.56	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.2	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.1	0.48	4	90
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.3	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0.04	-	-
		Benzo(ghi)perylene	mg/kg	0.1	0.2	0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.2	0.6547	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.3	0.7547	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.3	0.7047	-	-
		Total PAH (18)	mg/kg	0.8	34	5.82	-	-
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.44	-	86
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.41	-	96
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.47	-	94

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232981.001	LB250713.004	Arsenic, As	mg/kg	1	57	7.15316134956	50	100
		Cadmium, Cd	mg/kg	0.3	52	2.68587170940	50	99
		Chromium, Cr	mg/kg	0.5	57	6.81472348819	50	99
		Copper, Cu	mg/kg	0.5	90	48.20598938847	50	83
		Nickel, Ni	mg/kg	0.5	68	13.8079042242C	50	108
		Lead, Pb	mg/kg	1	290	51.6841541391	50	272 @
		Zinc, Zn	mg/kg	2	250	62.0536017957	50	181 @

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250441.004	TRH C10-C14	mg/kg	20	47	0	40	118
		TRH C15-C28	mg/kg	45	54	17	40	93
		TRH C29-C36	mg/kg	45	<45	0	40	108
		TRH C37-C40	mg/kg	100	<100	0	-	-
		TRH C10-C36 Total	mg/kg	110	<110	0	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	0	-	-
		TRH F						
		TRH >C10-C16	mg/kg	25	49	0	40	123
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	49	0	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	0	40	125
		TRH >C34-C40 (F4)	mg/kg	120	<120	0	-	-

VOC's in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250461.004	Monocyclic						
		Benzene	mg/kg	0.1	4.3	0.00372560125	5	87
		Aromatic						
		Toluene	mg/kg	0.1	4.4	0.00988245281	5	88
		Ethylbenzene	mg/kg	0.1	4.7	0.01285261473	5	95
		m/p-xylene	mg/kg	0.2	9.1	0.02931131872	10	91
		o-xylene	mg/kg	0.1	4.9	0.01619127435	5	98
		Polycyclic						
		Naphthalene (VOC)	mg/kg	0.1	<0.1	0.00599115348	-	-
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.88828743692	10	92
		d8-toluene (Surrogate)	mg/kg	-	9.6	9.37878480791	10	96
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	8.74080337450	10	93
		Totals						
		Total Xylenes	mg/kg	0.3	14	0.04550259307	-	-
		Total BTEX	mg/kg	0.6	28	0	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE232803.001	LB250461.004	TRH C6-C10	mg/kg	25	70	0.31720446368	92.5	76
		TRH C6-C9	mg/kg	20	62	0.20272326080	80	77
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.88828743692	10	92
		d8-toluene (Surrogate)	mg/kg	-	9.6	9.37878480791	10	96
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	8.74080337450	-	93
		VPH F						
		Benzene (F0)	mg/kg	0.1	4.3	0.00372560125	-	-
		Bands						
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	43	0.31720446368	62.5	68

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

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

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

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

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

No matrix spike duplicates were required for this job.

id samples expressed on a dry weight basis.

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

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

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

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

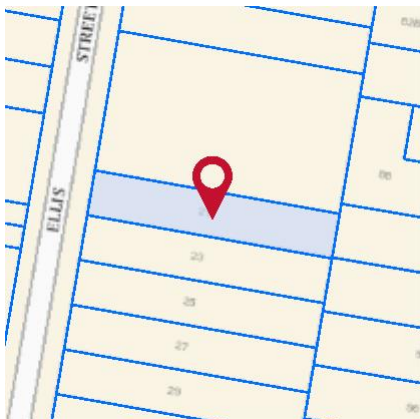
APPENDIX D

Property Report and Relevant Information



Property Report

21 ELLIS STREET CONDELL PARK 2200



Property Details

Address: 21 ELLIS STREET CONDELL PARK 2200
 Lot/Section 16/3/DP12103
 /Plan No:
 Council: CANTERBURY-BANKSTOWN COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Bankstown Local Environmental Plan 2015 (pub. 5-3-2015)
Land Zoning	R2 - Low Density Residential: (pub. 5-7-2019)
Height Of Building	9 m
Floor Space Ratio	0.5:1
Minimum Lot Size	450 m ²
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Additional Permitted Uses	APU 1
Local Provisions	30 km

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)



Property Report

21 ELLIS STREET CONDELL PARK 2200

- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Excluded (pub. 2-12-2021)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Subject Land (pub. 2-12-2021)
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)
- State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

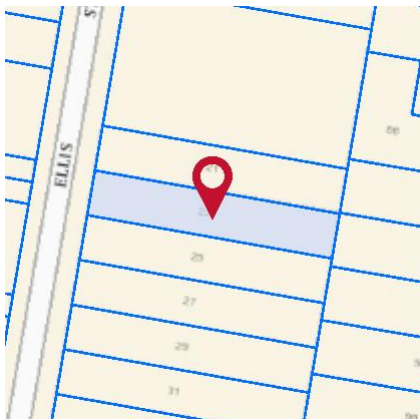
Local Aboriginal Land Council	GANDANGARA
Regional Plan Boundary	Greater Sydney

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)



Property Report

23 ELLIS STREET CONDELL PARK 2200



Property Details

Address: 23 ELLIS STREET CONDELL PARK 2200
 Lot/Section 17/3/DP12103
 /Plan No:
 Council: CANTERBURY-BANKSTOWN COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Bankstown Local Environmental Plan 2015 (pub. 5-3-2015)
Land Zoning	R2 - Low Density Residential: (pub. 5-7-2019)
Height Of Building	9 m
Floor Space Ratio	0.5:1
Minimum Lot Size	450 m ²
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Additional Permitted Uses	APU 1
Local Provisions	30 km

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)



Property Report

23 ELLIS STREET CONDELL PARK 2200

- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Excluded (pub. 2-12-2021)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Subject Land (pub. 2-12-2021)
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)
- State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Local Aboriginal Land Council	GANDANGARA
Regional Plan Boundary	Greater Sydney

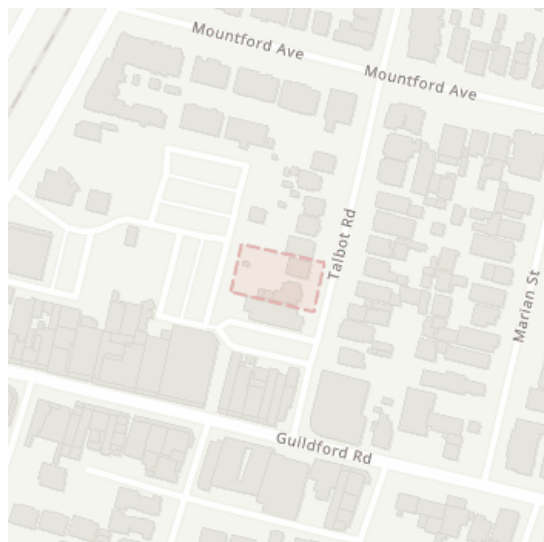
This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)

Caller Details

Contact:	Ehsan Zare	Caller Id:	3021080	Phone:	0405 016 670
Company:	Not supplied				
Address:	186 Riverstone Parade Riverstone NSW 2765	Email:	ehsan@neoconsulting.com.au		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



User Reference:	23 Talbot Road		
Working on Behalf of:	Private		
Enquiry Date:	Start Date:	End Date:	
09/06/2022	10/06/2022	10/06/2022	

Address:
23 Talbot Road
Guildford NSW 2161

Job Purpose:
Design

Onsite Activities:
Planning & Design

Location of Workplace:
Private

Location in Road:

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:
Not supplied

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.1100.com.au
- For more information on safe excavation practices, visit www.1100.com.au

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
212363894	Endeavour Energy	(02) 9853 4161	NOTIFIED
212363892	Jemena Gas West	1300 880 906	NOTIFIED
212363890	NBN Co NswAct	1800 687 626	NOTIFIED
212363888	Optus and or Uecomm Nsw	1800 505 777	NOTIFIED
212363893	Sydney Water	13 20 92	NOTIFIED
212363891	Telstra NSW Central	1800 653 935	NOTIFIED
212363889	TPG Telecom (NSW)	1800 786 306	NOTIFIED

END OF UTILITIES LIST

STANDARD SPECIFICATION

BE ADVISED : SOME CLAUSES IN THIS SPECIFICATION MAY NOT BE RELEVANT TO THIS PROJECT

1.0 GENERAL

- 1.1 ALL DIMENSIONS SHALL BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF ANY WORK
- 1.2 ALL MATERIALS SHALL COMPLY WITH RELEVANT CURRENT AUSTRALIAN STANDARDS AND UNLESS OTHERWISE STATED ON THE PLANS SHALL BE NEW AND THE BEST OF THE THEIR RESPECTIVE KIND AND SUITABLE FOR THEIR INTENDED PURPOSES.
- 1.3 ALL WORKMANSHIP SHALL COMPLY WITH RELEVANT CURRENT AUSTRALIAN STANDARDS AND TO GOOD TRADE PRACTICES
- 1.4 ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE RESPECTIVE AUTHORITY HAVING JURISDICTION OVER THE WORKS.
- 1.5 THE ARCHITECTURAL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE SPECIFICATION, SCHEDULES AND CONSULTANTS DRAWINGS THAT FORM PART OF THE CONSTRUCTION DOCUMENTS REFERRED TO IN THE "BUILDING CONTRACT".
- 1.6 DO NOT SCALE FROM DRAWINGS. NOTIFY OF ANY ERRORS OR OMISSIONS BEFORE PROCEEDING WITH ANY WORKS
- 1.7 ENSURE THAT SUBSTRATES ARE SUITABLE FOR THE INTENDED SUBSEQUENT FINISHES. COMMENCEMENT OF WORK ON THE SUBSTRATES IMPLIES ACCEPTANCE BY THE SUBCONTRACTOR OF THE SUBSTRATES ON WHICH FINISHES ARE APPLIED.
- 1.8 CONTRACTOR IS TO SUPPLY ALL EQUIPMENT NECESSARY FOR THE COMPLETION OF THE RESPECTIVE WORKS.
- 1.9 CONTRACTOR IS RESPONSIBLE FOR THE PROGRESSIVE CLEAN UP DURING AND AFTER THE COMPLETION OF RESPECTIVE WORKS

2.0 EARTHWORKS

- 2.1 UNLESS OTHERWISE STATED, REMOVE TOPSOIL TO A MINIMUM DEPTH OF 200mm INCLUDING ALL ROOTS, AND OTHER MATTER, AND REQUIRED BY THE SOIL CONDITION AND/OR BUILDER. PROVIDE SUITABLE CLEAN FILL AND COMPACT IN LAYERS NOT GREATER THAN 300mm TO REDUCE LEVELS AS SHOWN.
- 2.2 DO NOT EXCAVATE SERVICES TRENCHES WITHIN AN ANGLE OF 45 DEGREES DOWN FROM THE BOTTOM EDGE OF THE FOOTING.
- 2.3 ALL RETAINING WALLS TO BE TREATED WITH "BITKOTE" WATERPROOFING AGENT

3.0 CONCRETE

- 3.1 ALL CONCRETE REINFORCEMENT AND FORMWORK SHALL BE TO STRUCTURAL ENGINEERS DETAILS, RELEVANT BUILDING CODES AND STANDARDS
- 3.2 THE FOOTING AND SLAB CONSTRUCTION IS TO COMPLY WITH AS 2870
- 3.3 PROVIDE A PROPRIETARY VAPOUR BARRIER WHICH CONSISTS OF HIGH IMPACT RESISTANT POLYTHENE FILM MIN 0.2mm THICK WHICH HAS BEEN PIGMENTED AND BRANDED BY THE MANUFACTURER.

4.0 TERMITE PROTECTION:

- 4.1 PROVIDE ANTI-TERMITE TREATMENT UNDER THE BUILDING AREAS IN ACCORDANCE WITH AS 2057, AS 3660.1 AND APPENDIX D, FOR RETICULATED SYSTEMS.
- 4.2 BUILDER SHALL PROVIDE "BIFLEX" OR SIMILAR APPROVED ANTI-TERMITE TREATMENT IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARD CODES

5.0 BRICKWORK

- 5.1 BRICK WORK SHALL COMPLY WITH :
 - AS 3700 MASONRY CODE
 - AS A123 MASONRY CODE
 - MORTAR FOR MASONRY CONSTRUCTION
- 5.2 BRICK GAUGE 7 STANDARD COURSES = 600mm.
- 5.3 TIES SHALL BE 3.5mm DIAMETER GALVANIZED WIRE KINKED FOR AND BUILT IN EVERY 5TH COURSE AT APPROXIMATELY 900mm CENTRES, WITH ADDITIONAL TIES AT THE RATE OF 1 TIE/300mm HEIGHT OF OPENINGS AND VERTICAL CONTROL JOINTS AND WITHIN 150mm OF OPENINGS. BUILD TIES INTO EACH LEAF AT LEAST 50mm.
- 5.4 VERTICAL CONTROL JOINTS SHALL BE 12mm WIDE FILLED AT COMPLETION WITH A CONTINUOUS FILLER STRIP.
- 5.5 CAVITIES TO BE KEPT CLEAR OF MORTAR. PROVIDE CAVITY BOARDS. TEMPORARILY OMIT BRICKS TO PERMIT RAKING OUT OF CAVITY BOTTOMS.
- 5.6 FORM WEEP HOLES EVERY FOURTH PERPEND ABOVE FLASHING AND CAVITY FILL KEEP CLEAR OF MORTAR. DO NOT LOCATE WEEPHOLES CLOSER THAN 500mm TO JOINTS IN DAMP PROOF COURSES OR FLASHING.
- 5.7 PROVIDE DAMP PROOF COURSES (DPC) IN THE BOTTOM 3 COURSES OF BRICK WORK AND SLAB AND/OR FOOTINGS. DPC ADDITIVE SHALL BE CLEAR IN ALL FACEWORK.
- 5.8 SETOUT BRICKWORK ACCURATELY, PLUMP, LEVEL AND PROPERLY BONDED. RISING WORK TO BE RAKED BACK, JAMBS, REVEALS, CORNERS, PERPENDS, ETC TO BE TRUE, PLUMB AND IN LINE WITH PERPENDS TRUE LINE. SETOUT DOOR FRAMES NEAR PERPENDICULAR WALL WITH A MERGIN OF 12mm OR GREATER THAN 50mm
- 5.9 PROVIDE 12mm PLASTERING MARGIN BETWEEN WINDOW FRAME AND INTERNAL BRICKWORK TO BE PLASTERED.
- 5.10 WHERE NECESSARY REINFORCE BELOW AND OVER OPENINGS WITH GALVANISED WOVEN WIRE FABRIC 75mm WIDE IN CENTRE OF EACH LEAF OPENING EXTENDING ALUMINIUM OF 600mm BEYOND THE OPENING.

