

PROPOSED BOARDING HOUSE

LOT 211 DP 31157 | PENRITH COUNCIL 36. REV D - 08/03/22  
AMENDED SHEET LIST

SHEET LIST

01	COMPLIANCE TABLE, LOCATION PLAN
02	SITE PLAN
03	SITE CONTEXT PLAN
04	SITE ANALYSIS PLAN
05	DEMOLITION PLAN
06	SHADOW DIAGRAMS, ROOF PLAN
07	FLOOR PLANS
08	ELEVATIONS, SECTIONS
09	SECTIONS
10	AREA DIAGRAMS (COMMUNAL & ROOMS)
11	AREA DIAGRAMS (LANDSCAPE & DEEP SOIL)
12	SOLAR DIAGRAMS
13	SCHEDULE OF FINISHES
14	TYPICAL 2.4m KITCHEN DETAIL
15	TYPICAL 3m KITCHEN DETAIL
16	STREETSCAPE ELEVATIONS

LOCATION PLAN



37. REV D - 08/03/22  
AMENDED COMPLIANCE TABLE

COMPLIANCE TABLE

ITEM		PROPOSED	STANDARD	COMPLIANT
SITE AREA		651.3M2	-	YES
SETBACKS				
	FRONT	9.0M / AVERAGE	9.0M / AVERAGE	YES
	SECONDARY	3M	3M	
	REAR			YES
	GF	4M	4M	YES
	FF	6M	6M	YES
	SIDE	2M & 3M	2M & 3M	YES
FLOOR AREA				
	GROUND	99M2 (STAIRS NOT INCLUDED)	-	-
	FIRST	175M2 (STAIRS NOT INCLUDED)	-	-
	TOTAL	274M2	-	-
FSR		0.42:1 / 274M2	-	-
HEIGHT		8.4M	8.5M	YES
LANDSCAPE		270M2 / 41%	325.65 / 50%	-
DEEP SOIL		270M2 / 41%	18M2	YES
COMMUNAL - OUTDOOR		77M2	20M2 MIN 3M	YES
COMMUNAL - INDOOR		25M2	20M2	YES
PARKING				
	SPACES	4 SPACE	-	-
	ACCESSIBLE	1 SPACE	-	-
	TOTAL	5 SPACES	0.5 SPACES PER ROOM	YES

CONSULTANTS

ACCESS CONSULTANT	VISTA ACCESS ARCHITECTS	FARAH MADON	admin@accessarchitects.com.au	0412 051 876
ACOUSTIC CONSULTANT	RODNEY STEVENS ACOUSTIC	PENNY EDNEY	penny@rodneystevensacoustics.com.au	(02) 9943 5057
BASIX CONSULTANT	AKV PTY LTD	VIC VICARETTI	info@akvptyltd.com.au	0414 426 546
STORMWATER CONSULTANT	DEBOKE	ANDREW ARIDA	andrew@deboke.com.au	0432 225 833
LANDSCAPE CONSULTANT	GREENSCENE	JOSEPH BAINI	greensceneplans@gmail.com	02 9188 8252
TOWN PLANNER	THINK PLANNERS	JONATHON WOOD	jonathon@thinkplanners.com.au	0425 134 158
TRAFFIC CONSULTANT	STANBURY TRAFFIC	MORGAN STANBURY	morgan@stanburytraffic.com.au	02 8971 8314
PHOTOMONTAGE CONSULTANT	DEBOKE	GEORGE ARIDA	info@deboke.com.au	-



1 3D VIEW

38. REV D - 08/03/22  
NUMBER OF OCCUPANCY ADJUSTED

NUMBER OF OCCUPANCIES

ITEM	ROOM NO.	LEVEL	SINGLE OCCUPANCY	DOUBLE OCCUPANCY
BOARDING HOUSE				
	01 (ACC.)	GF		■
	02	GF		■
	03	1		■
	04	1	■	
	05	1		■
	06	1	■	
	07	1		■
	08	1	■	
	09	1	■	
TOTAL	9		4	5

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PROJECT TITLE  
PROPOSED BOARDING HOUSE

PROJECT ADDRESS  
27 COREEN AVENUE, PENRITH

DRAWING TITLE  
COMPLIANCE TABLE, LOCATION PLAN

SCALE @ A1  
DRAWN BY JM  
CHECKED BY CB

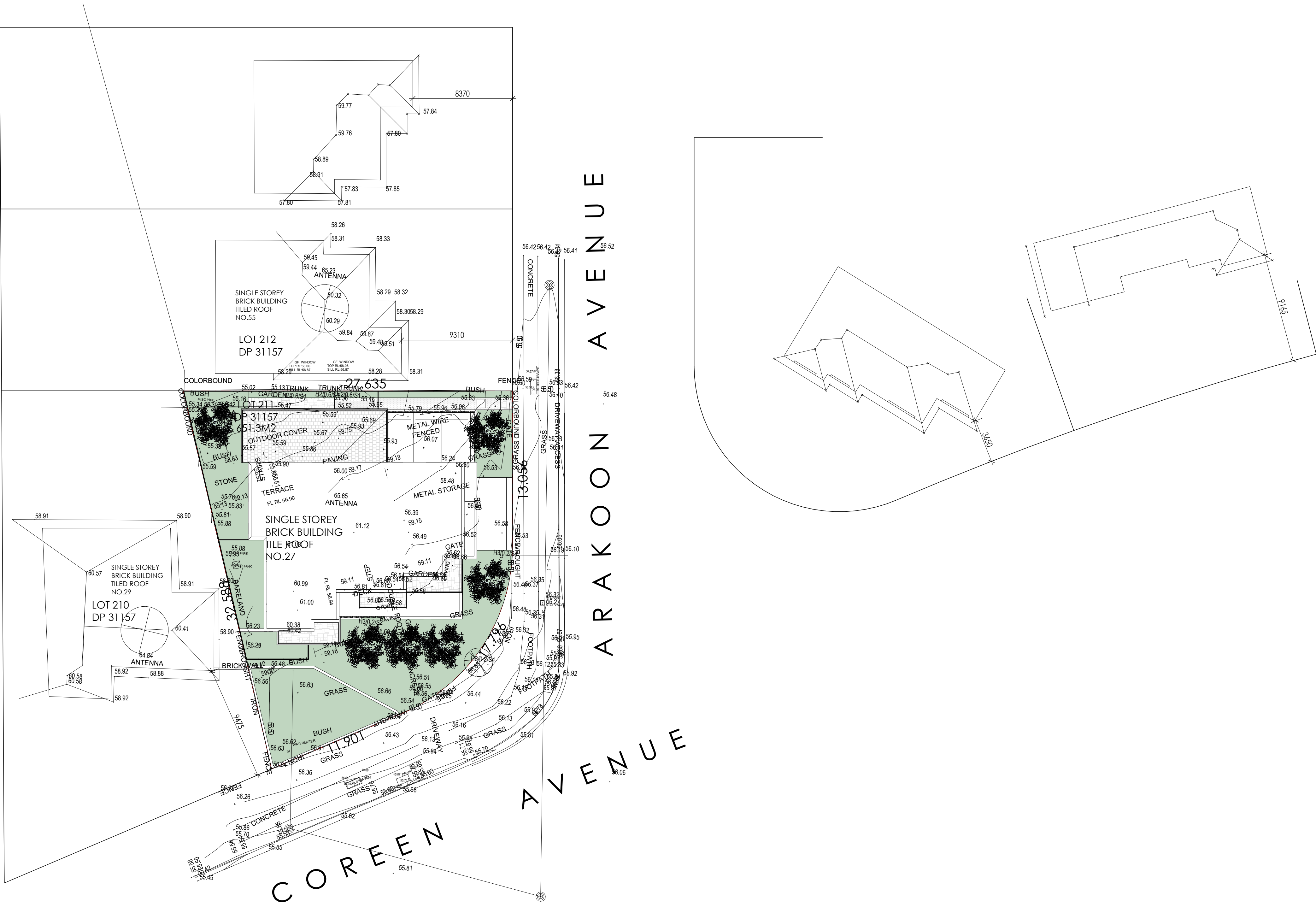
PROJECT NUMBER  
**21104**  
DRAWING NUMBER  
**01**  
**FOR DA APPROVAL**

REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
B	ISSUE FOR NGL/S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22

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1 SITE PLAN  
1 : 200



- KEY
- SITE BOUNDARY
  - DEMOLISHED/ REMOVED
  - BUILDING FOOTPRINT
  - LANDSCAPING
  - DEEP SOIL
  - ACCESSIBLE CLEARANCE

39. REV D - 08/03/22  
SURVEY PLAN UPDATED

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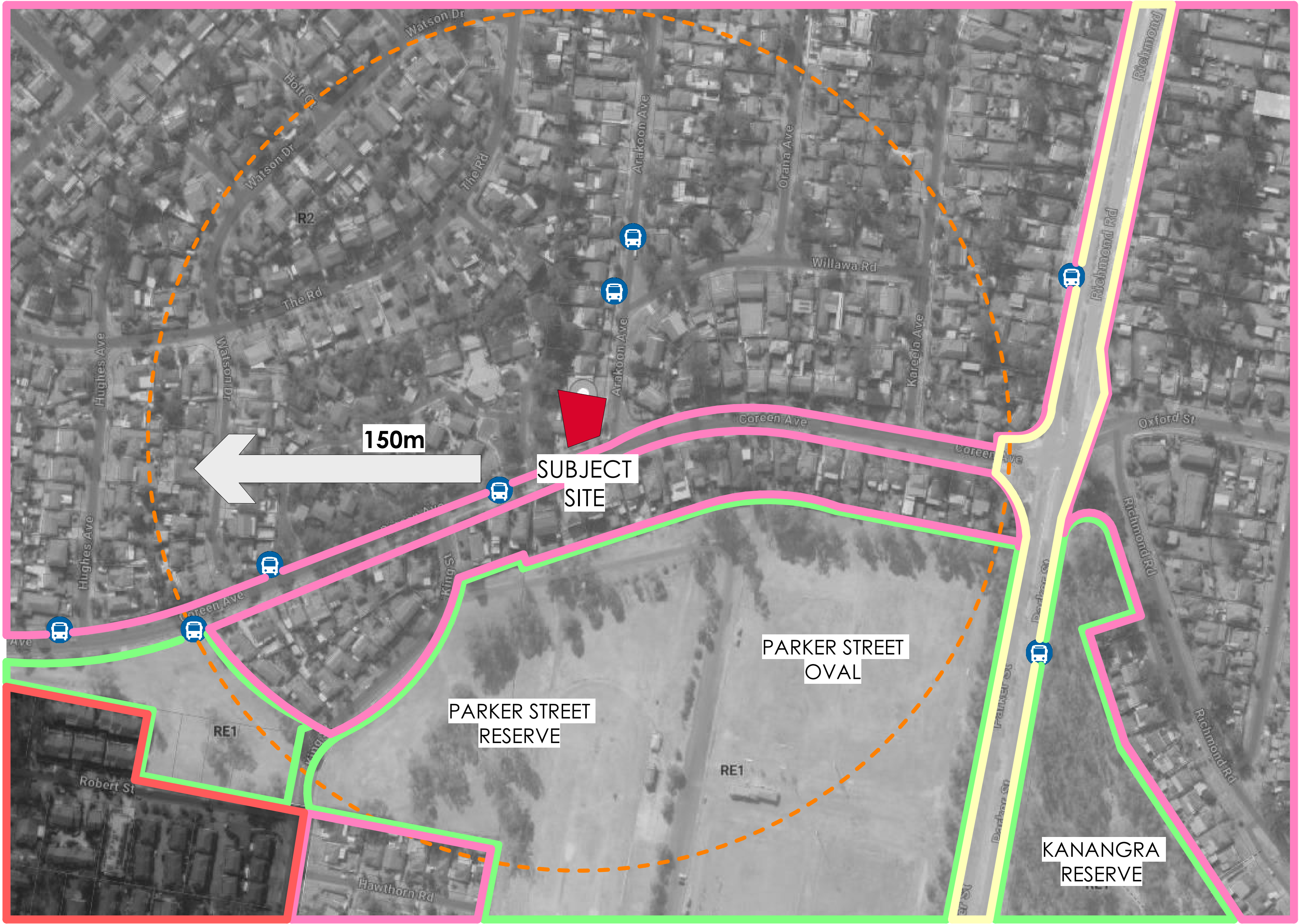
DRAWING TITLE  
SITE PLAN

SCALE @ A1	As indicated	PROJECT NUMBER	21104
DRAWN BY	JM		
CHECKED BY	CB	DRAWING NUMBER	
FOR DA APPROVAL			02

REV	DESCRIPTION	DATE
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KEY

R2

R4

RE1

SP2

TRAIN STATION

BUS STOP



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PROJECT ADDRESS  
27 COREEN AVENUE, PENRITH

DRAWING TITLE  
SITE CONTEXT PLAN

SCALE @ A1 1 : 1000  
DRAWN BY JM  
PROJECT NUMBER  
**21104**

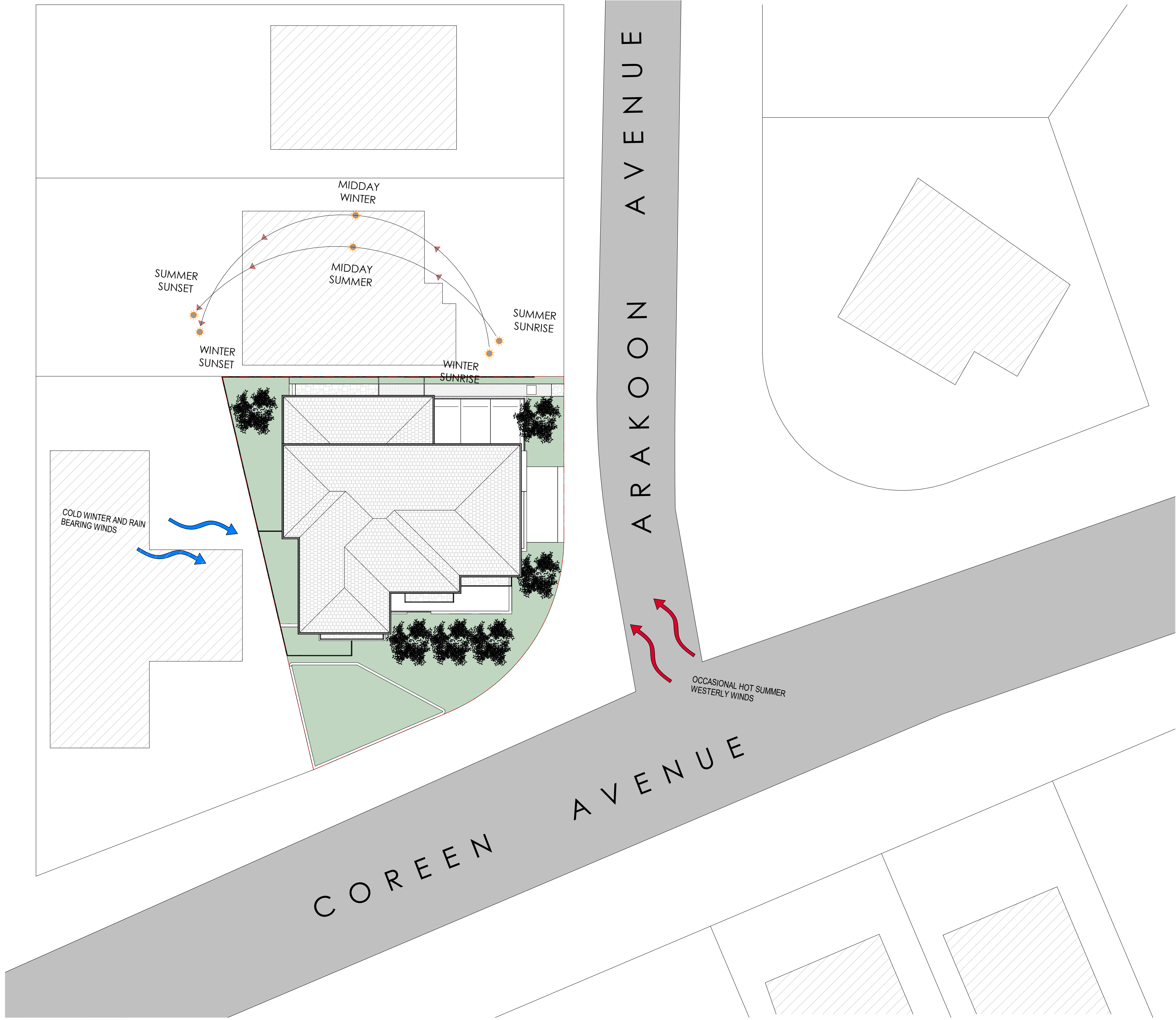
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**03**

REV	DESCRIPTION	DATE
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1 SITE CONTEXT PLAN  
1 : 1000





- KEY
- SITE BOUNDARY
  - DEMOLISHED/ REMOVED
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  - LANDSCAPING
  - DEEP SOIL
  - ACCESSIBLE CLEARANCE

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DRAWING TITLE  
SITE ANALYSIS PLAN

SCALE @ A1	As indicated	PROJECT NUMBER	21104	
DRAWN BY	JM			
CHECKED BY	CB	DRAWING NUMBER		
FOR DA APPROVAL			04	

REV	DESCRIPTION	DATE
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1 SITE ANALYSIS PLAN  
1 : 200



40\_REV D - 08/03/22  
SURVEY PLAN UPDATED

SINGLE STOREY  
BRICK BUILDING  
TILED ROOF  
NO.55

LOT 212  
DP 31157

LOT 211  
DP 31157  
651.3M2

SINGLE STOREY  
BRICK BUILDING  
TILE ROOF  
NO.27

SINGLE STOREY  
BRICK BUILDING  
TILED ROOF  
NO.29

LOT 210  
DP 31157

ANTENNA

ARAKOON AVENUE

KEY

- SITE BOUNDARY
- DEMOLISHED/ REMOVED
- BUILDING FOOTPRINT
- LANDSCAPING
- DEEP SOIL
- ACCESSIBLE CLEARANCE

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PROJECT ADDRESS  
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DRAWING TITLE  
DEMOLITION PLAN

SCALE @ A1  
DRAWN BY

JM

PROJECT NUMBER  
21104

CHECKED BY

CB

DRAWING NUMBER

05

FOR DA APPROVAL

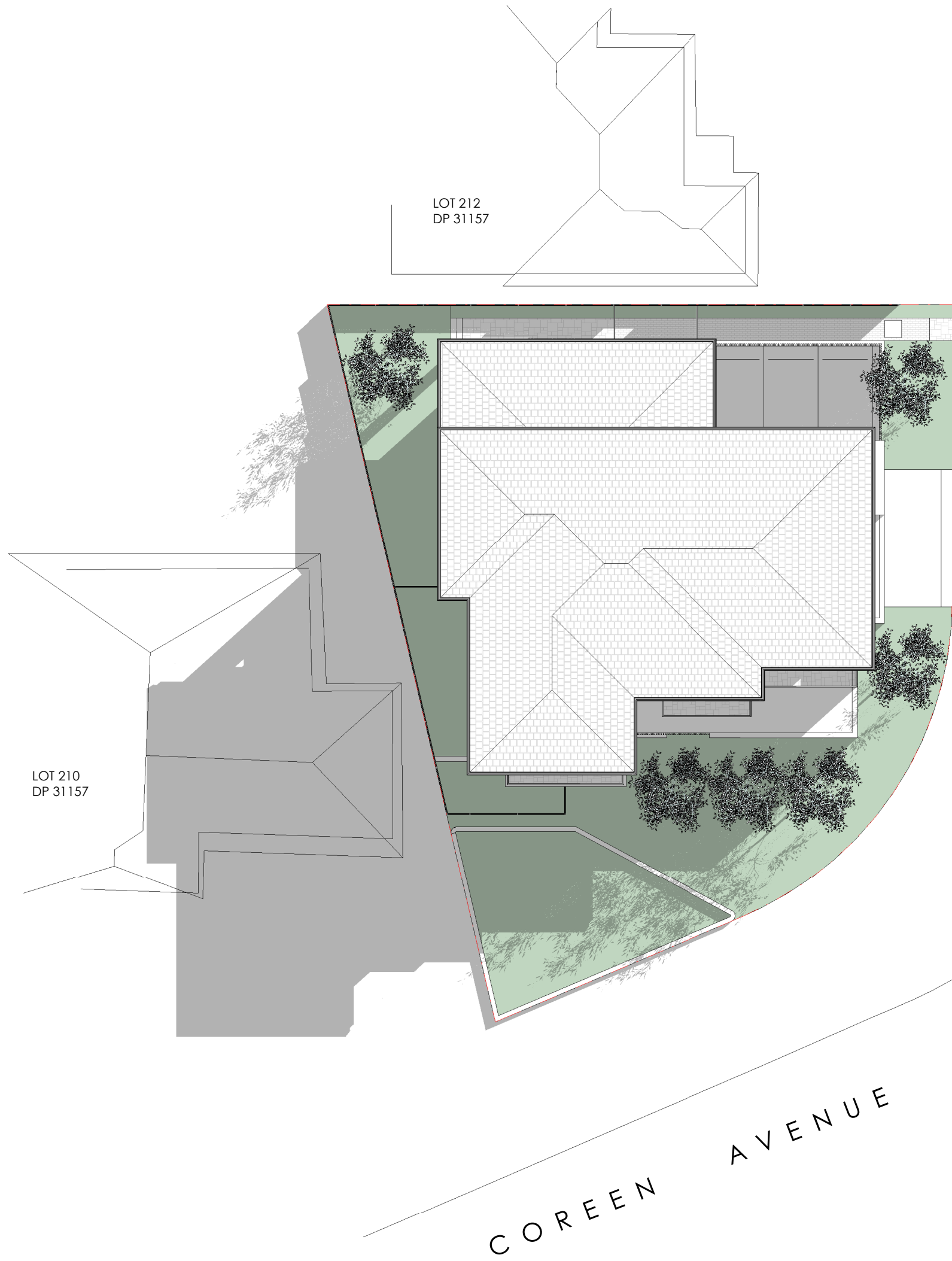
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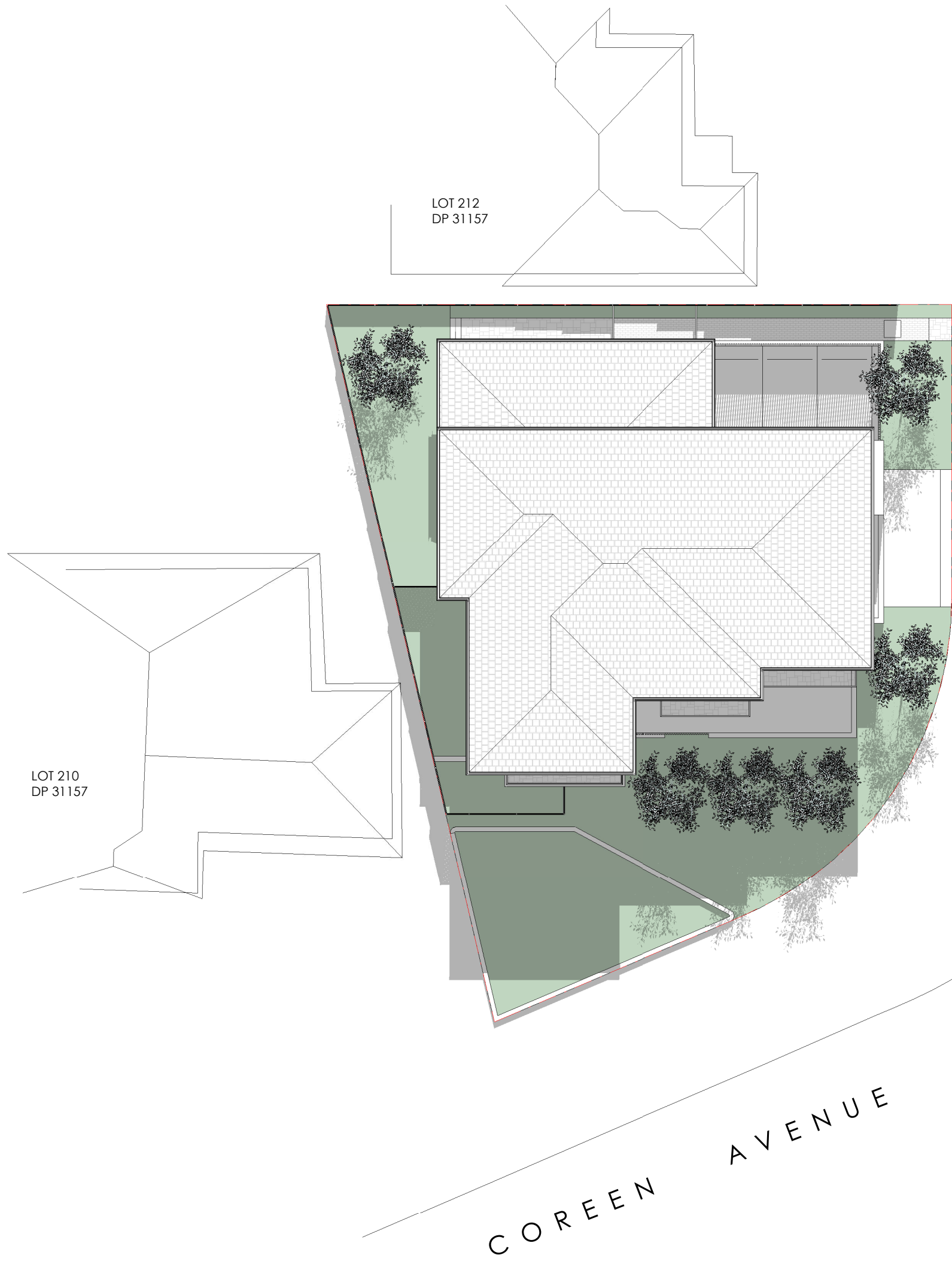
DEMOLITION PLAN

1 : 100

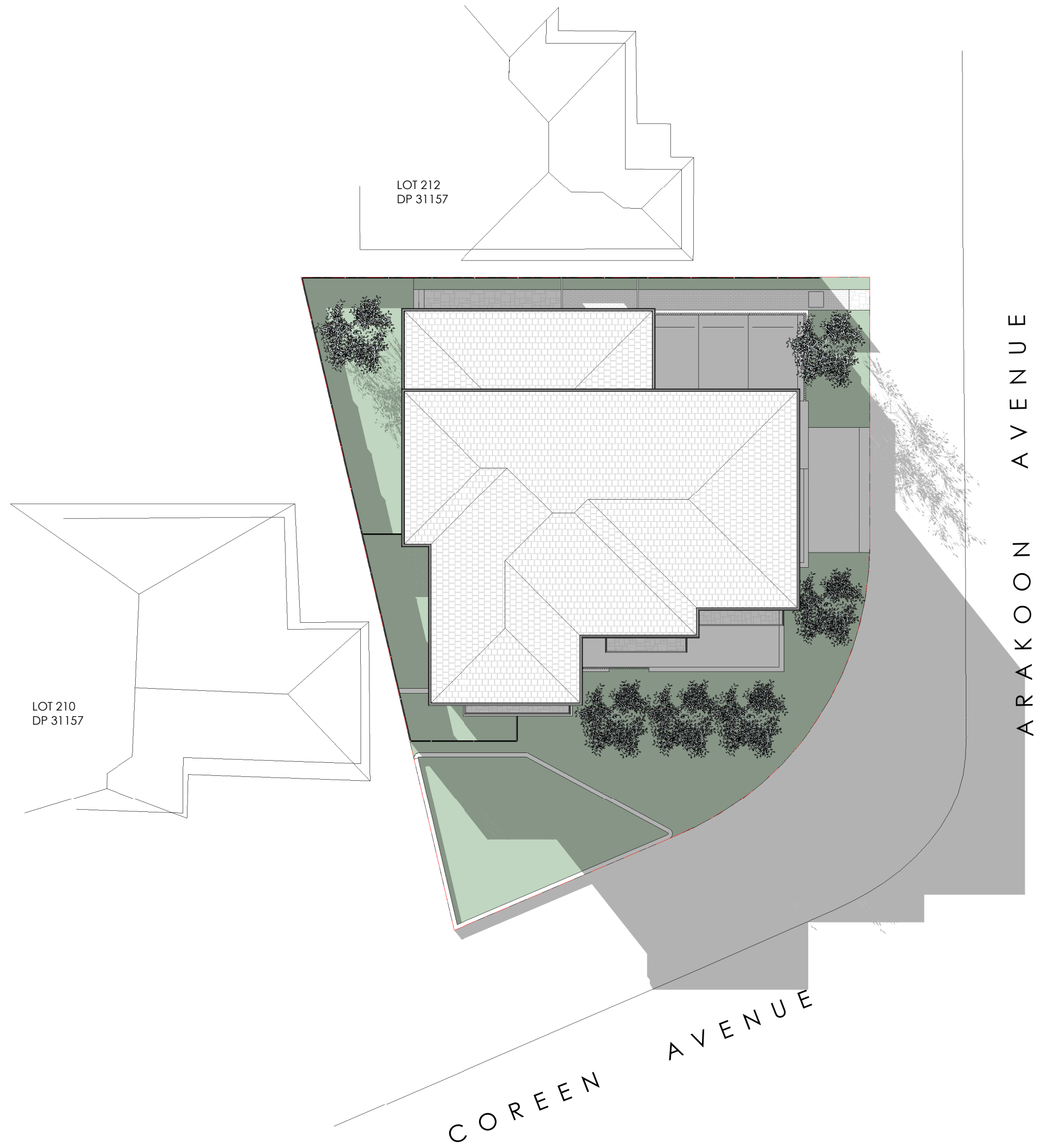




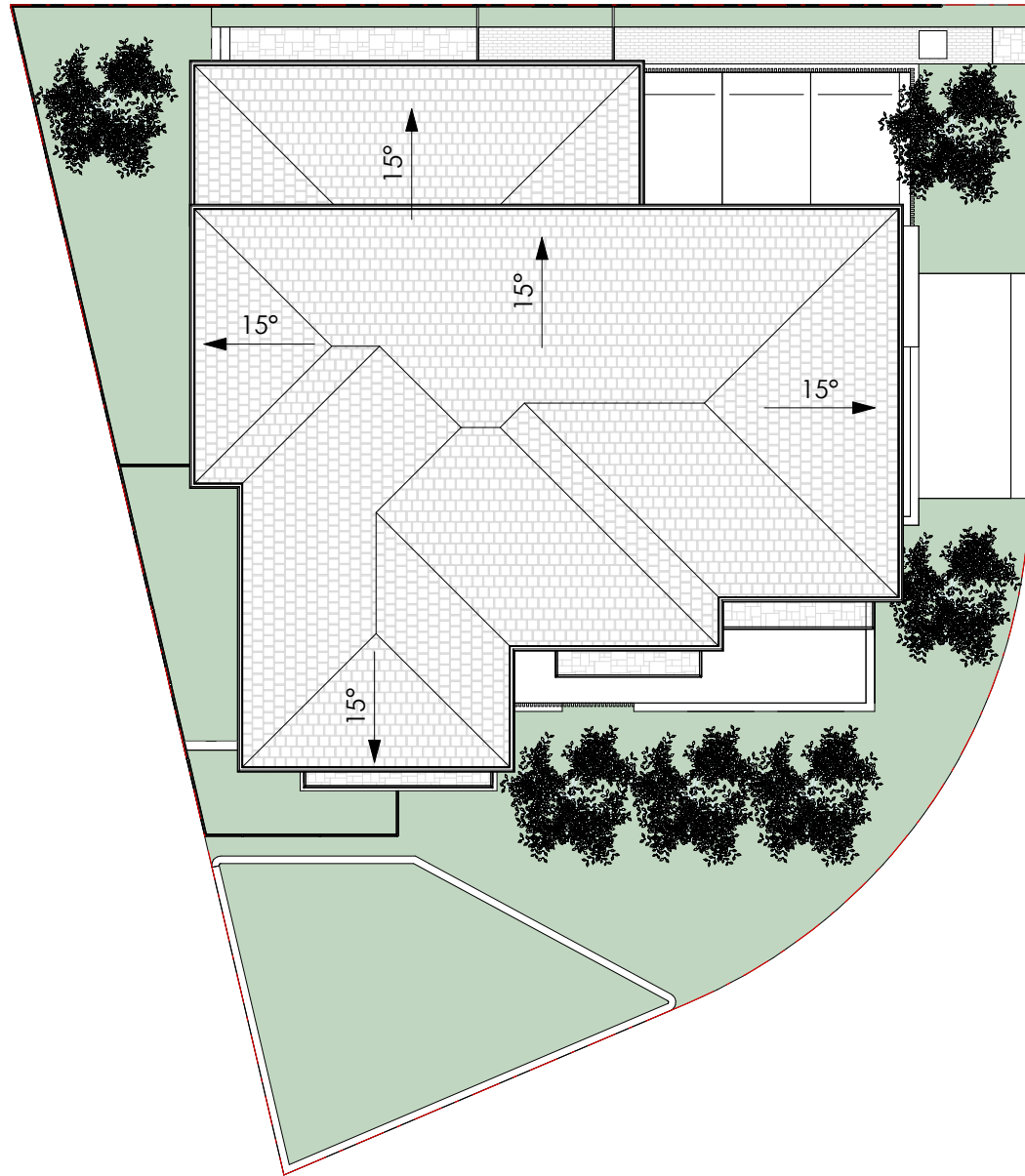
1 9AM SHADOW DIAGRAM  
1 : 200



2 12PM SHADOW DIAGRAM  
1 : 200



3 3PM SHADOW DIAGRAM  
1 : 200



4 ROOF PLAN  
1 : 200

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DRAWING TITLE  
SHADOW DIAGRAMS, ROOF PLAN

SCALE @ A1 1 : 200  
DRAWN BY JM

PROJECT NUMBER  
**21104**

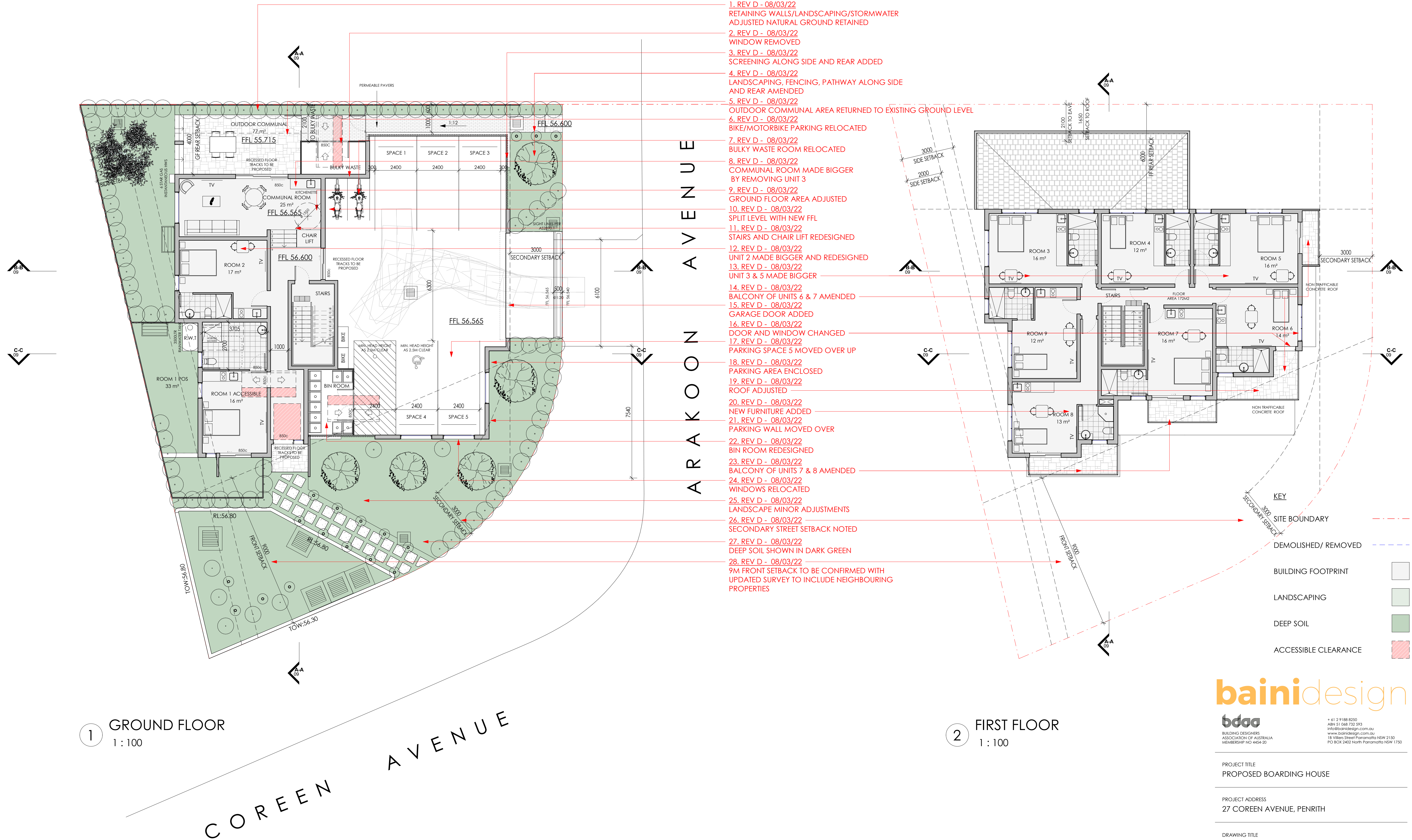
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DRAWING NUMBER  
**06**

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B	ISSUE FOR NGL/S34	17/11/21
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1 GROUND FLOOR  
1 : 100

2 FIRST FLOOR  
1 : 100

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PROJECT TITLE  
PROPOSED BOARDING HOUSE

