

BASIX™ Certificate

Building Sustainability Index

www.planningportal.nsw.gov.au/development-and-assessment/basix

Single Dwelling

Certificate number: 1803994S

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.planningportal.nsw.gov.au/definitions

Secretary

Date of issue: Monday, 14 July 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate LUL8JEQKWN.

Project summary

Project name	133_Riverview
Street address	133 RIVERVIEW Road AVALON BEACH 2107
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan DP1176452
Lot no.	1
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	5

Project score

Water	✓ 40	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 72	Target 72
Materials	✓ -100	Target n/a

Certificate Prepared by

Name / Company Name: Energy Advance

ABN (if applicable):

Description of project

Project address	
Project name	133_Riverview
Street address	133 RIVERVIEW Road AVALON BEACH 2107
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan DP1176452
Lot no.	1
Section no.	-
Project type	
Project type	dwelling house (detached)
No. of bedrooms	5
Site details	
Site area (m²)	1133
Roof area (m²)	315
Conditioned floor area (m²)	468.5
Unconditioned floor area (m²)	109.8
Total area of garden and lawn (m²)	350
Roof area of the existing dwelling (m²)	0

Assessor details and thermal loads		
NatHERS assessor number	DMN/14/1662	
NatHERS certificate number	LUL8JEQKWN	
Climate zone	56	
Area adjusted cooling load (MJ/ m².year)	8	
Area adjusted heating load (MJ/ m².year)	22	
Project score		
Water	 40	Target 40
Thermal Performance	 Pass	Target Pass
Energy	 72	Target 72
Materials	 -100	Target n/a

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.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 4.5 but <= 6 L/min plus spray force and/or coverage tests) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 6 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 6 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 6 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 3000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 100 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: - all toilets in the development - the cold water tap that supplies each clothes washer in the development - at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) - a tap that is located within 10 metres of the swimming pool in the development		✓ ✓ ✓ ✓	✓ ✓ ✓ ✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Swimming Pool			
The swimming pool must not have a volume greater than 107.5 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be shaded.	✓	✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
Assessor details and thermal loads			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate and the "Construction" and "Glazing" tables below.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Construction			
The applicant must construct the floors, walls, roofs, ceilings and glazing of the dwelling in accordance with the specifications listed in the tables below.	✓	✓	✓
The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the tables below.			✓

Construction	Area - m ²	Insulation
floor - concrete slab on ground, conventional slab.	197.1	none
floor - suspended floor above enclosed subfloor, concrete - suspended; frame: no frame.	81.8	none
floor - suspended floor above open subfloor, concrete - suspended; frame: no frame.	16	none
floor - above habitable rooms or mezzanine, concrete - suspended; frame: no frame..	347.5	none
external wall: external insulated façade system (EIFS); frame: no frame.	700.2	fibreglass batts or roll
external wall: concrete block/plasterboard; frame: no frame.	69.8	none
internal wall: plasterboard; frame: timber - H2 treated softwood.	313.9	none
ceiling and roof - flat ceiling / pitched roof, framed - concrete tiles , timber - H2 treated softwood.	315	ceiling: fibreglass batts or roll; roof: foil backed blanket.

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Glazing			
The applicant must install windows, glazed doors and skylights as described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓

Frames	Maximum area - m2
aluminium	252.93
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	0
double	0
triple	252.93

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric heat pump with a performance of 26 to 30 STCs or better.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: please select		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: interlocked to light		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: interlocked to light		✓	✓
Artificial lighting			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): electric heat pump		✓	
The applicant must install a pump for the swimming pool in the development.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
The photovoltaic system must consist of: • photovoltaic collectors with the capacity to generate at least 7.9 peak kilowatts of electricity, installed at an angle of 0 degrees to the horizontal facing north	✓	✓	✓
Other			
The applicant must install an induction cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