- 5.11 BUILD IN ALCOR/PGI FLASHINGS AS FOLLOWS:
 - WHEREVER SHOWN ON DRAWINGS
 - CAVITY WALLS BUILT OF SLAB ON GROUND (WHERE NOT PARGED)
 - OVER LINTELS TO EXPOSED OPENINGS - EXTEND THE FULL WIDTH OF OUTER LEAF CONTINUOUS ACROSS CAVITY 50mm INTO INNER LEAF 2c ABOVE
 - OVER ROOF - EXTEND THE FULL WIDTH OF EXTERNAL LEAF, STEPPED TO ROOF SLOPE TURNED DOWN MIN. 50mm OVER BASE FLASHING. TURN UP IN CAVITY SLOPING INWARDS AND BUILT INTO INNER LEAF 1c ABOVE.
 - DOOR/WINDOW STILES - EXTEND THE FULL HEIGHT 150mm WIDE FIXED TO FRAMES INTERLEAVED WITH SILL AND HEAD FLASHING AT EACH END.
 - STRUCTURE OR SERVICES WITHIN 30mm OF OUTER BRICK LEAF IN CAVITY: VERTICAL FLASHING CONTINUOUS 1c BELOW FL TO ABOVE STRUCTURE OR FRAME. NOMINAL 300m WIDE.
 - FOR HORIZONTAL STRUCTURES/SERVICES: CONTINUOUS FLASHING BUILT IN AS FOR OVER LINTELS
 - AT CAVITY WALLS WITH GLASS BLOCK 300mm WIDE FIXED TO GLASS BLOCK FRAME AND TURNED AWAY IN CAVITY FROM INNER LEAF.
- 5.12 WHERE NECESSARY REINFORCE BELOW AND OVER OPENINGS WITH GALVANISED WOVEN WIRE FABRIC 75mm WIDE IN CENTRE OF EACH LEAF OPENING EXTENDING ALUMINIUM OF 600mm BEYOND THE OPENING.
- 5.13 UNLESS OTHERWISE SHOWN ON DRAWINGS
EXTERNAL FACE WORK: 230x110x76mm
WINDOW SILLS: 2c FACE BRICK SPLAYED SILLS
WINDOW HEADS: SOLID FACEBRICK COURSE

6.0 LINTELS

MAX SPAN (mm)	LINTELS SIZE (VERT x HORIZ x THICK)	BEARING EACH END (mm)
900	75x10	150
1200	75x75x8	150
1500	90x90x8	150
1800	100x75x8	230
2100	125x75x8	230
2400	125x75x10	230
2500	100x100x8	230
3000	150x90x10	230

7.0 CARPENTRY WORK

- 7.1 ROOF AND CEILING FRAMING SHOULD COMPLY WITH AS 1684 LIGHT TIMBER FRAMING CODE. DRAW STRAP FIRMLY OVER WALL PLATES AND SECURELY FIX TO TOP OF PLATE BY 2x30mm GALV. CLOUDS/STRAP.
- 7.2 REFER TO AS 1684 FOR ROOF FRAMING SIZES UNLESS SPECIFIED ON DRAWINGS.
- 7.3 SUPPLY AND FIX ALL BULKHEADS & FALSE CEILINGS AS SHOWN ON THE DRAWINGS.

8.0 ROOFING

- 8.1 SELECTED ROOFING MATERIAL SHALL BE INSTALLED AND FIXED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION AND RELEVANT BUILDING CODES
- 8.2 GUTTER, FASCIA, DOWNPIPES, FLASHING SHALL BE IN LONGEST POSSIBLE LENGTHS
- 8.3 ALLOW FOR ALL JOINTS AND JOINING MATERIALS, COLLARS, STRAPS & FASTENINGS NECESSARY TO COMPLETE WORK.
- 8.4 ALLOW FOR ALL ROOF PENETRATIONS, ROOF COWLS, FLASHING, FLUMES THROUGH ROOF
- 8.5 FIX GUTTERS & FLASHING TO PERMIT THERMAL MOVEMENT IN THEIR FULL LENGTH
- 8.6 SEAL BETWEEN OVERLAPPING FLASHING; FLASHING TURNED DOWN OVER BASE OR APRON FLASHING; FLASHING OVER METAL ROOF; FLASHING OVER SECRET GUTTERS; AROUND ROOF PENETRATIONS ETC.

9.0 WINDOWS/GLAZING

- 9.1 UNLESS OTHERWISE STATED ON THE DRAWINGS WINDOW FRAMES SHALL BE ALUMINIUM RESIDENTIAL OR COMMERCIAL IN SECTION WITH POWDERCOAT FINISH AS SELECTED BY OWNER.
- 9.2 ALLOW FOR FLYSCREENS TO BE FITTED TO ALL WINDOWS.
- 9.3 ANGLED WINDOW UNITS SHALL BE FACTORY MADE AND FIXED AND DELIVERED ON SITE AS A COMPLETE UNIT.
- 9.4 WHERE RELEVANT WINDOWS ARE TO COMPLY WITH THE SPECIFICATIONS PROVIDED BY THE THERMAL PERFORMANCE ASSESSOR.
- 9.5 CLEAR GLASS GENERALLY: OBSCURE GLASS TO BATHROOMS, REFER TO DRAWINGS.
- 9.6 WHERE GLASS BLOCKS HAVE BEEN NOMINATED, THEY SHALL BE IN FRAMES AND INSTALLED TO MANUFACTURERS SPECIFICATIONS

10.0 JOINERY

- 10.1 ALL JOINERY SHALL BE OF HIGHEST QUALITY MATERIALS TO BEST TRADE PRACTICES AND HIGH QUALITY FINISH.
- 10.2 EXTERNAL DOOR FRAMES SHALL BE: 110x40 DOUBLE REBATED FRAME WITH 130x40 WEATHERED THRESHOLD U.N.O.
- 10.3 SUPPLY AND BUILD IN TIMBER DOOR FRAMES TO EXTERNAL LOCATIONS AS SHOWN ON ARCHITECTURAL DRAWINGS.

11.0 CEILINGS

- 11.1 CEILINGS SHALL BE RECESSED EDGE, MINIMUM 8.0mm PLASTERGLASS OR GYPROCK.
- 11.2 FLUSH JOINTS, SCREW HEADS, AND OTHER BLEMISHES IN THE SHEETS USING
- 11.3 APPROVED SYSTEMS TO PROVIDE FLUSH SMOOTH CONTINUOUS SURFACE
- 11.4 PROVIDE AND FIX ALL FLUSH STOP BEADS & CASING BEADS TO ALL CORNERS & EDGES
PROVIDE ALL SELECTED MOLDINGS AND CORNICES TO ALL CEILINGS AS SHOWN ON THE DRAWINGS.

12.0 PLASTERING

- 12.1 INTERNAL WALL FINISHES INCLUDING CUPBOARD, BIN & FRIDGE RECESSES ETC SHALL BE (OTHER THAN FACE FINISHES OR WHERE COVERED BY FEATURE MATERIALS) FLOAT AND SET IN HARDWALL PLASTER U.N.O.
- 12.2 PLASTERED WALLS SHALL BE NOMINAL 12mm THICK CONSISTING OF 1:1:9, CEMENT:LIME:SAND RENDER, AND FINISHED WITH NOMINALLY 3mm
- 12.3 HARDWALL PLASTER
- 12.4 SUPPLY AND FIX EXTERNAL CORNER BEADS TO ALL EXTERNAL CORNERS. PROVIDE STOP BEADS WHERE PLASTER WORK ABUTS TIMBER FRAMES, OR FACEWORK
- 12.5 EXTERNAL RENDER WHEN APPLICABLE SHALL BE 2 COAT SAND FINISH. (FOR PAINTING).
- 12.6 NIBS IN INTERNAL CORNERS ADJACENT TO DOOR FRAMES GREATER THAN 40mm SHALL NOT BE FLUSHED UP WITH FRAMES.
- 12.7 PROVIDE V-JOINTS IN RENDER & FINISHING PLASTER WHERE BRICK WORK ABUTS OR JOINS ONTO CONCRETE WORK.

13.0 FLOORING FINISHES

- 13.1 CARPET FLOOR COVERINGS TO NOMINATED AREAS COMPLETE WITH SELECTED UNDERLAY SMOOTH EDGE, DIMINISHING STRIPS ETC, TO COMPLETE THE WORKS: REFER TO DRAWINGS AND FINISHES SCHEDULE
- 13.2 PROVIDE TILED FLOOR FINISHES TO NOMINATED AREAS COMPLETE WITH ALL MATERIALS, ANGLE TRIMS ETC. TO COMPLETE THE WORKS: REFER TO DRAWINGS AND FINISHES SCHEDULE
- 13.3 PROVIDE TIMBER FLOOR FINISHES TO NOMINATED AREAS COMPLETE WITH ALL MATERIALS, DIMINISHING BOARDS ETC TO COMPLETE THE WORKS: FLOOR BOARDS TO BE SANDED AND POLISHED TO HIGH STANDARD WITH PREMIUM QUALITY SEALER (2 COATS). REFER TO DRAWINGS AND FINISHES SCHEDULE.

14.0 SIGNAGE

- 14.1 WHERE NECESSARY SUPPLY & FIX SELECTED UNIT AND HOUSE NUMBERS TO EACH UNIT AND TO LETTERBOXES AS SCHEDULED.
- 14.2 "SUPERDRAFT" RESERVES THE RIGHT TO ERECT A BUILDERS SIGN ON THE PROPERTY FACING THE STREET FRONTAGE IN COMPLIANCE WITH AUTHORITY REQUIREMENTS.

15.0 PAVING

- 15.1 GENERALLY: WHEN PAVING IS INCLUDED IN THE BUILDING CONTRACT THE FOLLOWING SHALL APPLY AS A MINIMUM STANDARD
 - SUPPLY AND LAY ALL PAVING TO EXTERNAL AREAS AS SHOWN ON WORKING DRAWINGS.
 - CUT, FILL & COMPACT SAND TO REQUIRED LEVELS. SCREED TO UNIFORM THINNESS AND LEVELS
 - PROVIDE BRICK EDGE RETAINING FOOTING EMBEDDED IN MORTAR BENEATH THE PAVING BRICK
 - TO DRIVEWAY AREAS, PROVIDE NOMINAL 300x150mm CONCRETE FOOTING ALONG PERIMETER OF DRIVEWAY AND BED EDGE BRICK IN MORTAR.
- 15.2 PROVIDE 100mm COMPACTED LIMESTONE BASE TO DRIVEWAY TOPPED WITH 50mm CLEAN SAND AND GRADE TO FALLS.
- 15.3 UNLESS NOTED PAVING PATTERN IS TO CLIENTS DETAIL
- 15.4 BRICK PAVERS SHALL BE:
 - TRAFFICABLE AREAS: MIN. 65mm SOLID CLAY OR CONCRETE
 - PEDESTRIAN AREAS: MIN. 43mm SOLID CLAY OR CONCRETE

16.0 ENERGY EFFICIENCY

- 16.1 INSULATION MUST FORM A CONTINUOUS BARRIER WITH CEILINGS, WALLS AND FLOORS BY ABUTTING OR OVERLAPPING ADJOINING INSULATION
- 16.2 INSULATION MUST NOT ADVERSELY AFFECT DOMESTIC SERVICES OR FITTINGS
- 16.3 REFLECTIVE INSULATION IS TO BE PROVIDED WITH A MINIMUM 25mm AIRSPACE AND IS FITTED CLOSE TO OPENINGS SUCH AS WINDOWS/DOORS ETC. AND IS PROVIDED WITH ADEQUATE SUPPORT.
- 16.4 BULK INSULATION MUST MAINTAIN ITS POSITION, THICKNESS.
- 16.5 ENSURE THAT CEILING INSULATION OVERLAPS UN-INSULATED WALLS CONSTRUCTION JOINTS, SUCH AS BETWEEN WALL AND FLOOR, ARE TO BE TIGHT FITTING OR SEALED USING CAULKING OR JOINERY ITEMS SUCH AS SKIRTING OR CORNICES
- 16.6 EXHAUST FANS ARE TO BE FITTED WITH A SELF CLOSING DAMPER
- 16.7 ROOF LIGHTS MUST BE SEALED WITH WEATHERPROOF SEALS
- 16.8 HEATED WATER PIPING MUST BE THERMALLY INSULATED AND PROTECTED AGAINST THE WEATHER AND SUN
- 16.9 INTERNAL HEATED WATER PIPING TO HAVE AN R VALUE OF 0.2
- 16.10 ENCLOSED SUB-FLOOR AND ROOF SPACE TO HAVE AN R VALUE OF 0.45

FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 106

info@femmebuild.com.au

REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER. CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATUMS & DIMENSIONS ON SITE AND SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT PRIOR TO START OF WORK & ITS OPERATION. MEASUREMENT & SCALING OF THIS DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.

DRAWING SCHEDULE

A.00	ARCHITECTURAL SPECIFICATION
A.01.1	DEMOLITION PLAN
A.01.2	PROPOSED SITE PLAN
A.01.3	PROPOSED SITE ANALYSIS PLAN
A.01.4	EROSION/SEDIMENT CONTROL PLAN
A.01.5	PROPOSED SUBDIVISION
A.02.1	PROPOSED CHILDCARE GROUND FLOOR PLAN
A.02.2	PROPOSED CHILDCARE FIRST FLOOR PLAN
A.02.3	PROPOSED REAR UNITS GROUND FLOOR PLAN
A.02.4	PROPOSED REAR UNITS GROUND FLOOR PLAN
A.02.5	PROPOSED ROOF PLAN
A.03.1	PROPOSED ELEVATIONS
A.03.2	PROPOSED ELEVATIONS
A.04.1	PROPOSED SECTION & DETAILS
A.04.2	PROPOSED SECTION & DETAILS
A.06.1	PROPOSED SHADOW DIAGRAMS

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE

DEVELOPMENT APP.

PROJECT DETAILS

NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS

TBC

DRAWING TITLE

ARCHITECTURAL
SPECIFICATION

DRAWN

SK

DESIGNED

FB

CHECK

FB

DATE DRAWN

FEB 2022

DRAWING SCALE

SHEET SIZE



ACCREDITED
BUILDING DESIGNER

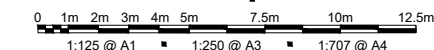
ACCREDITATION NUMBER: 6613

MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022

DRAWING NUMBER
A.00

REVISION
01



ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

DRAWN		
SK		
DESIGNED		
FB		
CHECK		
FB		
DATE DRAWN	DRAWING SCALE	SHEET SIZE
FEB 2022	1:125	A1



DRAWING SCALE 1:125 SHEET SIZE A1

PROPOSED DEMOLITION PLAN

SITE INFORMATION - CENTRE

SITE AREA	871.97m ²
PROPOSED CHILDCARE G. FLOOR	224.52m ²
GARBAGE ROOM	7.47m ²
PROPOSED CHILDCARE F.FLOOR	166.24m ²
TOTAL FLOOR AREA	390.76m ²
0 - 2	12
2 - 3	15
3 - 5	13
INDOOR PLAY AREA REQUIRED	91m ²
INDOOR PLAY AREA PROPOSED	149.63m ²
OUTDOOR PLAY AREA REQUIRED	280m ²
OUTDOOR PLAY AREA PROPOSED	281.14m ²
PERMEABILITY	199.23m ²
ONSITE PARKING	8
OFFSITE PARKING	1

SITE INFORMATION - UNIT A

SITE AREA	696.59m ²
PROPOSED RESIDENCE G. FLOOR	177.45m ²
GARAGE	33m ²
ALFRESCO	32.65m ²
PROPOSED RESIDENCE F.FLOOR	145.46m ²
BALCONIES	20.96m ²
TOTAL FLOOR AREA	337.91m ²
PERMEABILITY	34%
PRIVATE OPEN SPACE (POS)	273.70m ²
MAX BUILDING HEIGHT	8.99m

SITE INFORMATION - UNIT B

SITE AREA	675m ²
PROPOSED RESIDENCE G. FLOOR	151.06m ²
GARAGE	30.25m ²
ALFRESCO	17.34m ²
PROPOSED RESIDENCE F.FLOOR	115.51m ²
BALCONIES	11.20m ²
PROPOSED S'DARY DWELLING	57.66m ²
PORCH	8.04m ²
TOTAL FLOOR AREA	336.48m ²
PERMEABILITY	36%
PRIVATE OPEN SPACE (POS)	200.40m ²
MAX BUILDING HEIGHT	7.99m