PROJECT ADDRESS  
27 COREEN AVENUE, PENRITH

DRAWING TITLE  
FLOOR PLANS

SCALE @ A1  
1 : 100  
DRAWN BY  
JM

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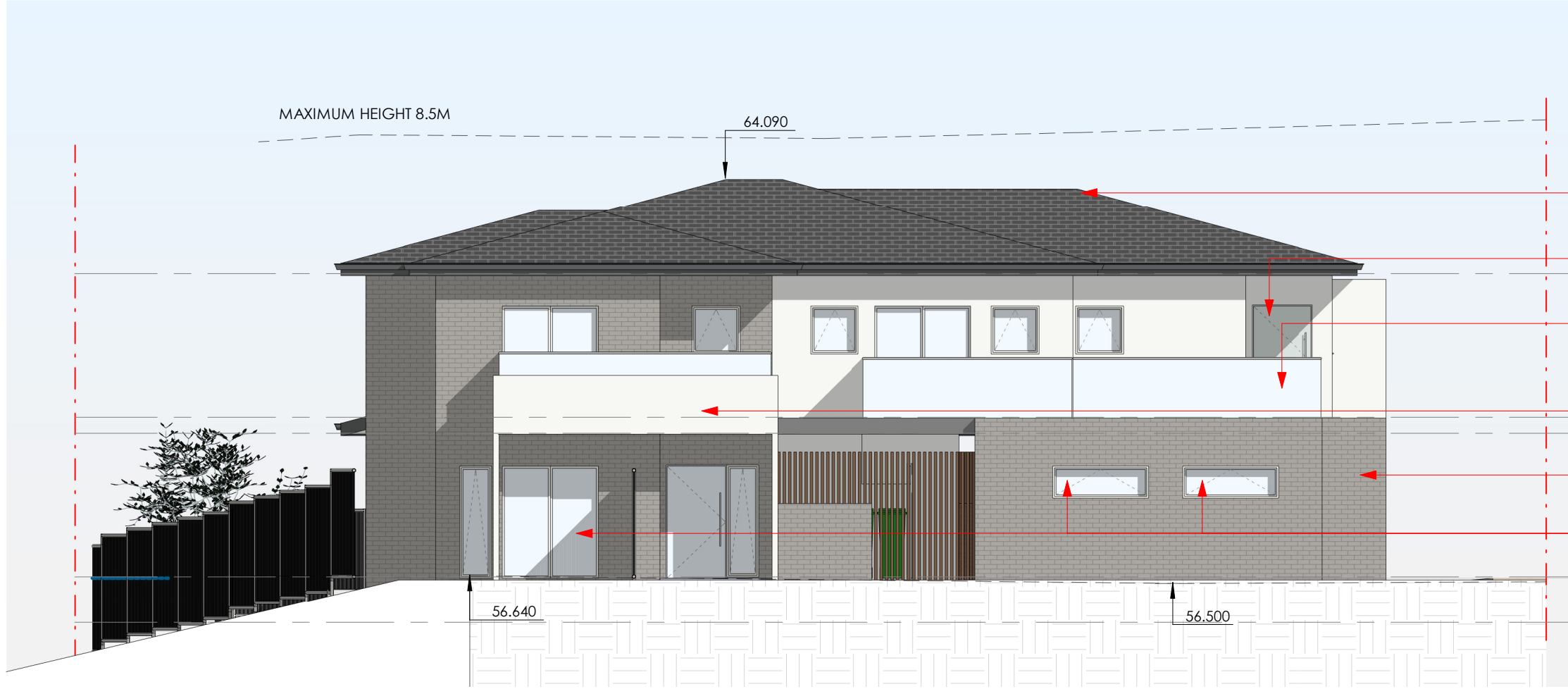
PROJECT NUMBER  
21104

DRAWING NUMBER  
07

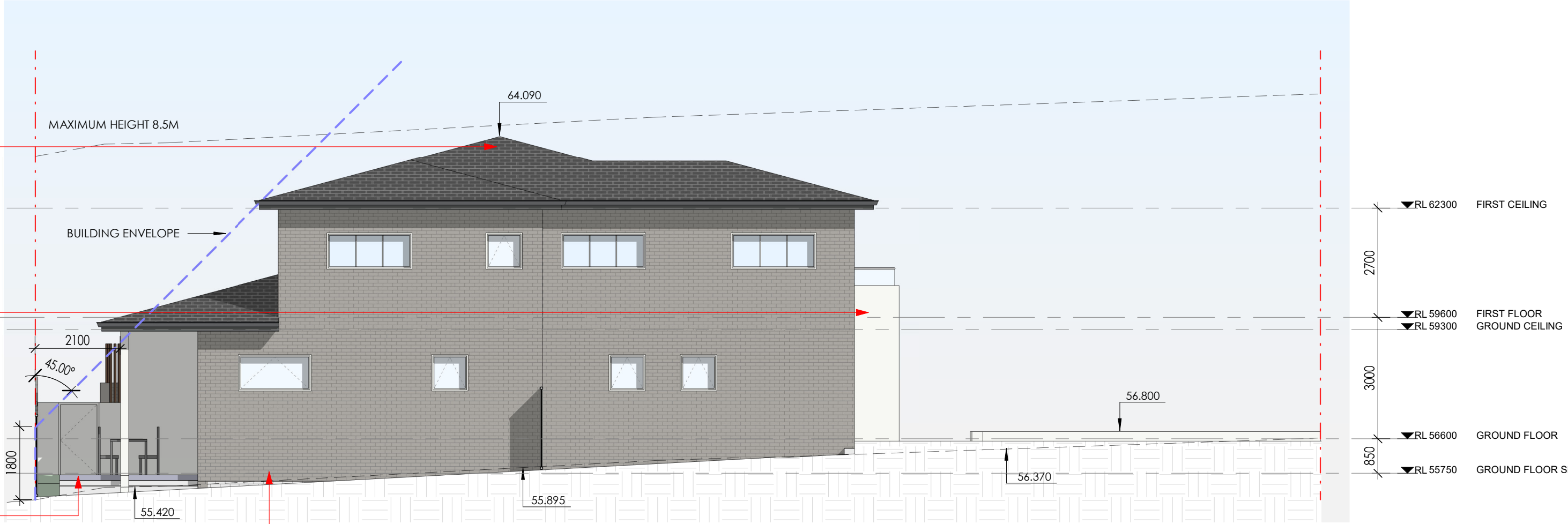
REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
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D	ISSUE FOR S34	08/03/22

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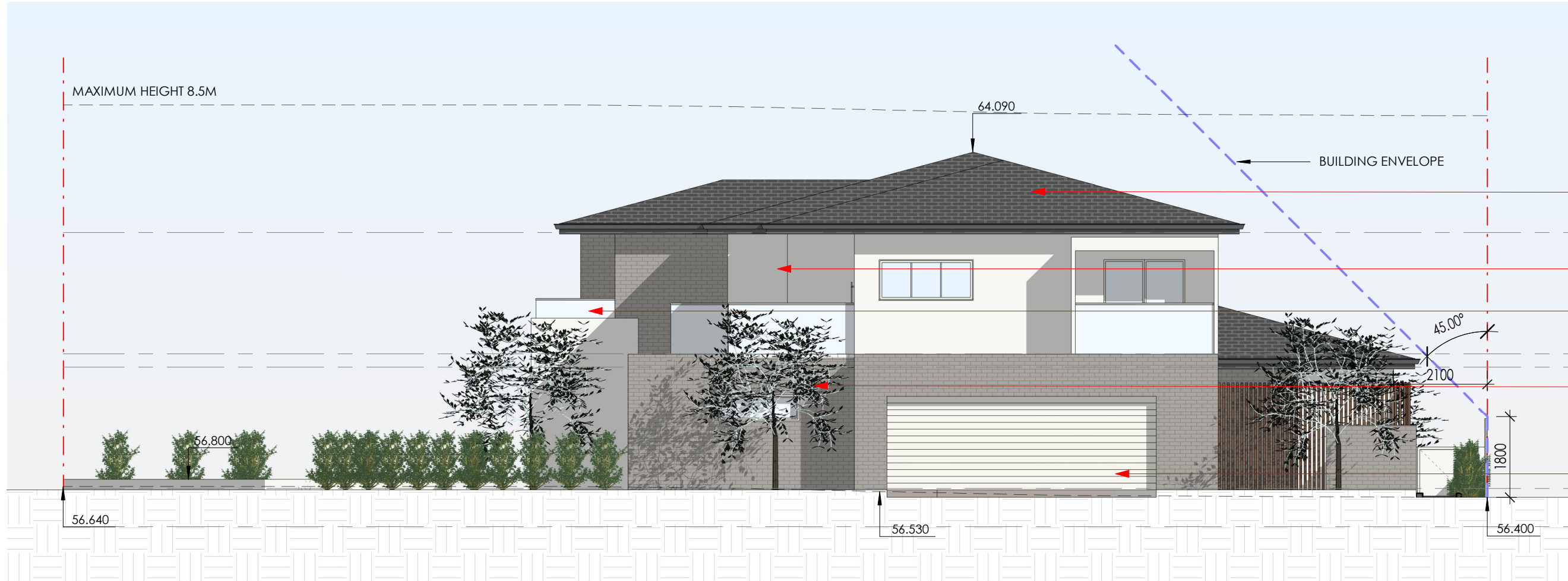
1 SOUTH ELEVATION  
1 : 100



2 WEST ELEVATION  
1 : 100



3 NORTH ELEVATION  
1 : 100



4 EAST ELEVATION  
1 : 100

- 19. REV D - 08/03/22  
ROOF ADJUSTED
- 16. REV D - 08/03/22  
DOOR AND WINDOW CHANGED
- 14. REV D - 08/03/22  
BALCONY AMENDED
- 23. REV D - 08/03/22  
BALCONY AMENDED
- 21. REV D - 08/03/22  
PARKING WALL MOVED OVER
- 24. REV D - 08/03/22  
WINDOWS RELOCATED, DOOR ADDED
- 1. REV D - 08/03/22  
RETAINING WALLS/TIERED LANDSCAPING  
REMOVED NATURAL GROUND RETAINED,  
LANDSCAPE ADDED
- 10. REV D - 08/03/22  
SPLIT LEVEL WITH NEW FFL

- 19. REV D - 08/03/22  
ROOF ADJUSTED
- 16. REV D - 08/03/22  
DOOR AND WINDOW CHANGED
- 21. REV D - 08/03/22  
PARKING WALL MOVED OVER UP
- 15. REV D - 08/03/22  
GARAGE DOOR ADDED
- 2. REV D - 08/03/22  
WINDOW REMOVED
- 1. REV D - 08/03/22  
RETAINING WALLS/LANDSCAPING/STORMWATER  
ADJUSTED NATURAL GROUND RETAINED
- 10. REV D - 08/03/22  
SPLIT LEVEL WITH NEW FFL

- 19. REV D - 08/03/22  
ROOF ADJUSTED
- 16. REV D - 08/03/22  
DOOR AND WINDOW CHANGED
- 14. REV D - 08/03/22  
BALCONY AMENDED
- 21. REV D - 08/03/22  
PARKING WALL MOVED OVER UP
- 15. REV D - 08/03/22  
GARAGE DOOR ADDED

37. REV D - 01/03/22  
NATURAL GROUND LINE ADJUSTED

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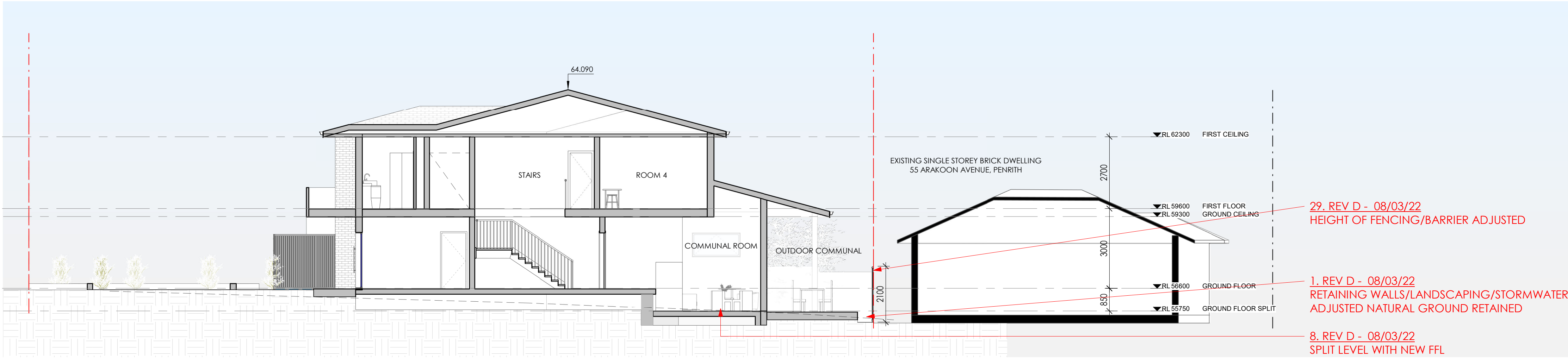
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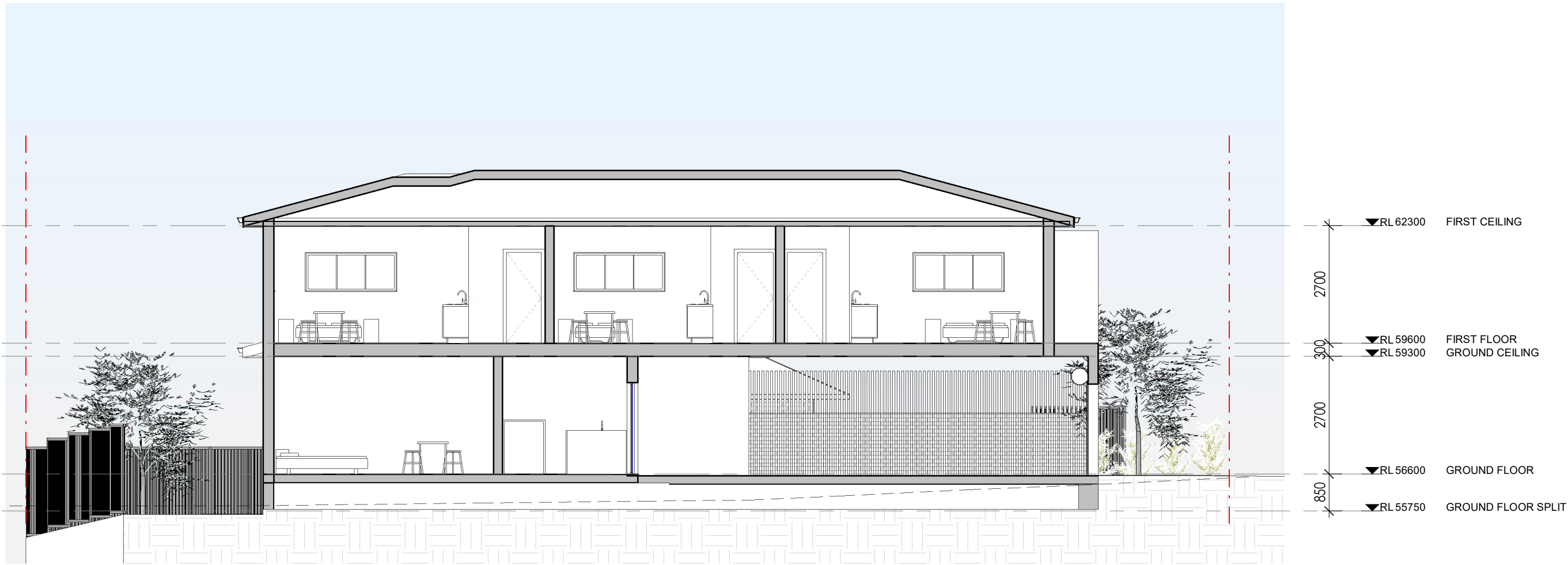
PROJECT TITLE PROPOSED BOARDING HOUSE		
PROJECT ADDRESS 27 COREEN AVENUE, PENRITH		
DRAWING TITLE ELEVATIONS, SECTIONS		
SCALE @ A1	1 : 100	PROJECT NUMBER <b>21104</b>
DRAWN BY	JM	DRAWING NUMBER <b>08</b>
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FOR DA APPROVAL		
REV	DESCRIPTION	DATE
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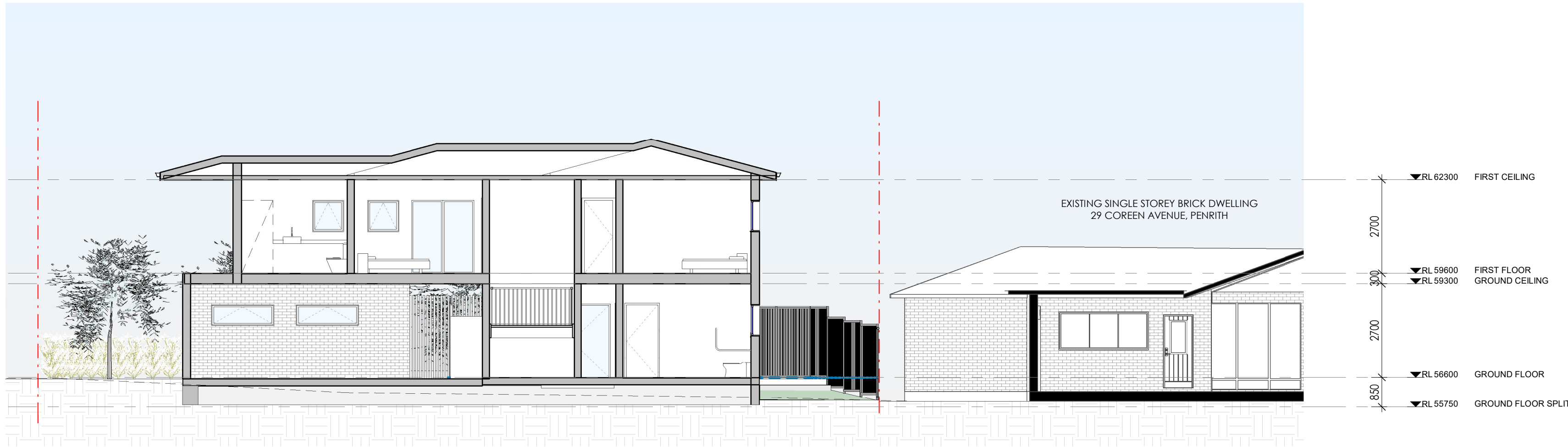




A-A SECTION A-A  
1 : 100



B-B SECTION B-B  
1 : 100



C-C SECTION C-C  
1 : 100

30. REV D - 01/03/22  
NEW SECTIONS ADDED (SECTION B & C)

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27 COREEN AVENUE, PENRITH

DRAWING TITLE  
SECTIONS

SCALE @ A1 1 : 100

DRAWN BY JM

CHECKED BY CB

FOR DA APPROVAL

PROJECT NUMBER

**21104**

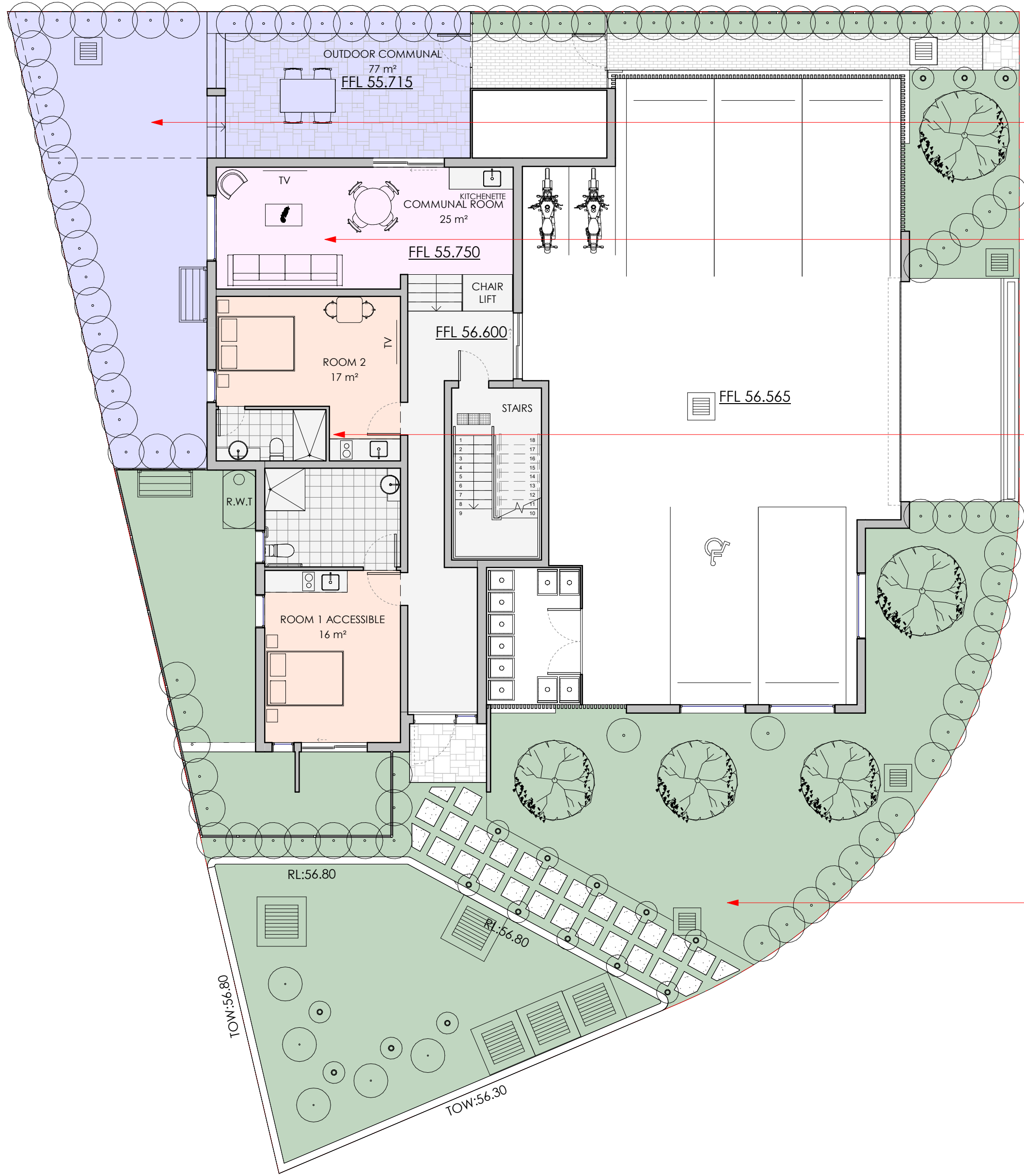
DRAWING NUMBER

**09**

REV	DESCRIPTION	DATE
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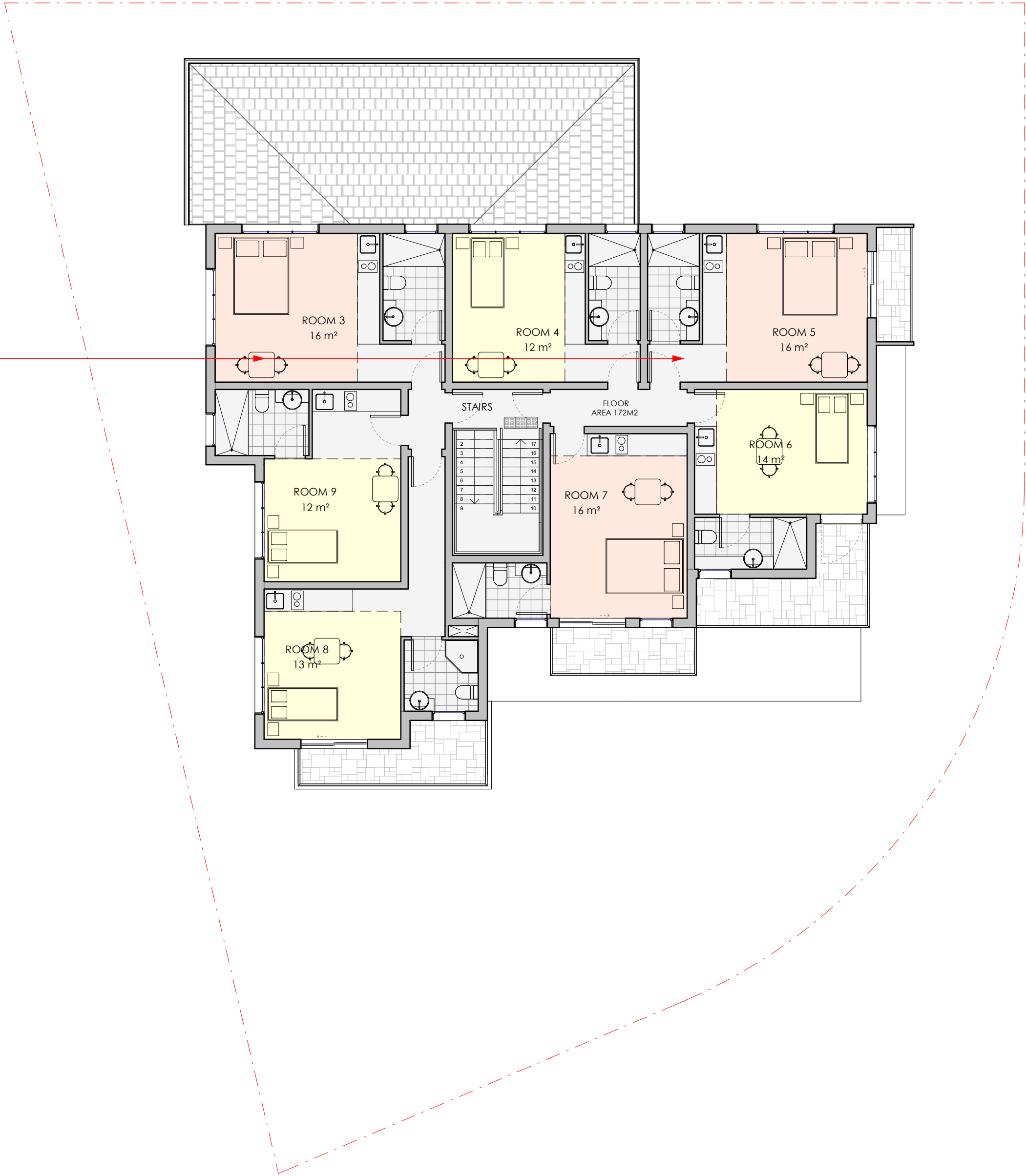
5. REV D - 08/03/22  
OUTDOOR COMMUNAL AREA RETURNED  
TO EXISTING GROUND LEVEL

8. REV D - 08/03/22  
COMMUNAL ROOM MADE BIGGER  
BY REMOVING UNIT 3

13. REV D - 08/03/22  
UNIT 3 & 5 MADE BIGGER

12. REV D - 08/03/22  
UNIT 2 MADE BIGGER AND REDESIGNED

23. REV D - 08/03/22  
DEEP SOIL SHOWN IN DARK GREEN



KEY

SITE BOUNDARY

BUILDING FOOTPRINT

LANDSCAPE

DEEP SOIL

SINGLE ROOM  
12 m² - 15 m²

DOUBLE ROOM  
16 m² - 25 m²

OUTDOOR COMMUNAL  
77 m²

INDOOR COMMUNAL  
24 m²

31. REV D - 01/03/22  
AREA DIAGRAM ADJUSTED

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PROJECT ADDRESS  
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DRAWING TITLE  
AREA DIAGRAMS (COMMUNAL & ROOMS)

SCALE @ A1 1 : 100

DRAWN BY JM

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PROJECT NUMBER

**21104**

DRAWING NUMBER

**10**

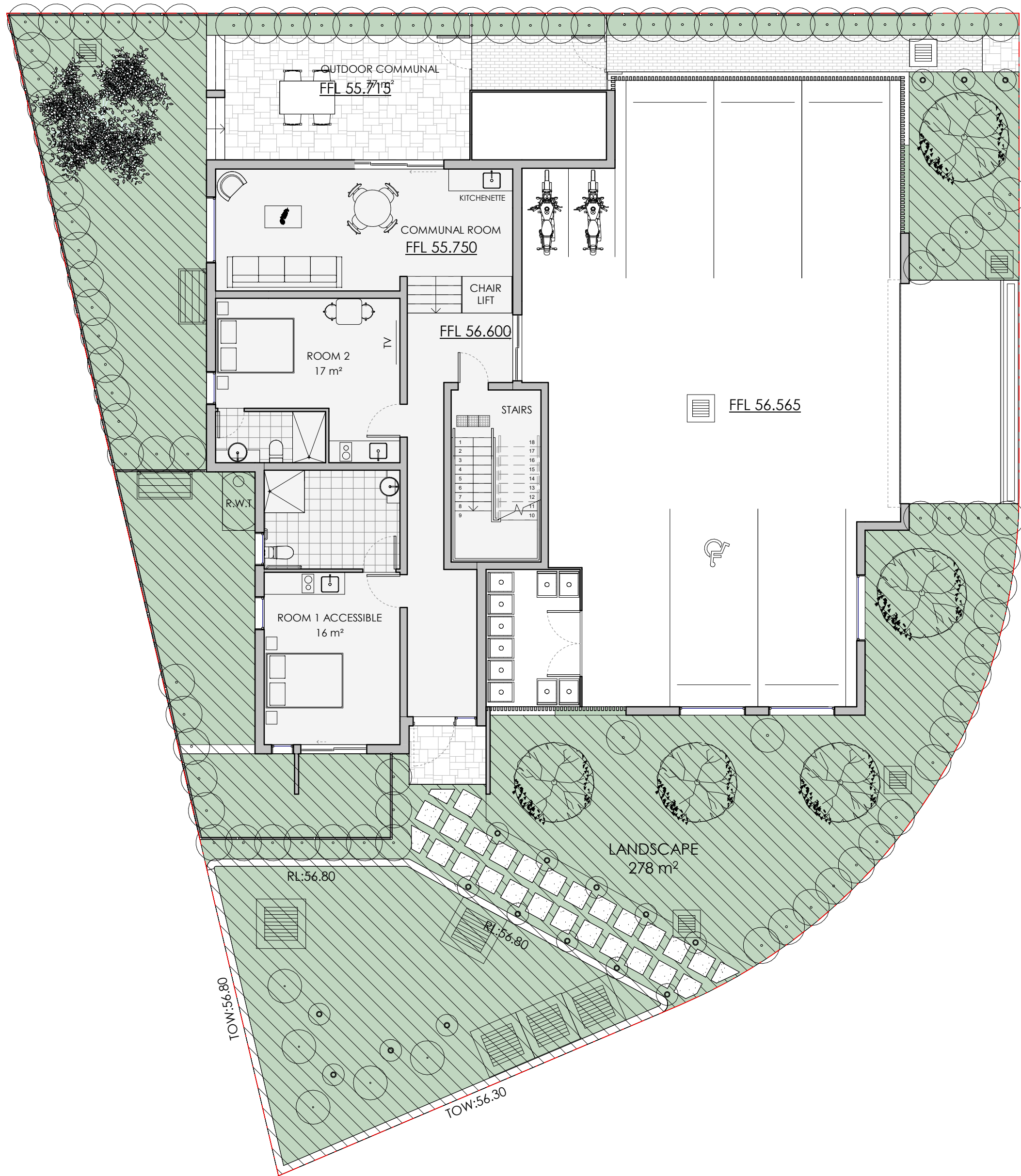
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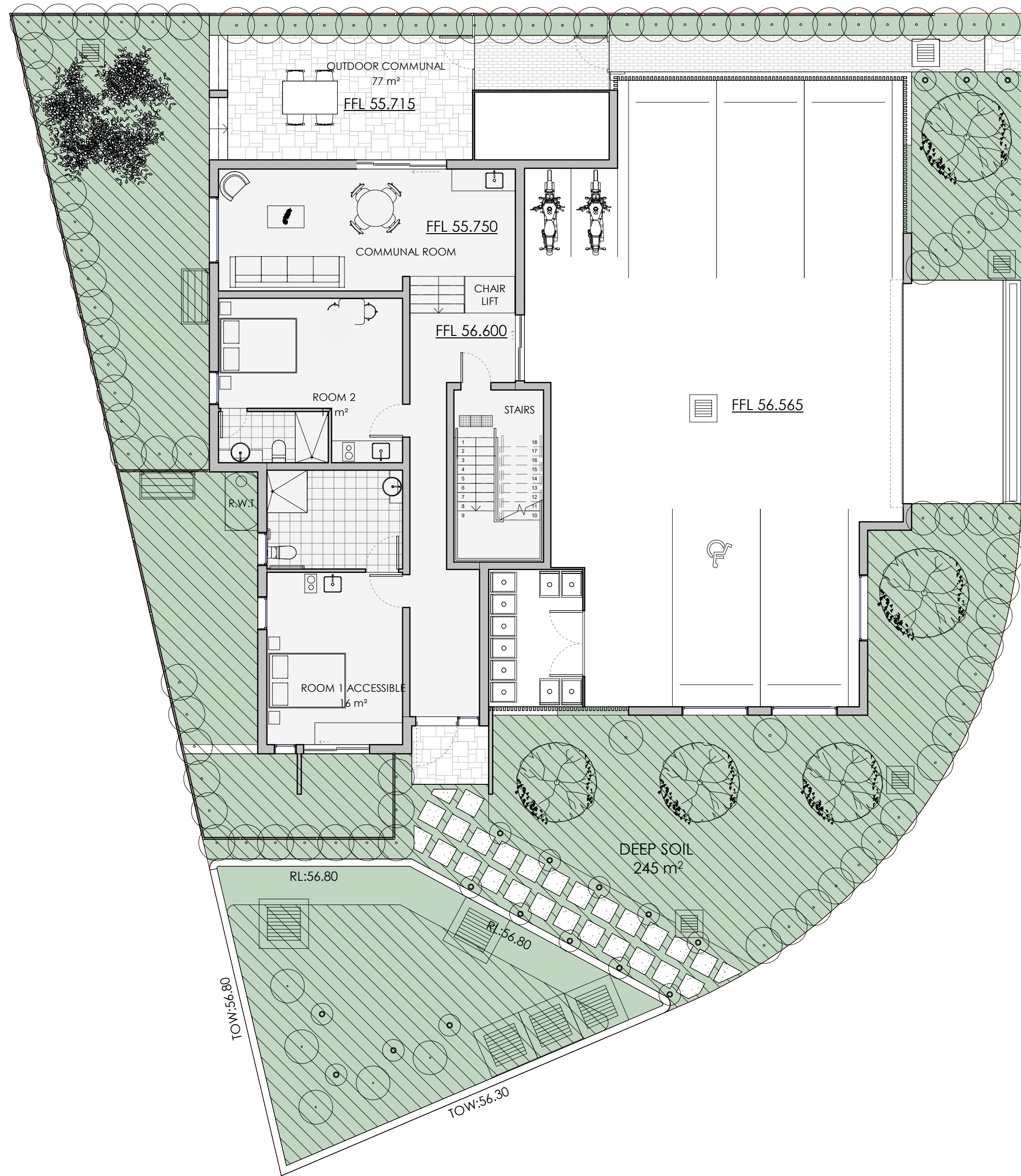
1 GROUND FLOOR AREA PLAN  
1 : 100

2 FIRST FLOOR AREA PLAN  
1 : 100





1 LANDSCAPE AREA PLAN  
1 : 100



2 DEEP SOIL AREA PLAN  
1 : 100

KEY

- SITE BOUNDARY ---
- BUILDING FOOTPRINT
- LANDSCAPING
- DEEP SOIL
- LANDSCAPE AREA  
261 m<sup>2</sup>
- DEEP SOIL AREA  
261 m<sup>2</sup>

32. REV D - 01/03/22  
AREA DIAGRAMS ADJUSTED

**baini**design

**bdaa**  
BUILDING DESIGNERS  
ASSOCIATION OF AUSTRALIA  
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PO BOX 2402 North Parramatta NSW 1750