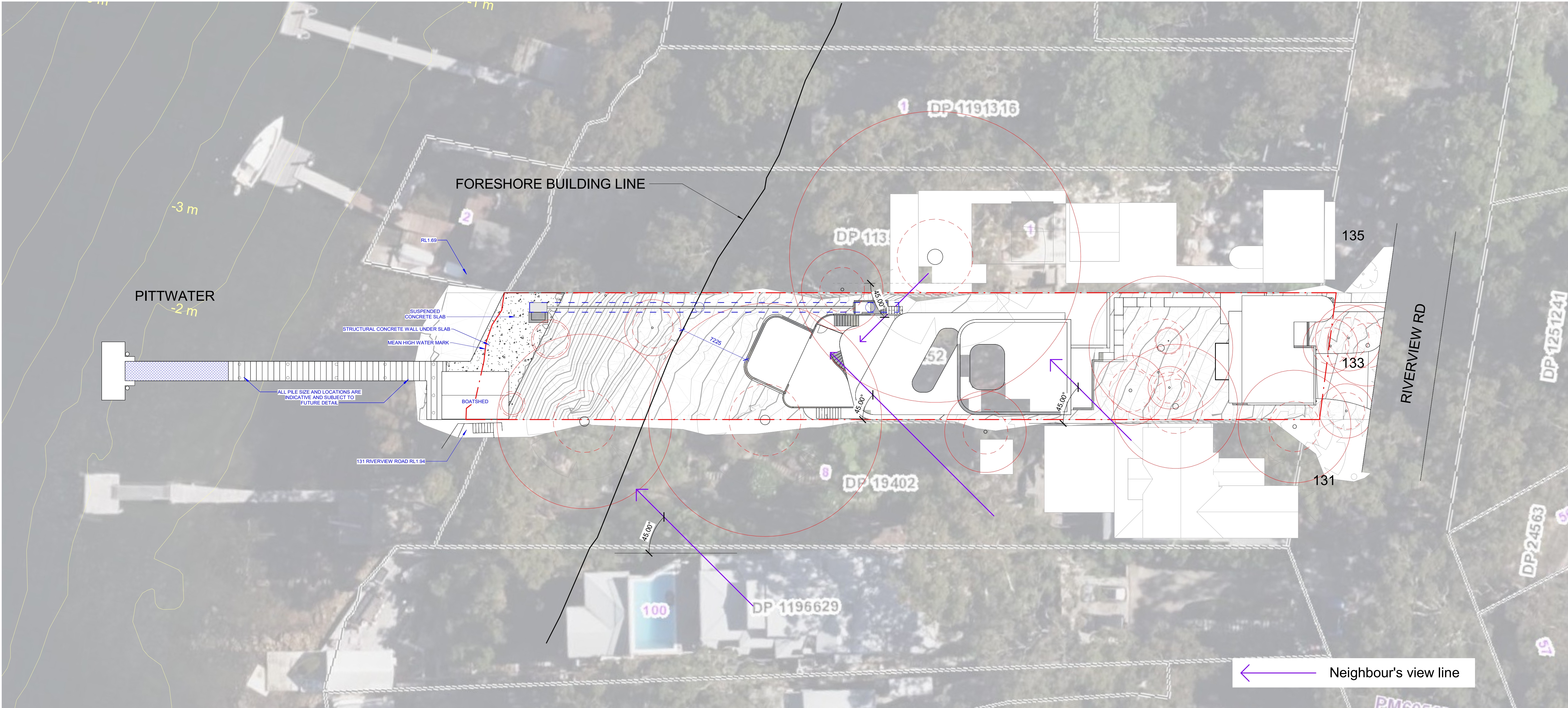
In these commitments, "applicant" means the person carrying out the development.

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).

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.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

Summary of BASIX Commitments for 133_Riverview	
	Commitment
Water	
Total area of garden and lawn (m2)	350
Area of indigenous planting within total garden (m2) required	0
Rainwater tank capacity (litres)	3000
Area of roof connected to tank (m2)	100
Connected to all toilets in the development?	Yes
Connected to at least one outdoor tap?	Yes
Connected to washing machine?	Yes
Rating of all showerheads installed	4 Star (> 4.5 but <= 6 L/min)
Rating of all toilet cisterns installed	6 Star
Rating of bathroom tap fittings	6 Star
Rating of kitchen tap fittings	6 Star
Thermal Performance	
Refer to Universal Certificate	
Energy	
Active cooling to living areas	3-Phase AC (EER 3.0-3.5)
Active cooling to bedroom areas	3-Phase AC (EER 3.0-3.5)
Active heating to living areas	3-Phase AC (EER 3.5-4.0)
Active heating to bedroom areas	3-Phase AC (EER 3.5-4.0)
Hot water system	Electric Heat Pump
Low energy lighting (If required refer to BASIX certificate)	No
Bathroom ventilation	Ducted (interlocked to light)
Kitchen ventilation	Ducted (interlocked to light)
Laundry ventilation	Ducted (interlocked to light)
Cooktop and oven	Induction Cooktop / Electric Oven
Outdoor Clothesline	Yes
Indoor or Sheltered Clothesline	No
Well Ventilated Fridge Space	No



D	20.06.25	For DA Lodgement
A	22.05.25	For DA Lodgement

REV	Date	Description
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ABN: 79 160 683 929
WEBSITE: www.riseprojects.com.au