SITE NOTES

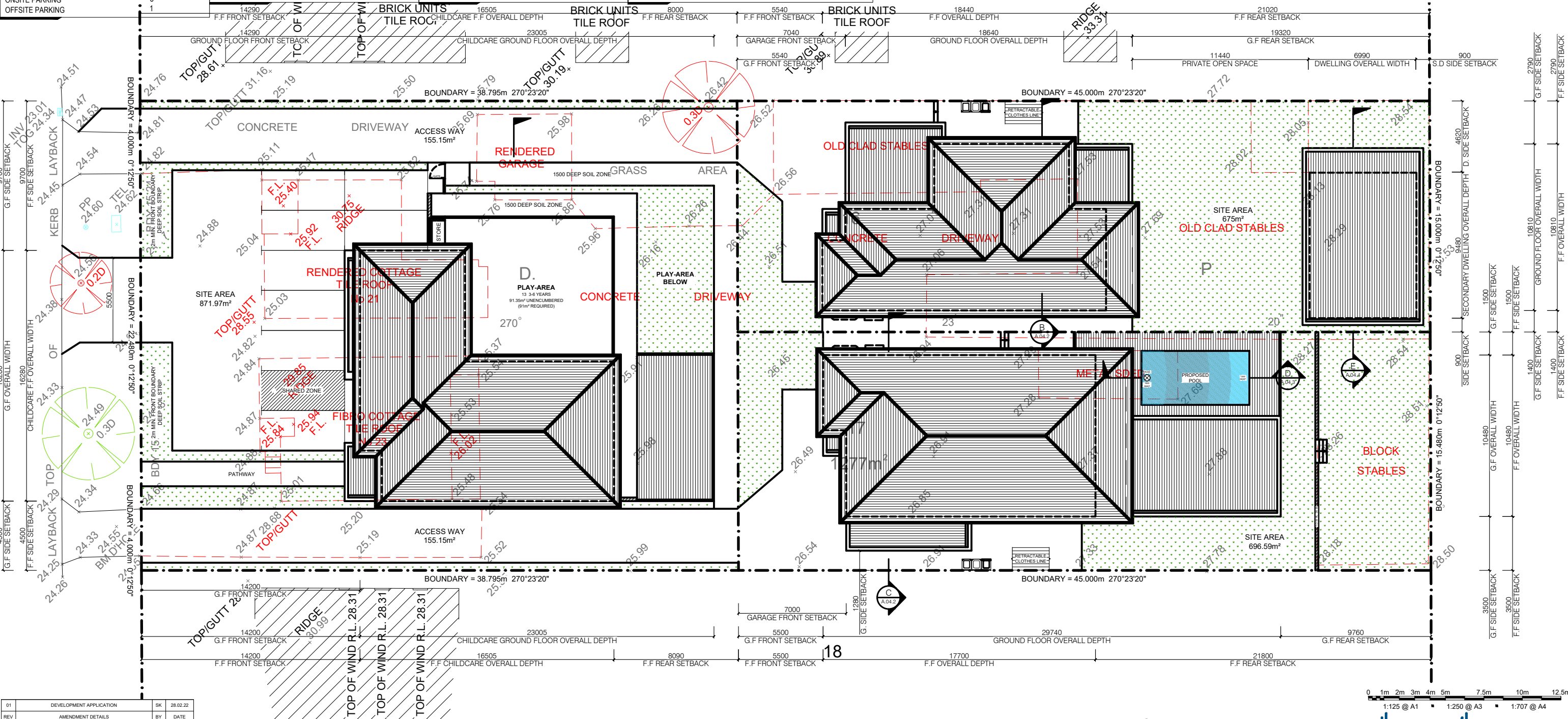
- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- EXISTING PLUMBING AND ELECTRICAL WORKS TO BE REMOVED AND MADE GOOD AS NECESSARY.
- THIS PLAN DOES NOT PROVIDE SPECIFIC LANDSCAPE PLANTING LOCATIONS.
- THE EXACT LOCATION OF UNDERGROUND AND ABOVEGROUND SERVICES SHALL BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.
- THIS DRAWING SET TO BE READ IN CONJUNCTION WITH THE SPECIFICATION PROVIDED.
- BEWARE OF EXISTING SERVICES. CONFIRM LOCATIONS PRIOR TO EXCAVATION. TAKE EXTREME CARE.
- REFER ALL MAJOR WORKS TO RAMPS, WALKWAYS, DRIVEWAYS ETC (INCLUDING CARPARK WORKS, LEVELS & DATUMS) REFER TO CIVIL ENGINEERS DOCUMENTATION.

FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 106
info@femmebuild.com.au

REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS DOCUMENT IS/ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS/ARE PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER. CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATUMS & DIMENSIONS ON SITE AND SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.



01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE
PROJECT STAGE			
DEVELOPMENT APP.			
PROJECT DETAILS			
NEW DEVELOPMENT			
21-23 ELLIS STREET, CONDELL PARK NSW 2200			
CLIENT DETAILS			
TBC			
DRAWING TITLE			
SITE PLAN			

DRAWN	SK
DESIGNED	FB
CHECK	FB
DATE DRAWN	FEB 2022
DRAWING SCALE	1:125
SHEET SIZE	A1



PROPOSED SITE PLAN
SCALE - 1 : 125

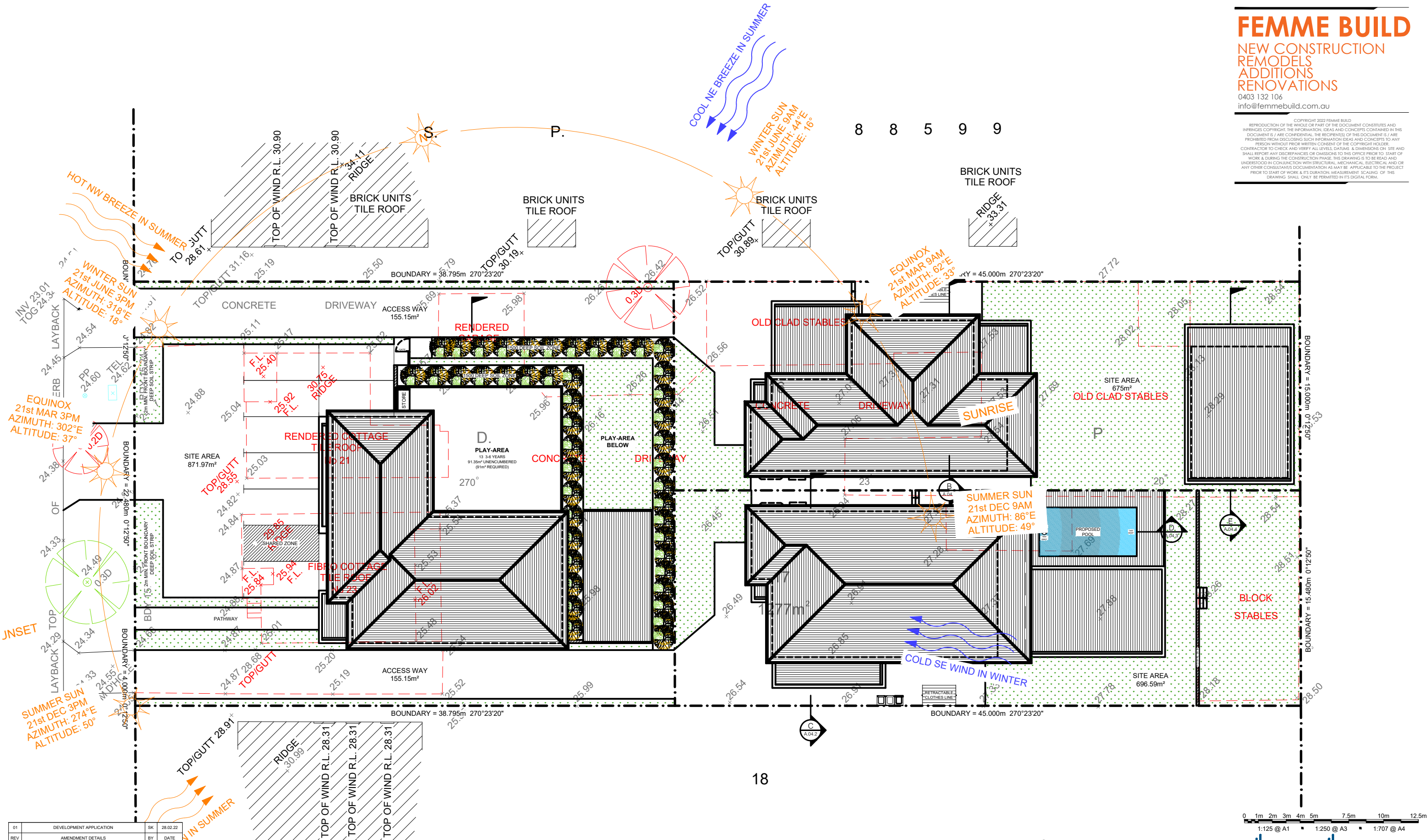
0 1m 2m 3m 4m 5m 7.5m 10m 12.5m
1:125 @ A1 1:250 @ A3 1:707 @ A4



ACCREDITED
BUILDING DESIGNER

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER FB0022 DRAWING NUMBER A.01.2 REVISION 01

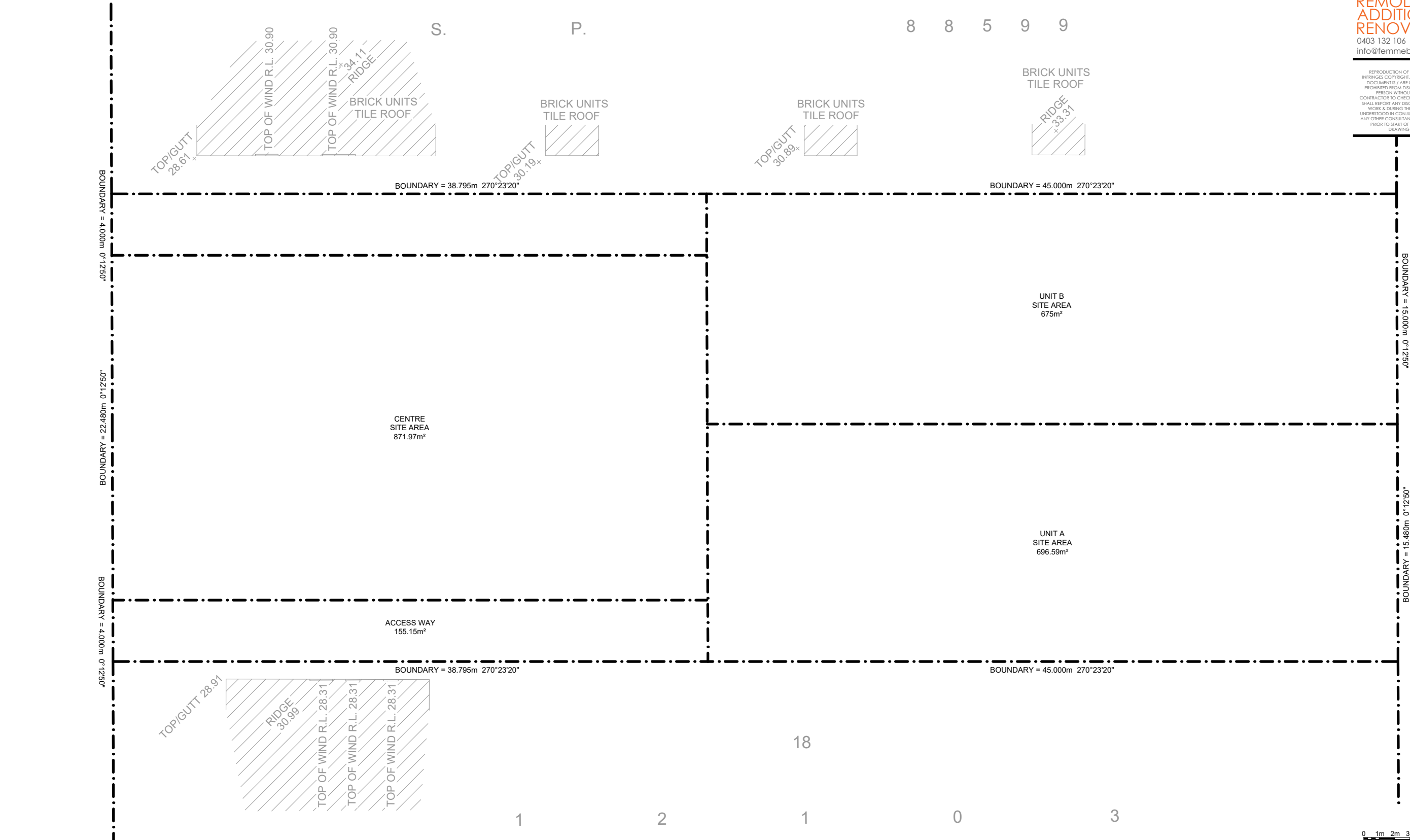


01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE
PROJECT STAGE			
DEVELOPMENT APP.			
PROJECT DETAILS			
NEW DEVELOPMENT			
21-23 ELLIS STREET, CONDELL PARK NSW 2200			
CLIENT DETAILS			
TBC			
DRAWING TITLE			
SITE ANALYSIS PLAN			

DRAWN	SK
DESIGNED	FB
CHECK	FB
DATE DRAWN	FEB 2022
DRAWING SCALE	1:125
SHEET SIZE	A1



PROPOSED SITE ANALYSIS PLAN
SCALE - 1 : 125



01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE
PROJECT STAGE DEVELOPMENT APP.			
PROJECT DETAILS NEW DEVELOPMENT			
21-23 ELLIS STREET, CONDELL PARK NSW 2200			
CLIENT DETAILS TBC			
DRAWING TITLE SUBDIVISION PLAN			

DRAWN
SK

DESIGNED
FB

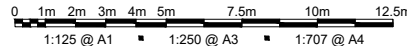
CHECK
FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1:125

SHEET SIZE
A1

PROPOSED SUBDIVISION PLAN
SCALE - 1 : 125

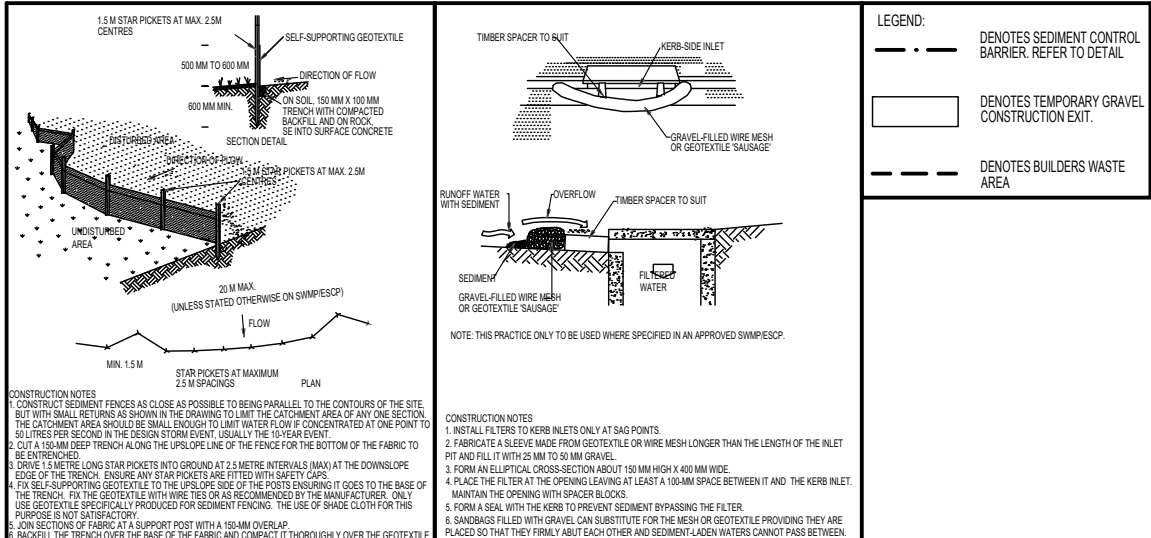


ACCREDITED
BUILDING DESIGNER

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER FB0022	DRAWING NUMBER A.01.5	REVISION 01
--------------------------	--------------------------	----------------