PROJECT TITLE  
PROPOSED BOARDING HOUSE

PROJECT ADDRESS  
27 COREN AVENUE, PENRITH

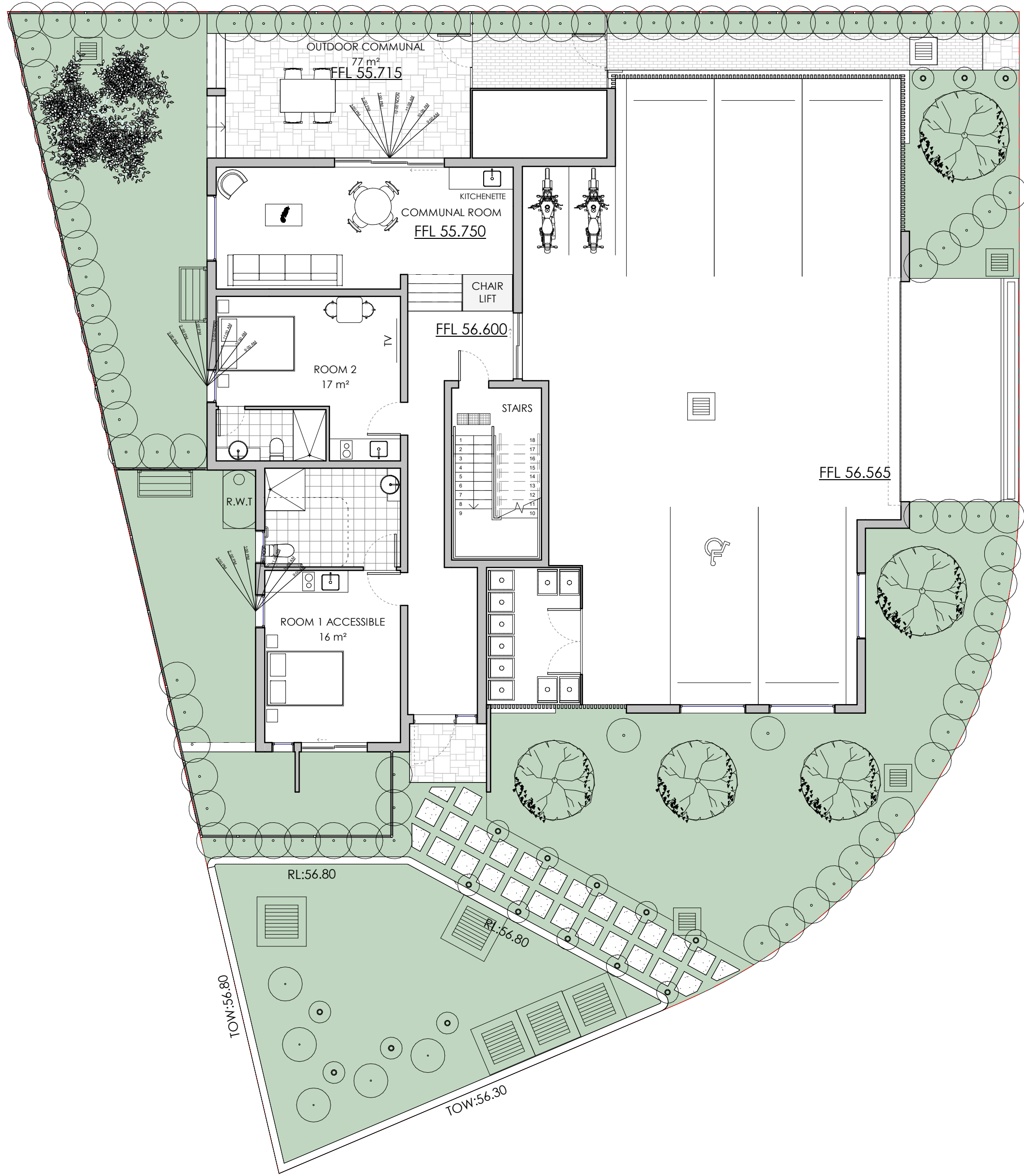
DRAWING TITLE  
AREA DIAGRAMS (LANDSCAPE & DEEP SOIL)

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DRAWN BY	JM	DRAWING NUMBER	11
CHECKED BY	CB	FOR DA APPROVAL	

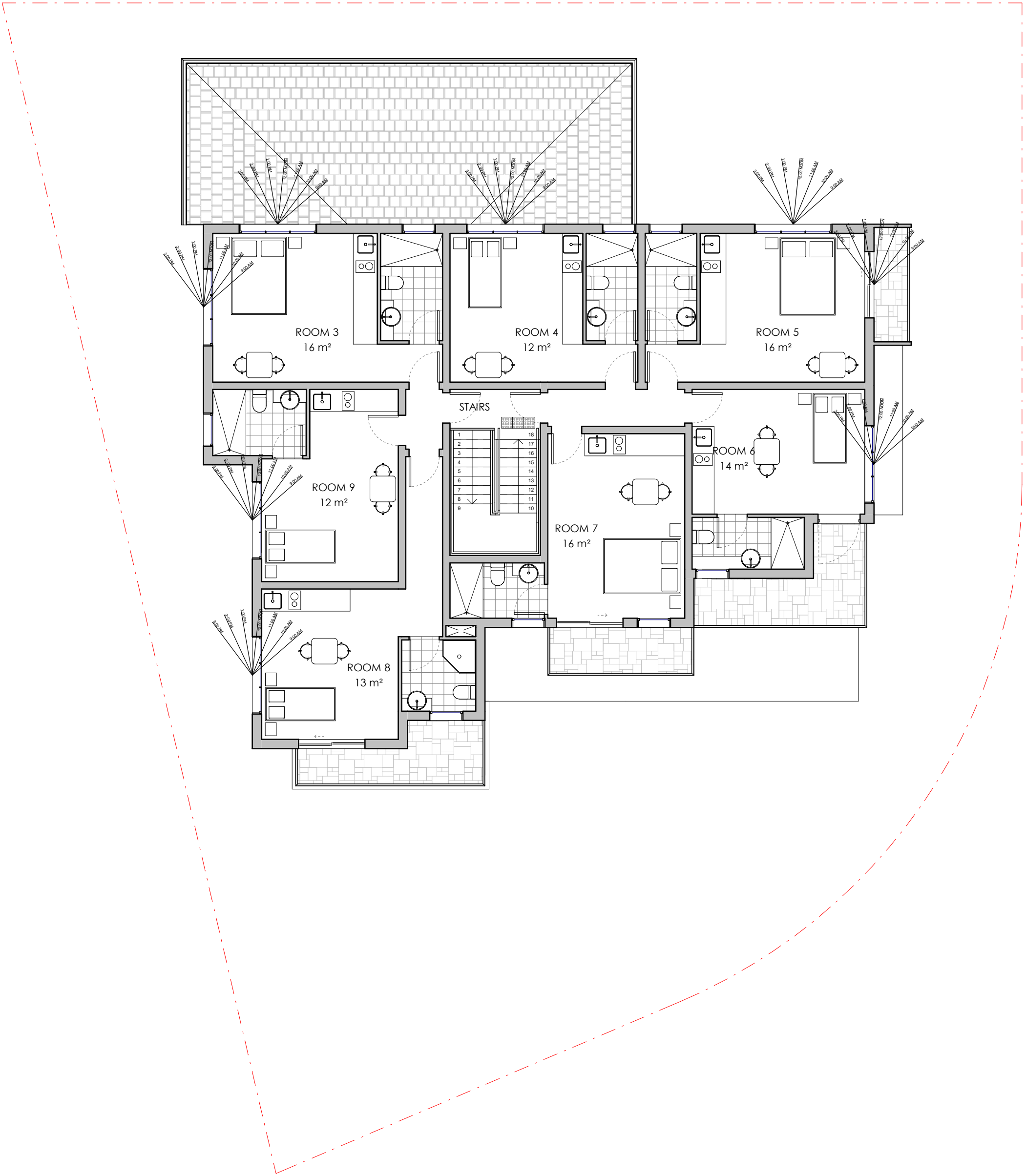
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A	ISSUE FOR DA	09/06/21
B	ISSUE FOR NGL/S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22

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1 GROUND FLOOR SOLAR DIAGRAM  
1 : 100



2 FIRST FLOOR SOLAR DIAGRAM  
1 : 100

33. REV D - 08/03/22  
SOLAR DIAGRAMS ADJUSTED

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PROJECT TITLE  
PROPOSED BOARDING HOUSE

PROJECT ADDRESS  
27 COREEN AVENUE, PENRITH

DRAWING TITLE  
SOLAR DIAGRAMS

SCALE @ A1 1 : 100

DRAWN BY JM

CHECKED BY CB

FOR DA APPROVAL

PROJECT NUMBER

21104

DRAWING NUMBER

12

REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
B	ISSUE FOR NGL/S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22

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SCHEDULE OF MATERIALS AND FINISHES

NOTE: ALL MATERIALS & FINISHES ARE SUBJECT TO AVAILABILITY

REFERENCE	ELEMENT	MATERIAL	FINISH / SPECIFICATION
01	EXTERNAL WALLS	FACE BRICK	PGH IMPRESSIONS ALPINE OR SIMILAR
02	EXTERNAL WALLS/FEATURES	RENDER AND PAINT	DULUX LEXICON QUARTER OR SIMILAR
03	FEATURE LOUVERS	TIMBER LOOK ALUMINIUM	TIMBER LOOK OR SIMILAR
04	DOORS & WINDOWS	GLASS SET IN POWDER COATED ALUMINIUM FRAME	DULUX WHITE OR SIMILAR
05	BALUSTRADES	GLASS SET IN POWDER COATED ALUMINIUM FRAME	DULUX WHITE OR SIMILAR
06	ROOF	CONCRETE ROOF TILE	BORAL CONTOUR CHARCOAL GREY OR SIMILAR
07	DRIVEWAY	CONCRETE	COLORLED DRIVEWAY / SHALE GREY OR SIMILAR

34. REV D - 08/03/22  
SCHEDULE OF FINISHES ADJUSTED

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PROJECT TITLE  
PROPOSED BOARDING HOUSE

PROJECT ADDRESS  
27 COREEN AVENUE, PENRITH

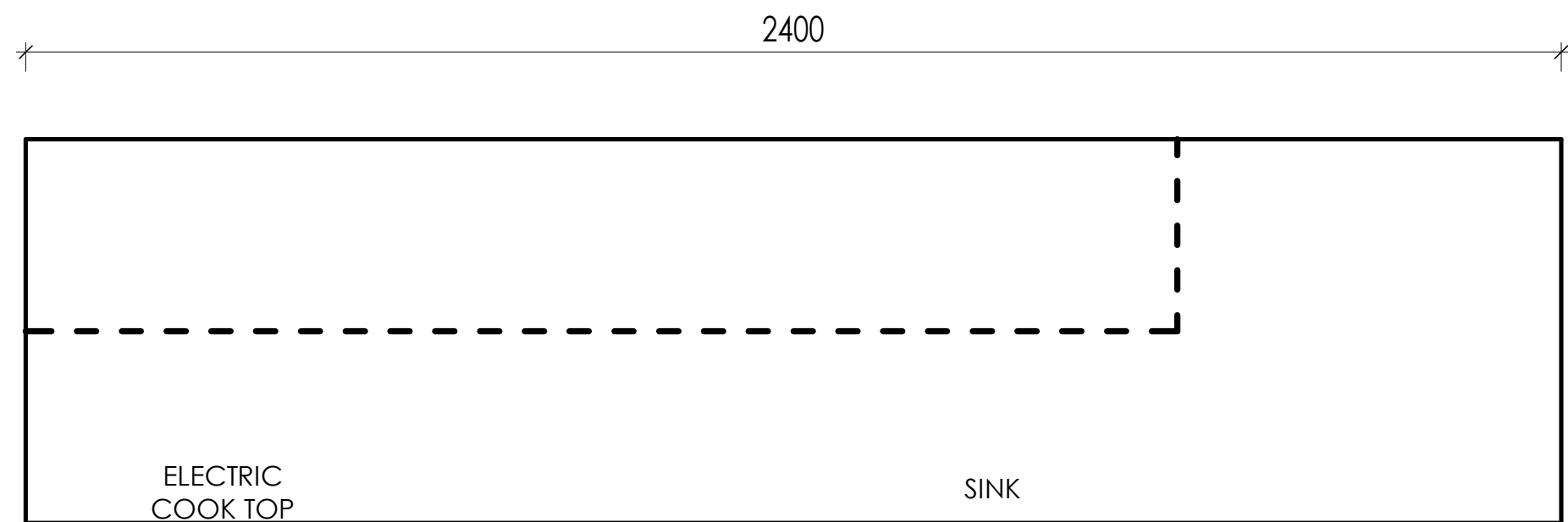
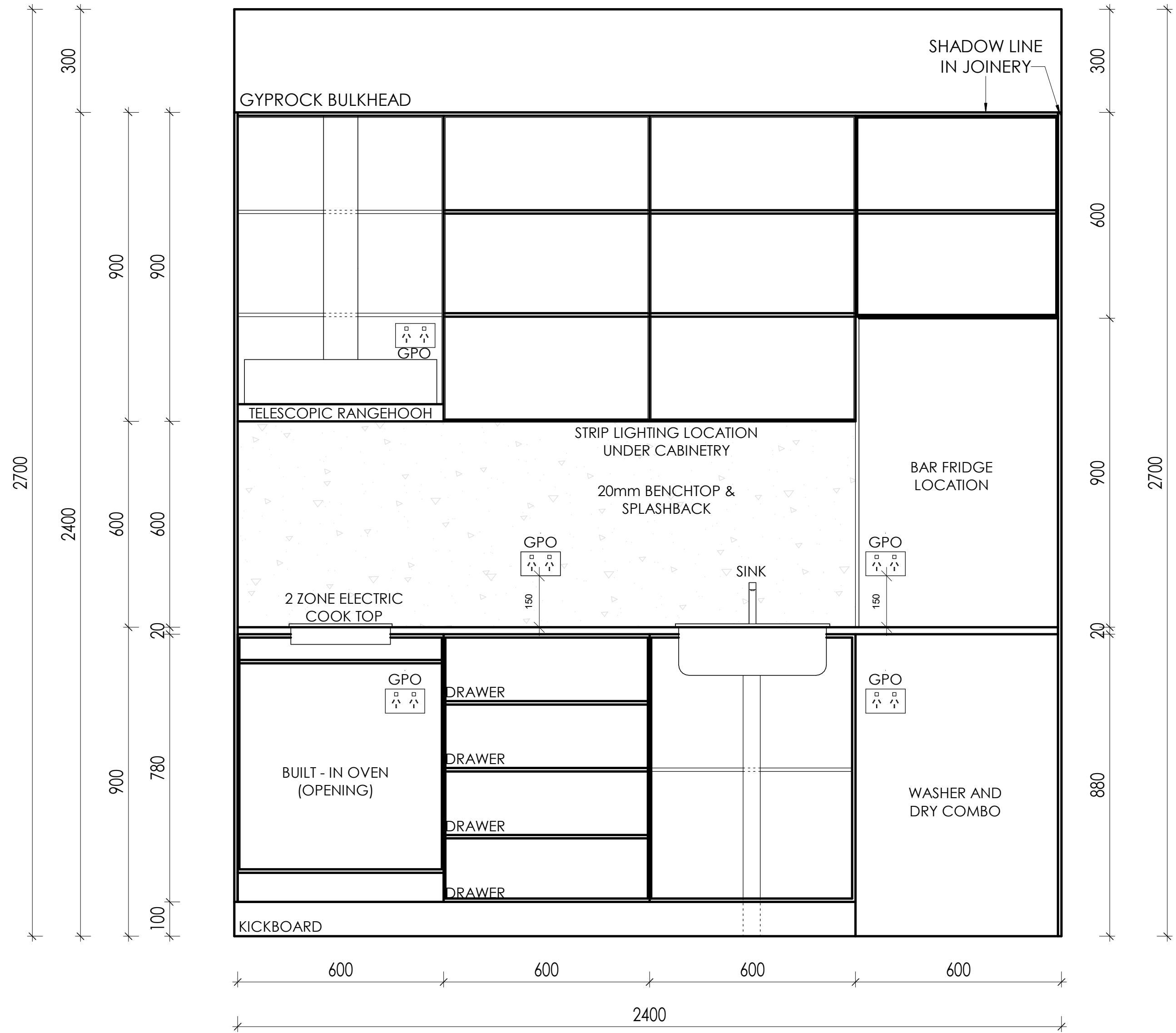
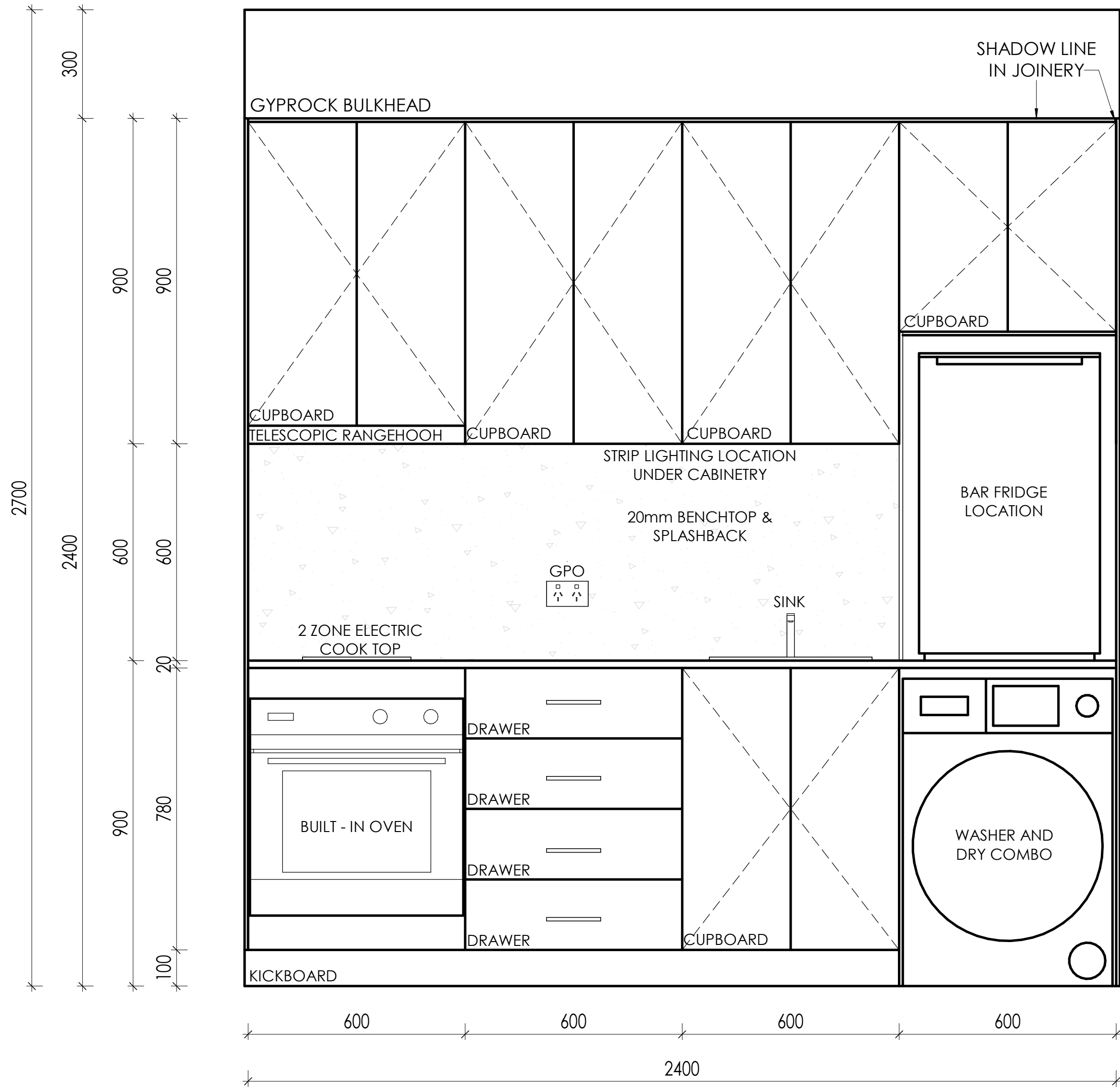
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SCHEDULE OF FINISHES

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DRAWN BY JM	21104
CHECKED BY CB	DRAWING NUMBER
FOR DA APPROVAL	13

REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
B	ISSUE FOR N&M/S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22

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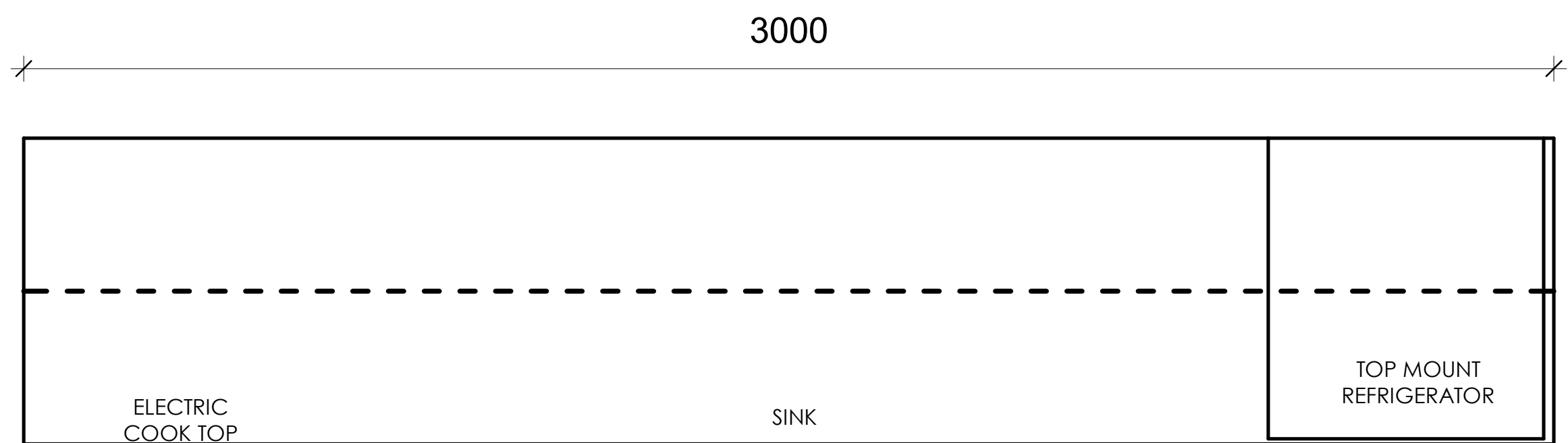
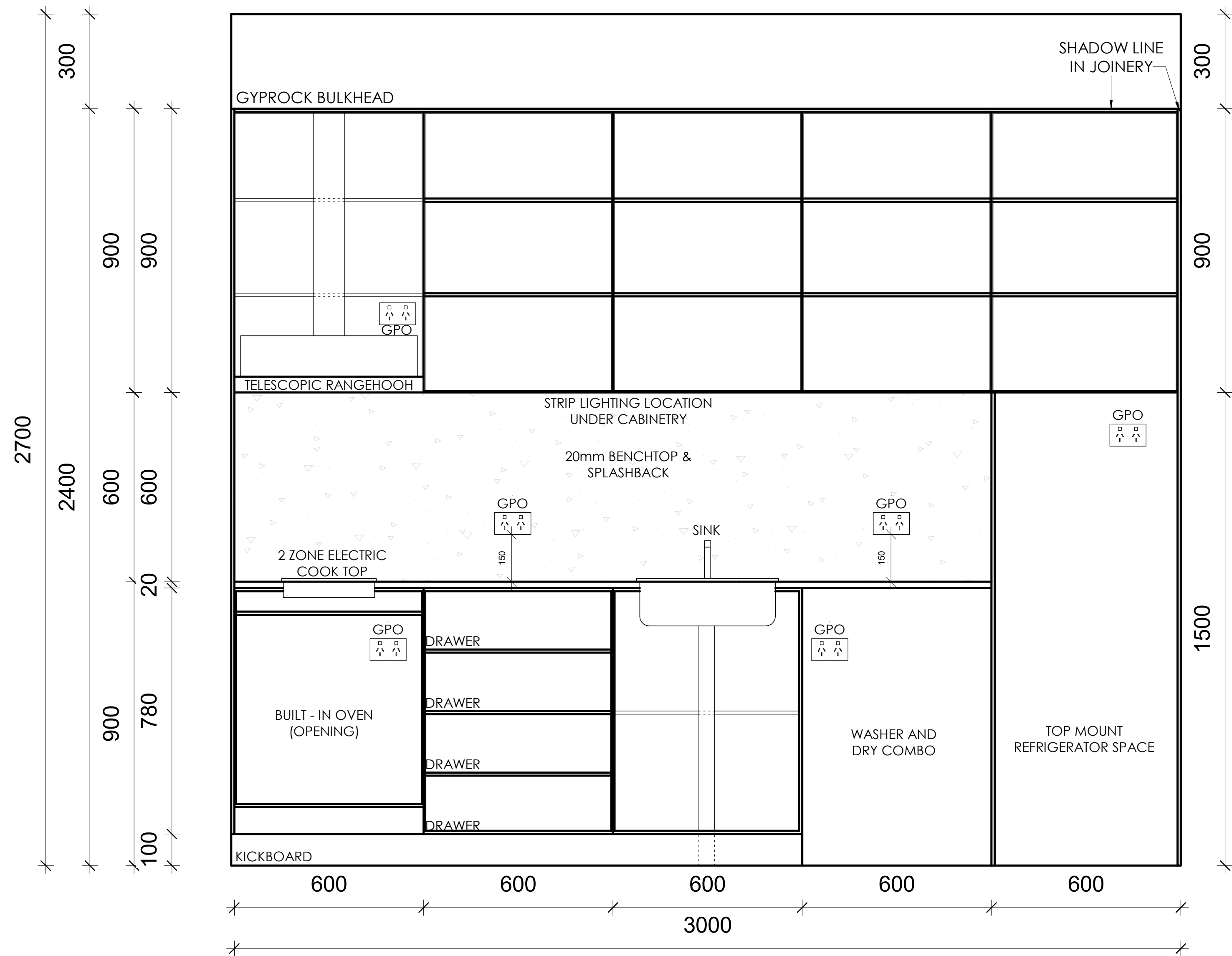
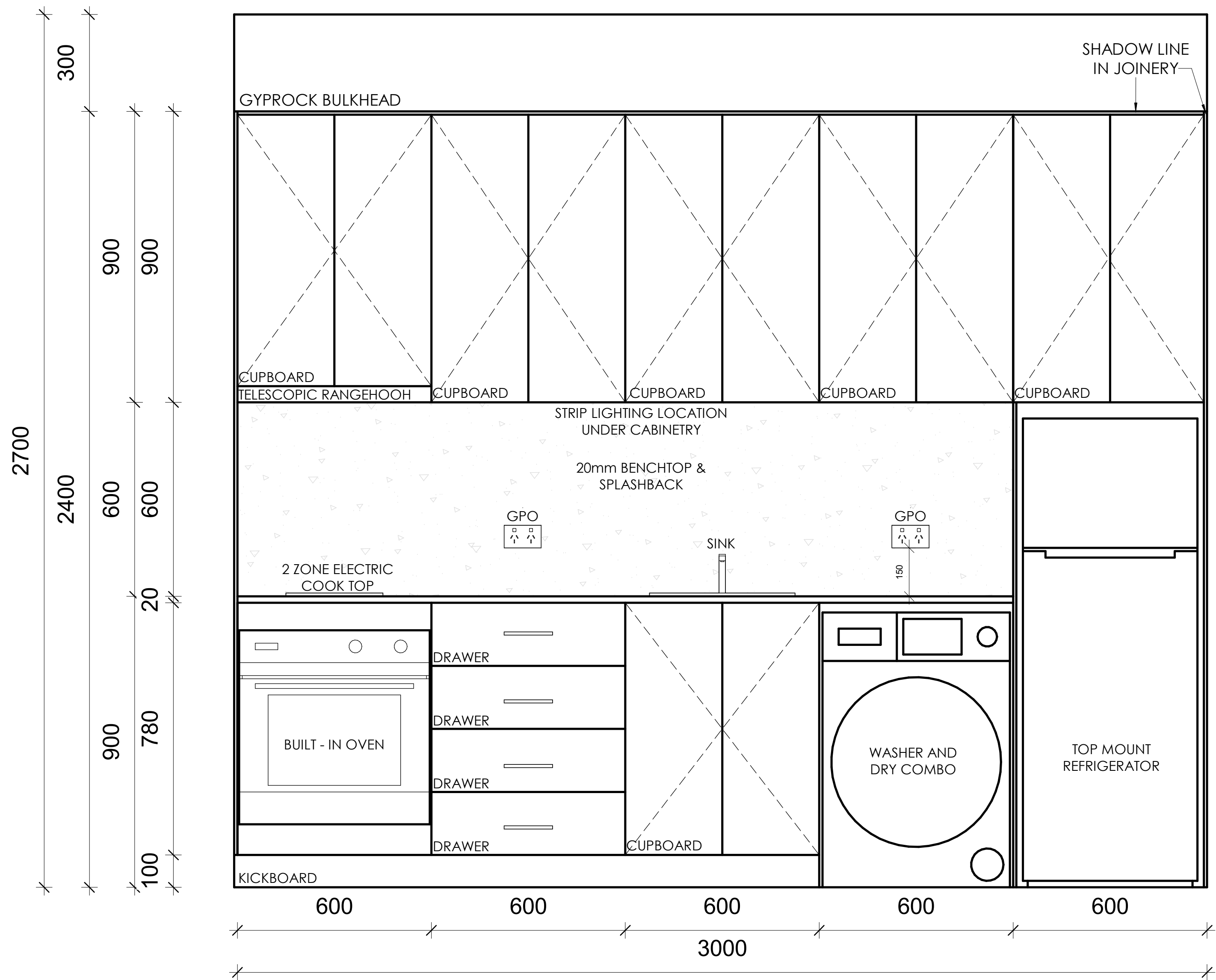




1 TYPICAL 2.4m KITCHEN DETAIL  
1 : 10

REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
B	ISSUE FOR N.O.M./S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22





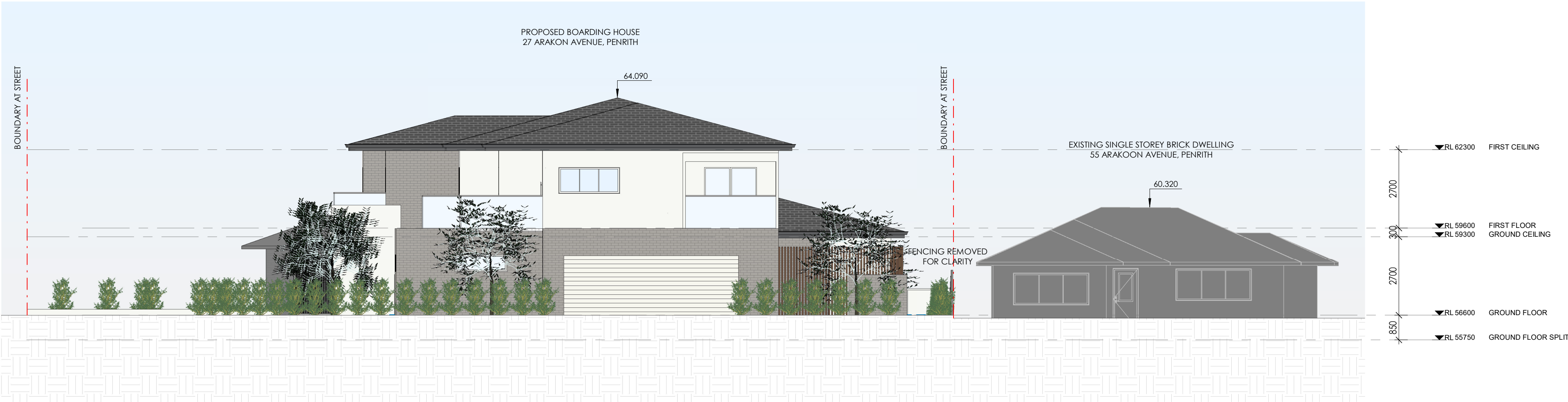
1 TYPICAL 3m KITCHEN DETAIL  
1 : 10

PROJECT TITLE		
PROPOSED BOARDING HOUSE		
PROJECT ADDRESS		
27 COREEN AVENUE, PENRITH		
DRAWING TITLE		
TYPICAL 3m KITCHEN DETAIL		
SCALE @ A1	1 : 10	
DRAWN BY	JM	
CHECKED BY	CB	
FOR DA APPROVAL		
PROJECT NUMBER		
21104		
DRAWING NUMBER		
15		
REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
B	ISSUE FOR NOM/S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22





1 SOUTH STREETScape (COREEN AVENUE)  
1 : 100



2 EAST STREETScape (ARAKOON AVENUE)  
1 : 100

35. REV D - 08/03/22  
STREETSCAPE ELEVATIONS ADDED

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PROJECT TITLE  
PROPOSED BOARDING HOUSE

PROJECT ADDRESS  
27 COREEN AVENUE, PENRITH

DRAWING TITLE  
STREETSCAPE ELEVATIONS

SCALE @ A1	1 : 100	PROJECT NUMBER
DRAWN BY	JM	<b>21104</b>
CHECKED BY	CB	DRAWING NUMBER
<b>FOR DA APPROVAL</b>		<b>16</b>

REV	DESCRIPTION	DATE
A	ISSUE FOR DA	09/06/21
B	ISSUE FOR NGL/S34	17/11/21
C	ISSUE FOR S34	09/02/22
D	ISSUE FOR S34	08/03/22

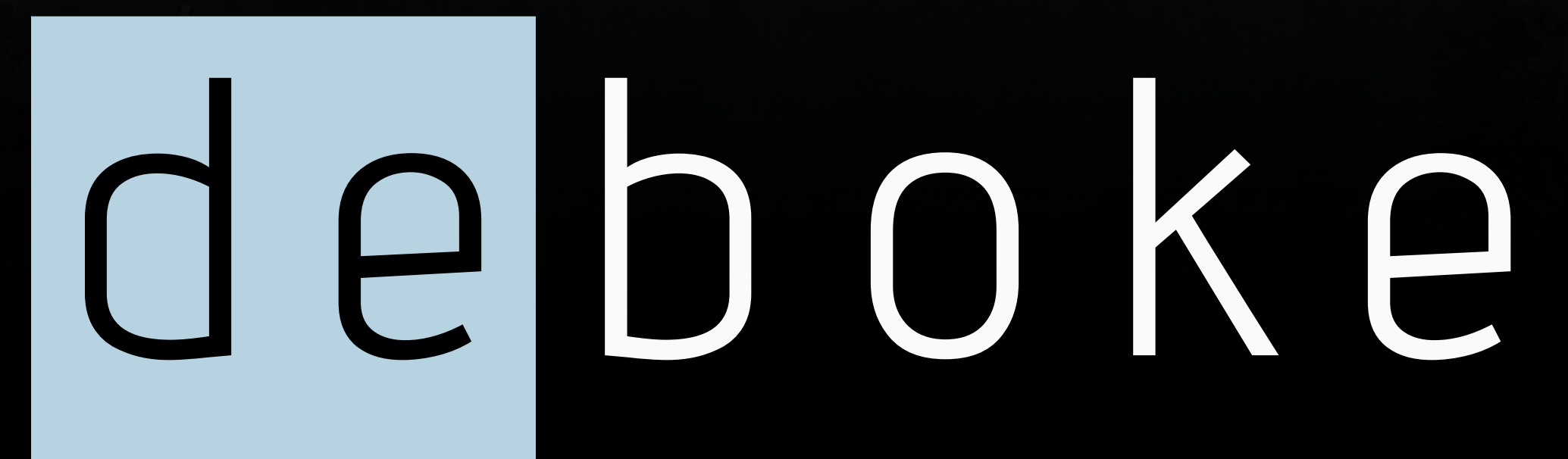
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# CONCEPT STORMWATER DRAINAGE PLANS

PROPOSED BOARDING HOUSE  
**27 COREEN AVENUE, PENRITH NSW 2750**



REF | SW21209

REVISION | D

CLIENT | JENNY LIU

ARCHITECT | BAINI DESIGN

ENGINEERING CONSULTANTS



DRAINAGE NOTES:

ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED

100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE

MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm

ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS

BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL

ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)

SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS

HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS

PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT

ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP

ALL PITS SHALL BE MAINTAINED REGULARLY

TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER

MAXIMUM FRONT ENTRY PIPE:-  
STRAIGHT ENTRY - Ø750  
SKEW ENTRY 45° - Ø525

Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES

COMPRESSIVE STRENGTH f<sub>c</sub> FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS

ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS

ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm

STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL

AUTHORITY STORMWATER NOTES:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL SET OUT AND LEVELS PRIOR TO COMMENCEMENT OF WORKS AND TO REPORT ANY DISCREPANCIES FOUND TO THE SUPERINTENDANT.

ALL SET OUT DIMENSIONS ARE TO FACE OF KERB, CENTERLINE OF FENCE/BOLARD/PIPE.

SMOOTH ALL TRANSITIONS BETWEEN NEW AND EXISTING WORK IN BOTH LEVEL AND ALIGNMENT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT AUTHORITY SAFETY REQUIREMENTS.

NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION AND PAVEMENT THICKNESS FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS

PIPE BACKFILL	DENSITY INDEX 75
SELECT FILL	95% STANDARD
SELECT FILL (LESS THAN 300mm BELOW BASE COURSE)	98% MODIFIED
BASE COURSE	100% MODIFIED

THE AUSPEC SPECIFICATION SHALL BE THE SPECIFICATION FOR THESE WORKS.

KERB INLET PIT NOTES:

KERB INLET PITS TO BE CONSTRUCTED TO PENRITH COUNCIL STANDARDS.

ALL KERB INLET PITS TO BE CAST IN-SITU, U.N.O. BY PENRITH COUNCIL STANDARD DRAWINGS.

ALL CONCRETE SHALL BE 32MPa STRENGTH AT 28 DAYS WITH F82 MESH CENTRALLY PLACEDBY PENRITH COUNCIL STANDARD DRAWINGS.

EROSION & SEDIMENT CONTROL

NOTES:

PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYPICAL).

ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.

DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

STORMWATER PIPE BEDDING/PAVING NOTES:

WHERE TRENCH BASE IS ROCK A MINIMUM OF 75mm BEDDING TO BE PROVIDED UNDER PIPE COLLARS.

STORMWATER PIPE BEDDING DETAIL TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS. BEDDING DETAILS TO BE CONFIRMED UPON EXCAVATION & PRIOR TO INSTALLATION OF PIPEWORK.

FOOTPATH REINSTATEMENT NOTES:

REMOVE ALL SAND FILL WITHIN THE FOOTPATH AREA TO THE EXISTING SUBGRADE.

SUPPORT ALL AUTHORITY SERVICES TO STRUCTURAL ENGINEERS DETAILS DURING EXCAVATION.