DRAWN BY: **AS** CHECKED BY: **DP**

ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
SITE PLAN

JOB No :	
SCALE : A1/ 1 : 200	
DATE: 20.06.25	
DW No. A103	REV: D

**Certificate No. # LUL8JEQKWN**
Scan QR code or follow website link for rating details.

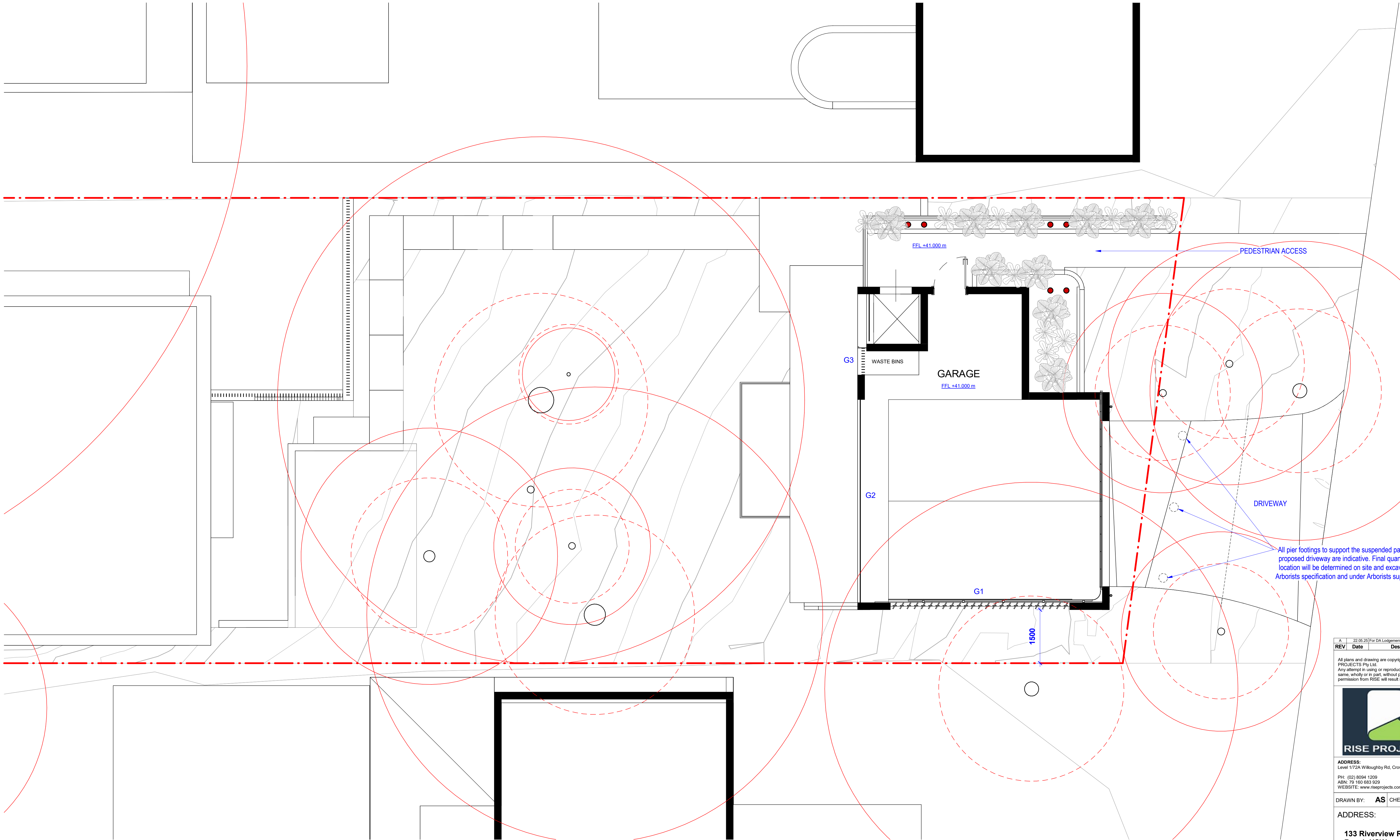
Assessor name
Accreditation No.
Property Address

Claude-Francois Sookloll
DMN/14/1662
Lot 1 (#133) Riverview Road
AVALON BEACH,
2107, NSW, 2107



<https://www.fr5.com.au/QRCodeLanding?PublicId=LUL8JEQKWN>

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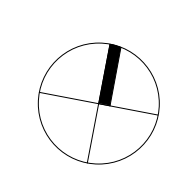


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ABN: 79 160 683 929
WEBSITE: www.riseprojects.com.au

DRAWN BY: **AS** CHECKED BY: **DP**

ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
GARAGE

JOB No : A1/ 1 : 50	
SCALE : A1/ 1 : 50	
DATE: 22.05.25	
DW No. A201	REV: A

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Assessor name
Accreditation No.
Property Address

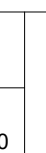
Claude-Francois Sookloll
DMN/14/1662
Lot 1 (#133) Riverview Road
AVALON BEACH,
2107, NSW, 2107