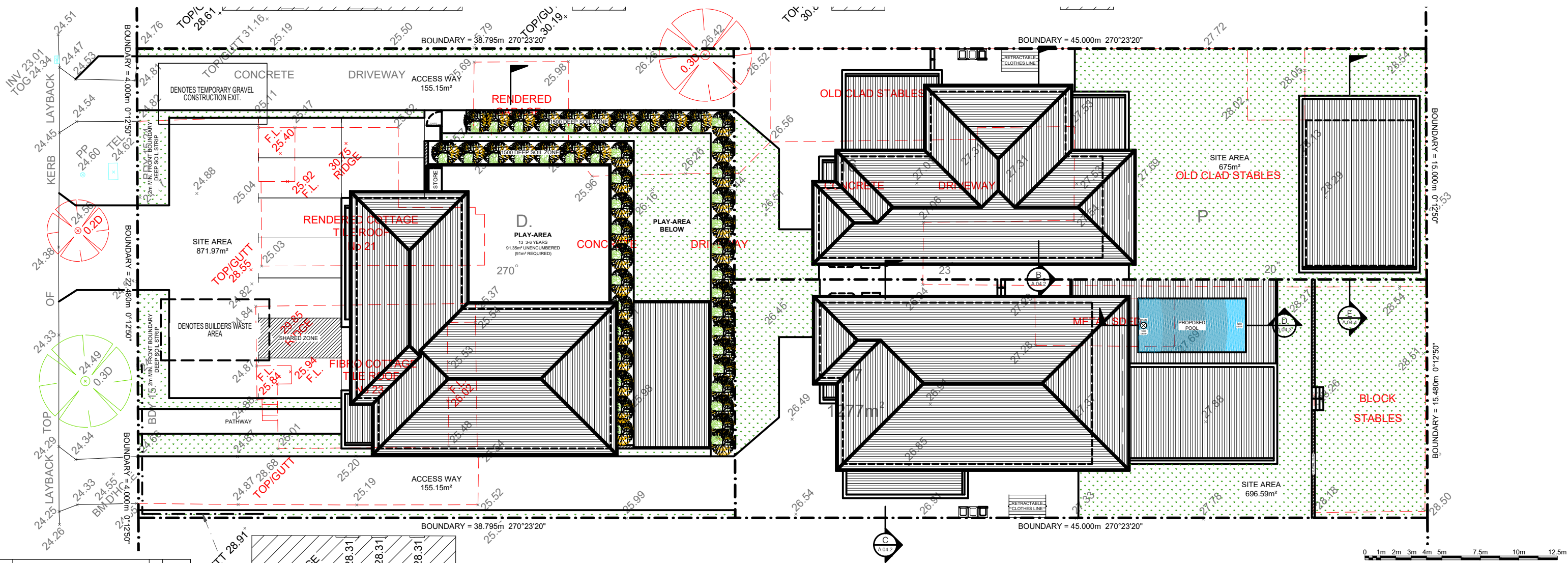
SEDIMENT CONTROL



FEMME BUILD
NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 108
info@femmebuild.com.au

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THE DOCUMENT CONSTITUTES AND
INFRINGEMENTS COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS
DOCUMENT IS (ARE) CONFIDENTIAL AND PROPRIETARY. NO PART OF THIS DOCUMENT IS TO BE
PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY
PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER.
CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATUMS & DIMENSIONS ON SITE AND
BANK. ANY DISCREPANCY MUST BE REPORTED TO THE PROJECT MANAGER PRIOR TO START
OF WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND
UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR
ANY OTHER CONSULTANTS' DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT.
PRIOR TO START OF WORK OR CONSTRUCTION, THE PROJECT MANAGER OF THE PROJECT
DRAWINGS SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.



01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE

DEVELOPMENT APP.

PROJECT DETAILS

NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS

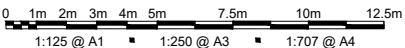
TBC

DRAWING TITLE

EROSION/SEDIMENT PLAN

DRAWN		
SK		
DESIGNED		
FB		
CHECK		
FB		
DATE DRAWN	DRAWING SCALE	SHEET SIZE
FEB 2022	1:125	A1

PROPOSED EROSION/SEDIMENT CONTROL PLAN



**ACCREDITED
BUILDING DESIGNER**

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER	DRAWING NUMBER	REVISION
FB0022	A.01.4	01

FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 106
info@femmebuild.com.au

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND
INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS
DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE
PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY
PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER.
CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATUMS & DIMENSIONS ON SITE AND
SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF
WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND
UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR
ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT
PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS
DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.

CONSTRUCTION NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- SUPPLY AND INSTALL 'BIFLEX' CHEMICAL TERMITE TREATMENT (UNLESS OTHERWISE APPROVED) TO COMPLY WITH AS3660.1 AND MANUFACTURER'S SPECIFICATIONS
- ALL BRICKWORK (INCLUDING BRICK VENEER) SHALL BE IN ACCORDANCE WITH AS3700- MASONRY CODE
- ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH AS1684. - UNLESS OTHERWISE APPROVED ROOF FRAMING SHALL BE OF TRADITIONAL TIMBER FRAMED CONSTRUCTION
- FOR ALL STRUCTURAL MEMBERS, FOOTINGS, & LOAD BEARING WALLS REFER TO STRUCTURAL DOCUMENTATION PREPARED BY ENGINEERS.

WALL SCHEDULE

WALL SARKING & BULK INSULATION AS
REQUIRED BY ENERGY ASSESSMENT

- CAVITY BRICK WALL.
- SELECTED, EXPOSED FACE BRICK (RE-USE RECYCLED BRICK FROM DEMOLITION.
- INTERIOR FINISH OTHER - PROVIDE FLUSH PLASTER FINISH.

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS
TBC

DRAWING TITLE
**PROPOSED CHILDCARE
GROUND FLOOR PLAN**

DRAWN
SK
DESIGNED
FB
CHECK
FB

DATE DRAWN
FEB 2022
DRAWING SCALE
1 : 100
SHEET SIZE
A1

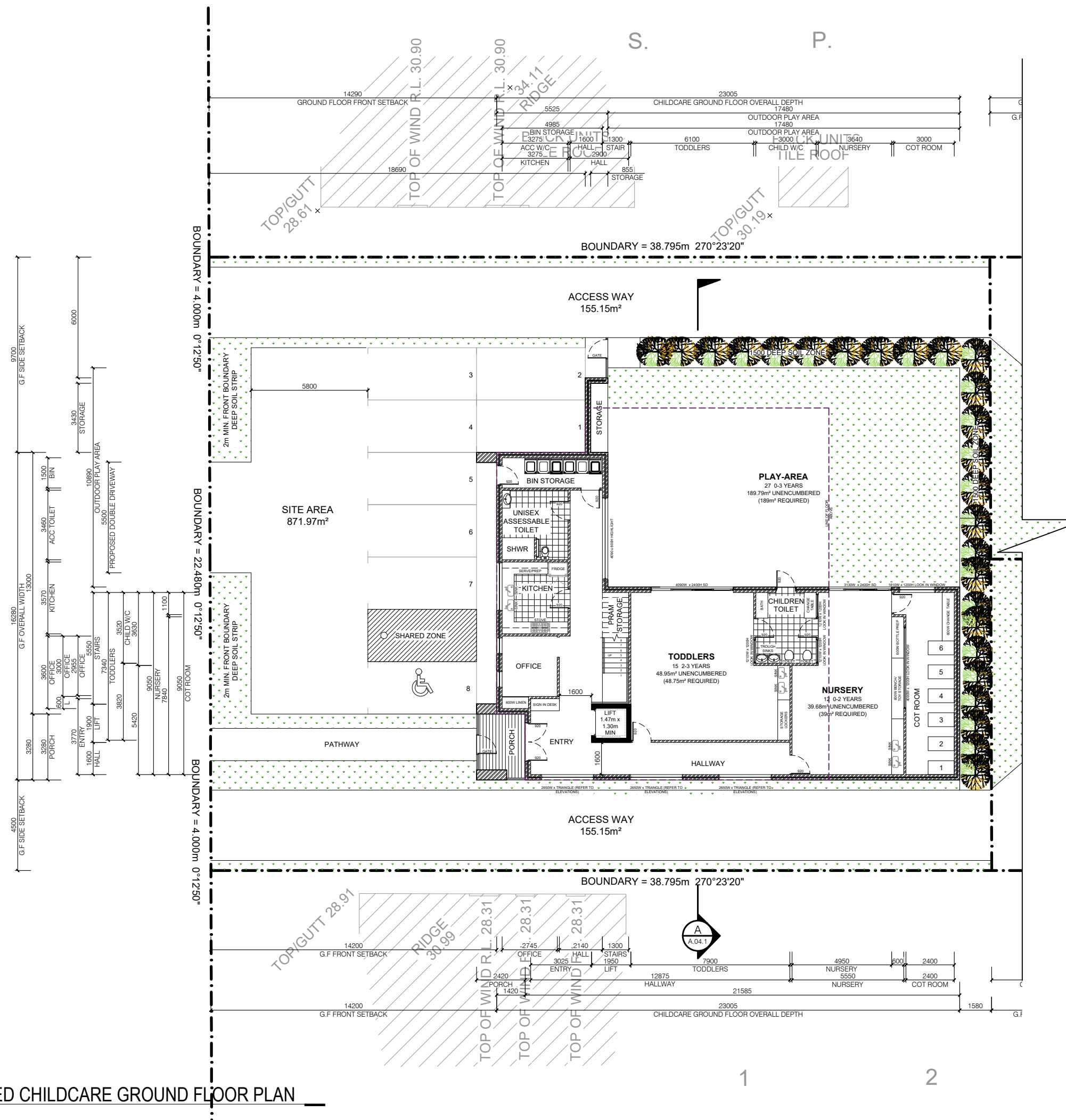
0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
X 1:100 @ A1 1:200 @ A3 1:267 @ A4



**ACCREDITED
BUILDING DESIGNER**

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022
DRAWING NUMBER
A.02.1
REVISION
01



PROPOSED CHILDCARE GROUND FLOOR PLAN
SCALE - 1 : 100

ELEVATION DIRECTION

FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 106
info@femmebuild.com.au

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND
INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS
DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE
PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY
PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER.
CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATINGS & DIMENSIONS ON SITE AND
SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF
WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND
UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR
ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT
PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS
DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.

CONSTRUCTION NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- SUPPLY AND INSTALL 'BIFLEX' CHEMICAL TERMITE TREATMENT (UNLESS OTHERWISE APPROVED) TO COMPLY WITH AS3660.1 AND MANUFACTURER'S SPECIFICATIONS
- ALL BRICKWORK (INCLUDING BRICK VENEER) SHALL BE IN ACCORDANCE WITH AS3700- MASONRY CODE
- ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH AS1684. - UNLESS OTHERWISE APPROVED ROOF FRAMING SHALL BE OF TRADITIONAL TIMBER FRAMED CONSTRUCTION
- FOR ALL STRUCTURAL MEMBERS, FOOTINGS, & LOAD BEARING WALLS REFER TO STRUCTURAL DOCUMENTATION PREPARED BY ENGINEERS.

WALL SCHEDULE

WALL SARKING & BULK INSULATION AS
REQUIRED BY ENERGY ASSESSMENT

- /// CAVITY BRICK WALL.
SELECTED, EXPOSED FACE BRICK
(RE-USE RECYCLED BRICK FROM
DEMOLITION.
INTERIOR FINISH OTHER - PROVIDE
FLUSH PLASTER FINISH.

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

DEVELOPMENT APP.

NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS
TBC

PROPOSED CHILDCARE FIRST FLOOR PLAN

DRAWN
SK
DESIGNED
FB
CHECK
FB

DATE DRAWN
FEB 2022
DRAWING SCALE
1 : 100
SHEET SIZE
A1

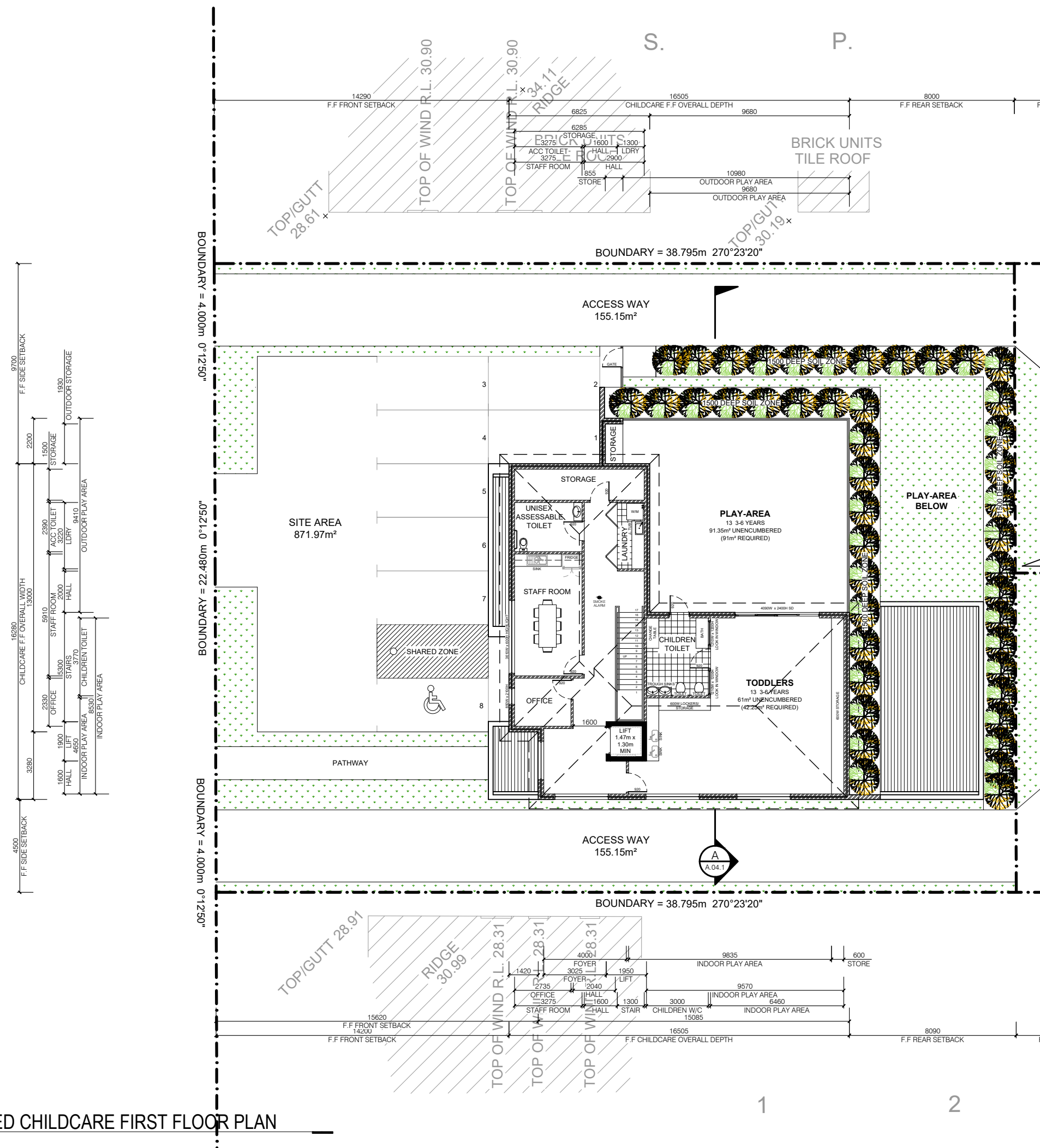
0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
X 1:100 @ A1 1:200 @ A3 1:267 @ A4



ACCREDITED
BUILDING DESIGNER

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022
DRAWING NUMBER
A.02.2
REVISION
01



PROPOSED CHILDCARE FIRST FLOOR PLAN
SCALE - 1 : 100

ELEVATION DIRECTION

CONSTRUCTION NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- SUPPLY AND INSTALL 'BIFLEX' CHEMICAL TERMITE TREATMENT (UNLESS OTHERWISE APPROVED) TO COMPLY WITH AS3660.1 AND MANUFACTURER'S SPECIFICATIONS
- ALL BRICKWORK (INCLUDING BRICK VENEER) SHALL BE IN ACCORDANCE WITH AS3700- MASONRY CODE
- ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH AS1684. - UNLESS OTHERWISE APPROVED ROOF FRAMING SHALL BE OF TRADITIONAL TIMBER FRAMED CONSTRUCTION
- FOR ALL STRUCTURAL MEMBERS, FOOTINGS, & LOAD BEARING WALLS REFER TO STRUCTURAL DOCUMENTATION PREPARED BY ENGINEERS.

WALL SCHEDULE

WALL SARKING & BULK INSULATION AS REQUIRED BY ENERGY ASSESSMENT

- CAVITY BRICK WALL.
- SELECTED, EXPOSED FACE BRICK (RE-USE RECYCLED BRICK FROM DEMOLITION).
- INTERIOR FINISH OTHER - PROVIDE FLUSH PLASTER FINISH.