REINSTATE FOOTPATH SUBGRADE.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION FROM A NATA REGISTERED TESTING AUTHORITY. MINIMUM THREE TESTS PER LAYER AS FOLLOWS:  
SELECT FILL 95% MODIFIED  
SELECT FILL (LESS THAN 300mm 98% MODIFIED  
BELOW BASE COURSE)  
BASE COURSE 100% MODIFIED

ABBREVIATIONS:

Ø or DIA	DIAMETER
CBR	CALIFORNIA BEARING RATIO
CH	CHAINAGE
CL	CENTER LINE
CO	CLEAR OUT
DD	DISH DRAIN
DDO	DISH DRAIN OUTLET
DEJ	DOWELLED EXPANSION JOINT
DGB	DENSE GRADED BASECOURSE
DGS	DENSE GRADED SUB-BASE
DP	DOWNPIPE
e	EXISTING
FFL	FINISHED FLOOR LEVEL
GTD	GRATED TRENCH DRAIN
GSIP	GRATED SURFACE INLET PIT
HYD	HYDRANT
IJ	ISOLATING JOINT
IK	INTEGRAL KERB
IL	INVERT LEVEL
IP	INTERSECTION POINT
KIP	KERB INLET PIT
KO	KERB ONLY
K&G	KERB & GUTTER
KR	KERB RETURN
LS	LONGITUDINAL SECTION
NGL	NATURAL GROUND LEVEL
OF	OVERLAND FLOW PATH
OSD	ON-SITE DETENTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RK	ROLL KERB & GUTTER
RL	REDUCED LEVEL
RW	RETAINING WALL
RWT	RAINWATER TANK
SJ	SAWN CONTROL JOINT
SMH	SEWER MAN HOLE
SW	STORMWATER
SWP	STORMWATER PIT
SWRM	STORMWATER RISING MAIN
SWS	STORMWATER SUMP
SV	STOP VALVE
TOK	TOP OF KERB
TOW	TOP OF WALL
TWL	TOP WATER LEVEL
TP	TANGENT POINT
UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UNO	UNLESS NOTED OTHERWISE
WPJ	WEAKENED PLANE JOINT
FF	FIRST FLUSH DEVICE
TYP	TYPICAL

LEGEND:

	RAINWATER TANK LINES
	STORMWATER LINE
	SSD
	SWRM
	HL
	OF
	e
	SW
	S
	W
	G
	E
	UE
	FO
	TEL
	FENCE LINE
	GRATED SURFACE INLET PIT
	JUNCTION PIT
	KERB INLET PIT
	EXISTING KERB INLET PIT
	eTEL
	EXISTING TELSTRA PIT
	eHYD
	EXISTING HYDRANT
	eSV
	ePP
	eSMH
	EXISTING SEWER MANHOLE
	OFF
	RWO
	CO
	]
	DP
	DOWNPIPE
	FSL
	BENCHMARK



DRAWING REGISTER				
NUMBER	NAME	REVISION		
S100	COVER SHEET	D		
S101	SPECIFICATIONS SHEET	D		
S200	SITE STORMWATER MANAGMENT PLAN	D		
S201	FIRST FLOOR PLAN	D		
S202	ROOF PLAN	D		
S300	DETAILS SHEET - SHEET 1 OF 2	D		
S301	DETAILS SHEET - SHEET 2 OF 2	D		
S400	EROSION AND SEDIMENT CONTROL PLAN	D		
S500	CATCHMENT PLAN	D		



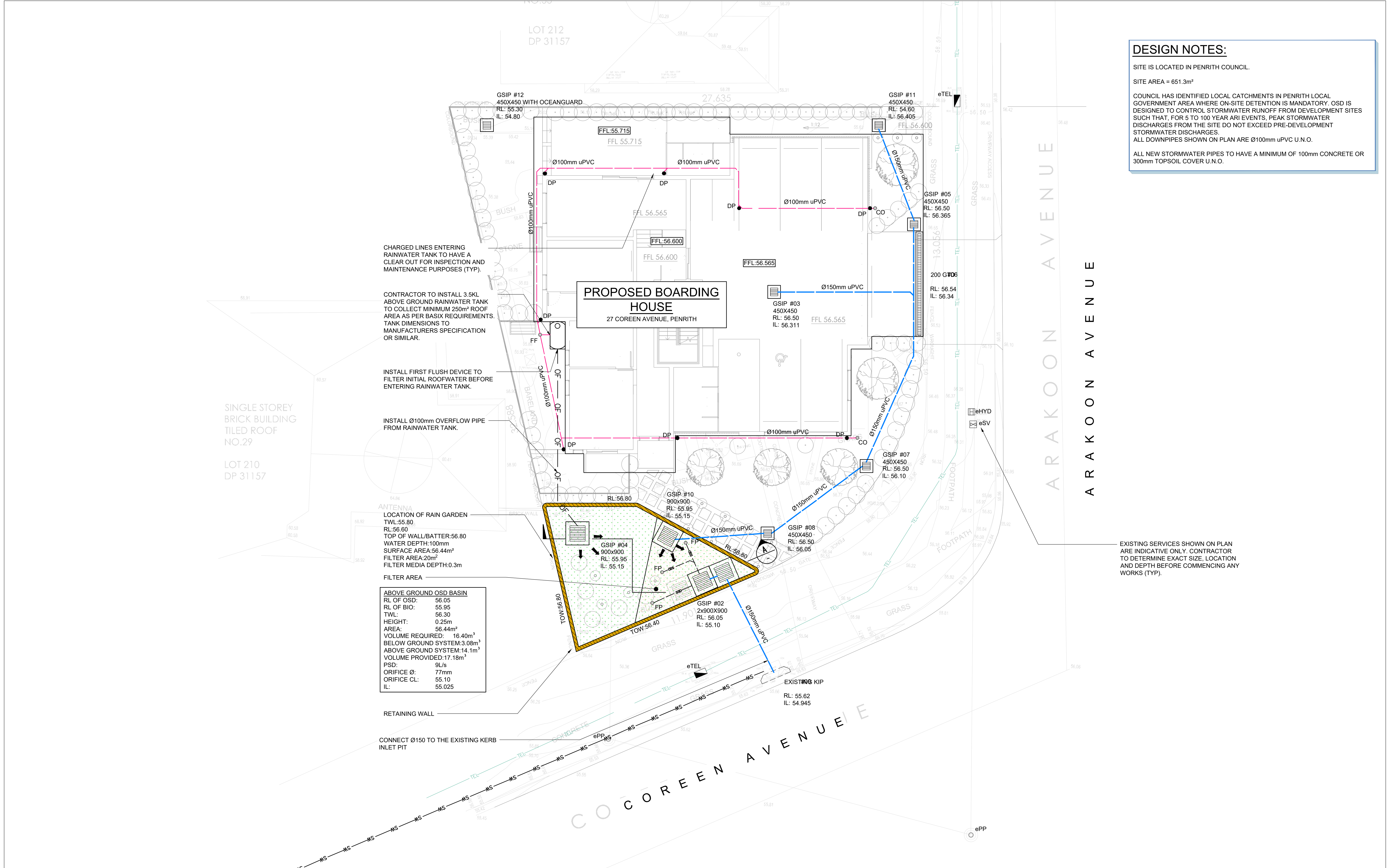
DIAL BEFORE YOU DIG SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE

TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

					E: admin@deboke.com.au W: www.deboke.com.au A: 65 Blaxcell Street, Granville NSW 2142 M: 0432 225 833 (A.A.), 0404 786 785 (J.D.)	 ENGINEERING CONSULTANTS	DRAWN: A.A. REVIEWED: J.D. APPROVED: A.A.	DESIGNED: A.A. DATE: 11.03.2022 DATE: 11.03.2022	 JENNY LIU	ARCHITECT:	CLIENT:	PROJECT: PROPOSED BOARDING HOUSE ADDRESS: 27 COREEN AVENUE, PENRITH APPLICATION: SECTION 34 (S34) LGA: PENRITH COUNCIL	TITLE:  COVER SHEET	ALL DIMENSIONS IN 'm' UNLESS OTHERWISE STATED
D	ISSUED FOR S34 CONFERENCE	2	A.A.	11.03.2022	COPYRIGHT THIS DRAWING AND THE INFORMATION SHOWN HEREON IS THE PROPERTY OF DEBOKE ENGINEERING CONSULTANTS AND MAY NOT BE USED FOR ANY PURPOSES THAN FOR WHICH SUPPLIED.		B.E CIVIL/STRUCTURAL BEng,MIEAust MEMB. NO: 5579488							
C	ISSUED FOR S34 CONFERENCE	2	A.A.	01.03.2022										
B	ISSUED FOR DA	2	A.A.	30.07.2021										
A	ISSUED FOR DA	2	A.A.	28.07.2021										
REV	DESCRIPTION	APP.	DESIGN	DATE	1. PRELIMINARY 2. DEVELOPMENT APPLICATION 3. COMPLYING DEVELOPMENT 4. CONSTRUCTION CERTIFICATE 5. FOR TENDER 6. OTHER						PROJECT NO. SW21209 DRAWING NO. S101			





**DESIGN NOTES:**



SITE IS LOCATED IN PENRITH COUNCIL.

SITE AREA = 651.3m²

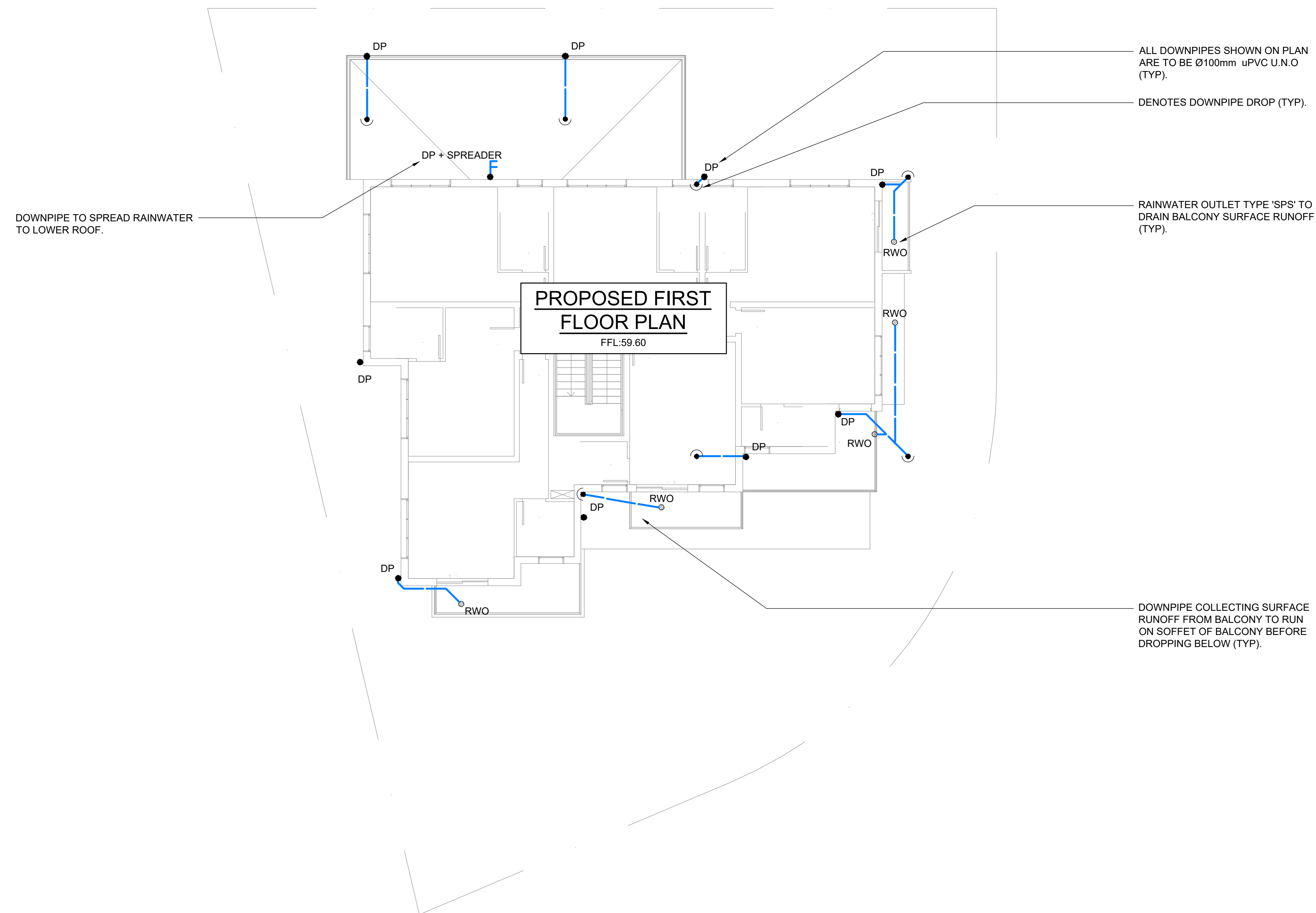
COUNCIL HAS IDENTIFIED LOCAL CATCHMENTS IN PENRITH LOCAL GOVERNMENT AREA WHERE ON-SITE DETENTION IS MANDATORY. OSD IS DESIGNED TO CONTROL STORMWATER RUNOFF FROM DEVELOPMENT SITES SUCH THAT, FOR 5 TO 100 YEAR ARI EVENTS, PEAK STORMWATER DISCHARGES FROM THE SITE DO NOT EXCEED PRE-DEVELOPMENT STORMWATER DISCHARGES.

ALL DOWNPIPES SHOWN ON PLAN ARE Ø100mm uPVC U.N.O.

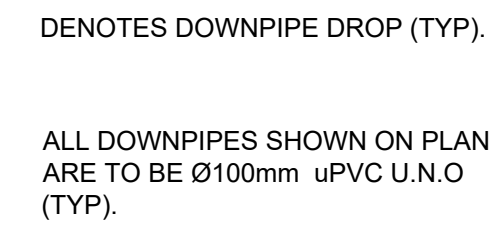
ALL NEW STORMWATER PIPES TO HAVE A MINIMUM OF 100mm CONCRETE OR 300mm TOPSOIL COVER U.N.O.




				E: admin@deboke.com.au W: www.deboke.com.au A: 65 Blaxcell Street, Granville NSW 2142 M: 0432 225 833 (A.A.), 0404 786 785 (J.D.)	 ENGINEERING CONSULTANTS	DRAWN: A.A. REVIEWED: J.D. APPROVED: A.A.	DESIGNED: A.A. DATE: 11.03.2022 DATE: 11.03.2022	 ARCHITECT:	JENNY LIU CLIENT:	PROJECT: PROPOSED BOARDING HOUSE ADDRESS: 27 COREEN AVENUE, PENRITH APPLICATION: SECTION 34 (S34) LGA: PENRITH COUNCIL	TITLE: SITE STORMWATER MANAGMENT PLAN	ALL DIMENSIONS IN 'm' UNLESS OTHERWISE STATED
D	ISSUED FOR S34 CONFERENCE	2	A.A.	11.03.2022		1. PRELIMINARY 2. DEVELOPMENT APPLICATION 3. COMPLYING DEVELOPMENT	4. CONSTRUCTION CERTIFICATE 5. FOR TENDER 6. OTHER			PROJECT NO. SW21209 DRAWING NO. S200		
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B	ISSUED FOR DA	2	A.A.	30.07.2021								
A	ISSUED FOR DA	2	A.A.	28.07.2021								
REV	DESCRIPTION	APP.	DESIGN	DATE								



[illegible]





					E: admin@deboke.com.au W: www.deboke.com.au A: 65 Blaxcell Street, Granville NSW 2142 M: 0432 225 833 (A.A.), 0404 786 785 (J.D.)		DRAWN: A.A. DESIGNED: A.A. REVIEWED: J.D. DATE: 11.03.2022 APPROVED: A.A. DATE: 11.03.2022		JENNY LIU	CLIENT:	PROJECT: PROPOSED BOARDING HOUSE ADDRESS: 27 COREEN AVENUE, PENRITH APPLICTION: SECTION 34 (S34) LGA: PENRITH COUNCIL	TITLE: ROOF PLAN  SCALE: 0m 1 2 3 4 5 SCALE 1:100 ON ORIGINAL SIZE	ALL DIMENSIONS IN 'm' UNLESS OTHERWISE STATED PROJECT NO. SW21209 DRAWING NO. S202	
D	ISSUED FOR S34 CONFERENCE	2	A.A.	11.03.2022	COPYRIGHT THIS DRAWING AND THE INFORMATION SHOWN HEREON IS THE PROPERTY OF DEBOKE ENGINEERING CONSULTANTS AND MAY NOT BE USED FOR ANY PURPOSES THAN FOR WHICH SUPPLIED. APPROVAL TYPE: 1. PRELIMINARY 2. DEVELOPMENT APPLICATION 3. COMPLYING DEVELOPMENT 4. CONSTRUCTION CERTIFICATE 5. FOR TENDER 6. OTHER		B.E CIVIL/STRUCTURAL BEng.MIEAust MEMB. NO: 5579488				ARCHITECT:			
C	ISSUED FOR S34 CONFERENCE	2	A.A.	01.03.2022										
B	ISSUED FOR DA	2	A.A.	30.07.2021										
A	ISSUED FOR DA	2	A.A.	28.07.2021										
REV	DESCRIPTION	APP.	DESIGN	DATE										



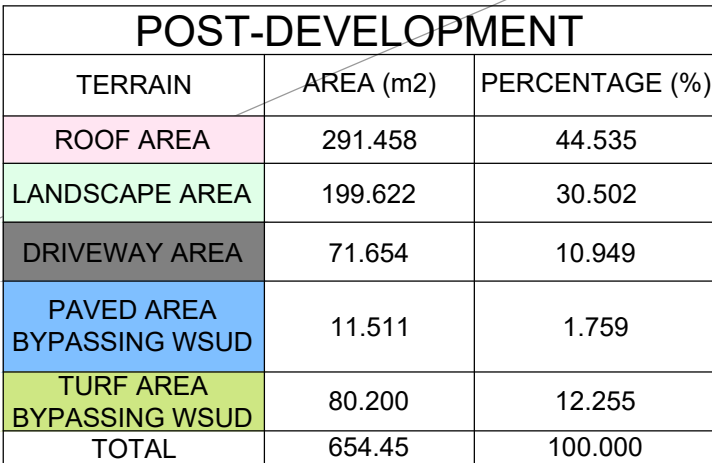


## WATER REUSE DEMAND RESULTS

- ## VEGETATION WITHIN BIO-RETENTION
- (NOTE: A MINIMUM OF 8 PLANTS PER SQUARE METRE IS RECOMMENDED. SHRUBS OR TREES MAY ALSO BE INCLUDED.)



PRE-DEVELOPMENT TO FRONT		
TERRAIN	AREA (m2)	PERCENTAGE (%)
IMPERVIOUS	260.337	39.790
PERVIOUS	99.731	15.243
PRE-DEVELOPMENT TO REAR		
	294.215	44.968
TOTAL	654.28	100.000



de boken  
ENGINEERING CONSULTANTS

baini design

ARCHITECT:

CLIENT:

SCALE:

ALL DIMENSIONS  
IN 'm'  
UNLESS OTHERWISE  
STATED

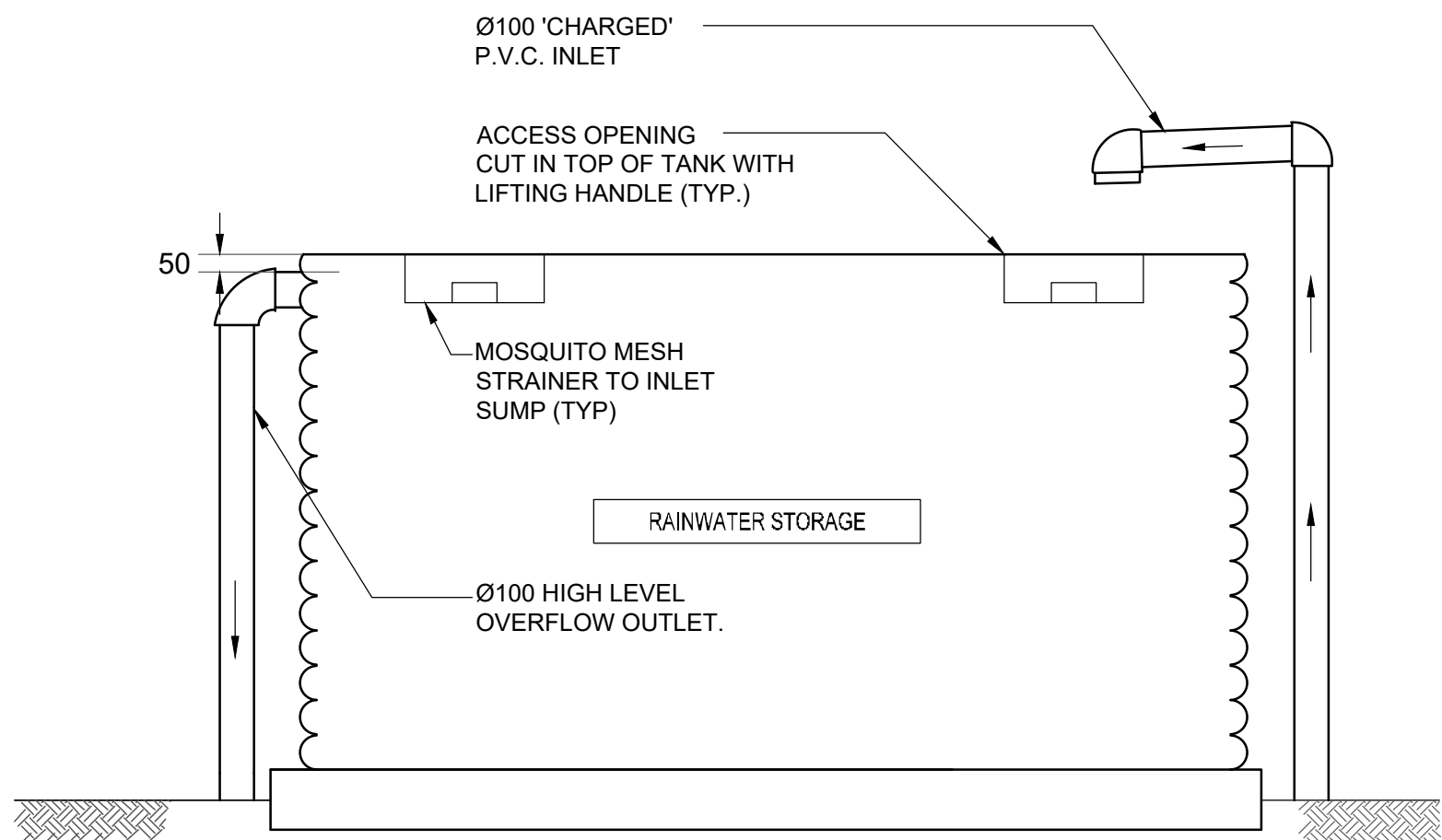
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PROJECT NO.  
**SW21209**

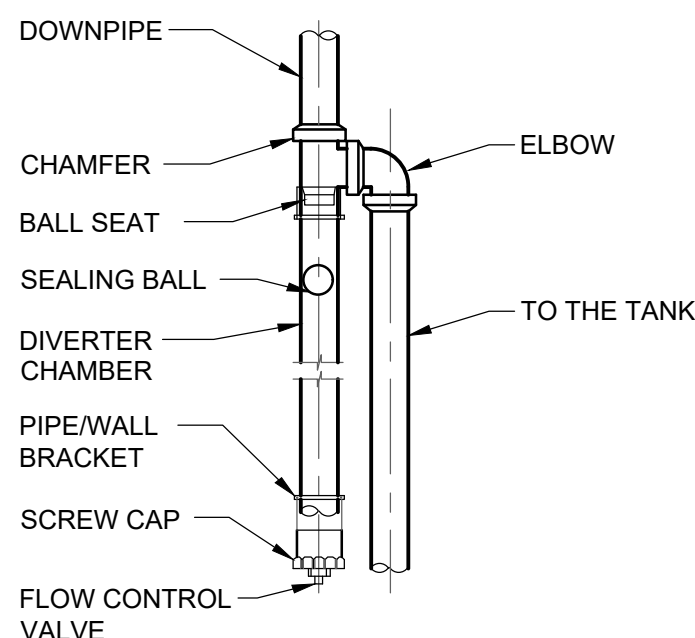
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DRAWING NO.  
**S300**





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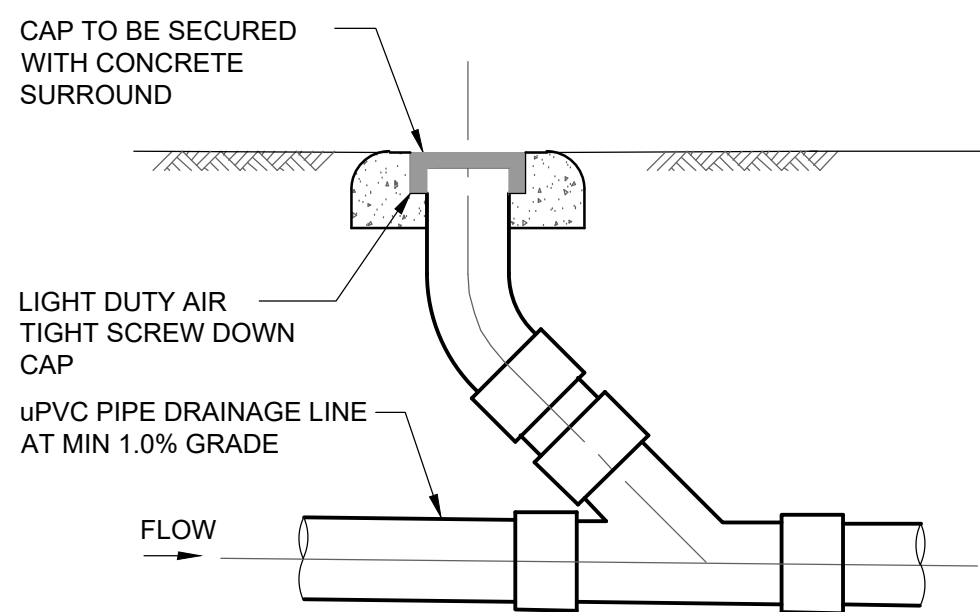


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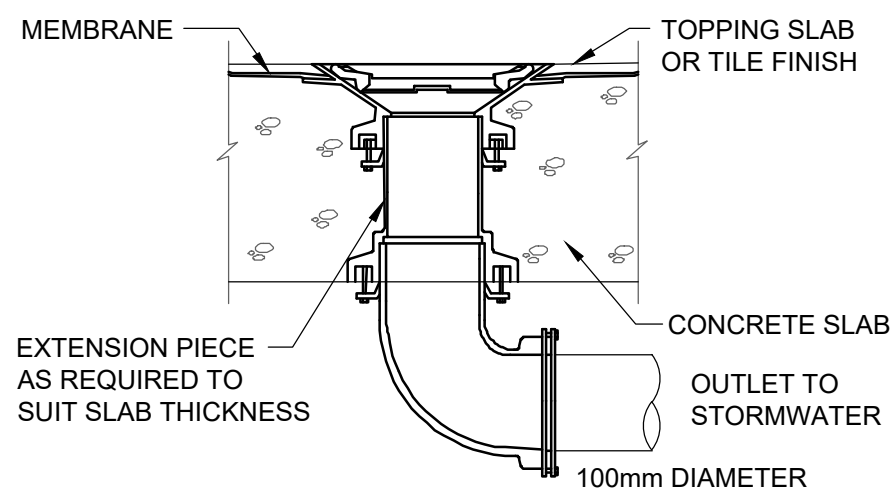
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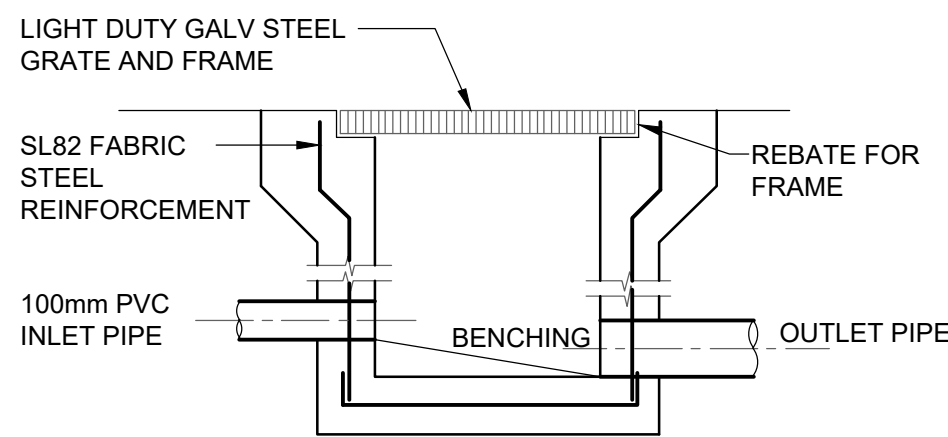
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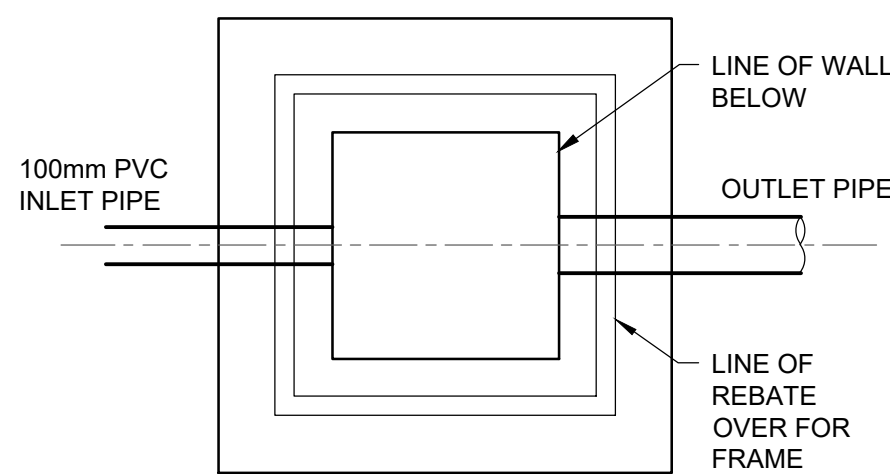
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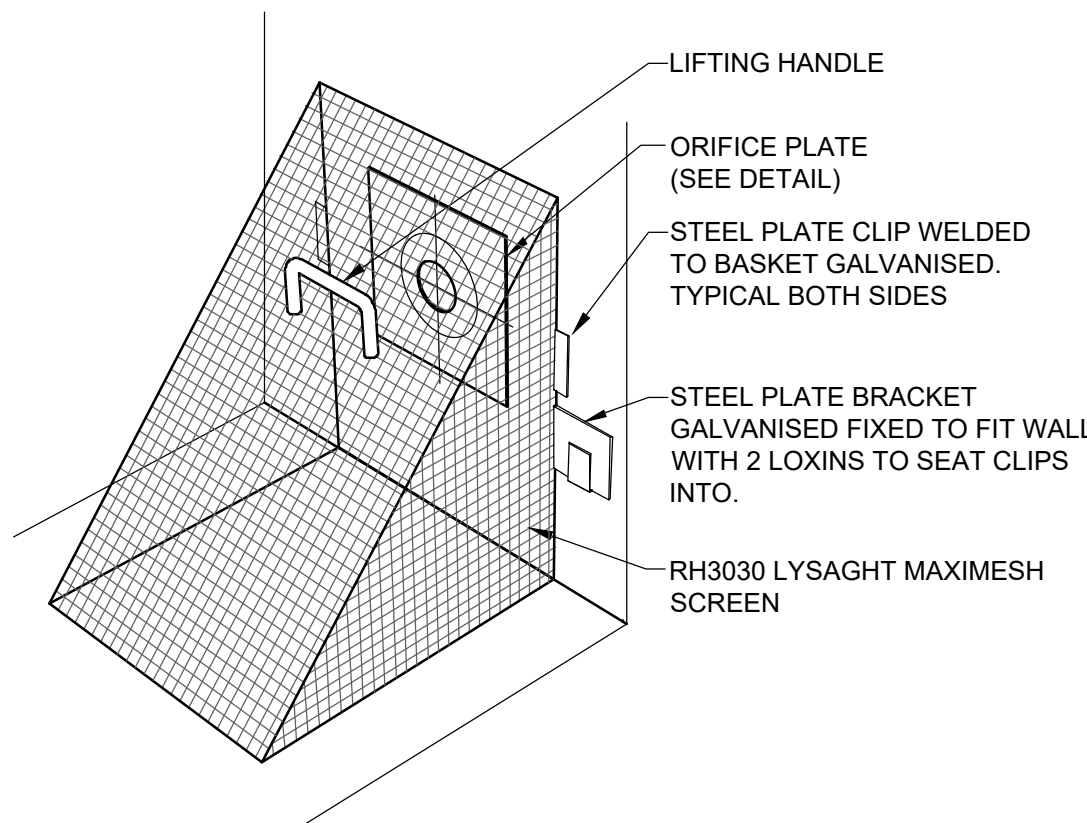


AS SHOWN  
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SECTION

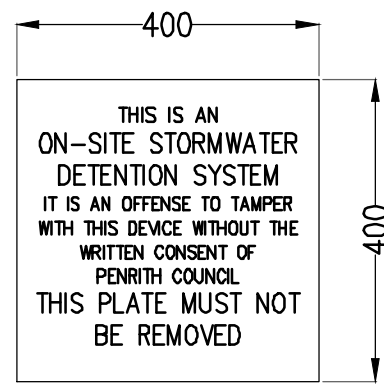


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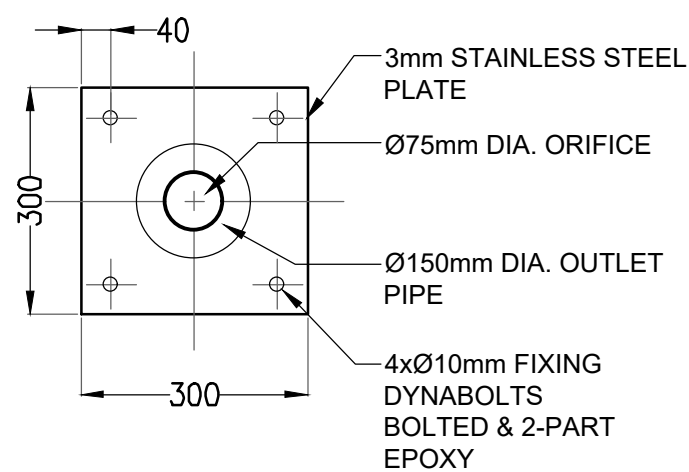
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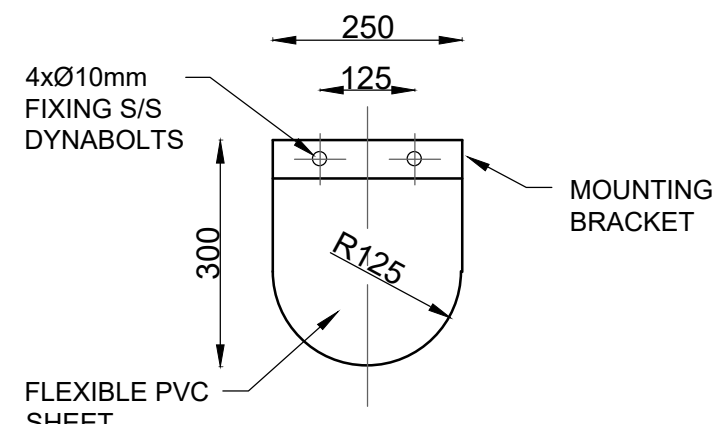
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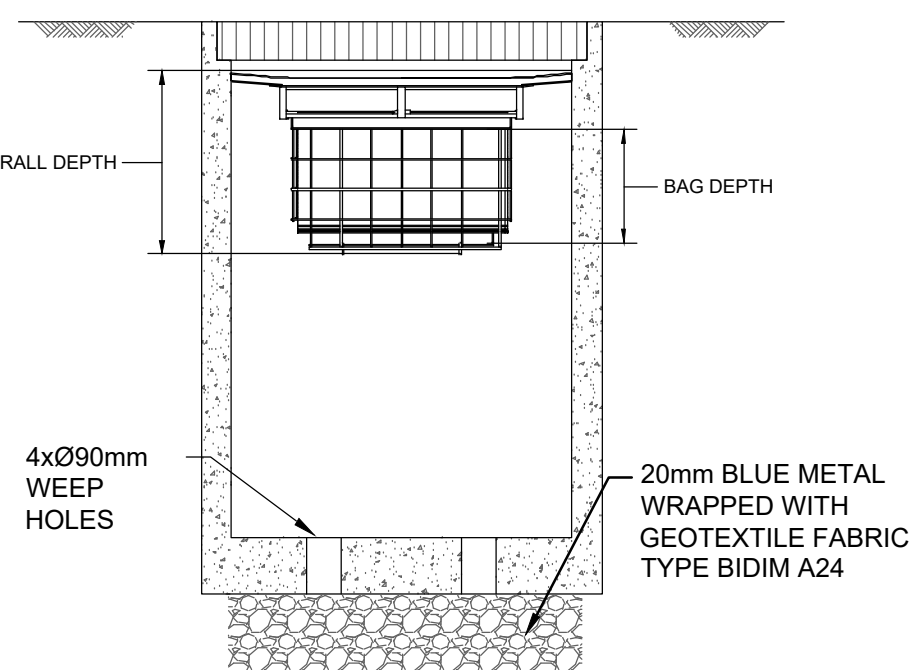
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ORIFICE PLATE | UNIT 1  
SCALE 1:20