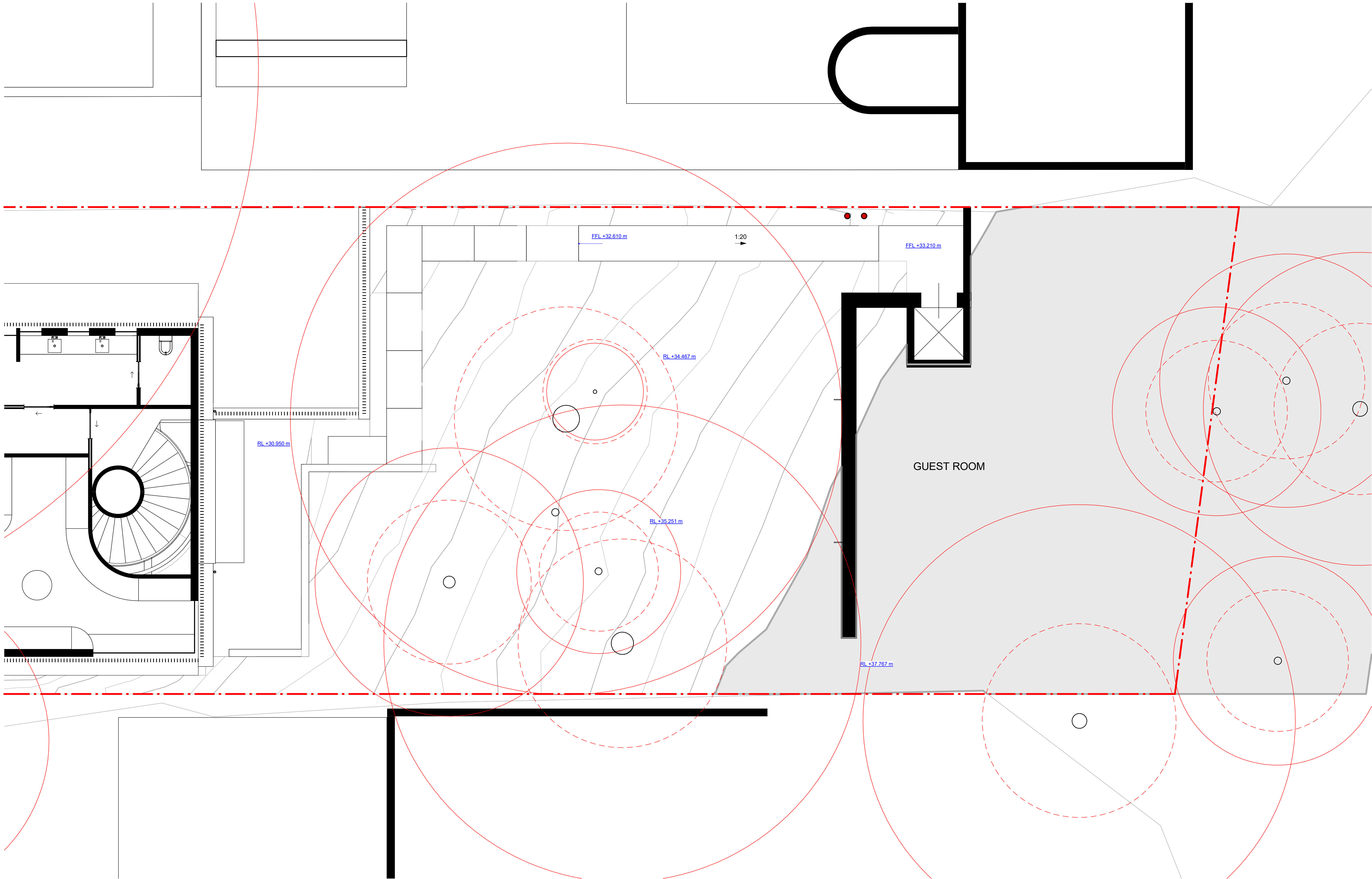


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DRAWN BY: AS		CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW:		
GUEST ROOM		
JOB NO :		
SCALE :		
DATE:	A1/1 : 50	
	22.05.25	
DW No.	REV:	A
A202		





Certificate No. # LUL8JEQKWN

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Assessor name

Accreditation No.

Property Address

Claude-Francois Sookloll

DMN/14/1662

Lot 1 (#133) Riverview Road

AVALON BEACH,

2107, NSW, 2107

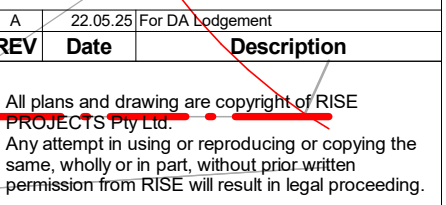


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DRAWN BY:	CHECKED BY:
AS	DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW	
VIEW: COURTYARD	
JOB No :	
SCALE:	A1/ 1 : 50
DATE:	22.05.25
DW No.	REV:
A203	A