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS

TBC

DRAWING TITLE

**PROPOSED REAR UNITS
GROUND FLOOR PLAN**

DRAWN
SK

DESIGNED
FB

CHECK
FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1 : 100

SHEET SIZE
A1

0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
X 1:100 @ A1 1:200 @ A3 1:267 @ A4



**ACCREDITED
BUILDING DESIGNER**

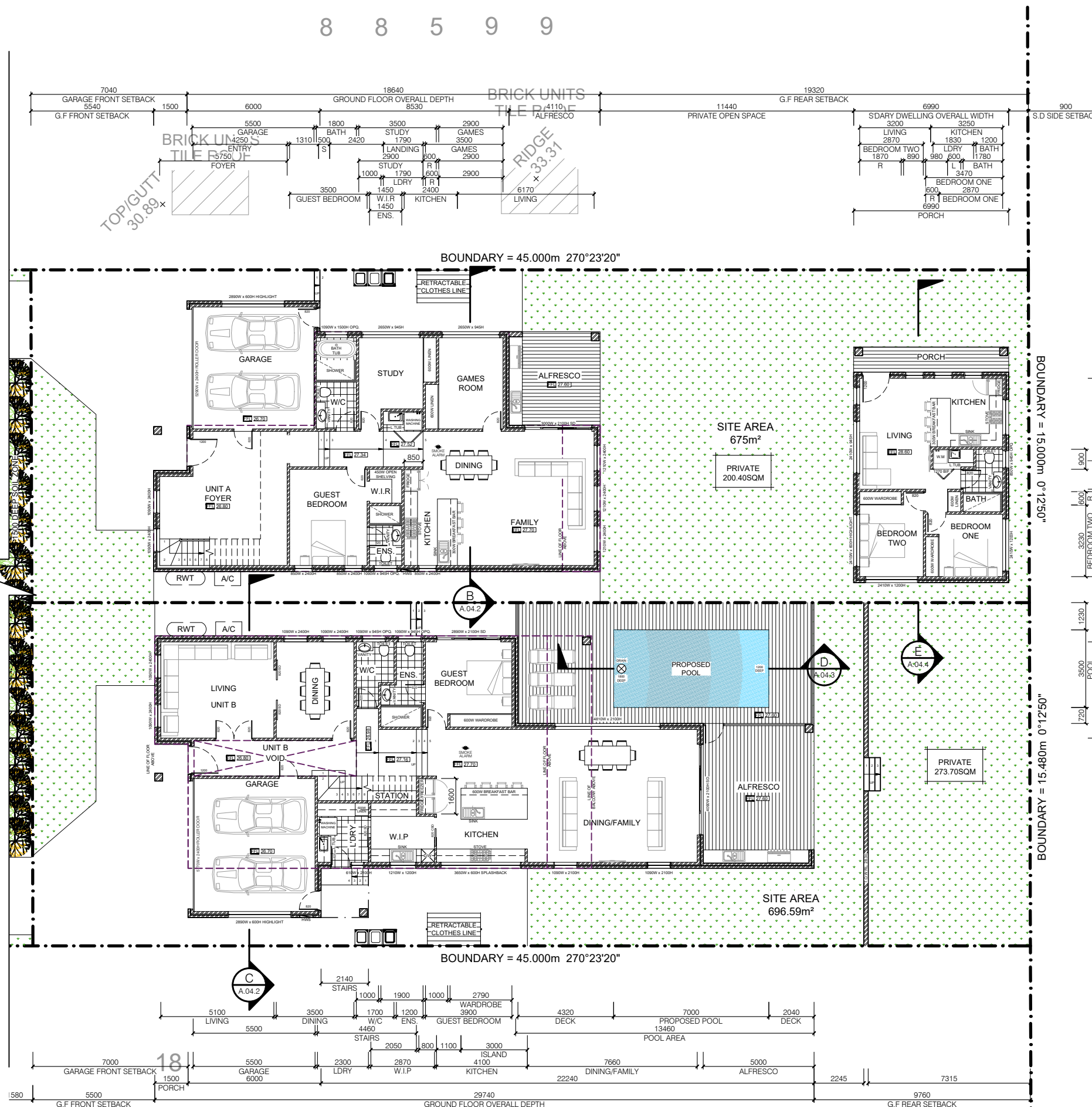
ACCREDITATION NUMBER: 6613

MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022

DRAWING NUMBER
A.02.3

REVISION
01



ELEVATION DIRECTION

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER.
CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATINGS & DIMENSIONS ON SITE AND SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.

CONSTRUCTION NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- SUPPLY AND INSTALL 'BIFLEX' CHEMICAL TERMITE TREATMENT (UNLESS OTHERWISE APPROVED) TO COMPLY WITH AS3660.1 AND MANUFACTURER'S SPECIFICATIONS
- ALL BRICKWORK (INCLUDING BRICK VENEER) SHALL BE IN ACCORDANCE WITH AS3700- MASONRY CODE
- ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH AS1684. - UNLESS OTHERWISE APPROVED ROOF FRAMING SHALL BE OF TRADITIONAL TIMBER FRAMED CONSTRUCTION
- FOR ALL STRUCTURAL MEMBERS, FOOTINGS, & LOAD BEARING WALLS REFER TO STRUCTURAL DOCUMENTATION PREPARED BY ENGINEERS.

WALL SCHEDULE

WALL SARKING & BULK INSULATION AS REQUIRED BY ENERGY ASSESSMENT

- CAVITY BRICK WALL.
- SELECTED, EXPOSED FACE BRICK (RE-USE RECYCLED BRICK FROM DEMOLITION.
- INTERIOR FINISH OTHER - PROVIDE FLUSH PLASTER FINISH.

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS
TBC

DRAWING TITLE
**PROPOSED REAR UNITS
FIRST FLOOR PLAN**

DRAWN
SK
DESIGNED
FB
CHECK
FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1 : 100

SHEET SIZE
A1

0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
X 1:100 @ A1 1:200 @ A3 1:267 @ A4



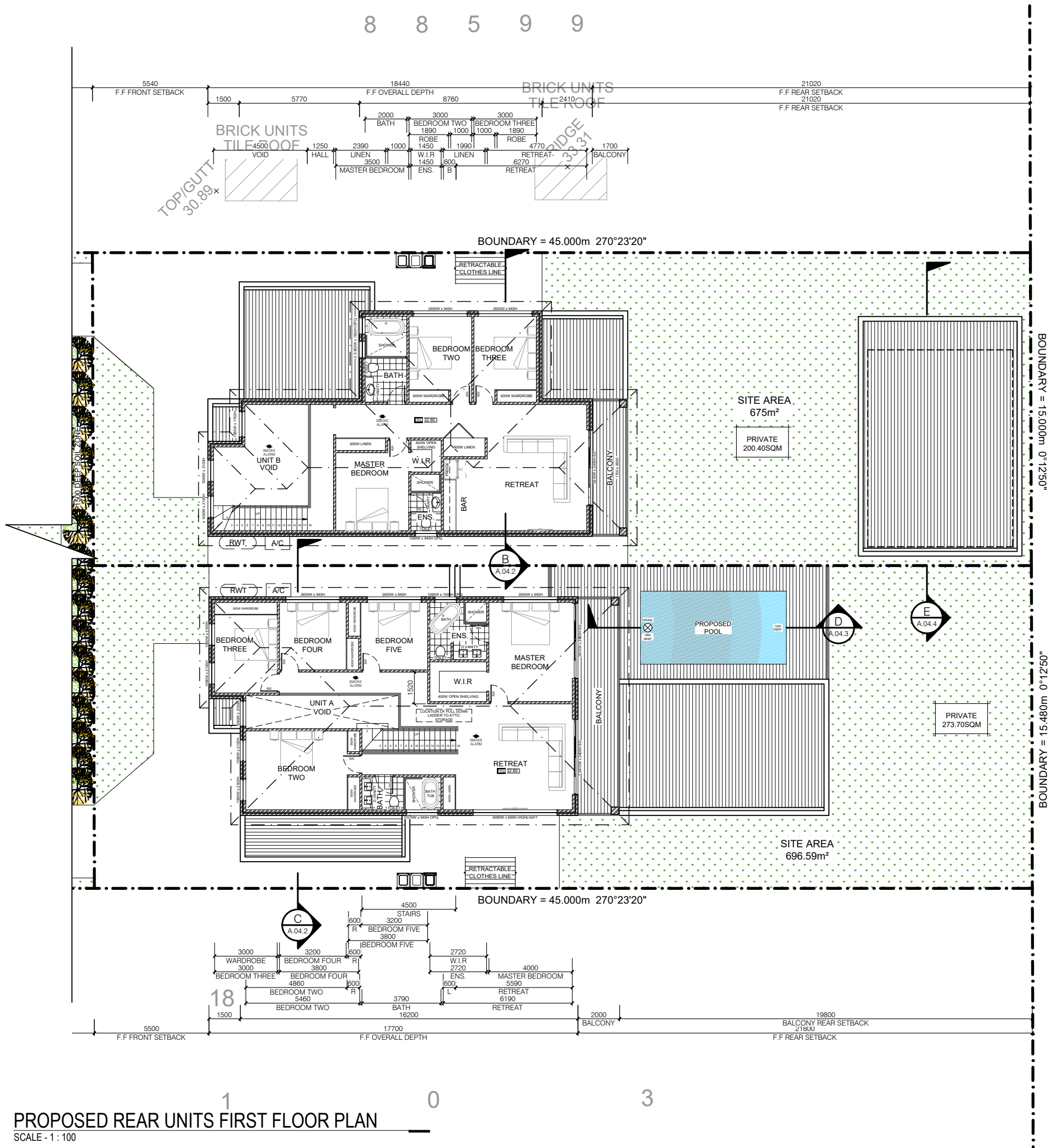
**ACCREDITED
BUILDING DESIGNER**

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022

DRAWING NUMBER
A.02.4

REVISION
01



ELEVATION DIRECTION

CONSTRUCTION NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- SUPPLY AND INSTALL 'BIFLEX' CHEMICAL TERMITE TREATMENT (UNLESS OTHERWISE APPROVED) TO COMPLY WITH AS3660.1 AND MANUFACTURER'S SPECIFICATIONS
- ALL BRICKWORK (INCLUDING BRICK VENEER) SHALL BE IN ACCORDANCE WITH AS3700- MASONRY CODE
- ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH AS1684. - UNLESS OTHERWISE APPROVED ROOF FRAMING SHALL BE OF TRADITIONAL TIMBER FRAMED CONSTRUCTION
- FOR ALL STRUCTURAL MEMBERS, FOOTINGS, & LOAD BEARING WALLS REFER TO STRUCTURAL DOCUMENTATION PREPARED BY ENGINEERS.

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE DEVELOPMENT APP.