FLAP VALVE  
SCALE 1:10



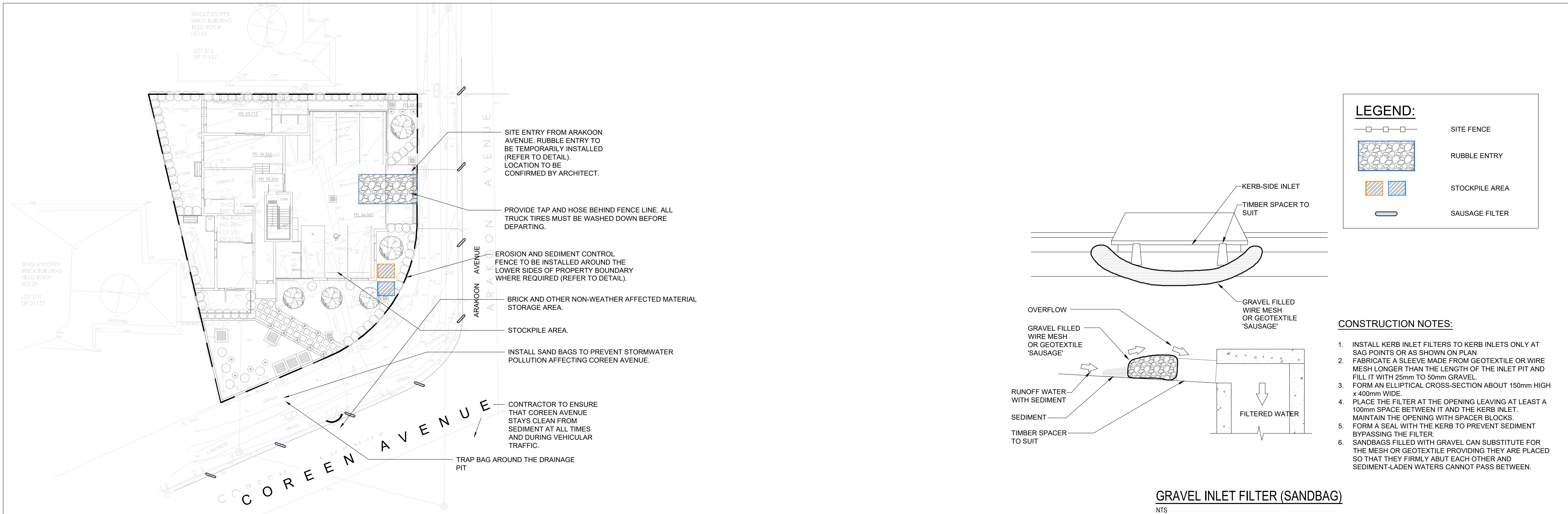
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CONTACT OCEAN PROTECT

OSD CALCULATION SUMMARY TABLE

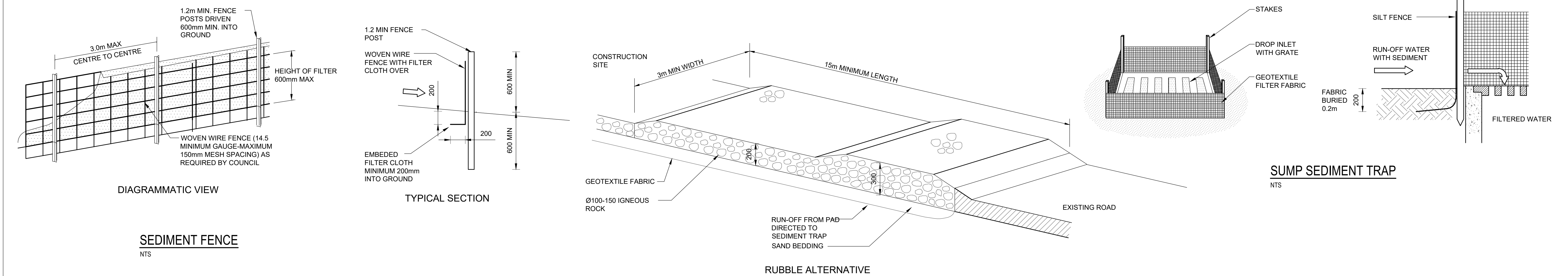
PRE-DEV AREA (m <sup>2</sup> )	POST-DEV AREA (m <sup>2</sup> )	PRE-DEV IMPERVIOUS (%)	POST-DEV IMPERVIOUS (%)	STORM (YR)	PRE-DEV FLOW TO FRONT (l/s)	PRE-DEV FLOW TO REAR (l/s)	POST-DEV FLOW (l/s)	PIPE OUTFLOW (l/s)	BYPASS OUTFLOW (l/s)	TOTAL PSD (l/s)	OSD VOLUME (m <sup>3</sup> ) FOR 100YR STORM STORAGE
360	581	72	70	5	10	4	18	10	3	13	16.400
				20	14	8	26	12	4	16	
				100	20	13	38	9	6	15	

					E: admin@deboke.com.au W: www.deboke.com.au A: 65 Blaxcell Street, Granville NSW 2142 M: 0432 225 833 (A.A.), 0404 786 785 (J.D.)	 ENGINEERING CONSULTANTS	DRAWN: A.A. REVIEWED: J.D. APPROVED: A.A.	DESIGNED: A.A. DATE: 11.03.2022 DATE: 11.03.2022		JENNY LIU	PROJECT: PROPOSED BOARDING HOUSE ADDRESS: 27 COREEN AVENUE, PENRITH APPLICATION: SECTION 34 (S34) LGA: PENRITH COUNCIL	TITLE:  DETAILS SHEET - SHEET 2 OF 2	ALL DIMENSIONS IN 'm' UNLESS OTHERWISE STATED									
D	ISSUED FOR S34 CONFERENCE	2	A.A.	11.03.2022	COPYRIGHT THIS DRAWING AND THE INFORMATION SHOWN HEREON IS THE PROPERTY OF DEBOKE ENGINEERING CONSULTANTS AND MAY NOT BE USED FOR ANY PURPOSES THAN FOR WHICH SUPPLIED.									PROJECT NO. SW21209								
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B	ISSUED FOR DA	2	A.A.	30.07.2021										S301								
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**EROSION & SEDIMENT  
CONTROL PLAN**  
SCALE 1:200



**TEMPORARY CONSTRUCTION EXIT**

					E: admin@deboke.com.au W: www.deboke.com.au A: 65 Blaxcell Street, Granville NSW 2142 M: 0432 225 833 (A.A.), 0404 786 785 (J.D.)	 ENGINEERING CONSULTANTS	DRAWN: A.A. DESIGNED: A.A. REVIEWED: J.D. DATE: 11.03.2022 APPROVED: A.A. DATE: 11.03.2022		JENNY LIU	PROJECT: PROPOSED BOARDING HOUSE ADDRESS: 27 COREEN AVENUE, PENRITH APPLICATION: SECTION 34 (S34) LGA: PENRITH COUNCIL	TITLE:  EROSION AND SEDIMENT CONTROL PAN	ALL DIMENSIONS IN 'm' UNLESS OTHERWISE STATED					
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C	ISSUED FOR S34 CONFERENCE	2	A.A.	01.03.2022	COPYRIGHT THIS DRAWING AND THE INFORMATION SHOWN HEREON IS THE PROPERTY OF DEBOKE ENGINEERING CONSULTANTS AND MAY NOT BE USED FOR ANY PURPOSES THAN FOR WHICH SUPPLIED.  APPROVAL TYPE: 1. PRELIMINARY 2. DEVELOPMENT APPLICATION 3. COMPLYING DEVELOPMENT 4. CONSTRUCTION CERTIFICATE 5. FOR TENDER 6. OTHER							PROJECT NO. SW21209					
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REV	DESCRIPTION	APP.	DESIGN	DATE			B.E CIVIL/STRUCTURAL BEng,MIEAust MEMB. NO: 5579488		ARCHITECT:	CLIENT:							





STANDARD CLOTHESLINE DETAIL  
(google image)



GENERAL NOTES

DRAWING

- All finished levels are to be verified onsite by contractor
- All Landscape works to be conducted in strict accordance with Council's landscape code and guidelines.
- These drawings must be read in conjunction with the draing package from the consultant, including all engineering and architecture drawings.
- Refer to architects and engineering drawings for pavement, walls, fence, steps, levels and drainage.

SERVICES

- Verify the as built location of all existing services before excavation works are started, services shown are indicative only.

FALLS

- All pavement, planting & turf areas to be graded evenly. Ponding is unacceptable

TURFING AREA

- All new turfed areas to be selected weed free Soft leaf Buffalo.
- Remove existing grass, Cultivate subgrade depth of 150mm and place site topsoil to areas to be turfed to a depth of a 100mm. Soil blends to comply with AS 4419

PLANTING AREAS

- Approved topsoil, both site won and imported, shall be spread evenly in the approved formation to give a finished depth of 150mm for planted areas. All planting topsoil to be placed 300mm min depth and 100mm of mulch as specified. Soil blends to comply with AS 4419.
- OSD Basins - Mulch type 2 (20mm river gravel) (refer materials schedule)
- Finished levels of topsoil in planted areas to be 200mm above adjoining paving.
- Ensure that soil media is ameliorated to increase its waterholding abilities.

IRRIGATION

- All irrigation installation to landscape areas are to satisfy the local Council water code and AS3500.

MAINTANCE

- All landscape works are to be maintained for a period of 6 months from the date of completion. This is including all watering, weeding, spraying and re mulching necessary to achieve growth. Any plants and turf defects which arise in this period should be rectified immediately.



Lomandra hystrix - mat rush



Syzygium Superior - lilly pilli



Melaleuca Revolution Gold



Acmena Allyn Magic



Lomandra Little Pal



Pittosporum James Stirling



Berberis Helmond Pillar



Gardenia White Star



TURF selected weed free Soft leaf Buffalo



Elaeocarpus Eumundi

PLANTING SCHEDULE

GROUND COVER				
CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
LOMI	Lomandra hystrix	mat rush	200mm	5
MATURE DIMENSION				
HEIGHT: 1 m H x 1 m W.				
TURF selected weed free Soft leaf Buffalo				
SHRUBS				
CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
SYZA	Syzygium australe	'Aussie Compact' - lilly pilli	200mm	48
MATURE DIMENSION				
HEIGHT: 3-5M but normally clipped to preferred height				
ACM	Acmena smithii	Allyn Magic	200mm	9
MATURE DIMENSION				
HEIGHT & WIDTH: 0.5 m H x 0.5 m W.				
LOMA	Lomandra confertifolia	Little Pal	200mm	13
MATURE DIMENSION				
HEIGHT & WIDTH: 0.5 m H x 0.5 m W.				
PITO	Pittosporum	James Stirling	200mm	17
MATURE DIMENSION				
HEIGHT & WIDTH: 2-3m H x 1 m W.				
GARD	Gardenia White Star	Gardenia White Star	200mm	2
MATURE DIMENSION				
HEIGHT: 75cm				
BERB	Berberis Helmond Pillar	Helmond Pillar	200mm	15
MATURE DIMENSION				
HEIGHT & WIDTH: 1 - 1.5m H x 0.5 - 1m W.				
TREES				
CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
MKG	Melaleuca Revolution Gold	Revolution Gold	45L	2
MATURE DIMENSION				
HEIGHT & WIDTH: 4 m H x 3 m W.				
ELAE	Elaeocarpus Eumundi	Eumundi Quandong	45L	3
MATURE DIMENSION				
HEIGHT & WIDTH: 7m H x 2m W.				
MAGN	Magnolia Little Gem	Magnolia Little Gem	45L	1
MATURE DIMENSION				
HEIGHT & WIDTH: 4-5m H x 2-3m W				

REV	DESCRIPTION	DATE	BY
A	DEVELOPMENT APPLICATION	26/07/2021	JB
B	DEVELOPMENT APPLICATION	22/02/2022	JB
C	DEVELOPMENT APPLICATION	01/03/2022	JB
D	DEVELOPMENT APPLICATION	11/03/2022	JB

PO BOX 2402, NORTH PARRAMATTA, NSW, 1750  
green@scenepoints@gmail.com  
ASN 38 374 779 081  
9188 8252

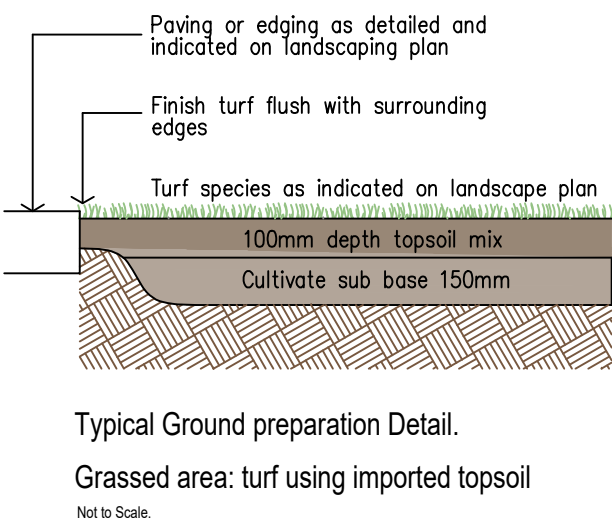
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PROPOSED BOARDING HOUSE  
LANDSCAPE DESIGN @  
27 Coreen Avenue,  
Penrith, 2750

DRAWING NUMBER  
1 OF 1  
SCALE @ A1  
1:100

DATE  
11/03/2022

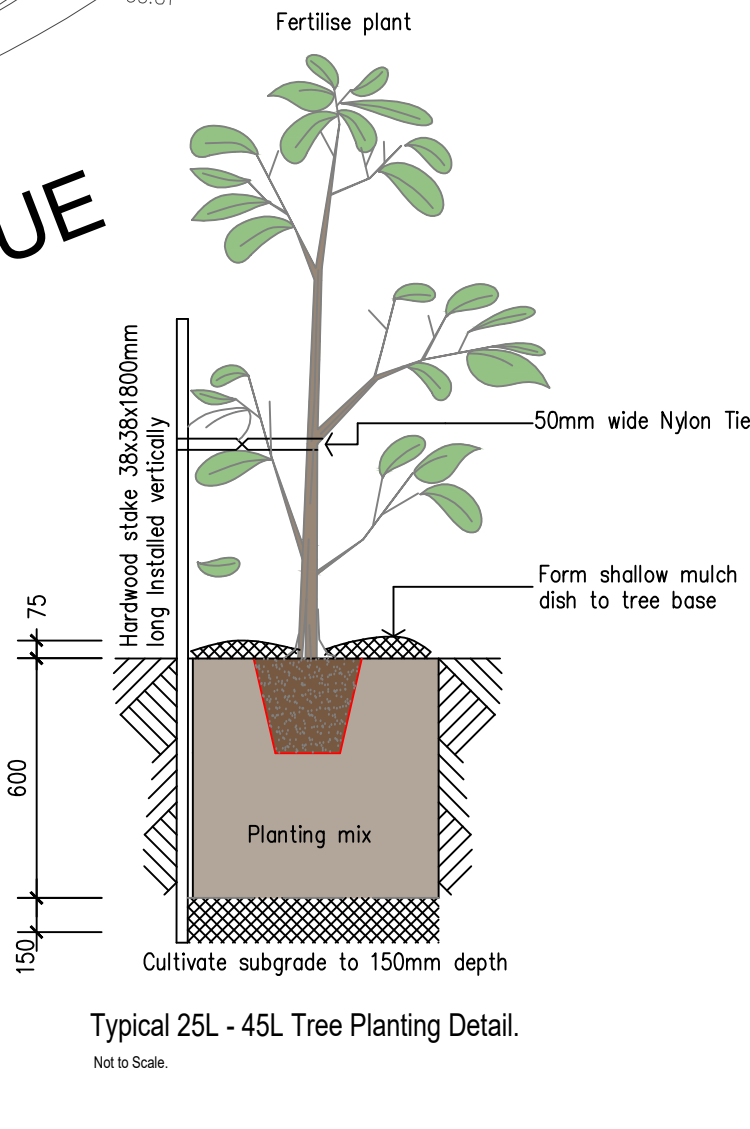
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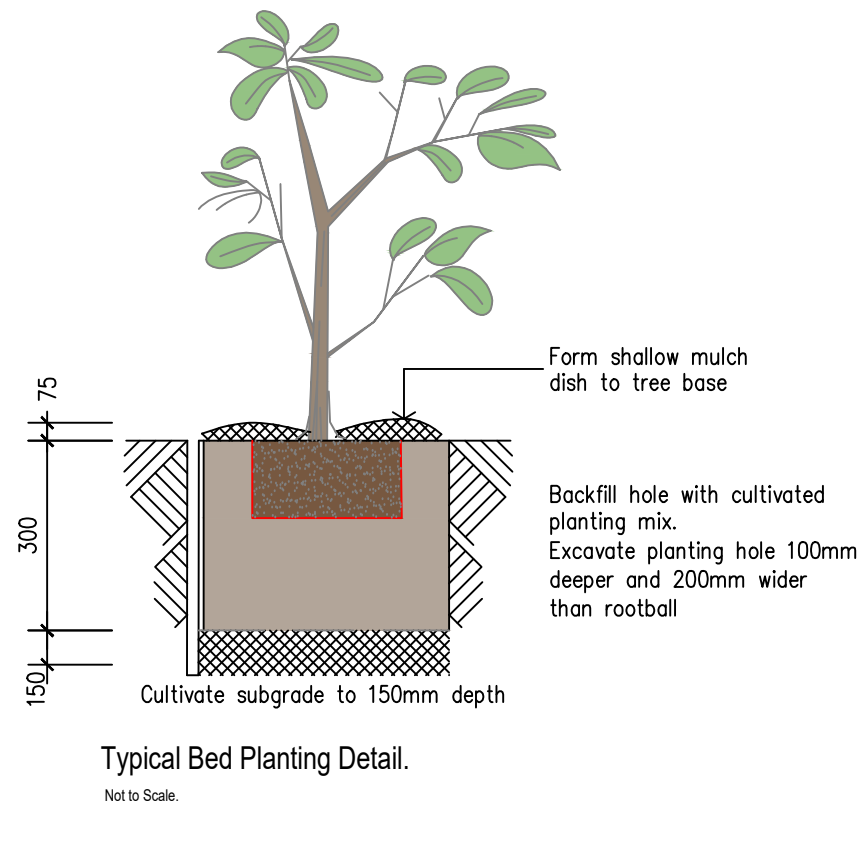
Typical Ground preparation Detail.

Grassed area: turf using imported topsoil  
Not to Scale.



Typical 25L - 45L Tree Planting Detail.

Not to Scale.



Typical Bed Planting Detail.

Not to Scale.





REPORT 210263R1

Revision 2

Noise Assessment  
Proposed Boarding House Development  
27 Coreen Avenue, Penrith NSW 2750

PREPARED FOR:

Chia-Chen Liu  
29 The Avenue  
Granville NSW 2142

11 March 2022





# Noise Assessment

## Proposed Boarding House Development

### 27 Coreen Avenue, Penrith NSW 2750

#### PREPARED BY:

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#### DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
210263R1	Revision 0	20 July 2021	Thomas Carney	Desmond Raymond	Rodney Stevens
210263R1	Revision 1	17 February 2022	Desmond Raymond	-	-
210263R1	Revision 2	11 March 2022	Desmond Raymond	-	-





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## 1 INTRODUCTION

Rodney Stevens Acoustics Pty Ltd (RSA) has been engaged by Chia-Chen Liu to prepare a noise assessment for the proposed boarding house development at 27 Coreen Avenue, Penrith NSW 2750.

This report addresses the noise impacts from the proposed boarding house on sensitive receivers, in addition to surrounding traffic noise on the proposed development. Furthermore, mechanical plant noise criteria has been established.

This assessment is to form part of the supporting documentation for the DA submission to Penrith City Council. Specific acoustic terminology is used in this report. An explanation of common acoustic terms is provided in Appendix A.

## 2 PROPOSED DEVELOPMENT

### 2.1 Site Location

The proposed development is located at 27 Coreen Avenue, Penrith NSW, it is bounded by residential premises to the north, south, east and west. The location of the proposed site and its surroundings is presented in Figure 2-1.

Figure 2-1 Site Location



Aerial image courtesy of Google Maps © 2021





## 2.2 Proposed Development

It is proposed to demolish the existing dwelling at 27 Coreen Avenue, Penrith NSW and build a 2-storey boarding house with ground floor parking. The architectural plans of the proposed boarding house development are presented in Appendix D.

## 3 BASELINE NOISE SURVEY

### 3.1 Unattended Noise Monitoring

In order to characterise the existing acoustical environment of the area, unattended noise monitoring was conducted between Wednesday 5<sup>th</sup> May and Wednesday 12<sup>th</sup> May 2021 at the logging location shown in Figure 2-1. The first noise logger was located on the back yard of the site. The noise monitoring at this location is representative of the ambient noise of the area.

The second noise logger was located in the front yard of the site. The noise monitoring at this location is representative traffic noise from Coreen Avenue and Aarakoon Avenue.

Logger locations were selected with consideration to other noise sources which may influence readings, security issues for noise monitoring equipment and gaining permission for access from other landowners.

Instrumentation for the survey comprised of two RION NL-42EX environmental noise loggers (serial numbers 810779 and 521656) fitted with microphone windshields. Calibration of the loggers was checked prior to and following measurements. Drift in calibration did not exceed  $\pm 0.5$  dB(A). All equipment carried appropriate and current NATA (or manufacturer) calibration certificates.

The logger determines  $L_{A1}$ ,  $L_{A10}$ ,  $L_{A90}$  and  $L_{Aeq}$  levels of the ambient noise.  $L_{A1}$ ,  $L_{A10}$ ,  $L_{A90}$  are the levels exceeded for 1%, 10% and 90% of the sample time respectively (see Glossary for definitions in Appendix A). Detailed results at the monitoring location are presented in graphical format in Appendix B. The graphs show measured values of  $L_{A1}$ ,  $L_{A10}$ ,  $L_{A90}$  and  $L_{Aeq}$  for each 15-minute monitoring period.

### 3.2 Data Processing

#### 3.2.1 Noise Emission (Noise Policy for Industry)

In order to assess noise emission from the proposed boarding house, the data obtained from the noise logger has been processed in accordance with the procedures contained in the NSW Environmental Protection Authority's (EPA) *Noise Policy for Industry* (NPfI, 2017) to establish representative noise levels that can be expected in the residential vicinity of the site.





The monitored baseline noise levels are detailed in Table 3-1.

Table 3-1 Measured Baseline Noise Levels Corresponding to Defined NPfI Periods

Location	Measurement Descriptor	Measured Noise Level – dB(A) re 20 µPa		
		Daytime 7 am - 6 pm	Evening 6 pm – 10 pm	Night-time 10 pm – 7 am
Logger One	L <sub>Aeq</sub>	53	51	48
	RBL (Background)	44	42	34

Notes: All values expressed as dB(A) and rounded to nearest 1 dB(A);

L<sub>Aeq</sub> Equivalent continuous (energy average) A-weighted sound pressure level. It is defined as the steady sound level that contains the same amount of acoustic energy as the corresponding time-varying sound.

L<sub>A90</sub> Noise level present for 90% of time (background level). The average minimum background sound level (in the absence of the source under consideration).

### 3.3 Noise Intrusion (State Environmental Planning Policy (Infrastructure) 2007)

To assess noise intrusion into the proposed development, the data obtained from the first logger location has been processed to establish representative ambient noise levels at the facades most exposed to Coreen Avenue and Aarakoon Avenue.

The time periods used for this assessment are as defined in the State Environmental Planning Policy (Infrastructure) 2007 and the Development near Rail Corridors and Busy Roads Interim Guideline. Results are presented below in Table 3-2.

Table 3-2 Traffic Noise Levels Corresponding to Defined SEPP 2007 Periods

Location	Period	External Noise Levels dB(A)
Logger Two	Day Time 7:00 am - 10:00 pm	L <sub>Aeq</sub> (15hour) 68
	Night Time 10:00 pm - 7:00 am	L <sub>Aeq</sub> (9hour) 64

## 4 NOISE GUIDELINES AND CRITERIA

### 4.1 State Environmental Planning Policy (Infrastructure) 2007

The NSW Government's State Environmental Planning Policy (Infrastructure) 2007 (SEPP (Infrastructure) 2007) was introduced to facilitate the delivery of infrastructure across the State by improving regulatory certainty and efficiency. In accordance with the SEPP, Table 3.1 of the NSW Department of Planning and Infrastructure's "*Development near Rail Corridors and Busy Roads - Interim Guideline*" (the DP&I Guideline) of December 2008 provides noise criteria for residential and non-residential buildings.





These criteria are summarised in Table 4-1.

Table 4-1 DP&I Interim Guideline Noise Criteria

Type of occupancy	Noise Level dB(A)	Applicable time period
Sleeping areas (bedroom)	35	Night 10 pm to 7 am
Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	40	At any time

Note 1: Airborne noise is calculated as  $L_{Aeq(15\text{hour})}$  daytime and  $L_{Aeq(9\text{hour})}$  night-time

The following guidance is also provided in the DP&I Guideline:

*“These criteria apply to all forms of residential buildings as well as aged care and nursing home facilities. For some residential buildings, the applicants may wish to apply more stringent design goals in response to market demand for a higher quality living environment.*

*The night-time “sleeping areas” criterion is 5 dB(A) more stringent than the “living areas” criteria to promote passive acoustic design principles. For example, designing the building such that sleeping areas are less exposed to road or rail noise than living areas may result in less onerous requirements for glazing, wall construction and acoustic seals. If internal noise levels with windows or doors open exceed the criteria by more than 10 dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia.”*

The noise criteria presented in Table 4-1 apply to a ‘windows closed condition’. Standard window glazing of a building will typically attenuate noise ingress by 20 dB(A) with windows closed and 10 dB(A) with windows open (allowing for natural ventilation). Accordingly, the external noise threshold above which a dwelling will require mechanical ventilation is an  $L_{Aeq(9\text{hour})}$  of 55 dB(A) for bedrooms and  $L_{Aeq(15\text{hour})}$  of 60 dB(A) for other areas.

Where windows must be kept closed, the adopted ventilation systems must meet the requirements of the Building Code of Australia and Australian Standard 1668 – The use of ventilation and air conditioning in buildings.

## 4.2 Operational Noise Project Trigger Noise Levels

Responsibility for the control of noise emissions in New South Wales is vested in Local Government and the EPA. The EPA oversees the Noise Policy for Industry (NPI) October 2017 which provides a framework and process for deriving project trigger noise level. The NPI project noise levels for industrial noise sources have two (2) components:

- Controlling the intrusive noise impacts for residents and other sensitive receivers in the short term; and
- Maintaining noise level amenity for particular land uses for residents and sensitive receivers in other land uses.

### 4.2.1 Intrusiveness Noise Levels

For assessing intrusiveness, the background noise generally needs to be measured. The intrusiveness noise level essentially means that the equivalent continuous noise level ( $L_{Aeq}$ ) of the source should not be more than 5 dB(A) above the measured Rated Background Level (RBL), over any 15-minute period.





#### 4.2.2 Amenity Noise Levels

The amenity noise level is based on land use and associated activities (and their sensitivity to noise emission). The cumulative effect of noise from industrial sources needs to be considered in assessing the impact. The noise levels relate only to other industrial-type noise sources and do not include road, rail or community noise. The existing noise level from industry is measured.

If it approaches the project trigger noise level value, then noise levels from new industrial-type noise sources, (including air-conditioning mechanical plant) need to be designed so that the cumulative effect does not produce total noise levels that would significantly exceed the project trigger noise level.

#### 4.2.3 Area Classification

The NPfI characterises the “Suburban” noise environment as an area with an acoustical environment that:

- Has local traffic with characteristically intermittent traffic flows or with some limited commerce or industry.
- This area often has the following characteristic: - evening ambient noise levels defined by the natural environment and human activity.

The area surrounding the proposed development falls under the “Suburban” area classification.

#### 4.2.4 Project Specific Trigger Noise Levels

Having defined the area type, the processed results of the unattended noise monitoring have been used to determine project specific project trigger noise levels. The intrusive and amenity project trigger noise levels for nearby residential premises are presented in Table 4-2. These project trigger noise levels are nominated for the purpose of assessing potential noise impacts from the proposed development.

In this case, the ambient noise environment is not controlled by industrial noise sources and therefore the project amenity noise levels are assigned as per Table 2.2 of the NPfI (Recommended Amenity Noise Levels) and standardised as per Section 2.2 of the NPfI. For each assessment period, the lower (i.e. the more stringent) of the amenity or intrusive project trigger noise levels are adopted. These are shown in bold text in Table 4-2.

Table 4-2 Operational Project Trigger Noise Levels

Receiver	Time of Day	ANL <sup>1</sup> L <sub>Aeq</sub>	Measured		Project Trigger Noise Levels	
			RBL <sup>2</sup> L <sub>A90</sub> (15min)	Existing L <sub>Aeq</sub> (Period)	Intrusive L <sub>Aeq</sub> (15min)	Amenity L <sub>Aeq</sub> (15min)
Residential	Day	55	44	53	<b>49</b>	58
	Evening	45	42	51	<b>47</b>	48
	Night	40	34	48	<b>39</b>	43

Note 1: ANL = “Amenity Noise Level” for residences in Suburban Areas.

Note 2: RBL = “Rating Background Level”.





## 5 TRAFFIC NOISE IMPACT ASSESSMENT

### 5.1 Traffic Noise Assessment

In order to ascertain the existing traffic noise levels from Coreen and Aarakoon Avenues, the measured noise logger data was processed in accordance with the NSW Department of Planning and Infrastructure's "*Development near Rail Corridors and Busy Roads - Interim Guideline*" assessment time periods as shown in Table 3-2.

The final façade noise levels were predicted for each time period considering the distance attenuation from each respective source, virtual source, façade's orientation and any barrier effects.

The required noise reduction via the building façade for each respective room for each time period will be compared to determine the appropriate design criteria levels.

It is typically accepted that an open window (fractionally open to meet ventilation requirements) results in an attenuation of external noise by 10 dB(A). This reduction has been used to predict the room noise level in the window open condition.

### 5.2 Recommended Noise Control Treatment

The calculation procedure establishes the required noise insulation performance of each surface component such that the internal noise level is achieved whilst an equal contribution of traffic noise energy is distributed across each component. Building envelope components with a greater surface area must therefore offer increased noise insulation performance.

All recommendations must be checked by others to ensure compliance with other non-acoustic requirements that Council or other authority may impose (e.g. Thermal requirements for BASIX compliance).

### 5.3 Glazing

The  $R_w$  rating required for each window will vary from room to room. Recommendations for windows also apply to any other item of glazing located on the external facade of the building in a habitable room unless otherwise stated.

Note that the  $R_w$  rating is required for the complete glazing and frame assembly. The minimum glazing thicknesses will not necessarily meet the required  $R_w$  rating without an appropriate frame system. It will be therefore necessary to provide a window glass and frame system having a laboratory tested acoustic performance meeting the requirements below.

The window systems must be tested in accordance with both of the following:

- Australian Window Association Industry Code of Practice Window and Door – Method of Acoustic Testing; and
- AS 1191 Acoustics – Method for laboratory measurement of airborne sound insulation of building elements.

It is necessary to submit such Laboratory certification for the proposed glazing systems (i.e. windows and framing systems) (e.g. NAL or CSIRO) for approval by RSA prior to ordering or commitment.

The entire frame associated with the glazing must be sealed into the structural opening using acoustic mastics and backer rods. Normal weather proofing details do not necessarily provide the full acoustic insulation potential of the window system. The manufacturers' installation instructions for the correct acoustic sealing of the frame must be followed.





It is possible that structural demands for wind loading or fire rating or the like may require more substantial glass and framing assemblies than nominated above. Where this is the case the acoustic requirements must clearly be superseded by the structural or fire rating demands.

Table 5-1 presents the minimum recommended  $R_w$  (weighted noise reduction) for glazing elements.

Table 5-1 Minimum Acoustic Rating ( $R_w$ ) Required for Glazing Elements

Level	Room	Window	Glazed Door/Door
Ground	Room 1	$R_w$ 34	$R_w$ 34
Ground	Communal	$R_w$ 26	$R_w$ 26
First	Rooms 3, 5, 6, 7, 8 & 9	$R_w$ 36	$R_w$ 36

A glazing thickness guideline is presented in Appendix E for further reference.

## 6 OPERATIONAL NOISE ASSESSMENT

### 6.1 Mechanical Plant Noise Assessment

A specific mechanical plant selection has not been supplied at this stage. It is anticipated that the building will be serviced by typical mechanical ventilation/air conditioning equipment. As the mechanical plant layout and equipment have not been selected, this assessment will assume air conditioning units are installed on the ground floor.

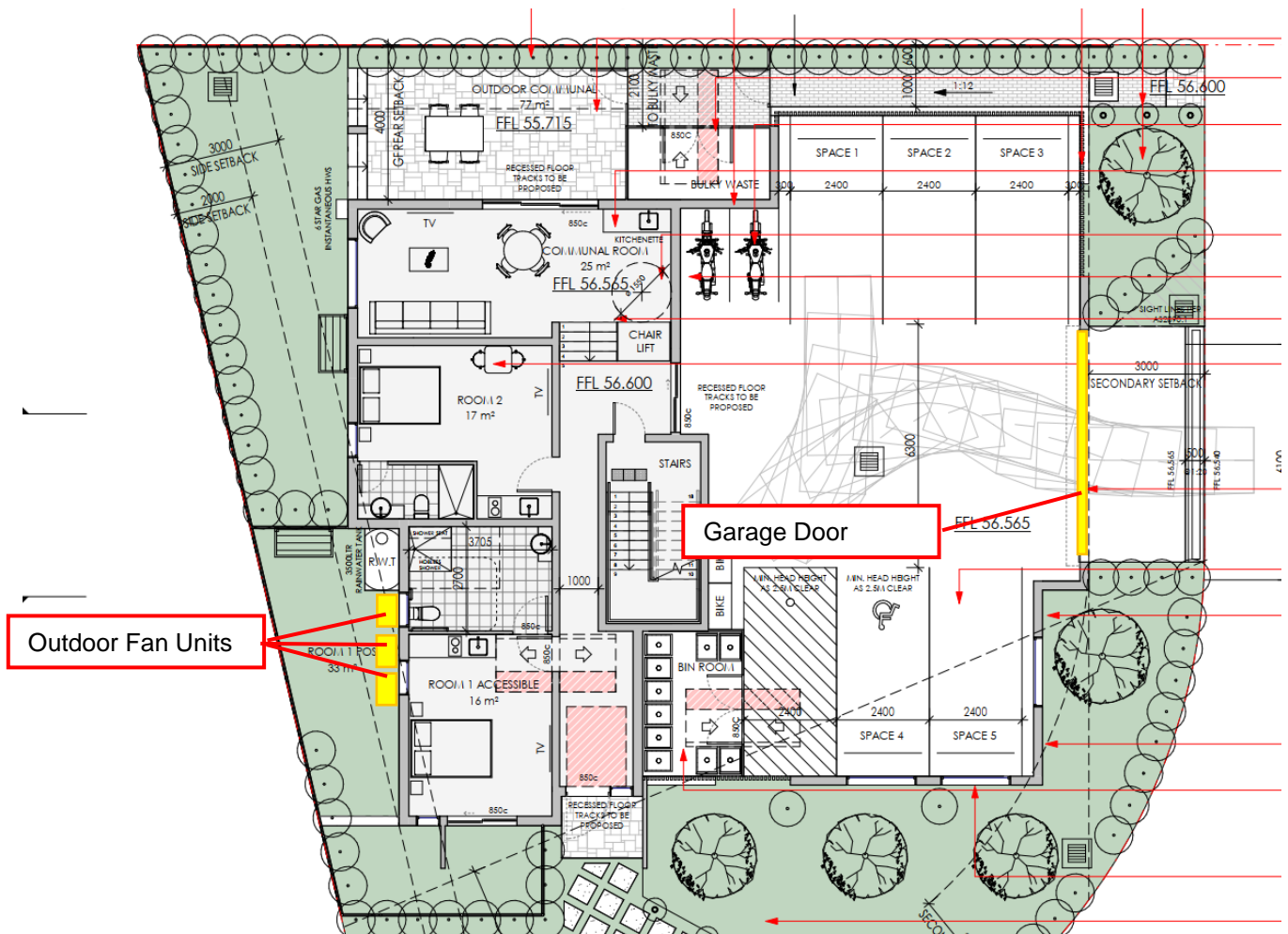
An air conditioning unit with sound power level  $L_w$  69 dBA has been assumed for this assessment. For the purposes of this assessment, three condenser units have assumed to be located on the western façade (see figure below) and operating at the same time.

The operation of the garage door also forms part of this assessment. A sound power level of a garage roller door being  $L_w$  81 dBA (generic data based on similar developments) and operating for 60 seconds (30 seconds for opening and 30 seconds for closing).





Figure 6-1 Indicative Mechanical Plant Location



Calculations of noise levels from the operation of the proposed mechanical plant have been carried out using the above data. We have used a worst case scenario where all plant is running at the same time. Calculations factors such as distance, shielding from buildings and barriers. The location of the receivers are presented in Figure 6-2.

Predictive resultant noise levels have been calculated for all mechanical plant items. Noise emissions at the nearest residential receivers are presented in the table below. The predicted noise calculations take into account the following:

- Heights of receivers are assumed to be 1.5 meters above respective level.
- All mechanical plant is operational at the same time (worst case scenario).
- 1.8m high boundary fencing is in place.
- Sound power level of each mechanical plant unit being  $L_w$  69 dBA.
- Sound power level of garage roller door being  $L_w$  81 dBA and operating for 60seconds.

The predicted noise level at the nearest residential receivers are presented in table below.





Table 6-1 Predicted Noise Levels At Sensitive Receivers – Mechanical Plants

Receiver	Period	Calculated Noise Level $L_{Aeq}$ – dB(A)	Criteria	Compliance
R1	Day	33	49	Yes
	Evening	33	47	Yes
	Night	33	39	Yes
R2	Day	36	49	Yes
	Evening	36	47	Yes
	Night	36	39	Yes
R3	Day	21	49	Yes
	Evening	21	47	Yes
	Night	21	39	Yes
R4	Day	21	49	Yes
	Evening	21	47	Yes
	Night	21	39	Yes

Based on the above assessment, the noise impact from the operation of the mechanical plant shows compliance to the established NPfI criteria. As this assessment has been conducted using generic mechanical plant data, a detailed assessment should be carried out prior to the issue of a Construction Certificate.

Further design considerations have been presented in Section 7 to allow for future mechanical plants to operate in an acoustically compliant manner.





## 6.2 Typical Vocal Levels

Calculations of the amount of noise transmitted to these receivers from the proposed boarding house have been based on voice levels as referenced in the Handbook of Acoustical Measurements and Noise Control by Cyril M. Harris. This handbook provides voice spectrums for males and females as well as different vocal efforts. The spectrum is given in Table 6-2.