AutoCAD: Docs\133 Riverview Rd, Avalon Beach\133 Riverview Rd_Courtyard2.dwg

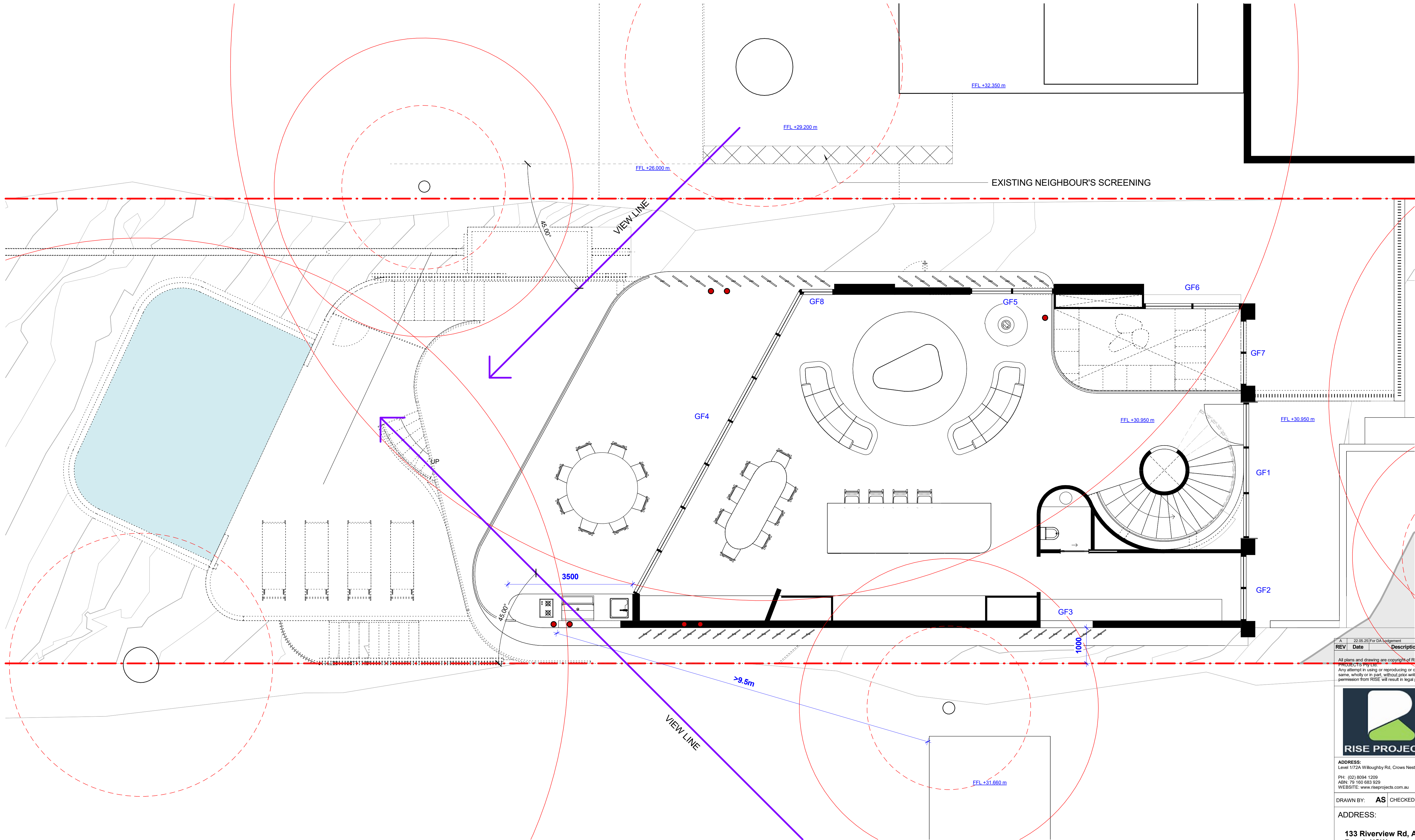


ADDRESS:

**133 Riverview Rd, Avalon
Beach NSW**

FIRST FLOOR

REV: **A**



REV	Date	Description
A	22.05.25	For DA Lodgement

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ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
GROUND FLOOR (ACCESS LEVEL)

JOB No :	
SCALE :	A1/ 1 : 50
DATE:	22.05.25
DW No.	A205
REV:	A

**Certificate No. # LUL8JEQKWN**
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Assessor name Claude-Francois Sookloll
Accreditation No. DMN/14/1662
Property Address Lot 1 (#133) Riverview Road
AVALON BEACH,
2107, NSW, 2107