PROJECT DETAILS NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS

TBC

DRAWING TITLE

PROPOSED ROOF PLAN

DRAWN

SK

DESIGNED

FB

CHECK

FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1 : 125

SHEET SIZE
A1

0 1m 2m 3m 4m 5m 7.5m 10m 12.5m
1:125 @ A1 1:250 @ A3 1:707 @ A4



ACCREDITED
BUILDING DESIGNER

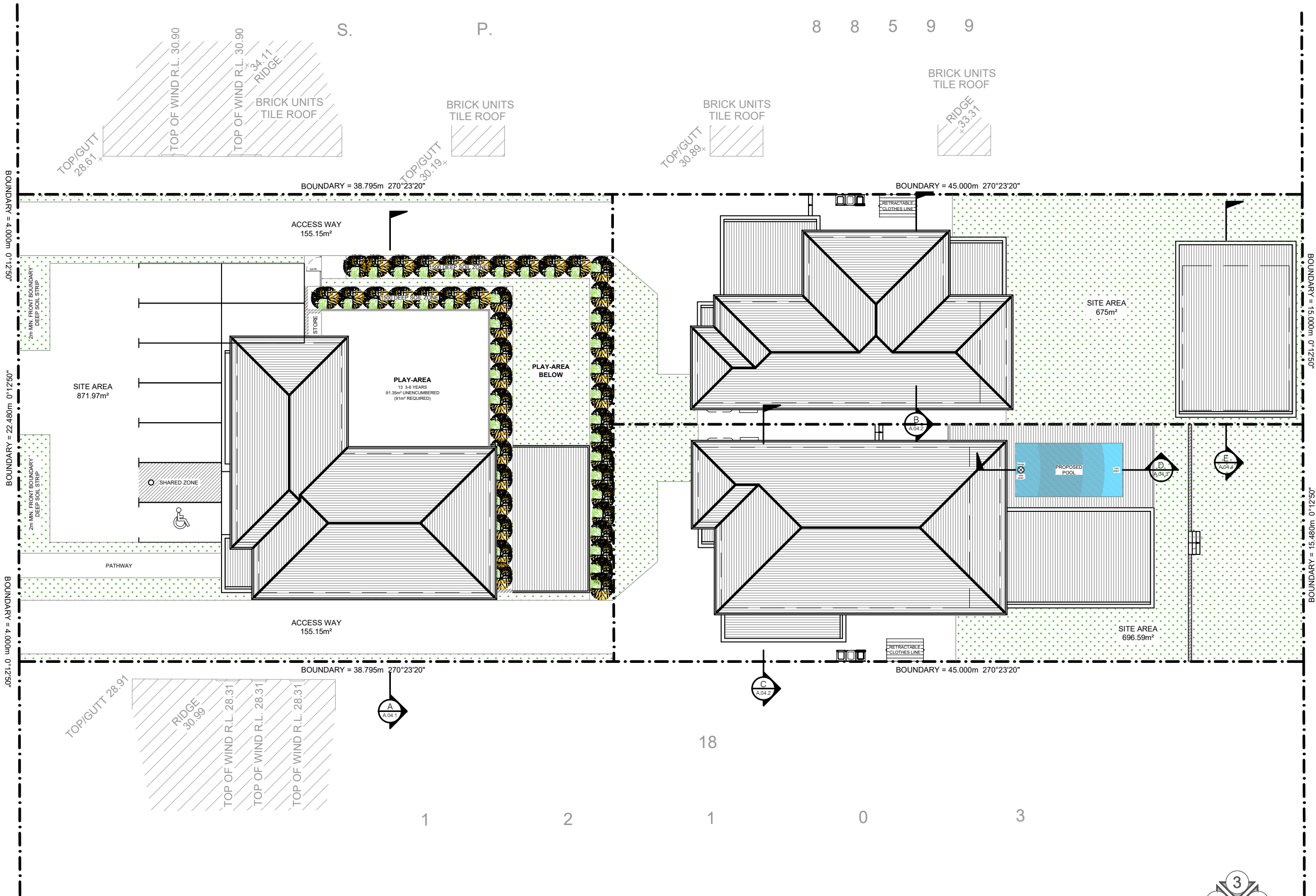
ACCREDITATION NUMBER: 6613

MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022

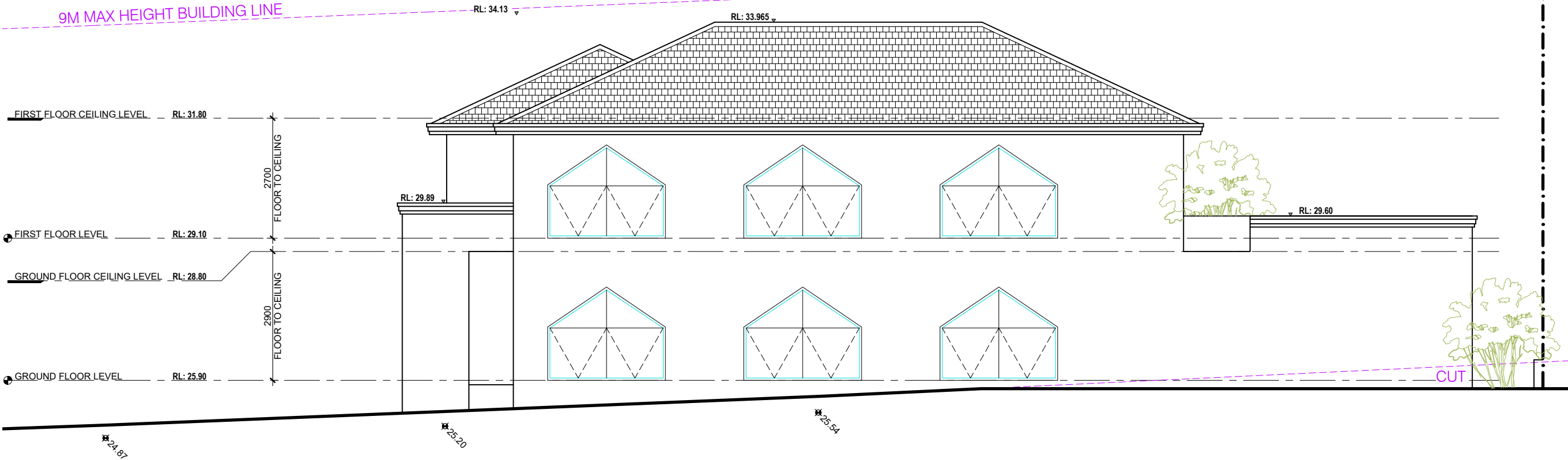
DRAWING NUMBER
A.02.3

REVISION
01



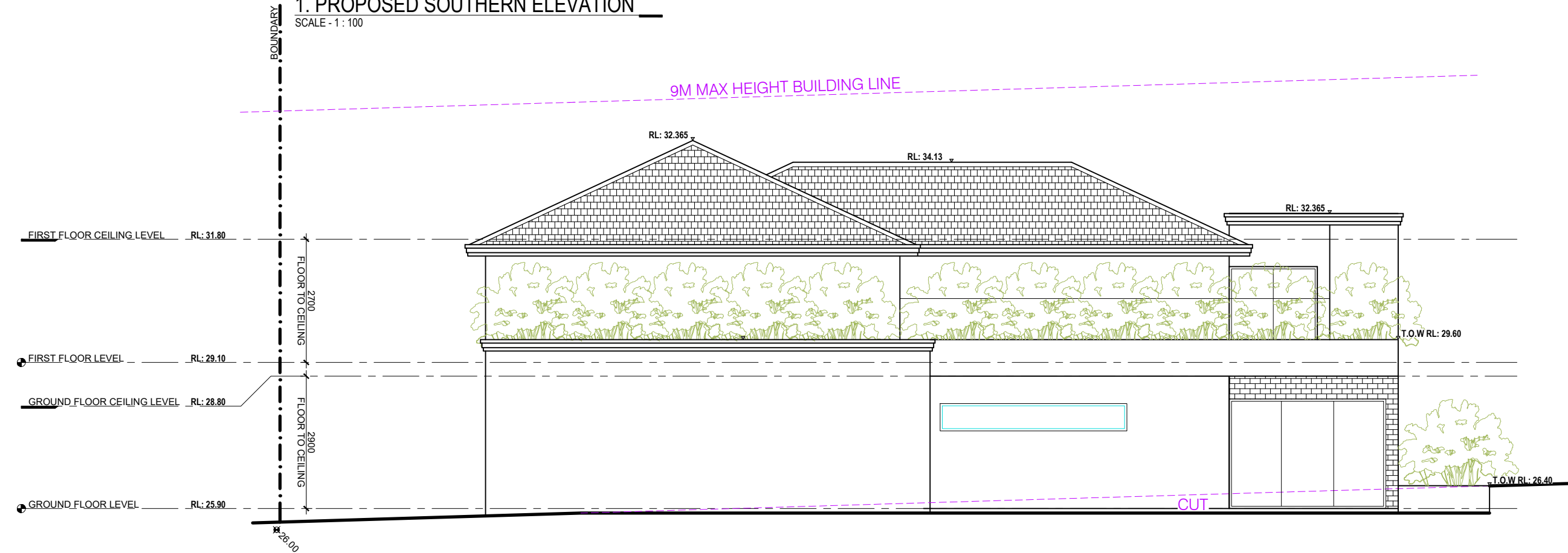
ELEVATION DIRECTION

PROPOSED ROOF PLAN
SCALE - 1 : 100



1. PROPOSED SOUTHERN ELEVATION

SCALE - 1 : 100



2. PROPOSED EASTERN ELEVATION

SCALE - 1 : 100

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT
21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS
TBC

DRAWING TITLE
PROPOSED
ELEVATIONS 1 & 2

DRAWN
SK
DESIGNED
FB
CHECK
FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1 : 100

SHEET SIZE
A3

0 1m 2m 3m 4m 5m 7.5m 10m 12.5m
1:125 @ A1 1:250 @ A3 1:707 @ A4



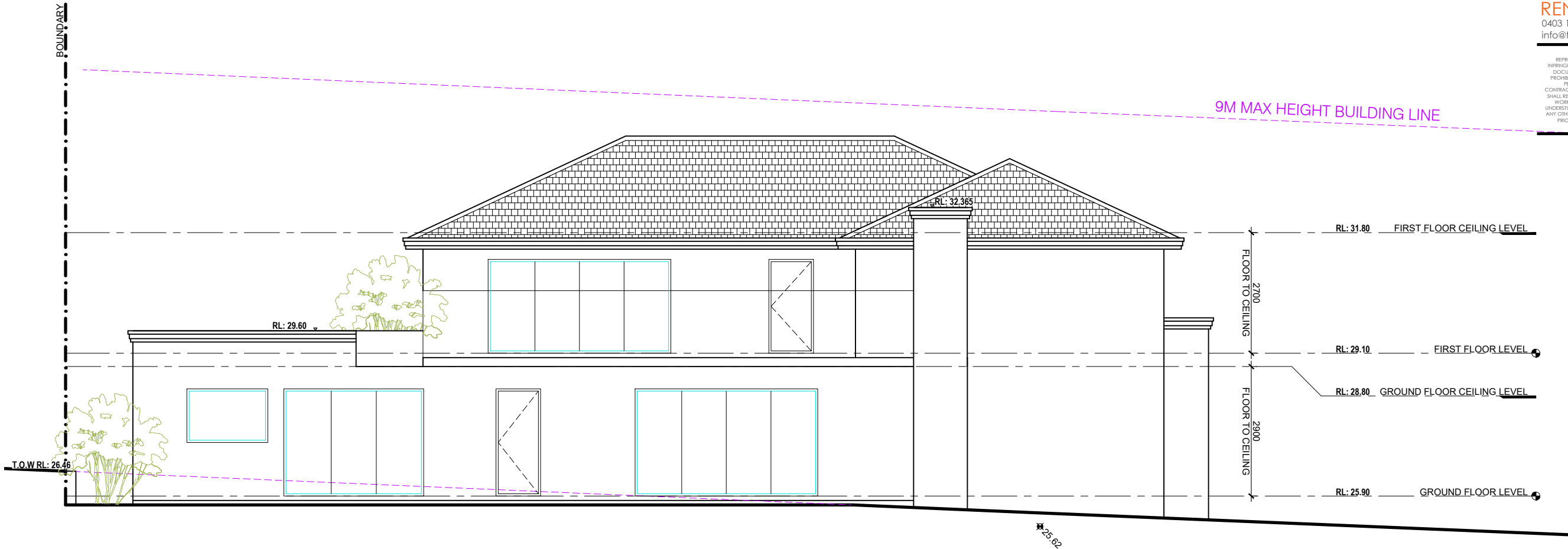
ACCREDITED
BUILDING DESIGNER

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022

DRAWING NUMBER
A.03.1

REVISION
01



3. PROPOSED NORTHERN ELEVATION
SCALE - 1 : 100



4. PROPOSED WESTERN ELEVATION
SCALE - 1 : 100

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT
21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS
TBC

DRAWING TITLE
PROPOSED
ELEVATIONS 1 & 2

DRAWN
SK
DESIGNED
FB
CHECK
FB

DATE DRAWN
FEB 2022
DRAWING SCALE
1 : 100
SHEET SIZE
A3



ACCREDITED
BUILDING DESIGNER

ACCREDITATION NUMBER: 6613
MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022
DRAWING NUMBER
A.03.2
REVISION
01

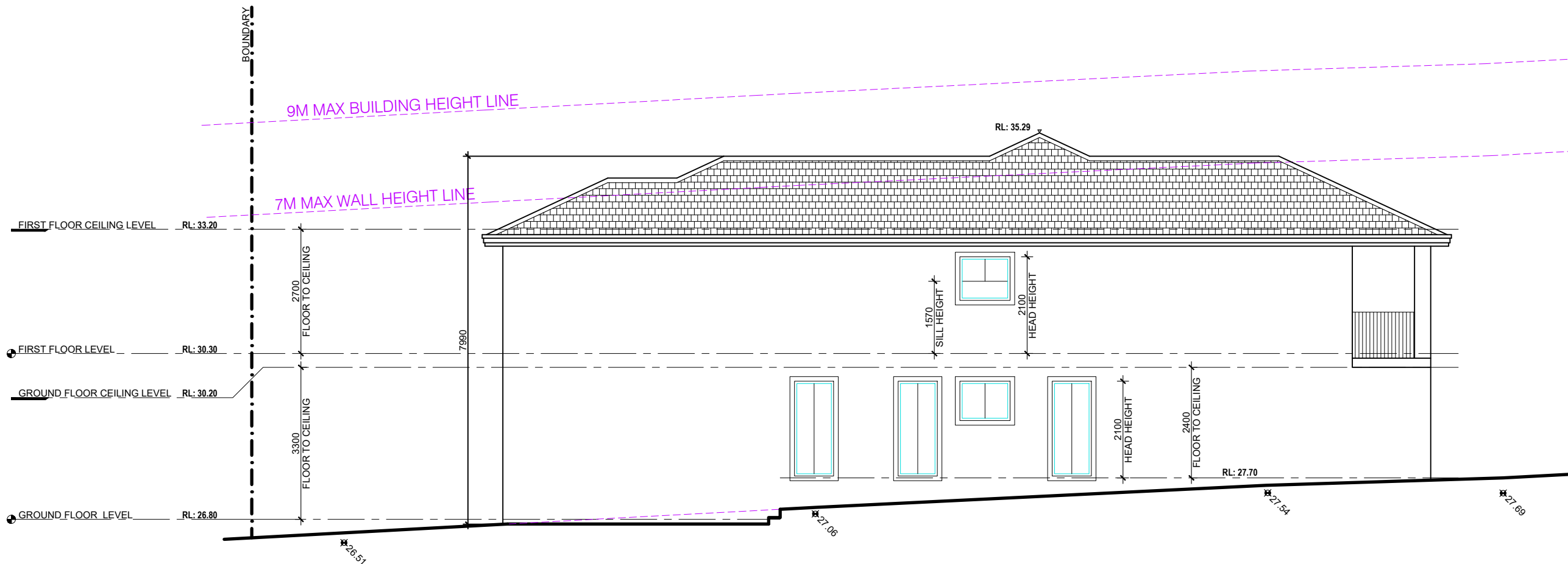
FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 106

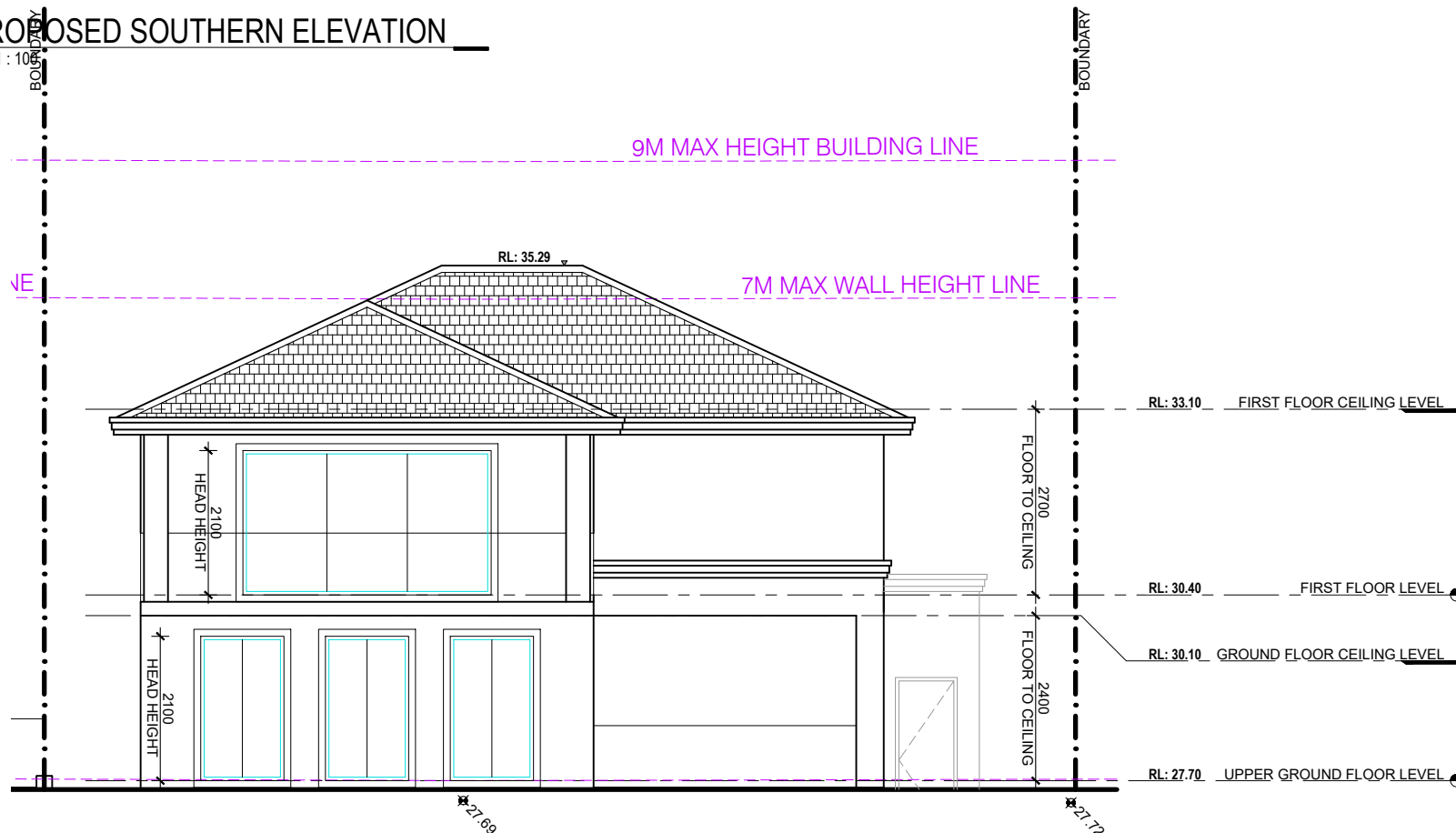
info@femmebuild.com.au

REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER. CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATINGS & DIMENSIONS ON SITE AND SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.



1. PROPOSED SOUTHERN ELEVATION

SCALE - 1 : 100



2. PROPOSED EASTERN ELEVATION

SCALE - 1 : 100

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE

DEVELOPMENT APP.