The spectra have been scaled based upon the overall number of patrons expected to be in the communal area at any given time

Table 6-2 Speech Spectrums - Handbook of Acoustical Measurements and Noise Control.

Type	Sound Power Level (dB) at Octave Band Centre Frequency (Hz)							Overall dB(A)
	125	250	500	1 k	2 k	4 k	8 k	
Male (Normal)	49	55	58	51	47	43	37	58
Female (Normal)	37	51	54	49	44	43	38	55
Male (Raised)	66	73	75	72	67	62	56	76

It is generally agreed that the human voice is not capable of producing noise at 32 Hz and 63Hz octave bands at significant amplitudes

## 6.3 Tenant Sound Power Levels

Based on a maximum number of 12 tenants in the communal space (assuming that 1 tenant per unit will be using the space), the following worst-case operational scenarios have also been assumed for our assessment:

- A total of 12 people will be using the communal space. Therefore, 50 percent of the patrons will be talking (one person talks and one person listens), the worst-case scenario will be 6 tenants talking at any one time in the communal space.
- A total of 6 people in the internal communal area speaking in a Raised Voice with 50 percent of the patrons will be talking (one person talks and one person listens)
- A total of 6 people in the external communal area speaking in a Raised Voice with 50 percent of the patrons will be talking (one person talks and one person listens)

Table 6-3 Sound Power Levels of People talking with Raised Vocal -  $L_w$  – dB(A)

Scenario	Resultant Sound Power Level per Octave Band (dB)								Overall dB(A)
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
6 Tenants with Normal Vocal in the Communal Area	-	64	74	75	70	66	62	57	76
6 Tenants with Raised Vocal in the Communal Area	-	76	85	91	90	85	79	71	93

## 6.4 Communal Area Noise Assessment

Calculations of the noise levels from the use of the communal space have been carried out using the data in Table 6-3. We have used the worst-case scenario where 12 tenants are using the communal space at the same time. Calculations take into account factors such as distance, shielding from buildings and barriers.



The following figure presents the proposed development and all sensitive receivers

Figure 6-2 Sensitive Receiver Location



#### 6.4.1 Predicted Noise Levels – Communal Areas

Predictive resultant noise levels have been calculated for residents using the communal space. Noise emissions at the nearest residential receivers are presented in the table below. The predicted noise calculations take into account the following:

- Heights of receivers are assumed to be 1.5 meters above their respective floor level.
- Up to 12 people will be using the communal areas at a time with 6 people in the internal area and 6 people in the external communal area.
- It is assumed that the external door leading to the communal area is open.
- A 2.1m boundary fence to the north and 1.8m boundary fence to the west have been assumed for the assessment (see Figure 6-3 below).
- Communal areas are closed during the night time (between 10pm to 7am).
- Resulting noise levels have been calculated to the most affected point on the boundary of the affected receivers.





Figure 6-3 Barrier Locations

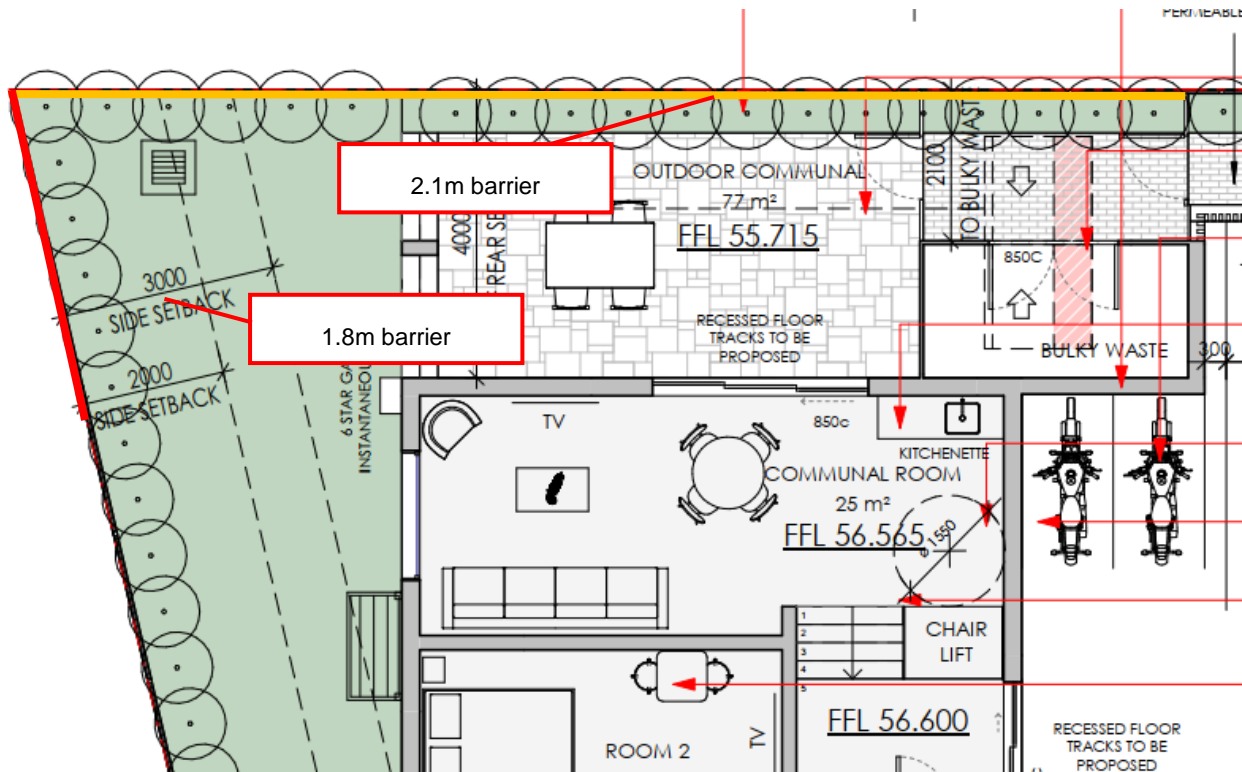


Table 6-4 Predicted Noise Levels At Sensitive Receivers – Communal Areas

Receiver	Period	Calculated Noise Level $L_{Aeq}$ – dB(A)	Criteria	Compliance
R1	Day	47	49	Yes
	Evening	47	47	Yes
	Night	n/a	39	n/a
R2	Day	42	49	Yes
	Evening	42	47	Yes
	Night	n/a	39	n/a
R3	Day	15	49	Yes
	Evening	15	47	Yes
	Night	n/a	39	n/a
R4	Day	33	49	Yes





Evening	33	47	Yes
Night	n/a	39	n/a

We note that our calculations have assumed that the communal open space will only be used by the tenants and no social gatherings will take place.

Based on the above noise modelling on the use of the communal area and the required noise control measures (see Section 7), the communal areas can operate in an acoustically compliant manner.

## 6.5 Carpark Noise Impact Assessment

The proposed car park is to be located on the ground floor, it has a capacity of 5 cars and 2 motorbikes, calculations of noise from the carpark have been based on typical noise generating events within a carpark such as, door slams, engine starts and cars driving away.

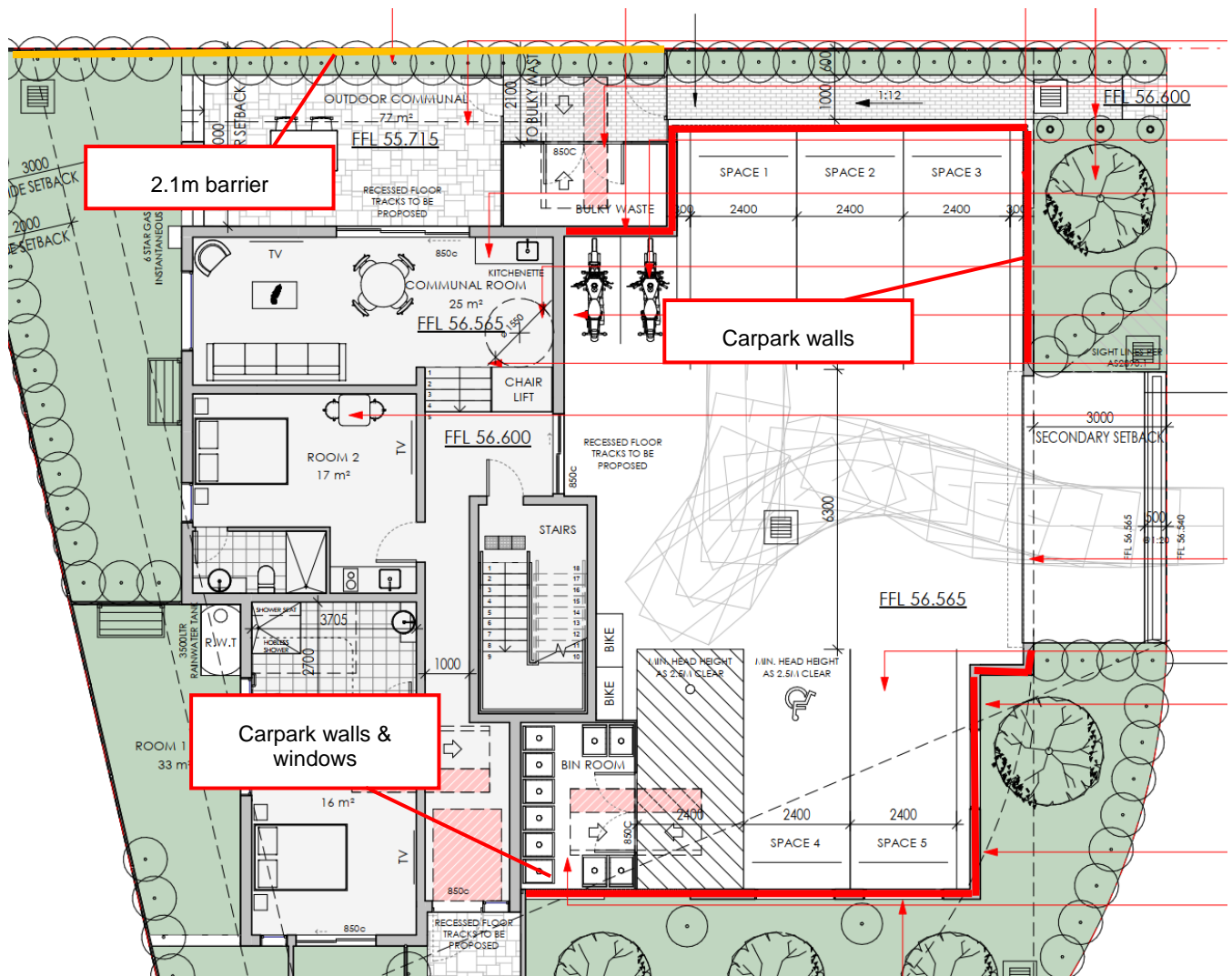
The predicted noise calculations take into account the following:

- Heights of receivers are assumed to be 1.5 meters above their respective floor level.
- A 2.1m boundary fence to the north and carpark walls have been assumed for the assessment (see Figure 6-4 below).
- Attenuation provided by the proposed building structure.
- 5 cars and 2 motorbikes enter or leave the carpark in a span of 15 minutes.





Figure 6-4 Carpark Wall



The calculated noise levels from the activities carried out within the carpark are presented in the table below:

Table 6-5 Predicted Noise Levels At Sensitive Receivers – Carpark

Receiver	Period	Calculated Noise Level $L_{Aeq}$ – dB(A)	Criteria	Compliance
R1	Day	<10	49	Yes
	Evening	<10	47	Yes
	Night	<10	39	Yes
R2	Day	<10	49	Yes
	Evening	<10	47	Yes





	Night	<10	39	Yes
	Day	20	49	Yes
R3	Evening	20	47	Yes
	Night	20	39	Yes
	Day	26	49	Yes
R4	Evening	26	47	Yes
	Night	26	39	Yes

The noise levels from the carpark with the operation of the cars, motorbikes and the garage door show compliance to the NPfI noise criteria. To maintain acoustic amenity, noise control measures have been presented in Section 7.

## 7 RECOMMENDATIONS

### 7.1 Communal Area

- External doors and windows to communal area should be closed during the evening and night time periods
- Communal areas to be closed between 10pm and 7am.

### 7.2 Barrier Details

A 2.1m and 1.8m high solid barrier extending along the boundaries of the outdoor communal area (Refer Figure 6-3). Acoustic barrier is required to provide the adequate noise attenuation, the construction material of the barriers must have a surface density of 10-15 kg/m<sup>2</sup> and be free from holes and gaps. Some suitable materials include:

- 25 mm thick plywood timber panelling
- 9 mm thick fibre cement sheet
- 75mm thick Hebel Powerpanel
- 12 mm thick Perspex, polycarbonate or Danpalon
- 6 mm toughened laminated safety glass
- Any other approved material which meets the above surface density specification

A typical material used in childcare centres is Perspex, which is a polycarbonate material. The use of the 12 mm thick Perspex or 6 mm glass for this purpose which has a surface mass of 11 kg/m<sup>2</sup> will meet the mass requirements detailed above and be suitable for use as it is transparent and will not unduly restrict light or vision.





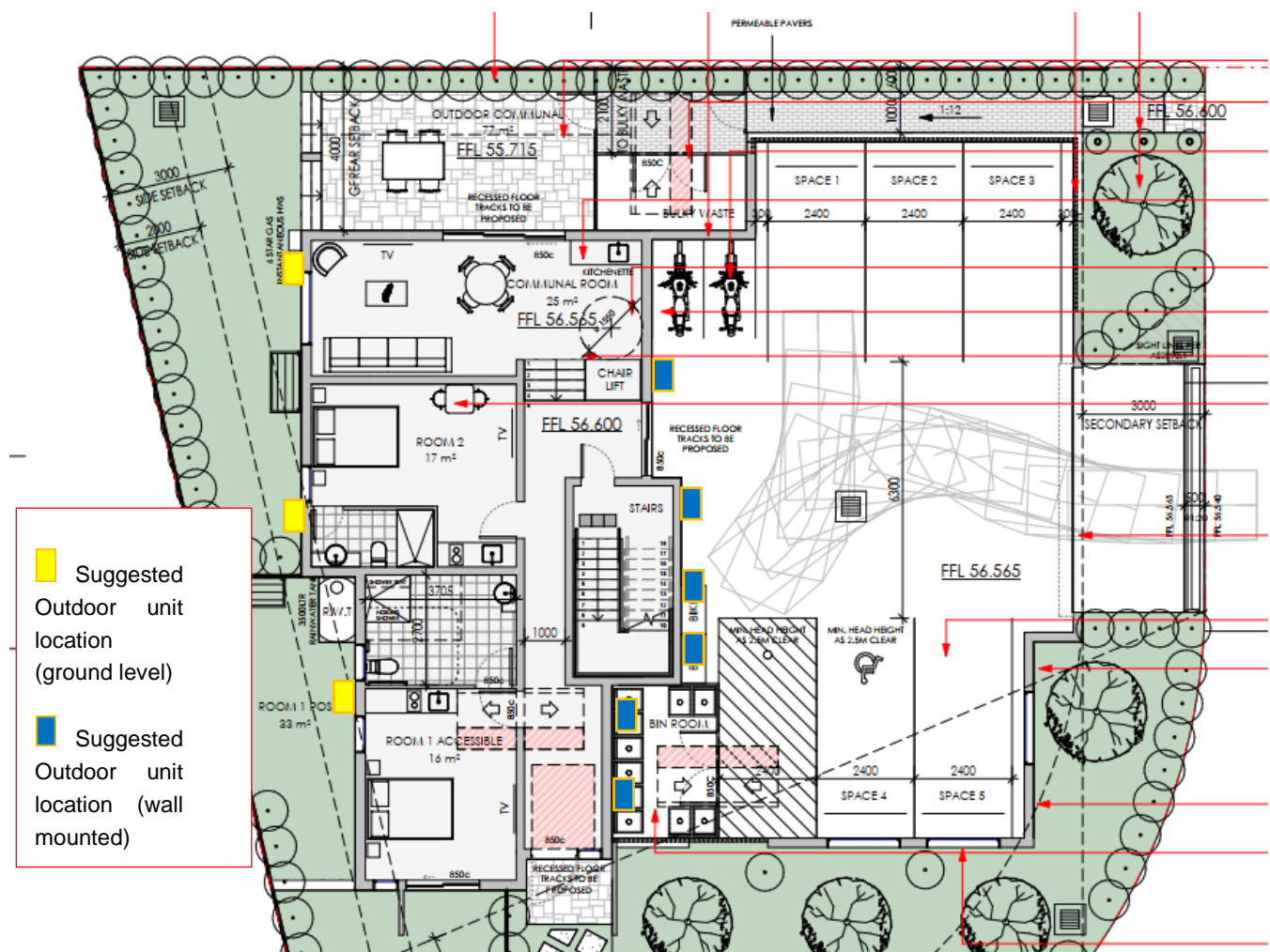
All barriers must be free of gaps and penetrations and it is particularly important to ensure that the gap at the bottom of the barrier is minimised as far as practicable. The base of the barriers should be well sealed at the junction where the barrier meets the floor, but still be designed to allow proper water drainage.

### 7.3 Mechanical Plant

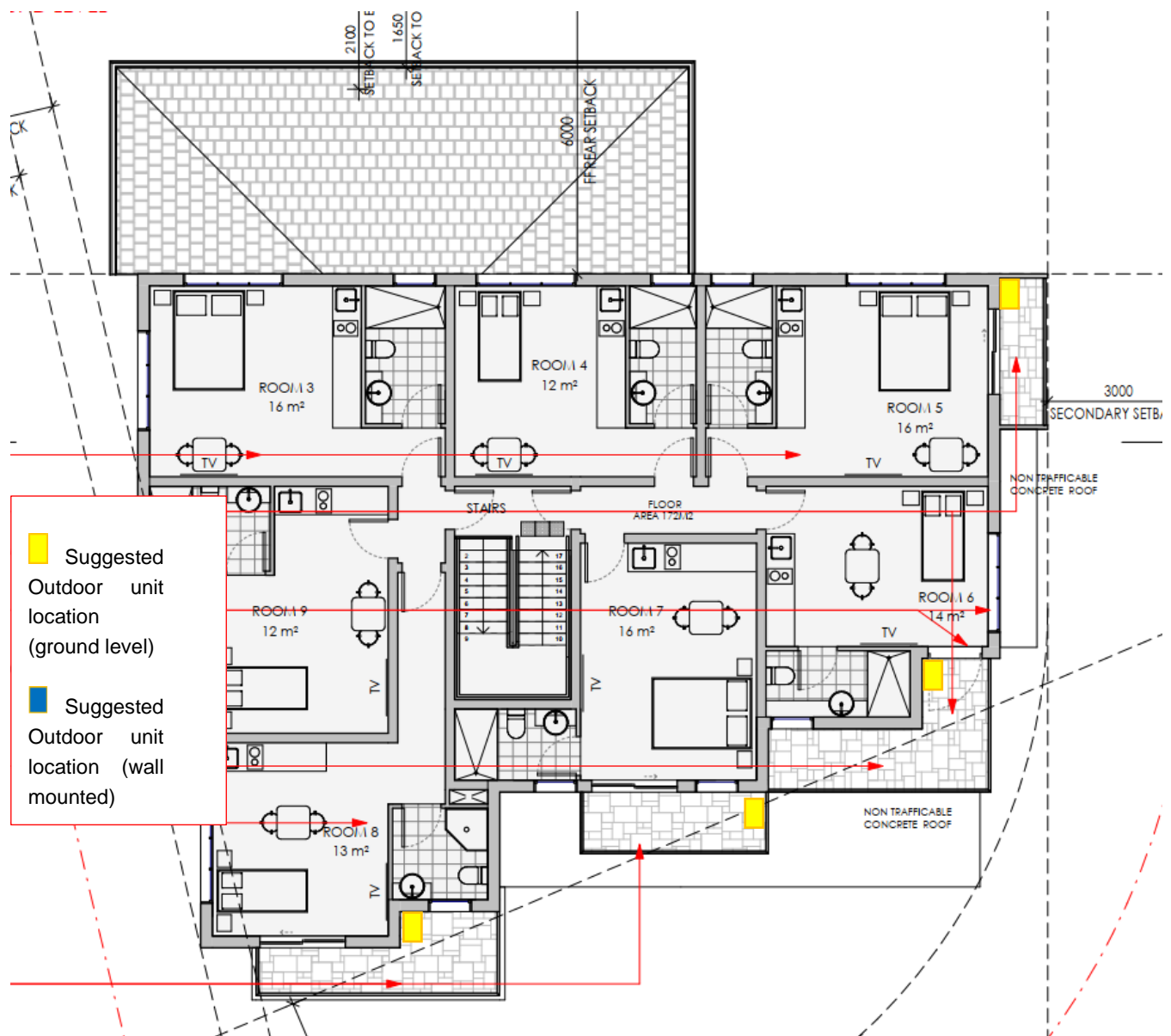
The mechanical plant selection and layout has not been finalised at this stage. The noise impact assessment conducted in Section 6.1 has been based on generic noise data for the AC units and the garage door. In order for the mechanical plants and equipment to comply with the operational noise criteria, the following design principles and noise control measures should be adopted:

- Maximum sound power level for the outdoor AC units to be no more than  $L_w$  69 dBA. Where more than 3 units are required, these should have a maximum sound power level of  $L_w$  59 dBA.
- Garage door motor should be installed on rubber isolation mounts. The motor should have a maximum sound power no more than  $L_w$  80 dBA. Garage door similar to *Merlin Silent Drive BBU* should be adopted.
- Suggested locations for the outdoor fan units are presented in figure below. There are two locations suggested; ground level and wall mounted.

Figure 7-1 Mechanical Plant Suggested Locations









## 8 CONCLUSION

Rodney Stevens Acoustics has conducted a noise impact assessment of the proposed boarding house at 27 Coreen Avenue, Penrith NSW. The assessment has assessed the noise generation and intrusion of the site and compared it with the noise criteria required by Penrith City Council and other relevant standards.

Noise emissions criteria for mechanical plant has been established in this report, a future noise survey may be required once the mechanical plan schedules are available.

Based on the noise impact study conducted, the proposed development is assessed to comply with Penrith City Council noise criteria with recommendations from this report. It is therefore recommended that planning approval be granted for the proposed development on the basis of acoustics.

Signed: -

A handwritten signature in black ink, appearing to read 'Desmond Raymond', enclosed within a light grey rectangular box.

Desmond Raymond

Principal Acoustic Consultant





## Appendix A – Acoustic Terminology

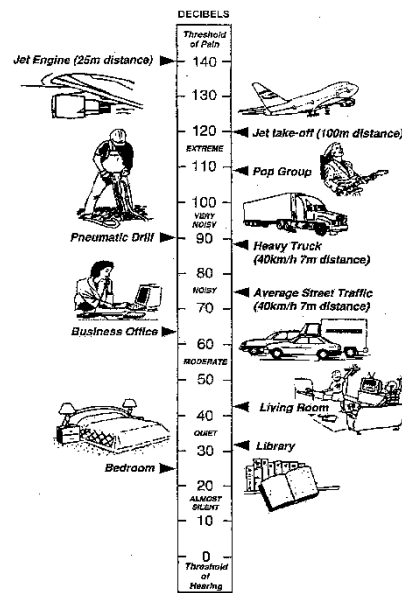
<b>A-weighted sound pressure</b>	The human ear is not equally sensitive to sound at different frequencies. People are more sensitive to sound in the range of 1 to 4 kHz (1000 – 4000 vibrations per second) and less sensitive to lower and higher frequency sound. During noise measurement an electronic ' <i>A-weighting</i> ' frequency filter is applied to the measured sound level <i>dB(A)</i> to account for these sensitivities. Other frequency weightings (B, C and D) are less commonly used. Sound measured without a filter is denoted as linear weighted <i>dB(linear)</i> .
<b>Ambient noise</b>	The total noise in a given situation, inclusive of all noise source contributions in the near and far field.
<b>Community annoyance</b>	<p>Includes noise annoyance due to:</p> <ul style="list-style-type: none"><li>■ character of the noise (e.g. sound pressure level, tonality, impulsiveness, low-frequency content)</li><li>■ character of the environment (e.g. very quiet suburban, suburban, urban, near industry)</li><li>■ miscellaneous circumstances (e.g. noise avoidance possibilities, cognitive noise, unpleasant associations)</li><li>■ human activity being interrupted (e.g. sleep, communicating, reading, working, listening to radio/TV, recreation).</li></ul>
<b>Compliance</b>	The process of checking that source noise levels meet with the noise limits in a statutory context.
<b>Cumulative noise level</b>	The total level of noise from all sources.
<b>Extraneous noise</b>	Noise resulting from activities that are not typical to the area. Atypical activities may include construction, and traffic generated by holiday periods and by special events such as concerts or sporting events. Normal daily traffic is not considered to be extraneous.
<b>Feasible and reasonable measures</b>	<p>Feasibility relates to engineering considerations and what is practical to build; reasonableness relates to the application of judgement in arriving at a decision, taking into account the following factors:</p> <ul style="list-style-type: none"><li>■ Noise mitigation benefits (amount of noise reduction provided, number of people protected).</li><li>■ Cost of mitigation (cost of mitigation versus benefit provided).</li><li>■ Community views (aesthetic impacts and community wishes).</li><li>■ Noise levels for affected land uses (existing and future levels, and changes in noise levels).</li></ul>
<b>Impulsiveness</b>	Impulsive noise is noise with a high peak of short duration or a sequence of these peaks. Impulsive noise is also considered annoying.





<b>Low frequency</b>	Noise containing major components in the low-frequency range (20 to 250 Hz) of the frequency spectrum.
<b>Noise criteria</b>	The general set of non-mandatory noise levels for protecting against intrusive noise (for example, background noise plus 5 dB) and loss of amenity (e.g. noise levels for various land use).
<b>Noise level (goal)</b>	A noise level that should be adopted for planning purposes as the highest acceptable noise level for the specific area, land use and time of day.
<b>Noise limits</b>	Enforceable noise levels that appear in conditions on consents and licences. The noise limits are based on achievable noise levels, which the proponent has predicted can be met during the environmental assessment. Exceedance of the noise limits can result in the requirement for either the development of noise management plans or legal action.
<b>Performance-based goals</b>	Goals specified in terms of the outcomes/performance to be achieved, but not in terms of the means of achieving them.
<b>Rating Background Level (RBL)</b>	The rating background level is the overall single figure background level representing each day, evening and night time period. The rating background level is the 10 <sup>th</sup> percentile min L <sub>A90</sub> noise level measured over all day, evening and night time monitoring periods.
<b>Receptor</b>	The noise-sensitive land use at which noise from a development can be heard.
<b>Sleep disturbance</b>	Awakenings and disturbance of sleep stages.
<b>Sound and decibels (dB)</b>	<p>Sound (or noise) is caused by minute changes in atmospheric pressure that are detected by the human ear. The ratio between the quietest noise audible and that which should cause permanent hearing damage is a million times the change in sound pressure. To simplify this range the sound pressures are logarithmically converted to decibels from a reference level of <math>2 \times 10^{-5}</math> Pa.</p> <p>The picture below indicates typical noise levels from common noise sources.</p>





dB is the abbreviation for decibel – a unit of sound measurement. It is equivalent to 10 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure.

#### Sound power Level (SWL)

The sound power level of a noise source is the sound energy emitted by the source. Notated as SWL, sound power levels are typically presented in  $dB(A)$ .

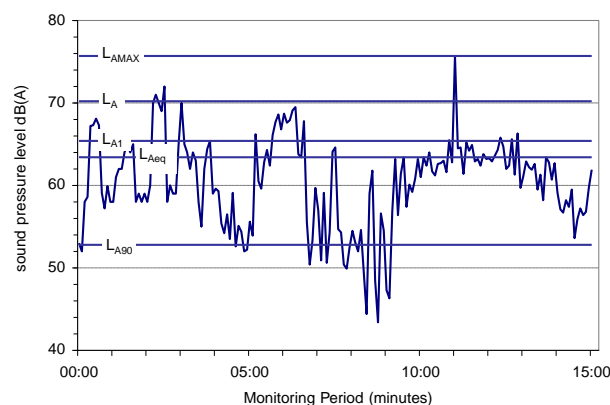
#### Sound Pressure Level (SPL)

The level of noise, usually expressed as SPL in  $dB(A)$ , as measured by a standard sound level meter with a pressure microphone. The sound pressure level in  $dB(A)$  gives a close indication of the subjective loudness of the noise.

#### Statistic noise levels

Noise levels varying over time (e.g. community noise, traffic noise, construction noise) are described in terms of the statistical exceedance level.

A hypothetical example of A weighted noise levels over a 15 minute measurement period is indicated in the following figure:



Key descriptors:

$L_{Amax}$  Maximum recorded noise level.

$L_{A1}$  The noise level exceeded for 1% of the 15 minute interval.





$L_{A10}$  Noise level present for 10% of the 15 minute interval. Commonly referred to the average maximum noise level.

$L_{Aeq}$  Equivalent continuous (energy average) A-weighted sound pressure level. It is defined as the steady sound level that contains the same amount of acoustic energy as the corresponding time-varying sound.

$L_{A90}$  Noise level exceeded for 90% of time (background level). The average minimum background sound level (in the absence of the source under consideration).

### **Threshold**

The lowest sound pressure level that produces a detectable response (in an instrument/person).

### **Tonality**

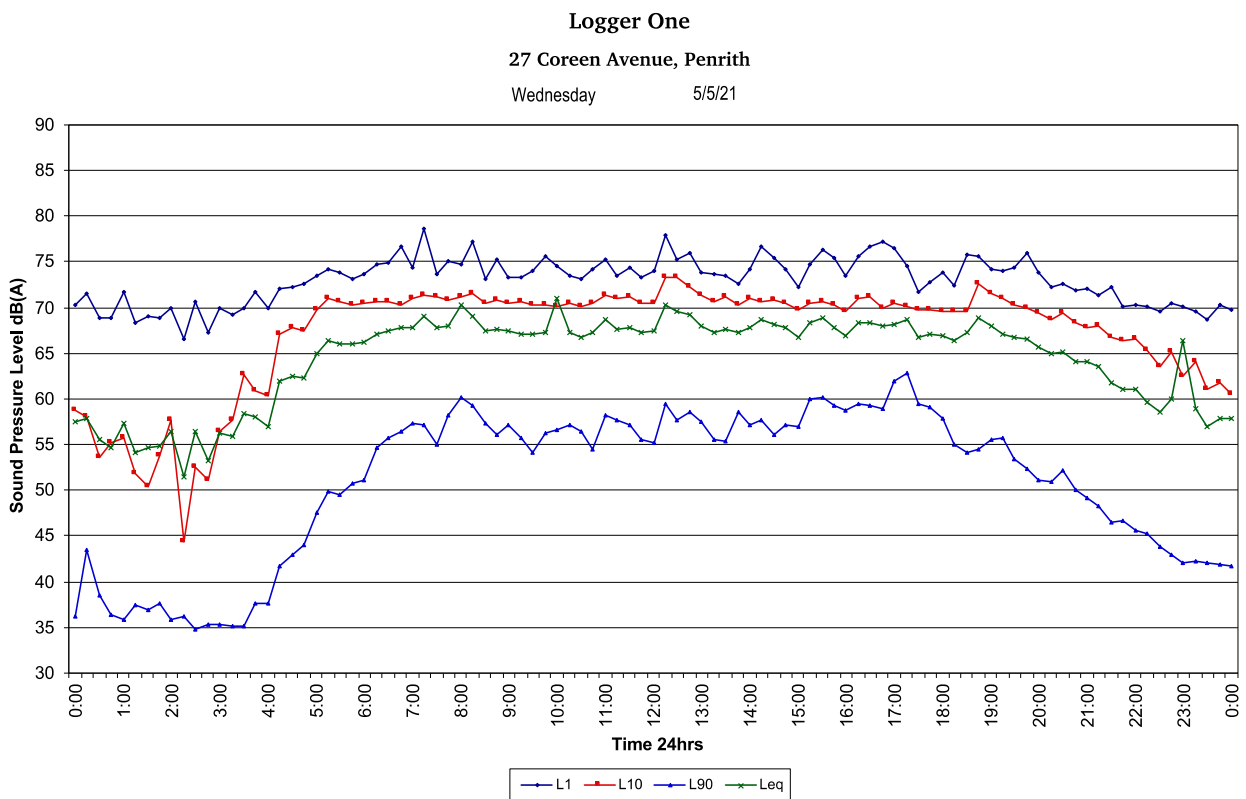
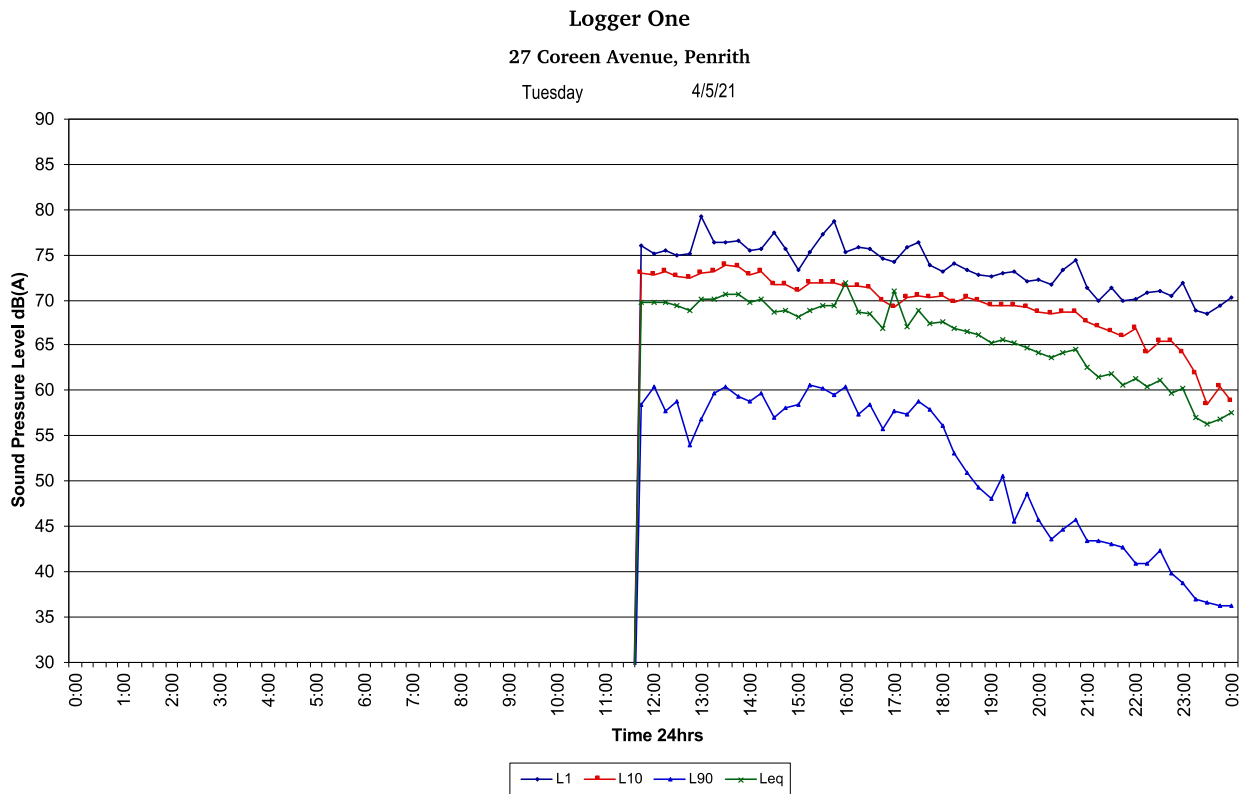
Tonal noise contains one or more prominent tones (and characterised by a distinct frequency components) and is considered more annoying. A 2 to 5 dB(A) penalty is typically applied to noise sources with tonal characteristics