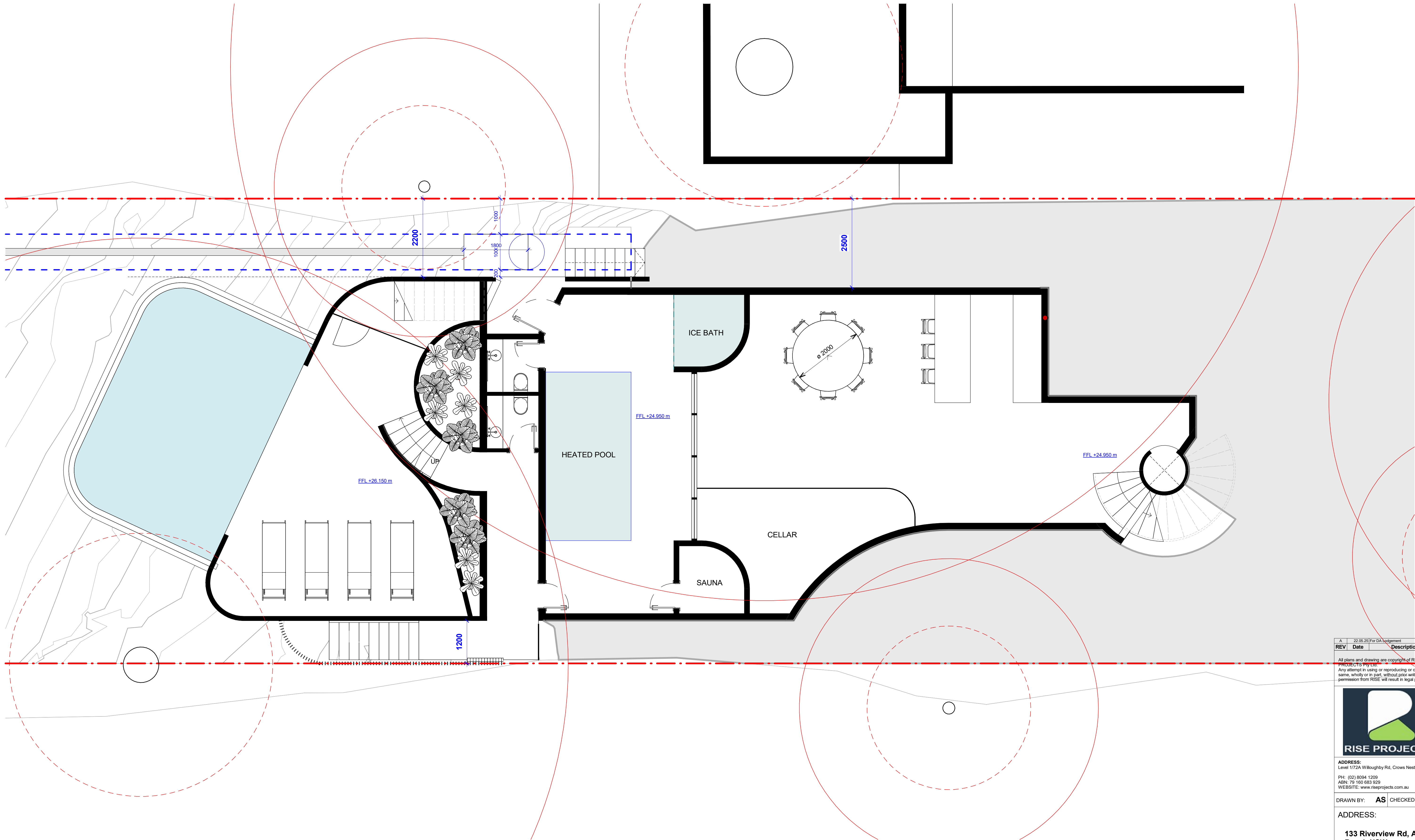


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DRAWN BY: AS CHECKED BY: DP		
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: LOWER GROUND FLOOR		
JOB No :		
SCALE : A1/1 : 50		
DATE: 22.05.25		
DW No. A206		
REV: A		





Certificate No. # LUL8JEQKWN

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Assessor name

Accreditation No.

Property Address

Claude-Francois Sookloll

DMN/14/1662

Lot 1 (#133) Riverview Road

AVALON BEACH,

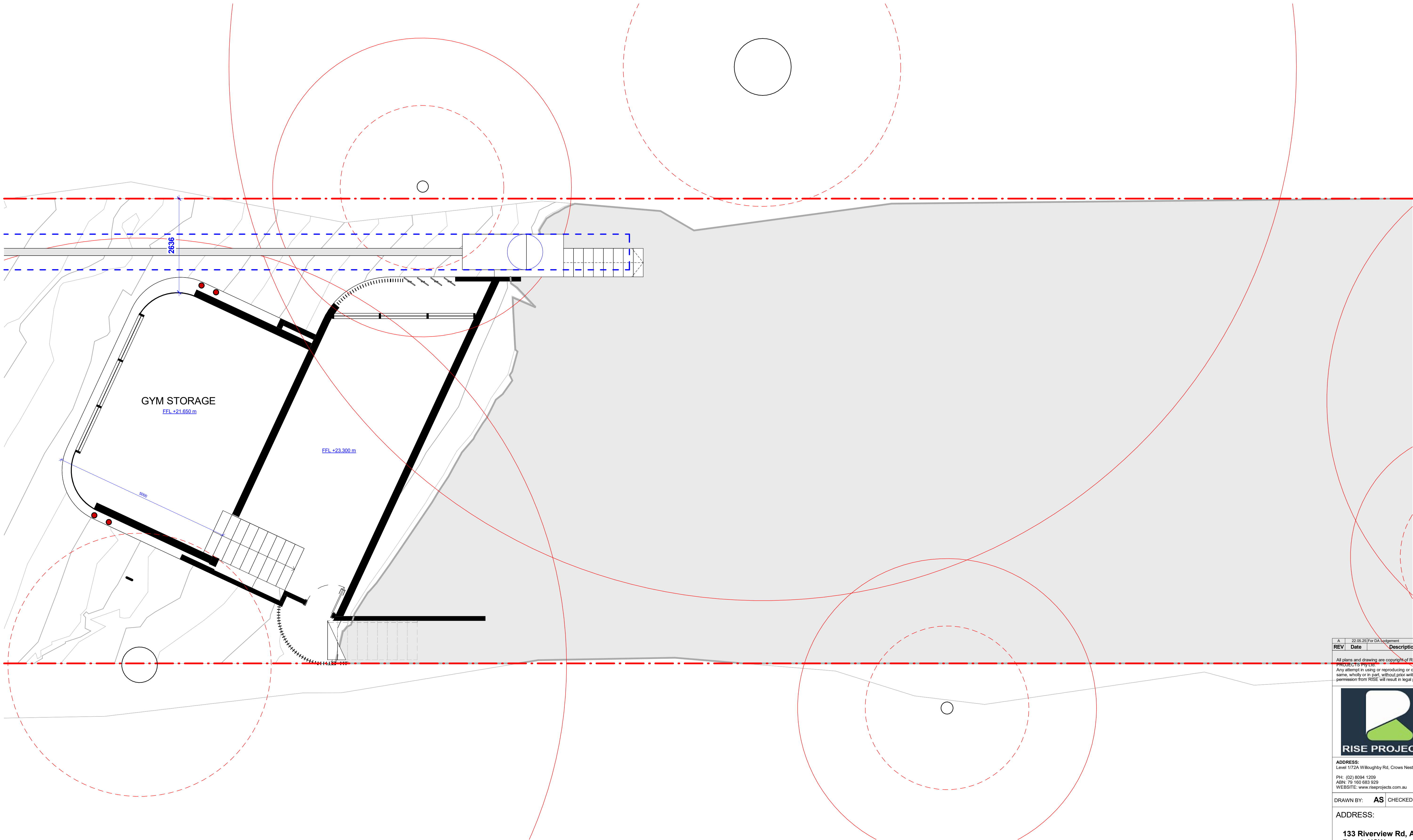
2107, NSW, 2107



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PH: (02) 8094 1209 ABN: 79 160 683 929 WEBSITE: www.riseprojects.com.au		
DRAWN BY:	AS	CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: CELLAR / POOL		
JOB No :		
SCALE :	A1/ 1 : 50	
DATE:	22.05.25	
DW No.	A207	REV: A