PROJECT DETAILS

NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS

TBC

DRAWING TITLE

UNIT A PROPOSED
ELEVATIONS 1 & 2

DRAWN

SK

DESIGNED

FB

CHECK

FB

DATE DRAWN

FEB 2022

DRAWING SCALE

1 : 100

SHEET SIZE

A3

0 1m 2m 3m 4m 5m 7.5m 10m 12.5m

1:125 @ A1 1:250 @ A3 1:707 @ A4



ACCREDITED
BUILDING DESIGNER

ACCREDITATION NUMBER: 6613

MEMBER NUMBER: 6763-21

PROJECT NUMBER

FB0022

DRAWING NUMBER

A.03.3

REVISION

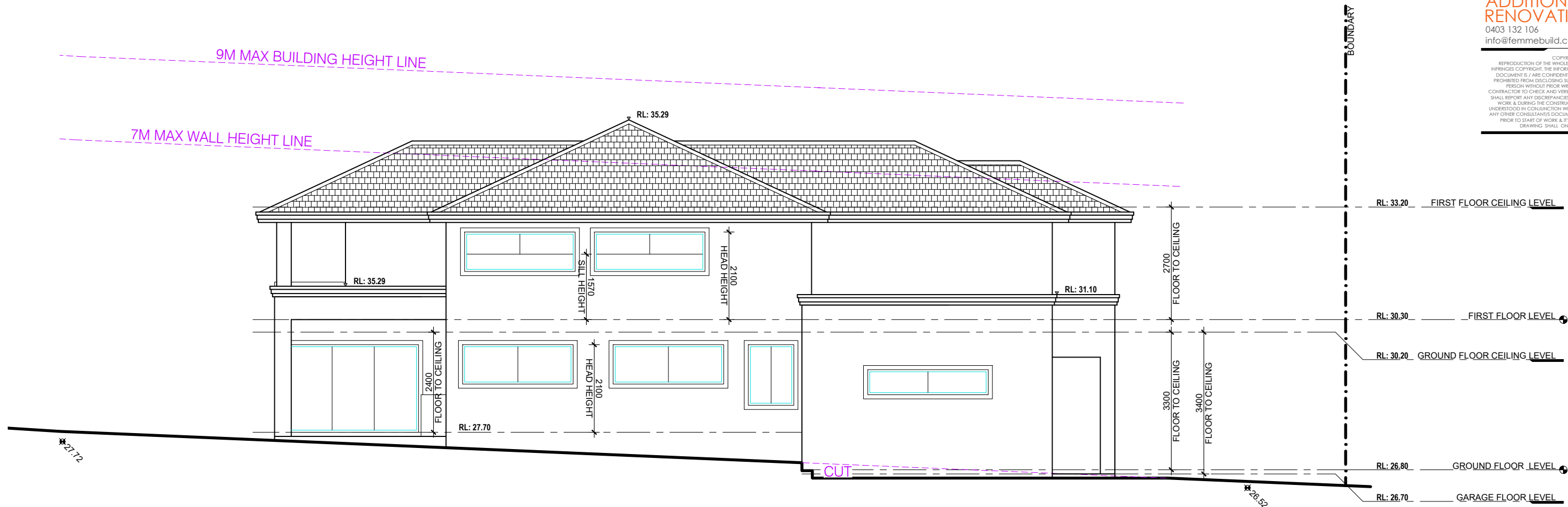
01

FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

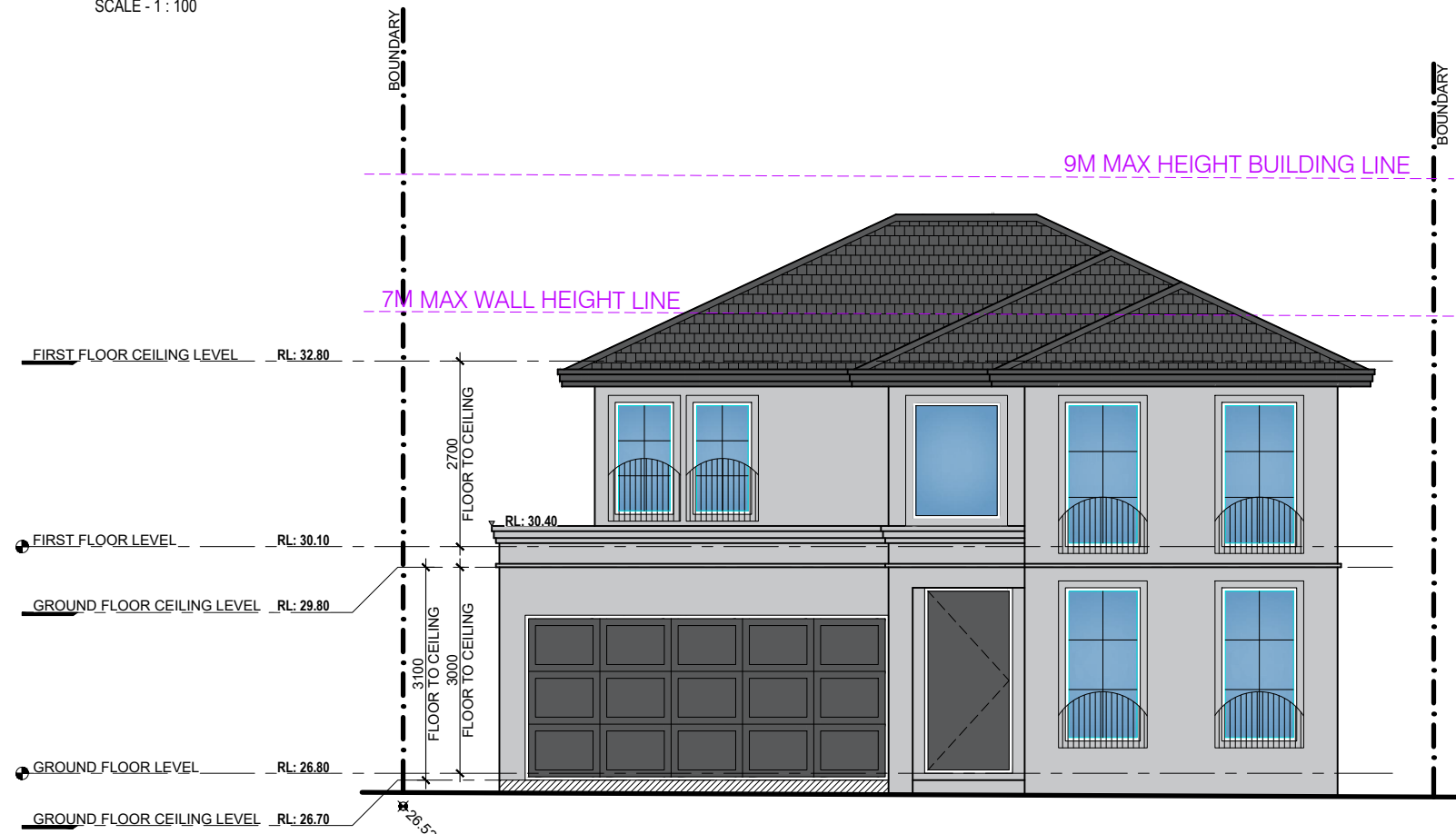
0403 132 106
info@femmebuild.com.au

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND
INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS
DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE
PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY
PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER.
CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATINGS & DIMENSIONS ON SITE AND
SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF
WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND
UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR
ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT
PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS
DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.



3. PROPOSED NORTHERN ELEVATION

SCALE - 1 : 100



4. PROPOSED WESTERN ELEVATION

SCALE - 1 : 100

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT
21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS
TBC

DRAWING TITLE
**UNIT A PROPOSED
ELEVATIONS 3 & 4**

DRAWN
SK
DESIGNED
FB
CHECK
FB

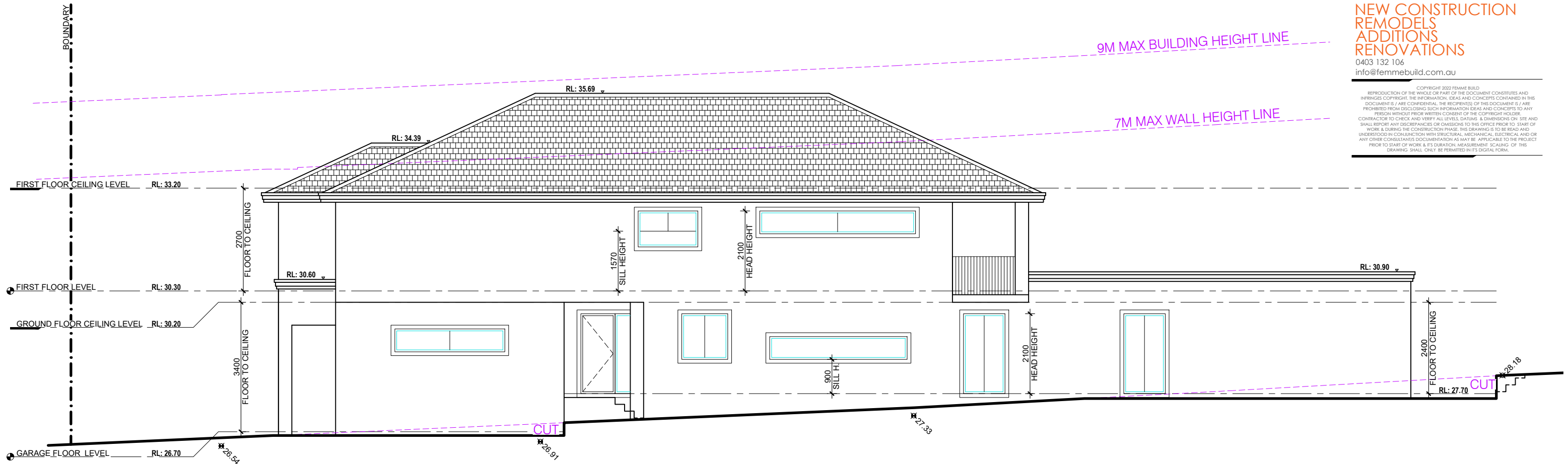
DATE DRAWN
FEB 2022
DRAWING SCALE
1 : 100
SHEET SIZE
A3



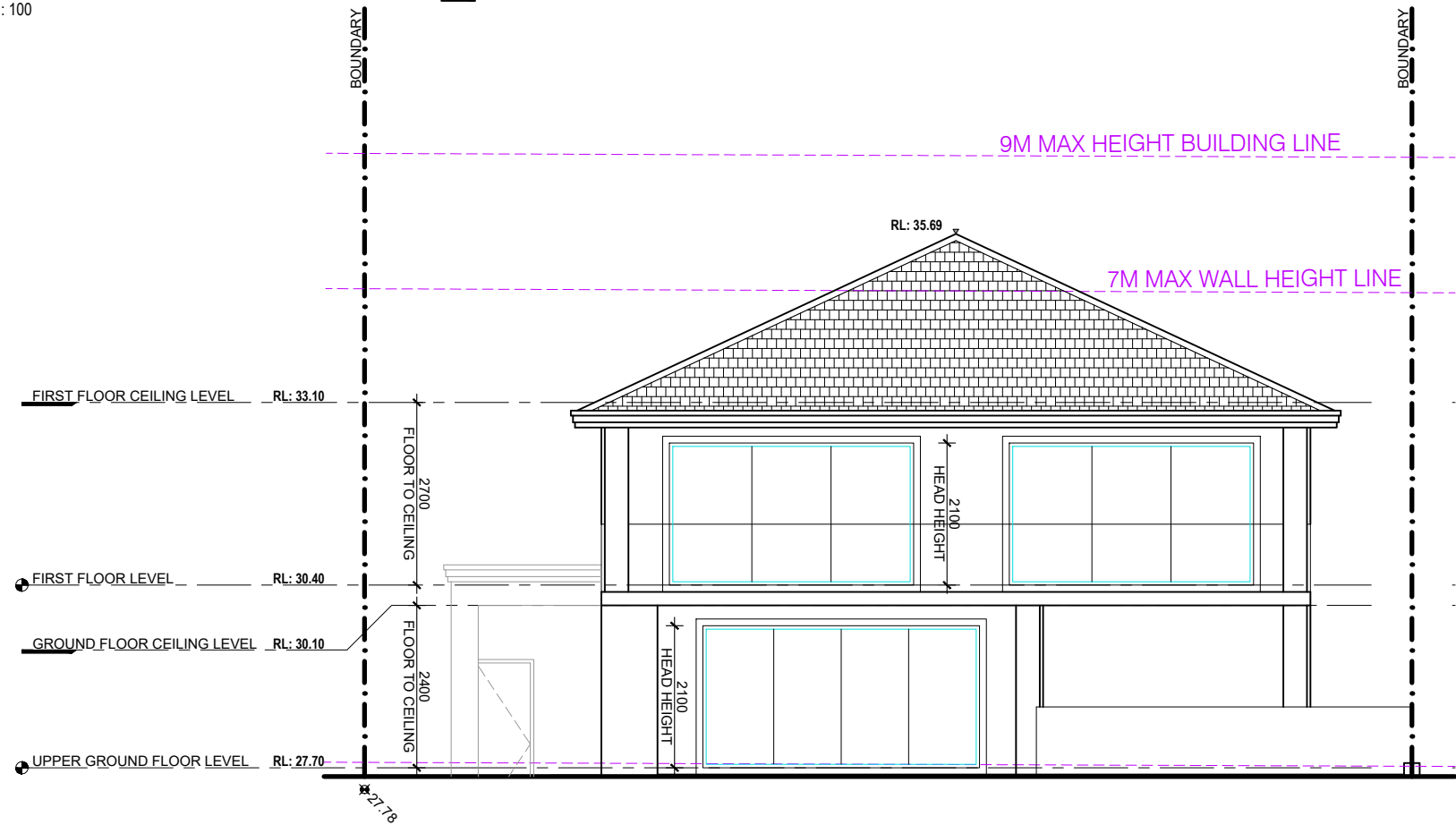
bdad
**ACCREDITED
BUILDING DESIGNER**

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022
DRAWING NUMBER
A.03.4
REVISION
01



1. PROPOSED SOUTHERN ELEVATION
SCALE - 1 : 100



2. PROPOSED EASTERN ELEVATION
SCALE - 1 : 100

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE
PROJECT STAGE			
DEVELOPMENT APP.			
PROJECT DETAILS			
NEW DEVELOPMENT			
21-23 ELLIS STREET, CONDELL PARK NSW 2200			
CLIENT DETAILS			
TBC			
DRAWING TITLE			
UNIT B PROPOSED ELEVATIONS 1 & 2			
DRAWN			
SK			
DESIGNED			
FB			
CHECK			
FB			
DATE DRAWN		DRAWING SCALE	SHEET SIZE
FEB 2022		1 : 100	A3
0 1m 2m 3m 4m 5m 7.5m 10m 12.5m			
1:125 @ A1 1:250 @ A3 1:707 @ A4			
bdaa			
ACCREDITED BUILDING DESIGNER			
ACCREDITATION NUMBER: 6613		MEMBER NUMBER: 6763-21	
PROJECT NUMBER		DRAWING NUMBER	REVISION
FB0022		A.03.5	01

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THE DOCUMENT CONSTITUTES AND
INFRINGES COPYRIGHT, THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS
DOCUMENT IS ARE CONFIDENTIAL, THE RECEIPT OF THIS DOCUMENT IS ARE
PROHIBITING FROM DISSEMINATING OR REPRODUCING THE INFORMATION TO ANY
PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER.
CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATUMS, & DIMENSIONS ON SITE AND
SHALL REPORT ANY DISCREPANCY OR OMISSIONS TO THIS OFFICE PRIOR TO START OF
WORK & DURING THE CONSTRUCTION PERIOD. THIS DOCUMENT IS TO BE READ AND
UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR
ANY OTHER CONSULTANTS' DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT.
PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL ACQUIRE ALL OF THIS
DRAWING SHALL ONLY BE FEMME BUILD'S DIGITAL FORM.