## Appendix B – Logger Graphs

### Traffic Logger



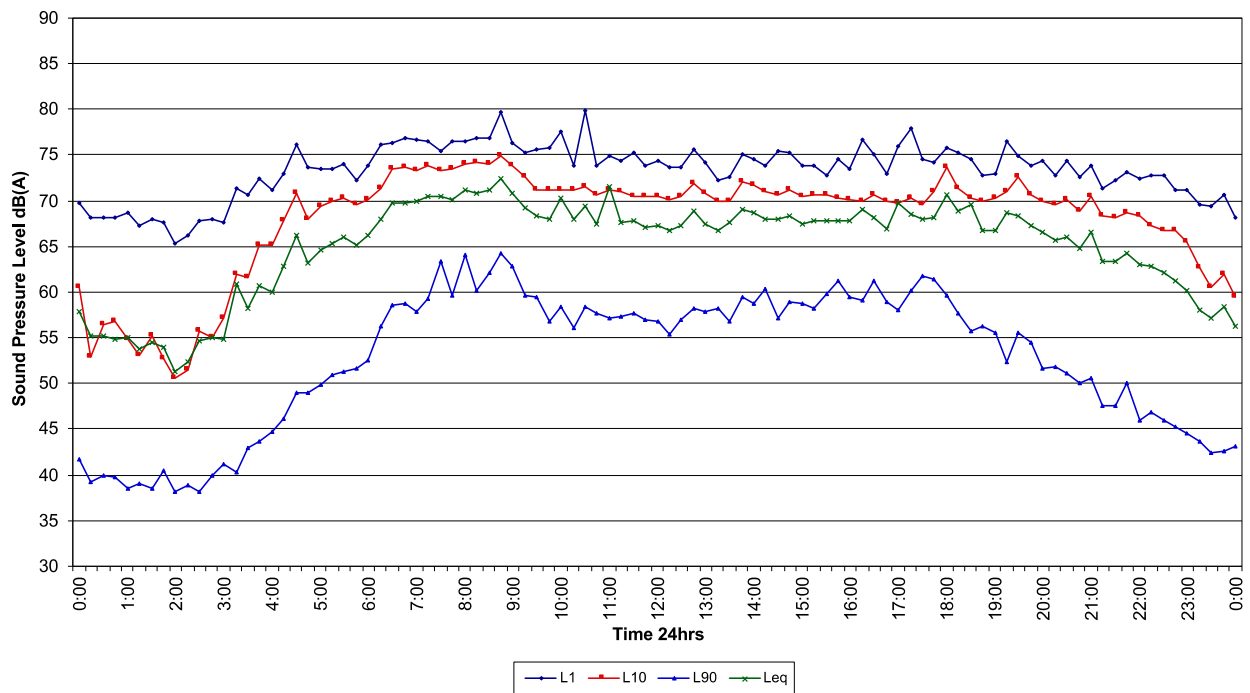


### Logger One

27 Coreen Avenue, Penrith

Thursday

6/5/21

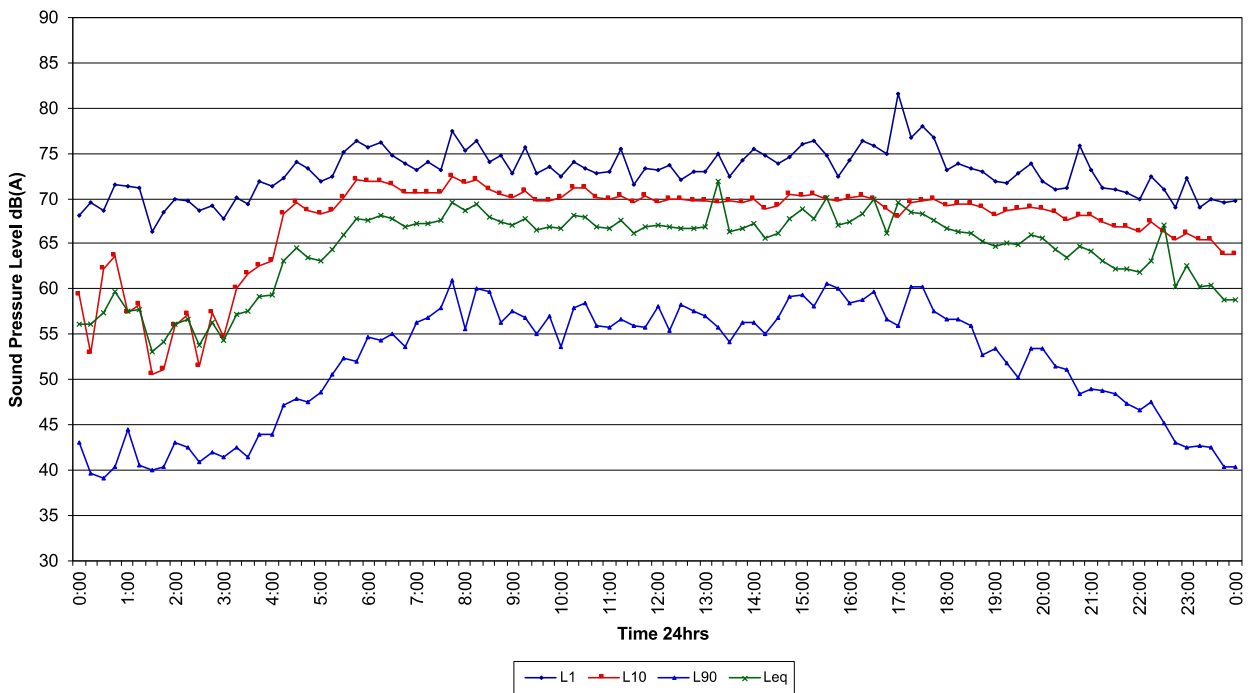


### Logger One

27 Coreen Avenue, Penrith

Friday

7/5/21





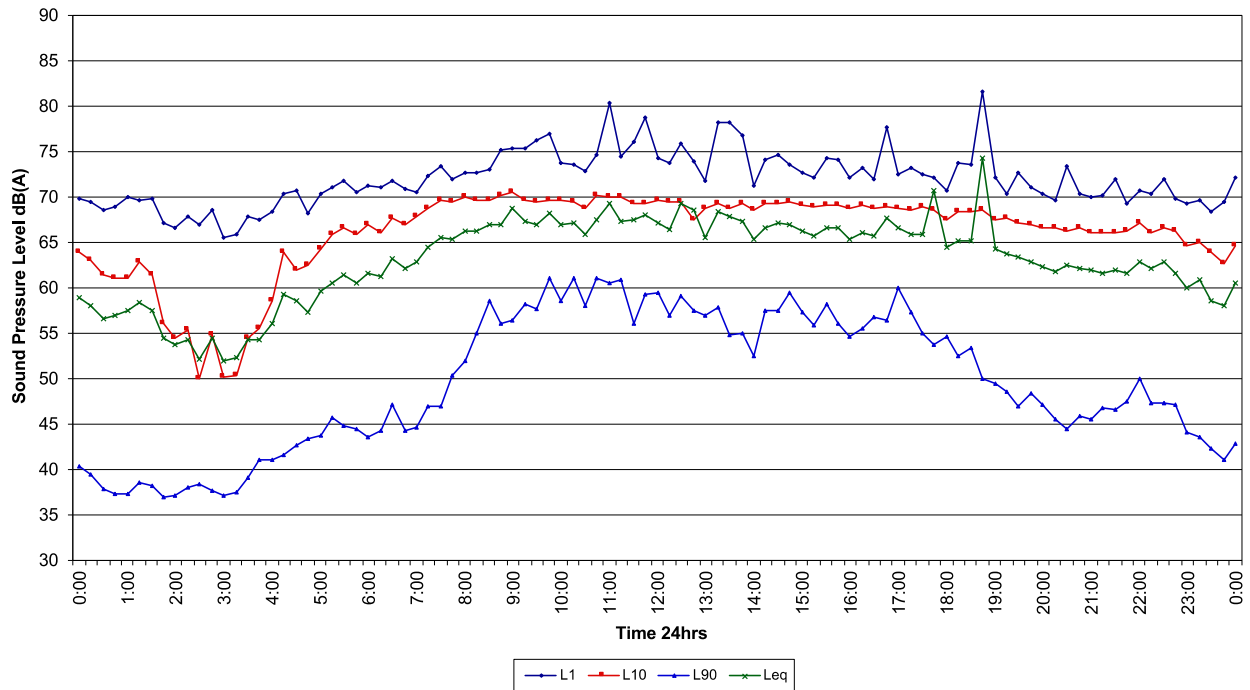


### Logger One

27 Coreen Avenue, Penrith

Saturday

8/5/21

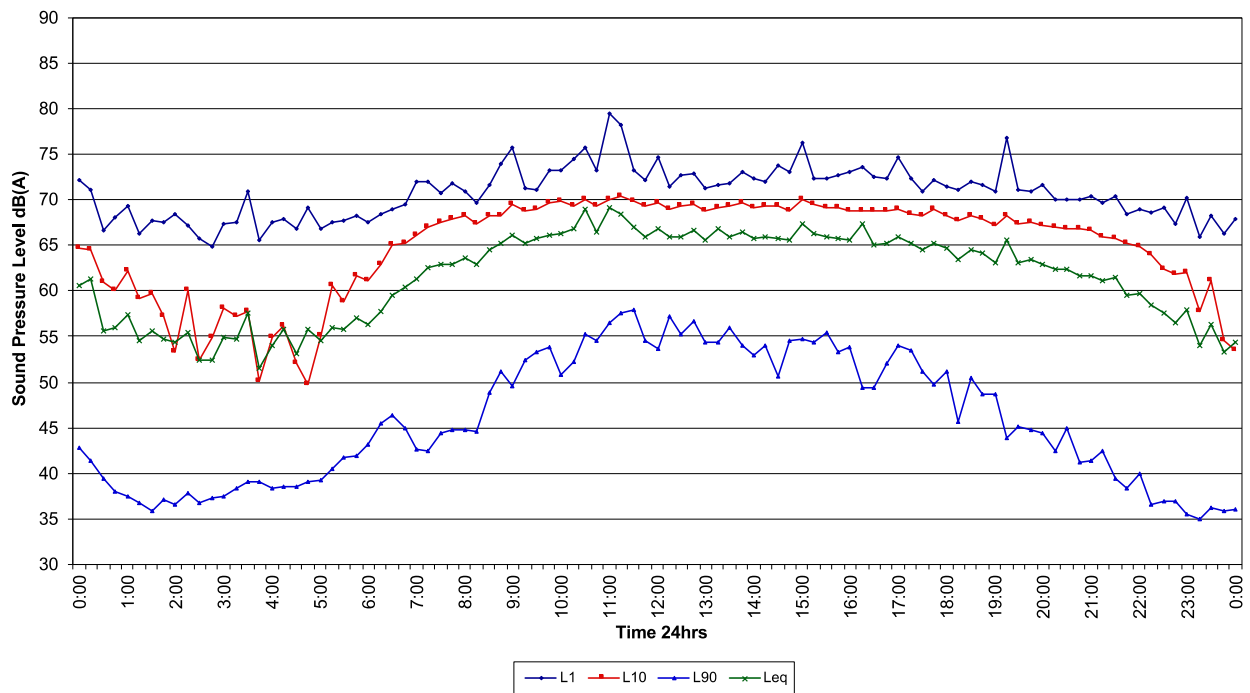


### Logger One

27 Coreen Avenue, Penrith

Sunday

9/5/21



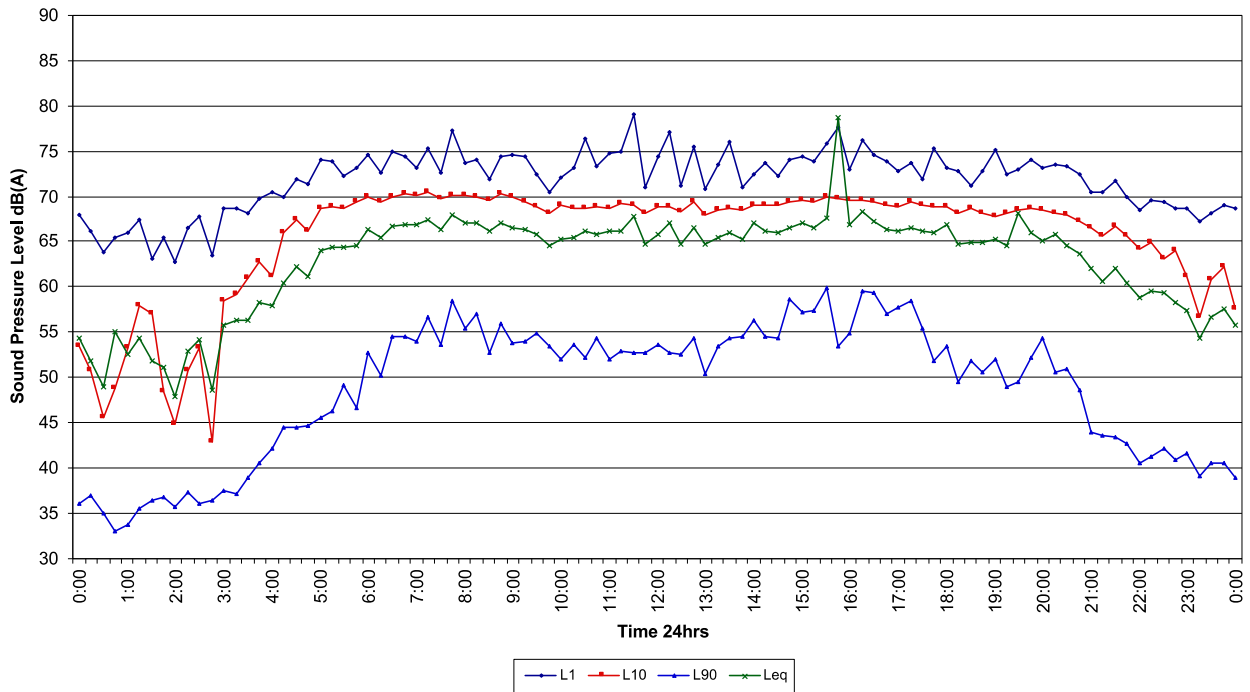


### Logger One

27 Coreen Avenue, Penrith

Monday

10/5/21

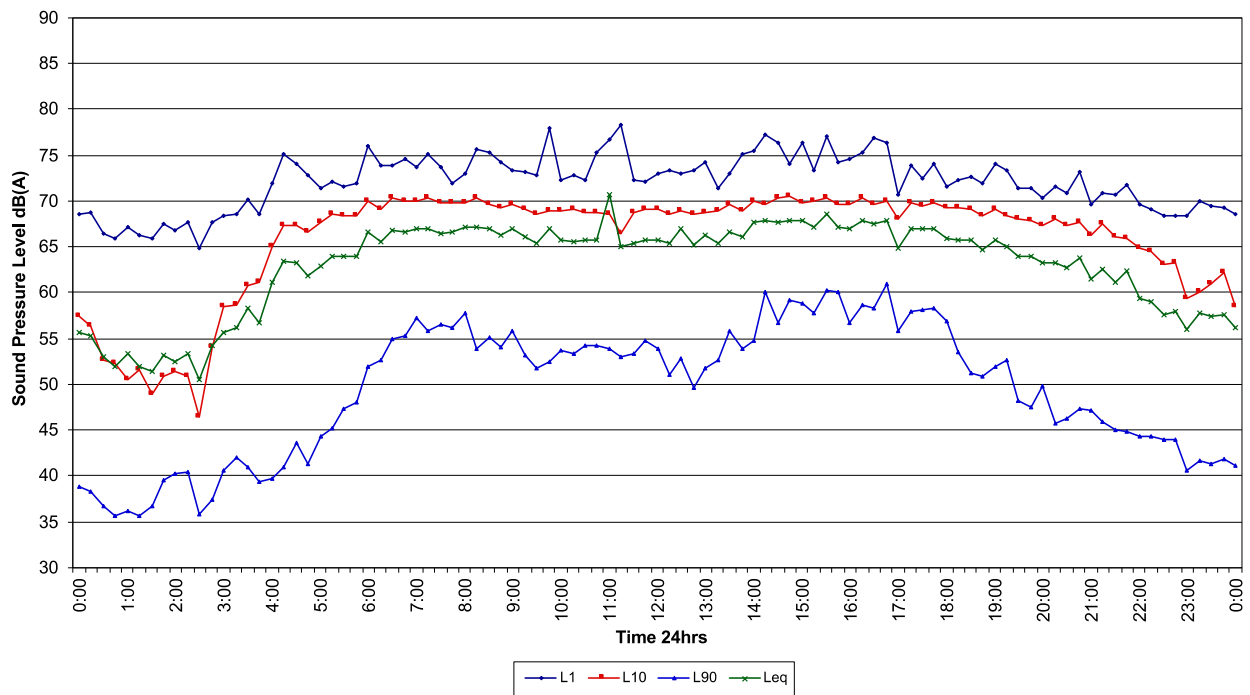


### Logger One

27 Coreen Avenue, Penrith

Tuesday

11/5/21

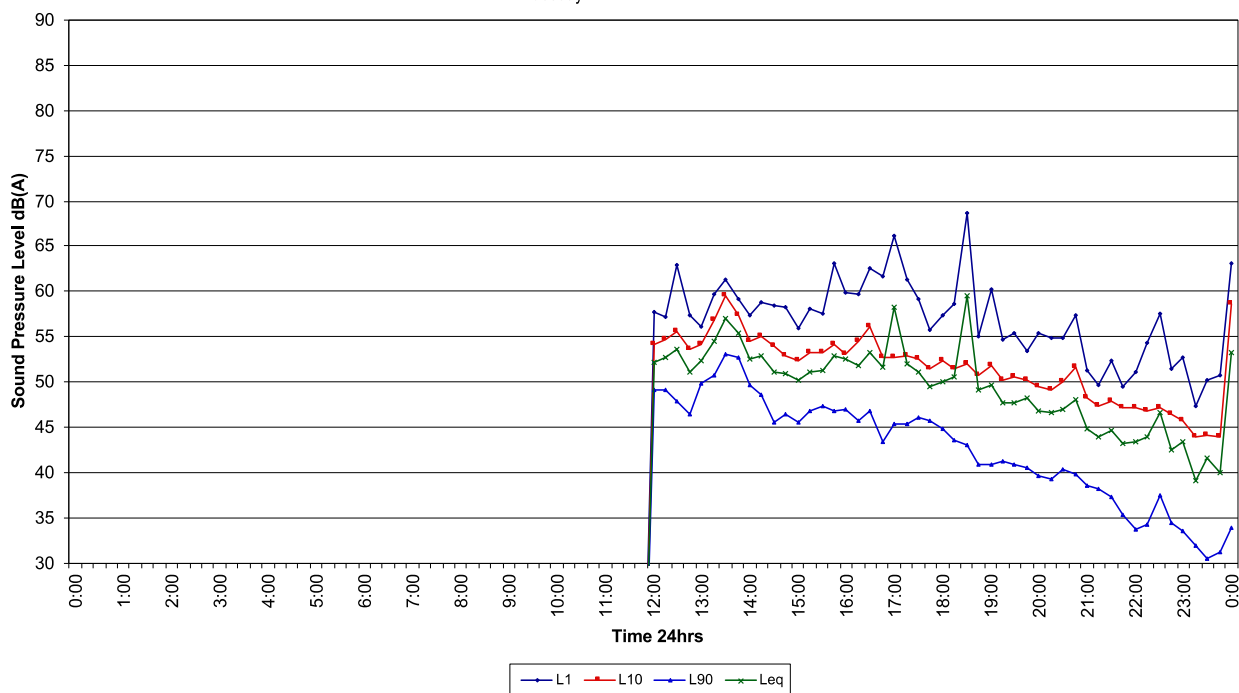




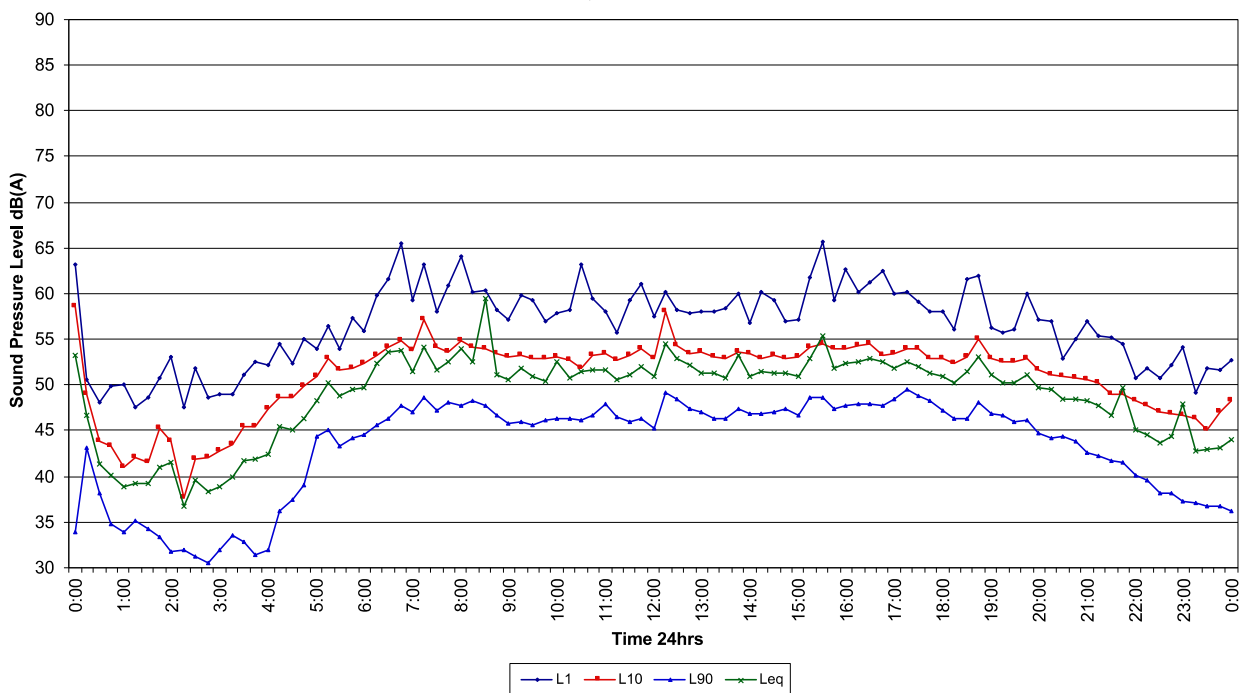


## Ambient Logger

**Logger One**  
27 Coreen Avenue, Penrith  
Tuesday 4/5/21



**Logger One**  
27 Coreen Avenue, Penrith  
Wednesday 5/5/21



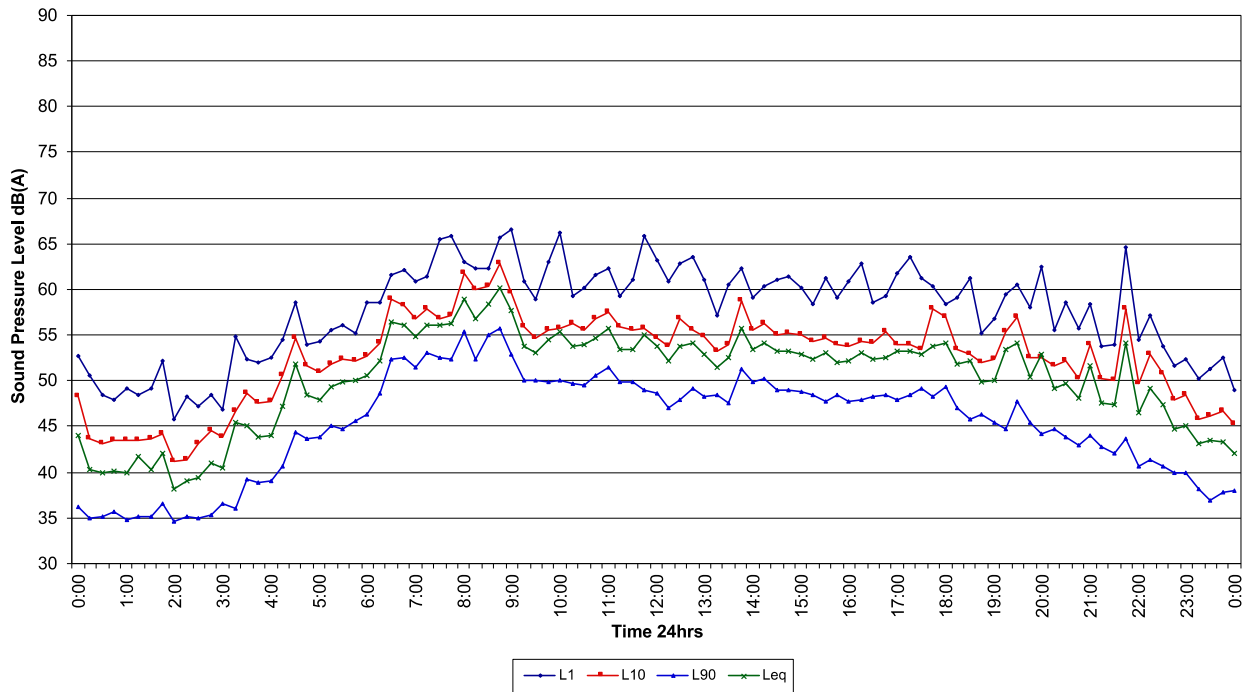


### Logger One

27 Coreen Avenue, Penrith

Thursday

6/5/21

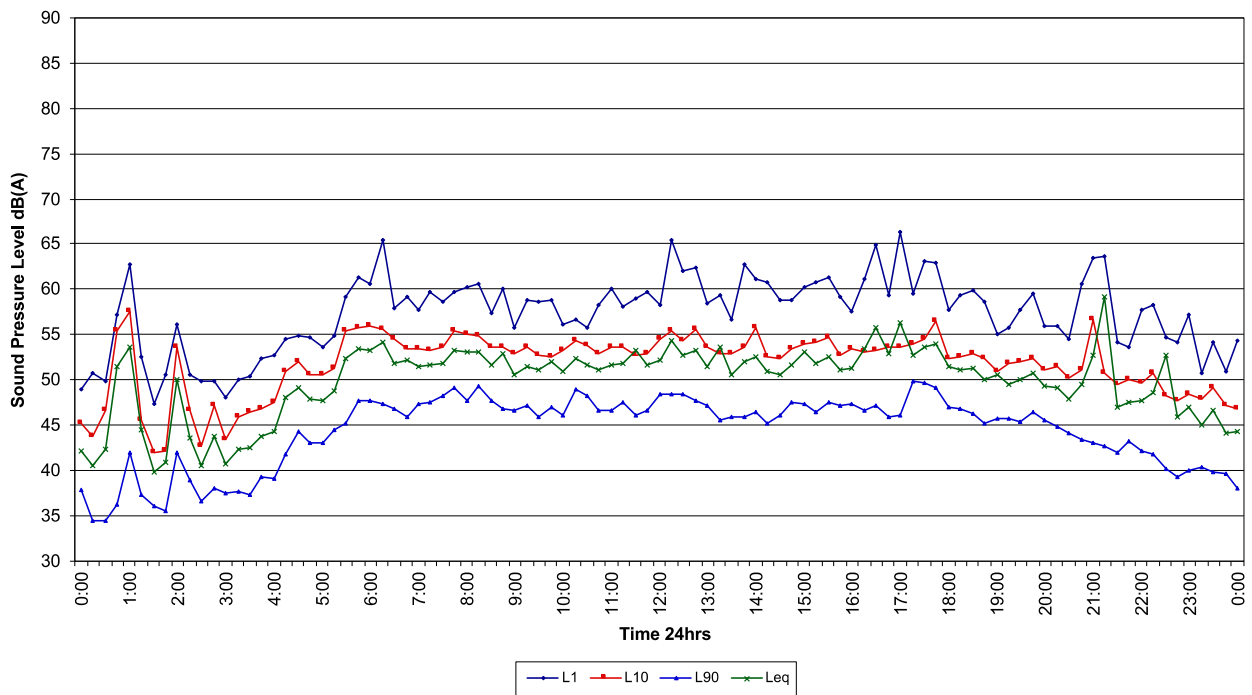


### Logger One

27 Coreen Avenue, Penrith

Friday

7/5/21





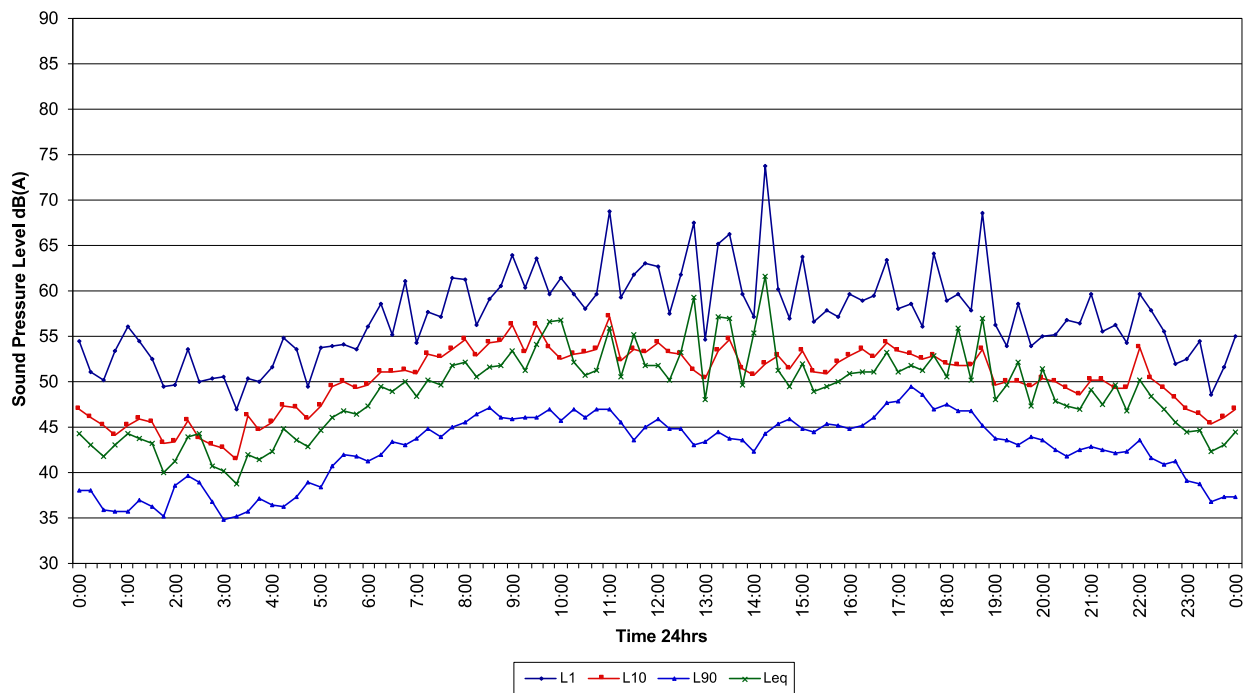


### Logger One

27 Coreen Avenue, Penrith

Saturday

8/5/21

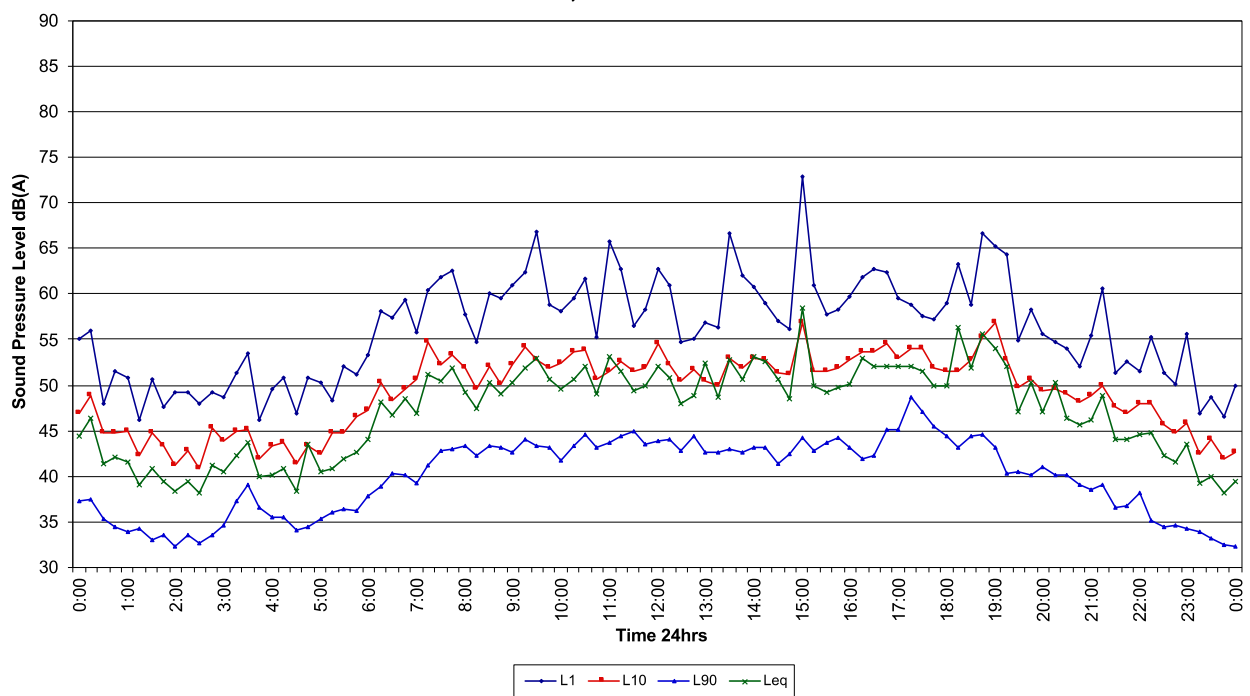


### Logger One

27 Coreen Avenue, Penrith

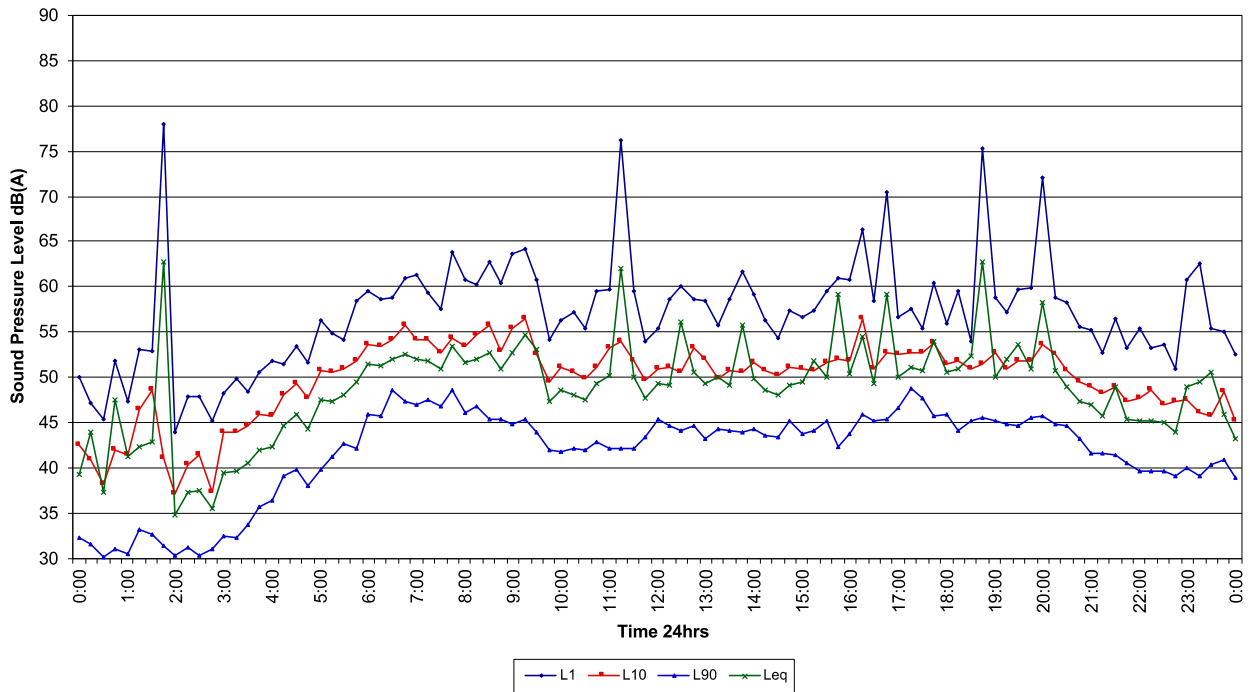
Sunday

9/5/21

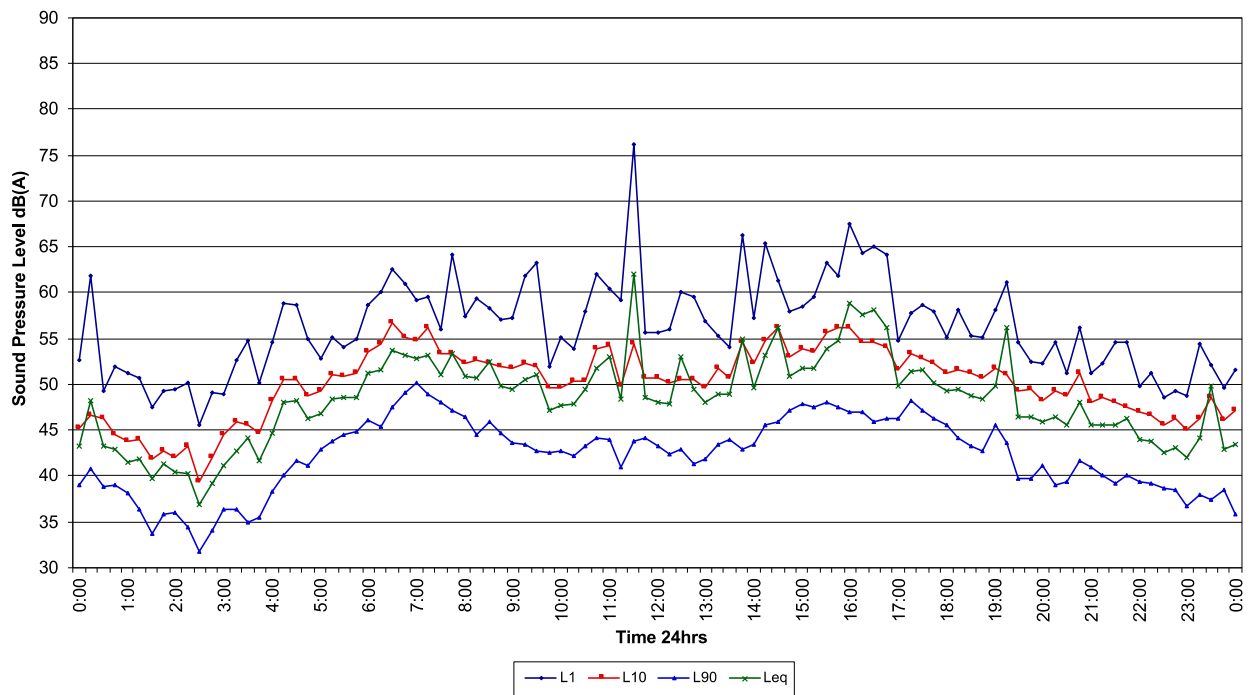




**Logger One**  
**27 Coreen Avenue, Penrith**  
Monday 10/5/21



**Logger One**  
**27 Coreen Avenue, Penrith**  
Tuesday 11/5/21







## Appendix C – Calibration Certificate



**Acoustic  
Research  
Labs Pty Ltd**

Unit 36/14 Loyalty Rd  
North Rocks NSW AUSTRALIA 2151  
Ph: +61 2 9484 0800 A.B.N. 65 160 399 119  
[www.acousticresearch.com.au](http://www.acousticresearch.com.au)

**Sound Level Meter**  
IEC 61672-3:2013  
**Calibration Certificate**  
Calibration Number C19621

**Client Details** Rodney Stevens Acoustics Pty Ltd  
1 Majura Close  
St Ives Chase NSW 2075


**Equipment Tested/ Model Number :** Rion NL-42EX  
**Instrument Serial Number :** 00810779  
**Microphone Serial Number :** 148338  
**Pre-amplifier Serial Number :** 22257

**Pre-Test Atmospheric Conditions**  
**Ambient Temperature :** 23.9°C  
**Relative Humidity :** 33.4%  
**Barometric Pressure :** 100.22kPa

**Post-Test Atmospheric Conditions**  
**Ambient Temperature :** 24.3°C  
**Relative Humidity :** 32.7%  
**Barometric Pressure :** 100.21kPa

**Calibration Technician :** Lucky Jaiswal  
**Calibration Date :** 18 Oct 2019

**Secondary Check:** James Jepsen  
**Report Issue Date :** 21 Oct 2019

**Approved Signatory :** 

Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	Pass	17: Level linearity incl. the level range control	Pass
13: Electrical Sig. tests of frequency weightings	Pass	18: Toneburst response	Pass
14: Frequency and time weightings at 1 kHz	Pass	19: C Weighted Peak Sound Level	Pass
15: Long Term Stability	Pass	20: Overload Indication	Pass
16: Level linearity on the reference level range	Pass	21: High Level Stability	Pass

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Least Uncertainties of Measurement -			
Acoustic Tests		Environmental Conditions	
31.5 Hz to 8kHz	±0.18dB	Temperature	±0.2°C
12.5kHz	±0.19dB	Relative Humidity	±2.4%
16kHz	±0.29dB	Barometric Pressure	±0.015kPa
Electrical Tests			
31.5 Hz to 20 kHz	±0.11dB		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.