REV	Date	Description
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ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
GYM STORAGE

JOB No :	
SCALE : A1/ 1 : 50	
DATE: 22.05.25	
DW No. A208	REV: A

**Certificate No. # LUL8JEQKWN**
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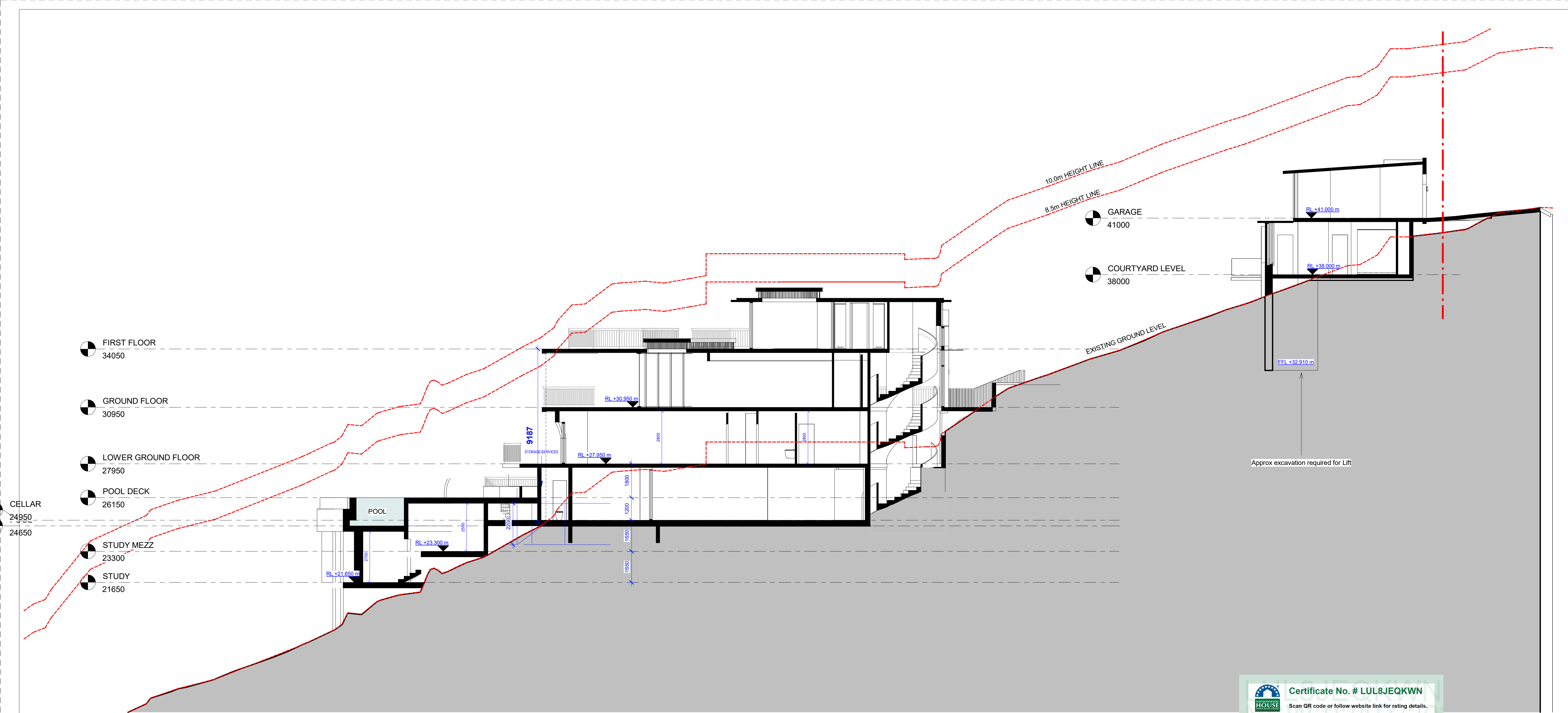
Assessor name
Accreditation No.
Property Address

Claude-Francois Sookloll
DMN/14/1662
Lot 1 (#133) Riverview Road
AVALON BEACH,
2107, NSW, 2107



<https://www.fr5.com.au/QRCodeLanding?PublicId=LUL8JEQKWN>

FOR INFORMATION



Certificate No. # LUL8JEQKWN
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Assessor name: Claude-Francois Sooklall
Accreditation No: DMN/14/1662
Property Address: Lot 1 (#133) Riverview Road, AVALON BEACH, 2107, NSW, 2107