01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS

NEW DEVELOPMENT

21-23 ELLIS STREET,
CONDELL PARK NSW 2200

CLIENT DETAILS

TBC

DRAWING TITLE

UNIT B PROPOSED
ELEVATIONS 3 & 4

DRAW

SK

DESIGNED

FB

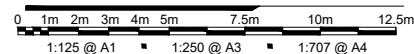
CHECK

FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1 : 100

SHEET SIZE
A3



ACCREDITATION NUMBER: 6613

MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022

DRAWING NUMBER
A.03.6

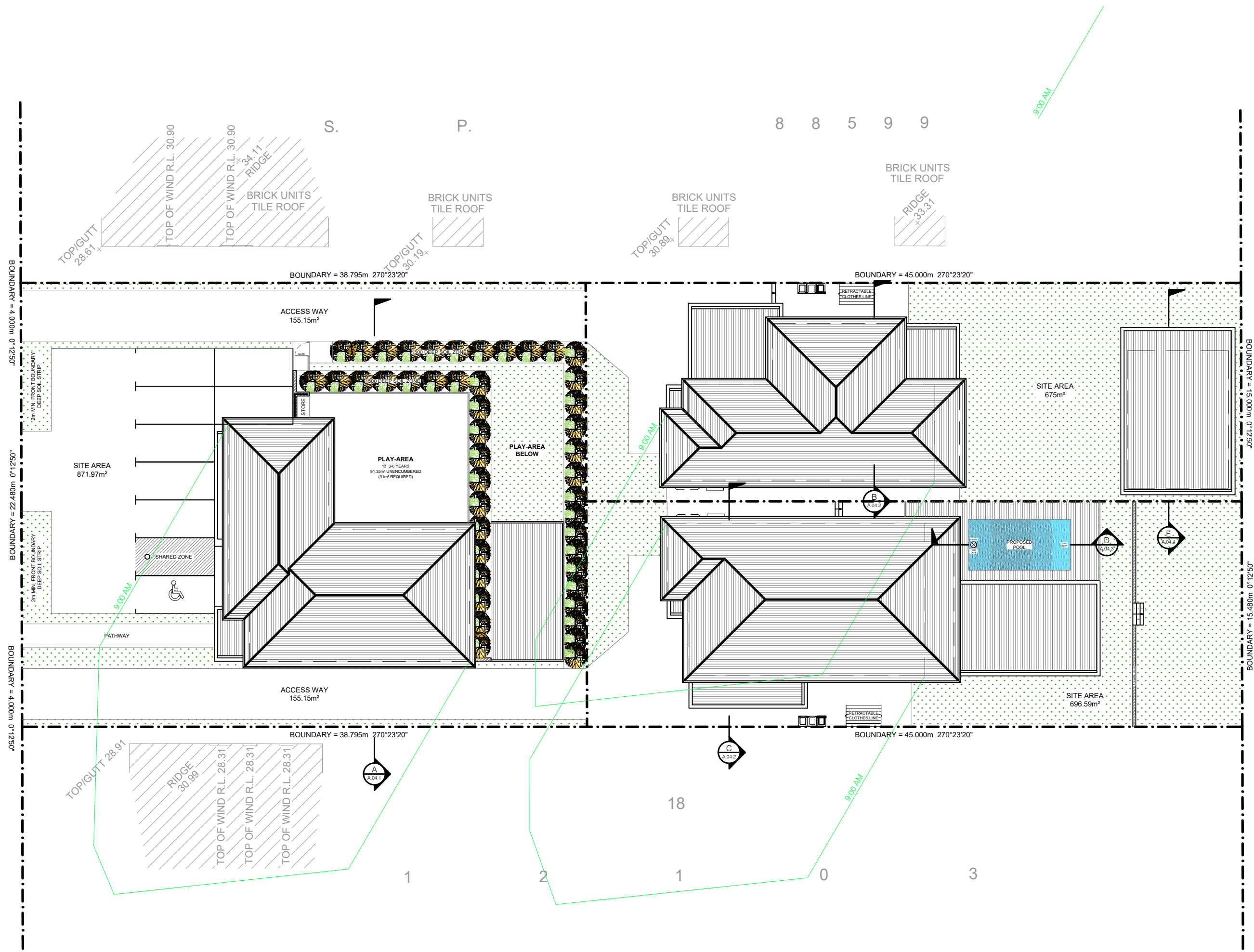
REVISION
01

FEMME BUILD

NEW CONSTRUCTION
REMODELS
ADDITIONS
RENOVATIONS

0403 132 106
info@femmebuild.com.au

COPYRIGHT 2022 FEMME BUILD
REPRODUCTION OF THE WHOLE OR PART OF THIS DOCUMENT CONSTITUTES AND INFRINGES COPYRIGHT. THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS DOCUMENT IS / ARE CONFIDENTIAL. THE RECIPIENTS OF THIS DOCUMENT IS / ARE PROHIBITED FROM DISCLOSING SUCH INFORMATION IDEAS AND CONCEPTS TO ANY PERSON WITHOUT PRIOR WRITTEN CONSENT OF THE COPYRIGHT HOLDER. CONTRACTOR TO CHECK AND VERIFY ALL LEVELS, DATINGS & DIMENSIONS ON SITE AND SHALL REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO START OF WORK & DURING THE CONSTRUCTION PHASE. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OR ANY OTHER CONSULTANT'S DOCUMENTATION AS MAY BE APPLICABLE TO THE PROJECT PRIOR TO START OF WORK & ITS DURATION. MEASUREMENT SCALING OF THIS DRAWING SHALL ONLY BE PERMITTED IN ITS DIGITAL FORM.



01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT

**21-23 ELLIS STREET,
CONDELL PARK NSW 2200**

CLIENT DETAILS
TBC

DRAWING TITLE
**PROPOSED SHADOW
DIAGRAMS - JUNE 21**

DRAWN
SK

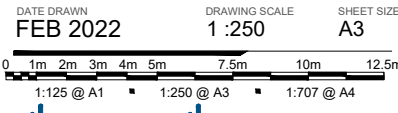
DESIGNED
FB

CHECK
FB

DATE DRAWN
FEB 2022

DRAWING SCALE
1:250

SHEET SIZE
A3



**ACCREDITED
BUILDING DESIGNER**

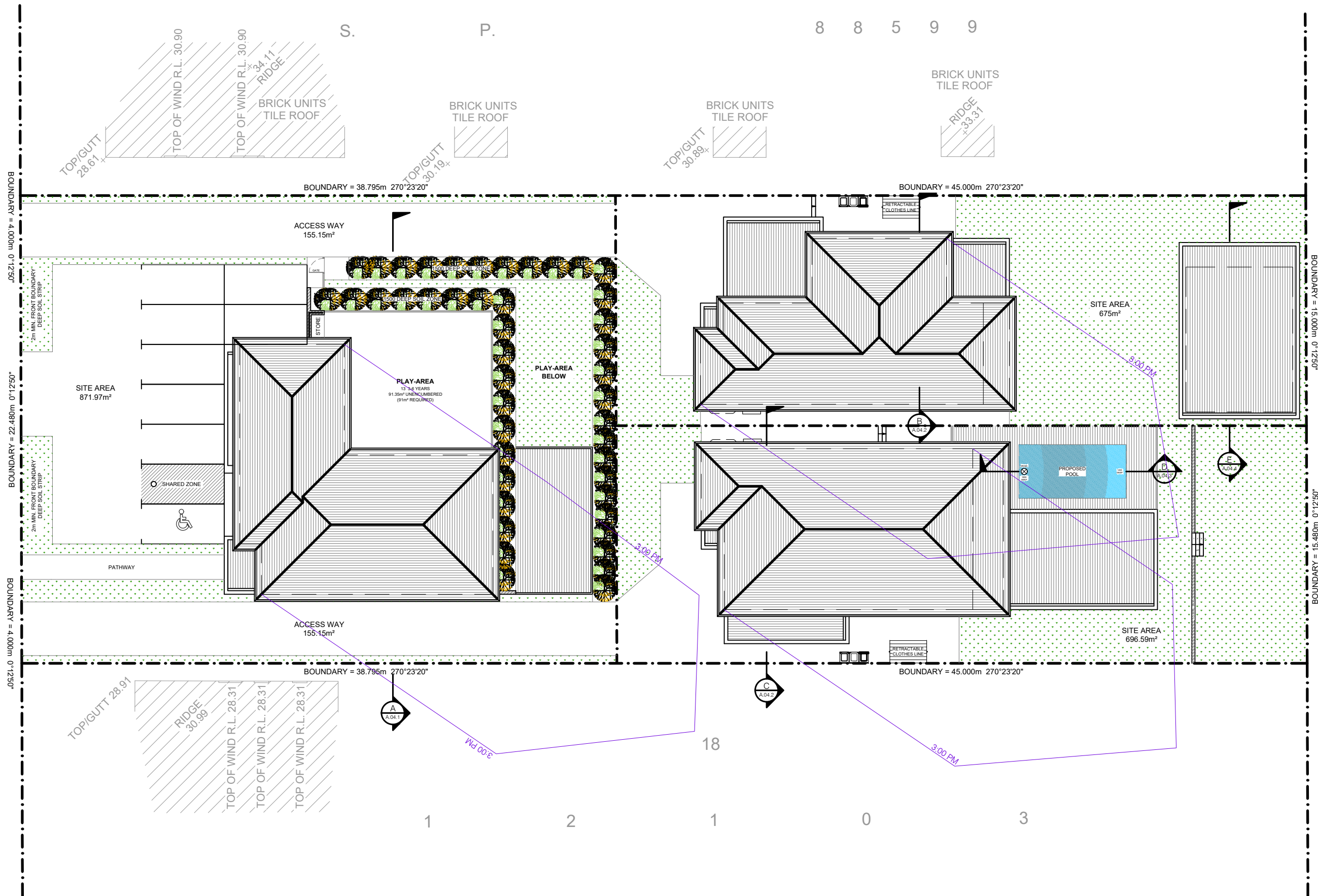
ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER FB0022	DRAWING NUMBER A.06.1	REVISION 01
---------------------------------	---------------------------------	-----------------------

PROPOSED SHADOW DIAGRAM JUNE 21st 9AM
SCALE - 1:250



PROPOSED SHADOW DIAGRAM JUNE 21st 12PM
SCALE - 1 : 250



PROPOSED SHADOW DIAGRAM JUNE 21st 3PM
SCALE - 1 : 250

01	DEVELOPMENT APPLICATION	SK	28.02.22
REV	AMENDMENT DETAILS	BY	DATE

PROJECT STAGE
DEVELOPMENT APP.

PROJECT DETAILS
NEW DEVELOPMENT

**21-23 ELLIS STREET,
CONDELL PARK NSW 2200**

CLIENT DETAILS
TBC

DRAWING TITLE
**PROPOSED SHADOW
DIAGRAMS - JUNE 21**

DRAWN
SK
DESIGNED
FB
CHECK
FB

DATE DRAWN
FEB 2022
DRAWING SCALE
1 : 250
SHEET SIZE
A3

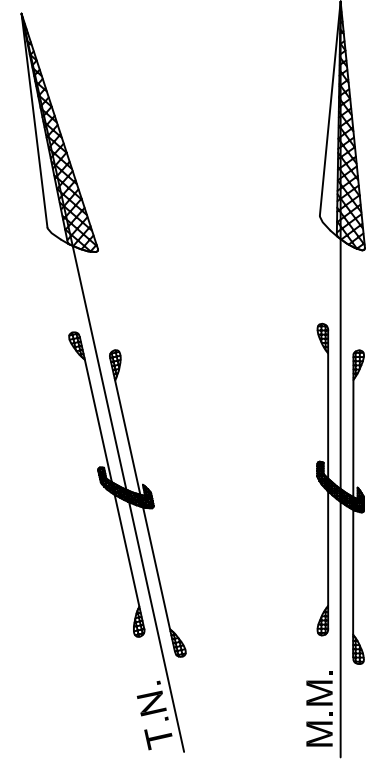
0 1m 2m 3m 4m 5m 7.5m 10m 12.5m
1:125 @ A1 1:250 @ A3 1:707 @ A4



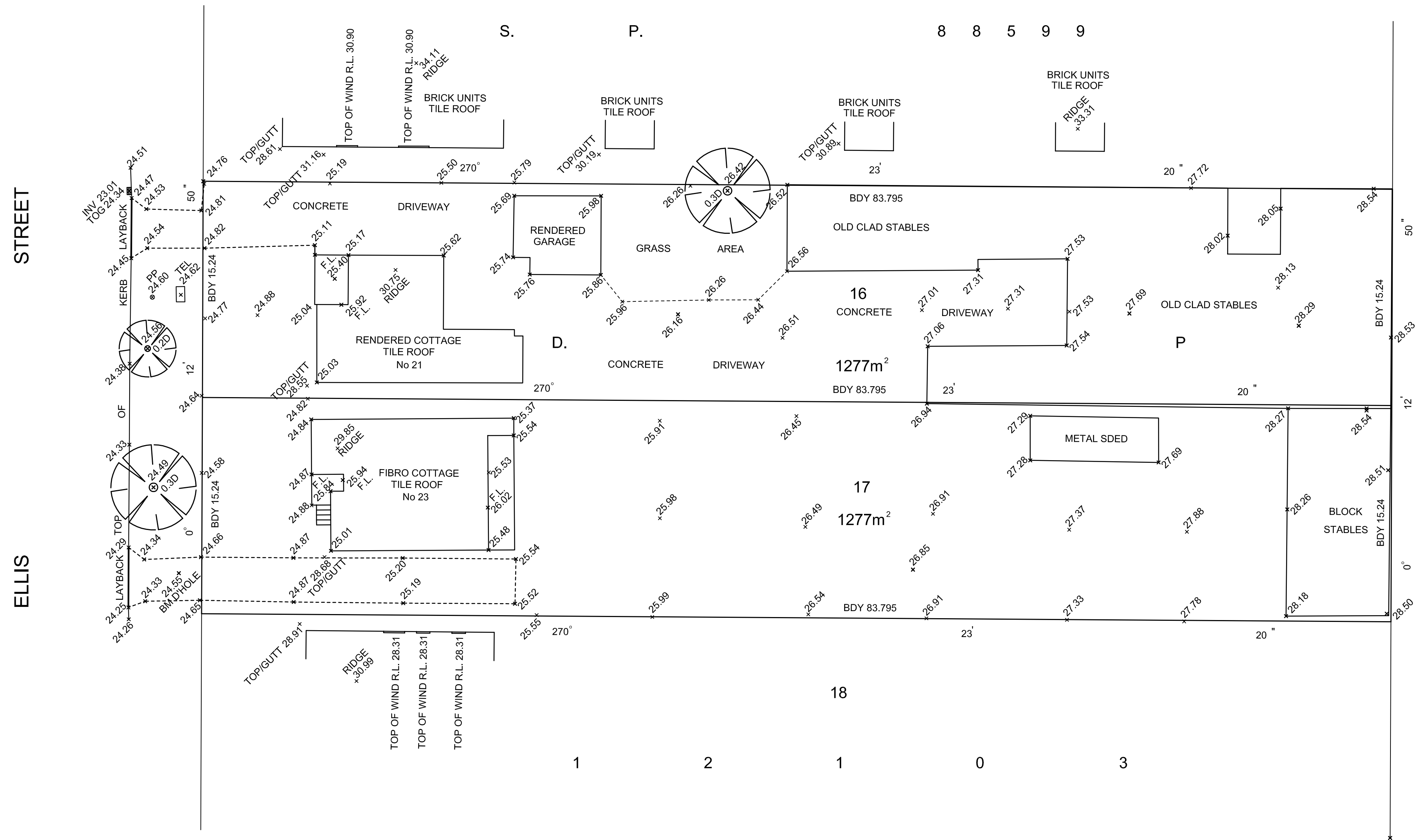
**ACCREDITED
BUILDING DESIGNER**

ACCREDITATION NUMBER: 6613 MEMBER NUMBER: 6763-21

PROJECT NUMBER
FB0022
DRAWING NUMBER
A.06.3
REVISION
01



DETAIL AND LEVEL SURVEY OF
LOTS 16 & 17 D.P. 12103
No's 21-23 ELLIS STREET, CONDELL PARK



NOTES
THIS PLAN HAS BEEN PREPARED FOR LEVEL INFORMATION ONLY
NO BOUNDARIES HAVE BEEN MARKED OR SURVEYED
THE LOCATION OF IMPROVEMENTS IN RELATION TO THE BOUNDARIES
HAS NOT BEEN INVESTIGATED.
DISTANCES SHOULD NOT BE SCALED FROM THIS PLAN. ALL
CRITICAL DIMENSIONS SHOULD BE CONFIRMED BY SURVEY.
PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE
SITE THE RELEVANT AUTHORITIES SHOULD BE CONTACTED TO DETERMINE
THE LOCATION OF UNDERGROUND SERVICES NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE
SERVICES THAT ARE NOT SHOWN ON THE PLAN WERE NOT VISIBLE AT THE TIME OF THE SURVEY
ONLY SIGNIFICANT TREES HAVE BEEN SHOWN AND THERE DIMENSIONS ARE APPROXIMATE
ALL AREAS AND DIMENSIONS HAVE BEEN COMPILED FROM PLANS MADE AVAILABLE AT THE
LAND TITLES OFFICE AND MAY BE SUBJECT TO REDEFINITION

DATUM A.H.D.
SCALE 1:200 @A1
MAY 2022
REF 20-129

HELENSBURGH SURVEYING SERVICES
PO BOX 2004 TARRAWANNA NSW 2518
PHONE (02)42838518
MOBILE 0418410771
EMAIL - boo21@bigpond.net.au