This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.  
Accredited for compliance with ISO/IEC 17025 - calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

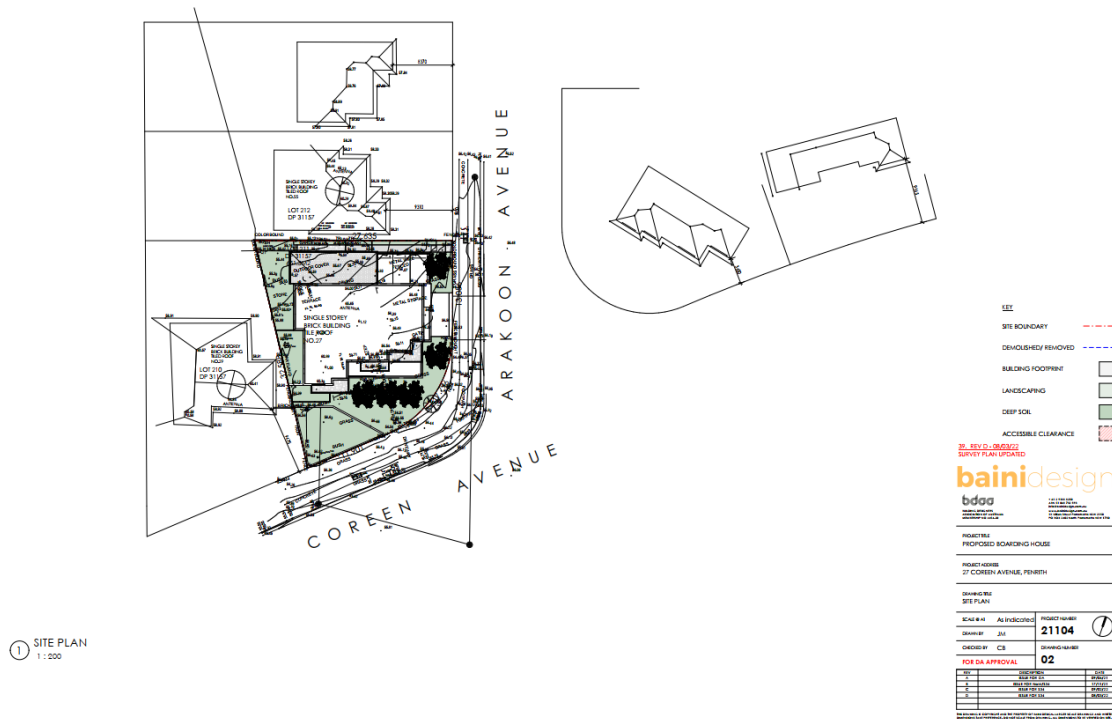
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

PAGE 1 OF 1

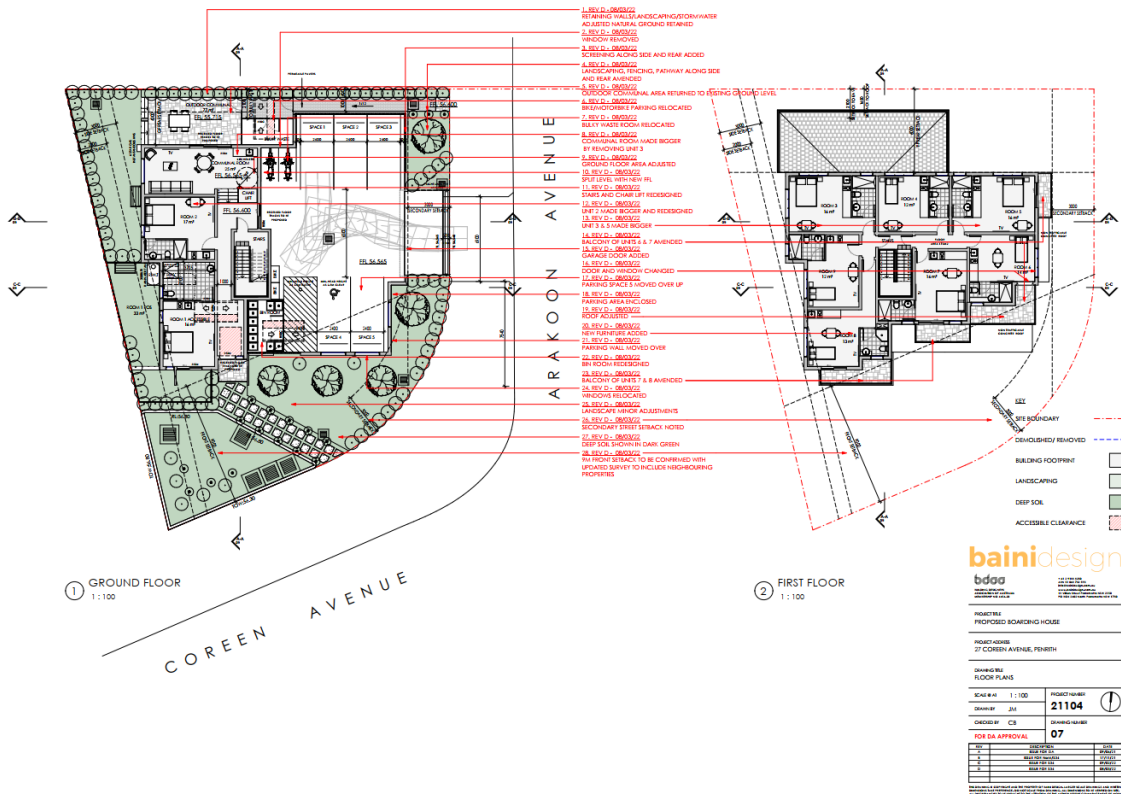


## Appendix D – Architectural Plans

### Site Plan



### Ground and First Floor Plans







## Appendix E – Glazing Guideline

A table showing typical glass thicknesses and their  $R_w$  Values is provided in Appendix E. Please note that these table must be used as a GUIDE only, please note that the  $R_w$  rating is required for the complete glazing and frame assembly. The minimum glazing thicknesses will not necessarily meet the required  $R_w$  rating without an appropriate frame system. It will be therefore necessary to provide a window glass and frame system having a laboratory tested acoustic performance meeting the requirements in

<b>Aluminium Awning Window</b>					
	Glass	4mm Float	6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals	Standard	Qlon	Qlon	Qlon
	STC	28	33	34	34
	RW	29	33	33	34
<b>Aluminium Sliding Window</b>					
	Glass	4mm Float	6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals	Standard	Fin	Fin	Fin
	STC	23	24	25	25
	RW	22	24	25	25
<b>Aluminium Double Hung</b>					
	Glass	5mm Float	6.38 Laminated		
	Seals	Standard	Fin		
	STC	24	27		
	RW	24	26		
<b>Aluminium Fixed Window (Awning Frame)</b>					
	Glass	4mm Float	6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals	-	-	-	-
	STC	28	32	33	34
	RW	28	33	33	33
<b>Secondary Glazing - Sound Barrier Window (AAW/ASW)</b>					
	Glass		6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals		Qlon	Qlon	Qlon
	STC		44	45	46
	RW		44	45	45
<b>Aluminium Sliding Door</b>					
	Glass	4mm Toughened	6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals	standard	Fin	Fin	Fin
	STC	22	30	33	33
	RW	21	29	33	33
<b>Aluminium Glazing - Sound Barrier Door</b>					
	Glass		6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals		Fin	Fin	Fin
	STC		44	45	46
	RW		44	44	45
<b>Aluminium Hinged Door*</b>					
	Glass		6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals		Qlon	Qlon	Qlon
	STC		29	30	30
	RW		29	30	30
<b>Aluminium Bifold Door*</b>					
	Glass		6.38 Laminated	8.38 Laminated	10.38 Laminated
	Seals		Qlon	Qlon	Qlon
	STC		25	29	29
	RW		27	29	29



# Plan of Management Boarding House 27 COREEN AVENUE PENRITH

23 MARCH 2022





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## PLAN OF MANAGEMENT OVERVIEW

This Plan of Management has been prepared for the operation and management of a small-scale new age boarding house at 27 Coreen Avenue, Penrith.

The boarding house is to accommodate a total of 9 boarding rooms/suites (including an accessible boarding room/suite), each with full bathroom, kitchenette and living area. The boarding house will accommodate a total of 14 lodgers based on the room size and configuration as nominated on the plans, noting that 4 single lodger rooms and 5 double lodger rooms are proposed and therefore an on-site manager is not proposed (The State Environmental Planning Policy – Affordable Rental Housing 2009 required an on-site manager if the total number of lodgers exceeds 20).

The proposal is to provide a new double width vehicle cross-over and driveway from Arakoon Street with an at-grade car park accommodating a total of 5 vehicles including an accessible car parking spaces, 2 x motorcycle parking space and 2 x bicycle parking space.

This plan of management identifies appropriate strategies and procedures to address potential social or environmental impacts associated with Boarding Houses. The plan of management embraces current best practice methodologies such as casual surveillance, formal CCTV surveillance, clear contact points and procedures, complaint handling processes, articulation of responsibilities, and agreed house rules.

A plan of management is an accepted concept in environmental law and can be used in a range of circumstances. This plan of management assists in addressing the amenity impacts on adjoining properties and to the immediate locality.

The plan of management assists in addressing any adverse impacts on the amenity and characteristics of the established residential area. It provides a procedure to receive and resolve complaints and requires the appointment of a management agent who will be contactable 24 hours a day, 7 days per week (as far as practicable).

The measures outlined in this plan of management will be of assistance in maintaining the amenity and characteristics of the area.



## LEGISLATIVE FRAMEWORK

The Boarding House is regulated by the Boarding Houses Act 2012 and the associated Boarding Houses Regulation 2013. The provisions of the Act and Regulations are to be complied with at all times.

### Objects of the Act

The objects of the Act are to *establish an appropriate regulatory framework for the delivery of quality services to residents of registrable boarding houses, and for the promotion and protection of the wellbeing of such residents, by:*

- (a) providing for a registration system for registrable boarding houses, and*
- (b) providing for certain occupancy principles to be observed with respect to the provision of accommodation to residents of registrable boarding houses and for appropriate mechanisms for the enforcement of those principles, and*
- (c) providing for the licensing and regulation of assisted boarding houses and their staff (including providing for service and accommodation standards at such boarding houses), and*
- (d) promoting the sustainability of, and continuous improvements in, the provision of services at registrable boarding houses.*

### Definition

The proposal is defined as a 'general boarding house' under the Act:

- (2) Boarding premises are a **general boarding house** if the premises provide beds, for a fee or reward, for use by 5 or more residents (not counting any residents who are proprietors or managers of the premises or relatives of the proprietors or managers).*

## KEY REQUIREMENTS

### *Registration of Boarding Houses*

The boarding house is required to Notify the Commissioner the following according to Section 9:

### **9 Notification of particulars about registrable boarding house**

- (1) A proprietor of boarding premises that are used as a registrable boarding house must notify the Commissioner, in accordance with this section, of the following particulars so as to enable the Commissioner to include information about the boarding house in the Register:*

- (a) the name, and the residential or business address, of each proprietor of the boarding house,*
- (b) the name (if any) and the address of the registrable boarding house,*
- (c) whether the boarding house is a general or regulated assisted boarding house,*

- (d) whether development consent or approval is required under the Environmental Planning and Assessment Act 1979 to use the boarding house as boarding premises and, if so, whether such consent or approval has been granted,
- (e) the number of residents of the registrable boarding house,
- (f) the number of residents who are under 18 years of age,
- (g) the name of the manager (if any) of the registrable boarding house,
- (h) the total number of bedrooms provided as sleeping accommodation for the residents,
- (i) such other particulars as may be approved by the Commissioner or prescribed by the regulations.

The additional particulars specified by Section 9(1)(i) are identified in Section 4 of the Regulations and stated as:

- (1) The following additional particulars are prescribed for the purposes of section 9 (1) (i) of the Act:
  - (a) the telephone number and email address, if any, of the manager (if any) of the registrable boarding house,
  - (b) the telephone number, email address and website address, if any, of the registrable boarding house,
  - (c) the local government area in which the registrable boarding house is located,
  - (d) the telephone number and email address, if any, of each proprietor of the registrable boarding house,
  - (e) the maximum number of fee-paying residents who can be accommodated in the registrable boarding house,
  - (f) the method or methods for calculating charges for fee-paying residents and the fee amounts payable,
  - (g) the methods of payment used by fee-paying residents (including cash payments, credit cards, cheques, direct bank debits, money orders, BPay and Australia Post),
  - (h) the kinds of services provided to any residents (including accommodation, meals and personal care services),
  - (i) whether the registrable boarding house has special provisions for physical access and, if so, the kind of provisions provided,
  - (j) the numbers of residents who fit into each of the following categories (to the extent that it is reasonably practicable to ascertain this information):
    - (i) males,
    - (ii) females,
    - (iii) elderly persons (that is, persons 60 years of age or more),
    - (iv) students of tertiary institutions,
    - (v) persons who are mentally ill persons within the meaning of the Mental Health Act 2007,
    - (vi) persons who have a disability (however arising and whether or not of a chronic episodic nature) that is attributable to an intellectual, psychiatric, sensory, physical or like impairment or to a combination of such impairments,



- (vii) *persons with significant health problems,*
- (viii) *persons needing assistance with daily tasks and personal care.*

### **Occupancy Agreements**

A written Occupancy Agreement is to be formulated in accordance with the Act and associated Regulations that sets out the terms of the occupancy agreement. The Occupancy Agreement is to align with the Occupancy Principles contained in Schedule 1 of the Act, as stated below (but may be updated from time to time):

### **Schedule 1 Occupancy principles**

*(Section 30 (1))*

#### **1 State of premises**

*A resident is entitled to live in premises that are:*

- (a) reasonably clean, and*
- (b) in a reasonable state of repair, and*
- (c) reasonably secure.*

#### **2 Rules of registrable boarding house**

*A resident is entitled to know the rules of the registrable boarding house before moving into the boarding house.*

#### **3 Penalties for breaches of agreement or house rules prohibited**

*A resident may not be required to pay a penalty for a breach of the occupancy agreement or the rules of the registrable boarding house.*

#### **4 Quiet enjoyment of premises**

*A resident is entitled to quiet enjoyment of the premises.*

#### **5 Inspections and repairs**

*A proprietor is entitled to enter the premises at a reasonable time on reasonable grounds to carry out inspections or repairs and for other reasonable purposes.*

#### **6 Notice of increase of occupancy fee**

*A resident is entitled to 4 weeks written notice before the proprietor increases the occupancy fee.*

#### **7 Utility charges**

*(1) The proprietor is entitled to charge a resident an additional amount for the use of a utility if:*

- (a) the resident has been notified before or at the time of entering the occupancy agreement of the use of utilities in respect of which the resident will be charged, and*
- (b) the amount charged is based on the cost to the proprietor of providing the utility and a reasonable measure or estimate of the resident's use of that utility.*

*(2) A **utility** for the purposes of this clause is each of the following:*

- (a) the supply of electricity,*
- (b) the supply of gas,*
- (c) the supply of oil,*
- (d) the supply of water,*

(e) the supply of any other service prescribed by the regulations.

## **8 Payment of security deposits**

(1) The proprietor may require and receive a security deposit from the resident or the resident's authorised representative only if:

(a) the amount of the deposit does not exceed 2 weeks of occupancy fee under the occupancy agreement, and

(b) the amount is payable on or after the day on which the resident (or the resident's authorised representative) enters the agreement.

(2) Within 14 days after the end of the occupancy agreement, the proprietor must repay to the resident (or the resident's authorised representative) the amount of the security deposit less the amount necessary to cover the following:

(a) the reasonable cost of repairs to, or the restoration of, the registrable boarding house or goods within the premises of the boarding house, as a result of damage (other than fair wear and tear) caused by the resident or an invitee of the resident,

(b) any occupation fees or other charges owing and payable under the occupancy agreement or this Act,

(c) the reasonable cost of cleaning any part of the premises occupied by the resident not left reasonably clean by the resident, having regard to the condition of that part of the premises at the commencement of the occupancy,

(d) the reasonable cost of replacing locks or other security devices altered, removed or added by the resident without the consent of the proprietor,

(e) any other amounts prescribed by the regulations.

(3) The proprietor may retain the whole of the security deposit after the end of the occupancy agreement if the costs, fees or charges referred to in subclause (2) (a)–(e) are equal to, or exceed, the amount of the security deposit.

(4) In this clause:

**security deposit** means an amount of money (however described) paid or payable by the resident of a registrable boarding house or another person as security against:

(a) any failure by the resident to comply with the terms of an occupancy agreement, or

(b) any damage to the boarding house caused by the resident or an invitee of the resident, or

(c) any other matter or thing prescribed by the regulations.

## **9 Information about occupancy termination**

A resident is entitled to know why and how the occupancy may be terminated, including how much notice will be given before eviction.

## **10 Notice of eviction**

(1) A resident must not be evicted without reasonable written notice.

(2) In determining what is reasonable notice, the proprietor may take into account the safety of other residents, the proprietor and the manager of the registrable boarding house.

(3) Subclause (2) does not limit the circumstances that are relevant to the determination of what is reasonable notice.



**11 Use of alternative dispute resolution**

*A proprietor and resident should try to resolve disputes using reasonable dispute resolution processes.*

**12 Provision of written receipts**

*A resident must be given a written receipt for any money paid to the proprietor or a person on behalf of the proprietor.*

## MANAGEMENT OF THE BOARDING HOUSE

The Boarding House will be managed by an appointed off site manager through a Property Management Company, who will be contactable 24 hours a day and 7 days per week (as far as practicable). The off-site manager is to be associated with a Property Management Company, that is to be a recognised property management firm operating as a business with relevant ABN and authorities for property management and is licensed under the Property Stock and Business Agents Act and associated regulations, will be made the point of contact. The nominated off site manager is to be trained and have resources to screen potential occupants, manage complaints efficiently and ensure maintenance of common property is systematic and thorough.

The off site manager is to be engaged by contract on an annual basis.

The off site manager will be able to respond within short timeframes, and be responsible for contracts and contacts with maintenance persons and companies, manage the facilities for the recording and storing of CCTV footage, and have established relationships/contacts with security companies and services such as the NSW Police Force, NSW Ambulance Service and NSW Fire Brigade.

Any matters that require urgent and potentially life threatening responses are the responsibility of either police, ambulance or fire services.

The off site manager must:

- Be experienced in the operation of multiple occupancy residential development.
- Oversee all occupancy agreements and ensure such agreements align with the provisions of the Boarding Houses Act 2012 and associated Regulations, including setting out information about occupancy evictions (such as the amount of notice to be provided of eviction).
- Organise building and landscaping maintenance as required through the engaging of contractors to undertaken maintenance, landscaping and cleaning functions.
- Promptly address and respond to tenant issues and building operation and maintenance matters.
- Maintain an incident register and record any complaints. The register is to be made available to Council.
- Ensure that the total occupancy of the boarding rooms pursuant to the leases does not exceed 14 lodgers.
- Provide the tenant with a copy of the Resident Information Brochure and House Rules with any new occupancy agreement;
- Undertake periodic inspections of the boarding rooms to ensure that they are being maintained in a clean and tidy fashion and that maximum occupant numbers are maintained.



## **MAINTENANCE OF COMMON AREAS AND RESPONSIBILITIES**

Common areas are to be maintained by users and spaces should be left as they are found, in a clean and tidy state. A communal vacuum cleaner and mop will be stored on site.

A weekly cleaner will be employed, at the cost of the Boarding House owner, to ensure that the common property is clean and to take out the bins for the council garbage collection and subsequently bring in the bins after collection. Recycling bins and residual bins will be provided in each room to promote recycling.

The Boarding House off site manager is to employ the services of professional maintenance companies to undertake regular maintenance of the building. The maintenance companies are to enter the premises regularly and complete all maintenance required.

Any damage of internal or external property is repaired immediately together with all wear and tear items.

## **MAINTENANCE OF INDIVIDUAL AREAS AND RESPONSIBILITIES**

Individual residents are responsible for maintaining their rooms in a clean and tidy state and must be made available for inspection by the boarding house manager upon request (48 hours' notice).

## **PEST CONTROL ARRANGEMENTS**

Cleaning will also include regular inspections for vermin control and pest control services will be arranged by the boarding house manager on a regular basis.

## **WASTE MANAGEMENT AND COLLECTION**

A weekly cleaner will be employed, at the cost of the Boarding House owner, to ensure that the common property is clean and to take out the bins for the council garbage collection and subsequently bring in the bins after collection. Recycling bins and residual bins will be provided in each room to promote recycling.

Waste management is to be stored within the dedicated bin holding area and will be a collect and return service.

## **FIRE SAFETY**

A Fire Safety Evacuation Plan will be prepared and attached to this Plan of Management prior to commencement of operations of the boarding house. The plan will contain pictorial instructions detailing evacuation steps in the case of an emergency. The plan is to include evacuation routes, assembly points, and a plan of action once a fire alarm has been activated.

The Fire Safety Evacuation Plan is to be prominently located in each room and in the common area.

The phone numbers of appropriate contacts will be prominently displayed throughout the premises e.g. NSW Police, Security Company, NSW Fire and Rescue, NSW Ambulance Service and other local emergency assistance services.

## **EMERGENCY CONTACTS AND PROCEDURES**

The phone numbers of appropriate contacts will be prominently displayed throughout the premises (foyer and common room) e.g. NSW Police, Security Company, NSW Fire and Rescue, NSW Ambulance Service and other local emergency assistance services. Phone numbers are also to be provided for appropriate support infrastructure service providers such as Telstra, Electrical Authority, Water Authority, local Council, etc.

## **CONFLICT RESOLUTION**

Complaints from the community and between lodgers are to be noted in an Incident Diary with details of the complaint and the action taken to address the complaint. The task of the off site manager is to ensure that all neighbourhood and internal complaints are recorded, and management responses documented.

A Management Diary and an Incident Register is to be kept.

The off site manager will listen to complaints or respond to correspondence and detail procedures to the persons complaining as to how the Boarding House intends minimising any further impact in the future on neighbours or between residents.

The procedures detailed in this Plan of Management are designed to minimise complaints. The off site manager is to deal with empathy and respect to any person making a complaint.



## **COMPLAINTS MECHANISM: EXTERNAL**

The off-site manager is responsible for establishing contact and maintaining a relationship with the neighbours of the Boarding House within a 100m radius by undertaking the following tasks:

- Upon appointment letterbox drop all mail boxes within 100m radius of the Boarding Housing advising of their appointment and nominating all methods to contact them should any matter arise that warrants addressing. There shall be no less than two after hours contact numbers.
- Provide a clear sign at the front of the Boarding House, that is visible to the public, identifying the name of the off site manager and the methods of contacting the Manager in the event that there is a matter that warrants addressing.

Complaints from the community are to be noted in an Incident Diary with details of the complaint and the action taken to address the complaint.

The task of the off site manager is to ensure that all neighbourhood complaints are recorded, and management responses documented. A Management Diary and an Incident Register is to be kept. The off site manager will listen to complaints or respond to correspondence and detail procedures to the persons complaining as to how the Boarding House intends minimising any further impact in the future.

The procedures detailed in this Plan of Management are designed to minimise complaints.

The off site manager is to deal with empathy and respect to any person making a complaint.

## **COMPLAINTS MECHANISM: BETWEEN LODGERS**

The off-site manager is responsible for acting as mediator in disputes between lodgers.

Complaints from the lodgers are to be noted in an Incident Diary with details of the complaint and the action taken to address the complaint.

The task of the off-site manager is to ensure that all complaints are recorded, and management responses documented.

A Management Diary and an Incident Register is to be kept.

The off-site manager will listen to complaints or respond to correspondence and detail procedures to the persons complaining as to how it is intended to minimise any further impact in the future.

The procedures detailed in this Plan of Management are designed to minimise complaints.

The off-site manager is to deal with empathy and respect to any person making a complaint.

## **HOUSE RULES - AMENITY OF THE NEIGHBOURHOOD AND CONTROL OF NOISE**

The draft “House Rules” for the Boarding House are attached to this Plan of Management. It is noted that the document is a draft as it outlines the minimum requirements to be implemented by the off-site manager; however, it may be appropriate to amend and add to the House Rules as the Boarding House operations evolve.

The House Rules are to be prominently displayed in the common areas. Each new tenant is to be provided with a copy of the House Rules when signing their leasing agreement and agree to be bound by the House Rules.

House Rules relate to:

- The emission of noise (from within the boarding house and the external spaces);
- prohibition of large gatherings and parties on the premises;
- interference with the peace and quiet of other residents and neighbours;
- volume of television and music players;
- control of alcohol intake and prohibition of illegal substances; and
- anti-social behaviour.
- Parking of vehicles.

The emission of noise and appropriate hours for noise emission is dictated in legislation and enforced by parties such as the local Council.

The off site manager is to be familiar with the legislative requirements and rules and be aware of the relevant authorities that are responsible for enforcement of noise issues.



## HOUSE RULES

**The following rules are a condition of your occupancy agreement – Any breach of these rules will result in termination of your occupancy agreement.**

### *Resident Behaviour & Neighbour Relations*

Each occupant is required to ensure that other occupants of this boarding house as well as surrounding neighbours are allowed to peacefully and quietly enjoy their own premises. Each occupant is required to ensure they do not do anything or allow anything to occur that will impact on the quiet enjoyment of each tenant and neighbour of this boarding house.

Occupants of each boarding room shall make available their boarding room available for inspection by the property manager. This shall be by appointment with 24 hours' notice. However, in the case of an emergency, no notice is required, and the property manager may use the spare key to enter the premises.

Occupants are not to congregate in large groups in any part of the common property, especially the external common property. Anti-social behaviour of any kind is prohibited and will be referred immediately to the police.

Any breach of the house rules will result in warnings initially, and in the case of persistent and serious breaches, termination of your lease and eviction from the premises.

### *Noise & Radio/TV*

At any time noisy activities are occurring, occupants should keep doors any windows closed where possible to reduce noise emission and impact on neighbours.

Television, music players and any other sound emitting devise should be kept at a moderate level and not be audible from neighbouring properties

### *Use of External Areas*

The common room and common courtyard shall only be used during the following Hours:

- Sunday to Thursday 7am to 10pm
- Friday and Saturday 7am to 10pm

Furthermore, a maximum of up to 14 people to be permitted to use the communal space at a time.

#### *Alcohol and Smoking*

No Alcohol or illegal substances are to be consumed or be brought into common property at any time. Alcohol consumed in rooms must be disposed of in designated recycling bins.

No smoking is permitted within the Boarding House. Smoking is to be limited to visually obscured external open space areas only. No smoking is to be undertaken at the front of the property, only in the designated external smoking spaces.

#### *Parking of Vehicles and Vehicular Access Arrangements*

##### *Entry and Exit of Cars and Turning Area*

The development is to provide on-site parking for a total of 5 on-site car parking spaces and this is the only area on site where parking is permitted. The use of these carparking spaces will be determined by the off-site manager.

##### *Parking of Cars*

Any cars unable to be accommodated on site will be parked on the street network and are not to block driveways or being parked in no parking or no stopping zones. At no time are cars authorised to park on the footpath area in a manner that is not permitted by relevant legislation- cars are either to be parked on the site or parked lawfully on the surrounding street network.

#### *Register of Complaints & Dealing with Complaints: Neighbours*

The off-site manager is responsible for establishing contact and maintaining a relationship with the neighbours of the Boarding House within a 100m radius by undertaking the following tasks:

- Upon appointment letterbox drop all mail boxes within 100m radius of the Boarding House advising of their appointment and nominating all methods to contact them should any matter arise that warrants addressing. There shall be no less than two after hours contact numbers.
- Provide a clear sign at the front of the Boarding House, that is visible to the public, identifying the name of the off site manager and the methods of contacting the Manager in the event that there is a matter that warrants addressing.

Complaints from the community are to be noted in an Incident Diary with details of the complaint and the action taken to address the complaint. This is to include specific room numbers that generate complaints.

The task of the off site manager is to ensure that all neighbourhood complaints are recorded, and management responses documented. A Management Diary and an Incident Register is to be kept.



The off site manager will listen to complaints or respond to correspondence and detail procedures to the persons complaining as to how the Boarding House intends minimising any further impact in the future.

#### *Register of Complaints & Dealing with Complaints: Between Tenants*

If conflict between lodgers cannot be resolved amicably complaints are to be directed to the boarding house manager who will act as a mediator between lodgers. Complaints are to be noted in an Incident Diary with details of the complaint and the action taken to address the complaint.

This is to include specific room numbers that generate complaints. The task of the off site manager is to ensure that all internal complaints are recorded, and management responses documented. A Management Diary and an Incident Register is to be kept.

The off site manager will listen to complaints or respond to correspondence and detail procedures to the persons complaining as to how it is intended to minimise any further impact in the future.

#### *Cleaning Schedules*

Each resident is required keep common areas clean. After using common facilities such as the kitchen or bathroom, residents are clean up after themselves. Residents are encouraged to use their own private kitchen and bathroom where possible.

Common areas are to be maintained by users and spaces should be left as they are found- in a clean and tidy state.

A weekly cleaner will be employed, at the cost of the Boarding House owner, to ensure that the common property is clean and to take out the bins for the council garbage collection and subsequently bring in the bins after collection. Recycling bins and residual bins will be provided in each room to promote recycling.

#### *Waste Disposal*

Waste is to be disposed to the communal waste bins once bins are full.

#### *Number of Approved Boarding House Rooms*

For single lodger rooms, there are to be no more than 1 lodger in each room (total of 8 rooms) and for double lodger rooms, there are to be no more than 2 lodgers in each room (total of 2 rooms).

#### *Common Areas and Usage Times*

Common areas are available for the enjoyment of boarders provided good order is maintained. All waste is to be disposed of and not left in the common areas or externally in common areas;

The common room and common courtyard shall only be used during the following Hours:

- Sunday to Thursday 7am to 10pm
- Friday and Saturday 7am to 10pm

Furthermore, a maximum of up to 12 people to be permitted to use the communal space at a time.

#### *Behaviour and Guest Visiting Times*

Each tenant of this boarding house is responsible for themselves and their visitors. Tenants should ensure their visitors enter and exit the site in a quiet and respectful manner, having regard to the time of day or night they are entering or exiting the site.

Guests are permitted on site however they are not to stay overnight if this would lead to more than 2 persons being located in the boarding room.

#### *Animals*

There is to be no keeping of animals on the premises as this may compromise the health and/or safety of other residents and will impact upon maintenance and cleanliness requirements within the Boarding House.

#### *Smoking*

No smoking is permitted within the Boarding House. Smoking is to be limited to visually obscured external open space areas only. No smoking is to be undertaken at the front of the property, only in the designated external smoking spaces.

#### *Alcohol and Drugs*

No Alcohol or illegal substances are to be consumed or be brought into common property at any time. Alcohol consumed in rooms must be disposed of in designated recycling bins.

#### *Security*

The Boarding House is to be fitted with recording CCTV cameras in the common areas such entries, car parking area and common lounge room. All movement in these areas is to be recorded and monitored. The footage is to be capable of being viewed live and recorded, over the Internet from any fixed or portable Internet viewing device, from anywhere locally or internationally.

The continual electronic monitoring and recording of common areas is a key function of providing actual and perceived security. These premises are under 24/7 video surveillance which is recorded and held and will be provided to council and/or law enforcement at any time. Disturbances are to be reported to the manager and NSW Police (if manager unavailable).



*Function and Event Restrictions*

No Parties or any other noise generating activity is to occur after 10pm Sunday to Thursday and after midnight Friday and Saturday.

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 1226433M\_03

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

This certificate is a revision of certificate number 1226433M\_02 lodged with the consent authority or certifier on 02 August 2021 with application DA21/0561.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

Secretary

Date of issue: Wednesday, 30 March 2022

To be valid, this certificate must be lodged within 3 months of the date of issue.



Planning,  
Industry &  
Environment

### Project summary

Project name	Coreen Ave - Boarding Houses_03
Street address	27 Coreen Avenue Penrith 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 31157
Lot no.	211
Section no.	-
No. of residential flat buildings	1
No. of units in residential flat buildings	9
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 50	Target 40
Thermal Comfort	✓	concession Target Pass
Energy	✓ 46	Target 45

### Certificate Prepared by

Name / Company Name: AKV Pty Ltd

ABN (if applicable): 60110410654



# Description of project

## Project address

Project name	Coreen Ave - Boarding Houses_03
Street address	27 Coreen Avenue Penrith 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 31157
Lot no.	211
Section no.	-

## Project type

No. of residential flat buildings	1
No. of units in residential flat buildings	9
No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	651.30
Roof area (m²)	250.17
Non-residential floor area (m²)	0.0
Residential car spaces	5
Non-residential car spaces	0




## Common area landscape

Common area lawn (m²)	48.65
Common area garden (m²)	50.0
Area of indigenous or low water use species (m²)	10.0

## Assessor details

Assessor number	N/A
Certificate number	N/A
Climate zone	N/A
Ceiling fan in at least one bedroom	N/A
Ceiling fan in at least one living room or other conditioned area	N/A

## Project score

Water	 50	Target 40
Thermal Comfort		concessionTarget Pass
Energy	 46	Target 45

## Description of project

The tables below describe the dwellings and common areas within the project

### Residential flat buildings - Building1, 9 dwellings, 1 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
1	1	17.42	10.3	20.0	0.0
6	1	15.8	4.25	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
2	1	17.96	4.19	20.0	0.0
7	1	18.53	3.83	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
3	1	19.77	4.89	0.0	0.0
8	1	20.21	3.86	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
4	1	16.02	4.07	0.0	0.0
9	1	16.82	4.54	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
5	1	19.39	4.07	0.0	0.0



## Description of project

The tables below describe the dwellings and common areas within the project

### Common areas of unit building - Building1

Common area	Floor area (m <sup>2</sup> )
Car park area (No. 1)	133.73
Ground floor lobby type (No. 2)	18.06

Common area	Floor area (m <sup>2</sup> )
Garbage room (No. 1)	8.8
Hallway/lobby type (No. 1)	19.0

Common area	Floor area (m <sup>2</sup> )
Ground floor lobby type (No. 1)	26.97

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building1

### (a) Dwellings

- (i) Water
- (ii) Energy
- (iii) Thermal Comfort

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 2. Commitments for multi-dwelling houses

## 3. Commitments for single dwelling houses

## 4. Commitments for common areas and central systems/facilities for the development (non-building specific)

- (i) Water
- (ii) Energy



## Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

### 1. Commitments for Residential flat buildings - Building1

#### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install:			
(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		✓	✓
(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓	✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	3.5 star	3.5 star	-	-	-	-	-	-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	central water tank (no. 1)	See central systems	See central systems	no	yes	no	no	no
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓



(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	gas instantaneous 6 star	no mechanical ventilation (ie. natural)	-	individual fan, ducted to façade or roof	manual switch on/off	natural ventilation only, or no laundry	-

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	1-phase airconditioning 4.5 Star (old label)	1-phase airconditioning 4.5 Star (old label)	1-phase airconditioning 4.5 Star (old label)	1-phase airconditioning 4.5 Star (old label)	1	1	yes	yes	yes	yes	1	yes

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	2.5 star	yes	2.5 star	no washing machine taps	-	yes	no

(iii) Thermal Comfort								Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The development will be a Class 3 building. The applicant must include in the documentation accompanying the application for a construction certificate (or complying development certificate, if applicable), a report demonstrating that the development will meet Section J of the National Construction Code - Volume 1.								✓	✓	✓



**(b) Common areas and central systems/facilities**

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	3500.0	To collect run-off from at least: - 250.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 100.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 20.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area (No. 1)	no mechanical ventilation	-	compact fluorescent	motion sensors	No
Garbage room (No. 1)	ventilation exhaust only	-	compact fluorescent	motion sensors	No
Ground floor lobby type (No. 1)	no mechanical ventilation	-	compact fluorescent	motion sensors	No
Ground floor lobby type (No. 2)	no mechanical ventilation	-	compact fluorescent	motion sensors	No
Hallway/lobby type (No. 1)	no mechanical ventilation	-	compact fluorescent	motion sensors	No



#### 4. Commitments for common areas and central systems/facilities for the development (non-building specific)

##### (b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

## Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

## Legend

1. Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✓" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).