<https://www.fr5.com.au/QRCodeLanding?PublicId=LUL8JEQKWN>

REV	Date	Description
A	22.05.25	For DA Lodgement

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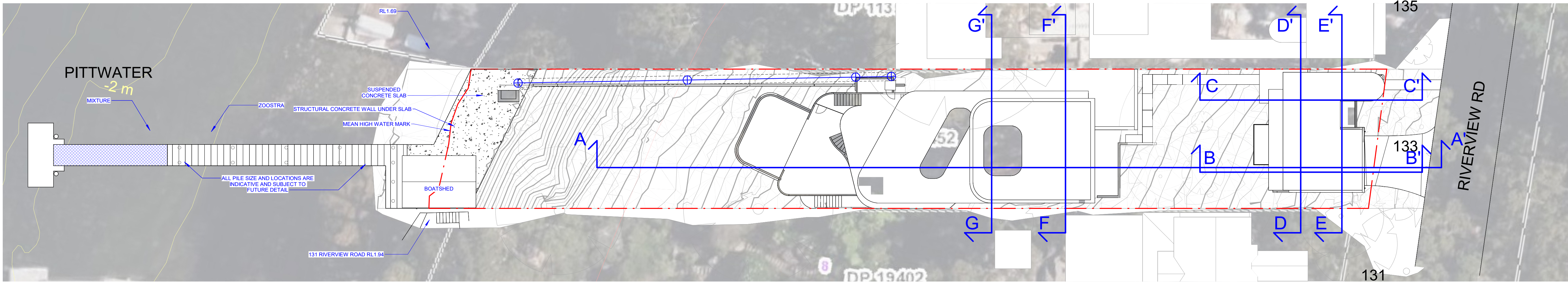
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Level 1/72A WIloughby Rd, Crows Nest NSW 2065
PH: (02) 8094 1209
ABN: 79 160 683 929
WEBSITE: www.riseprojects.com.au

DRAWN BY: **AS** CHECKED BY: **DP**

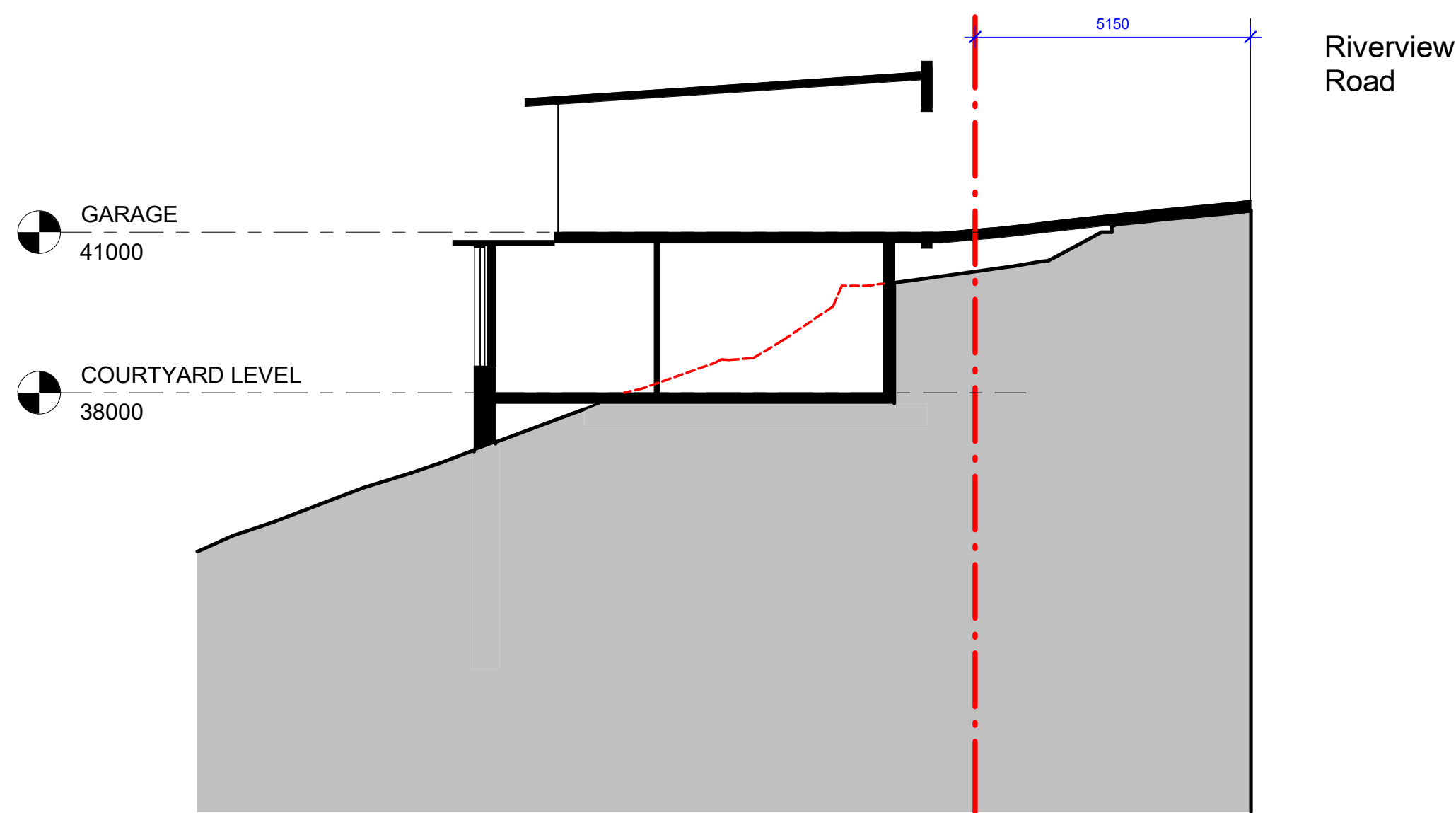
ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
SECTIONS - LONG SECTION

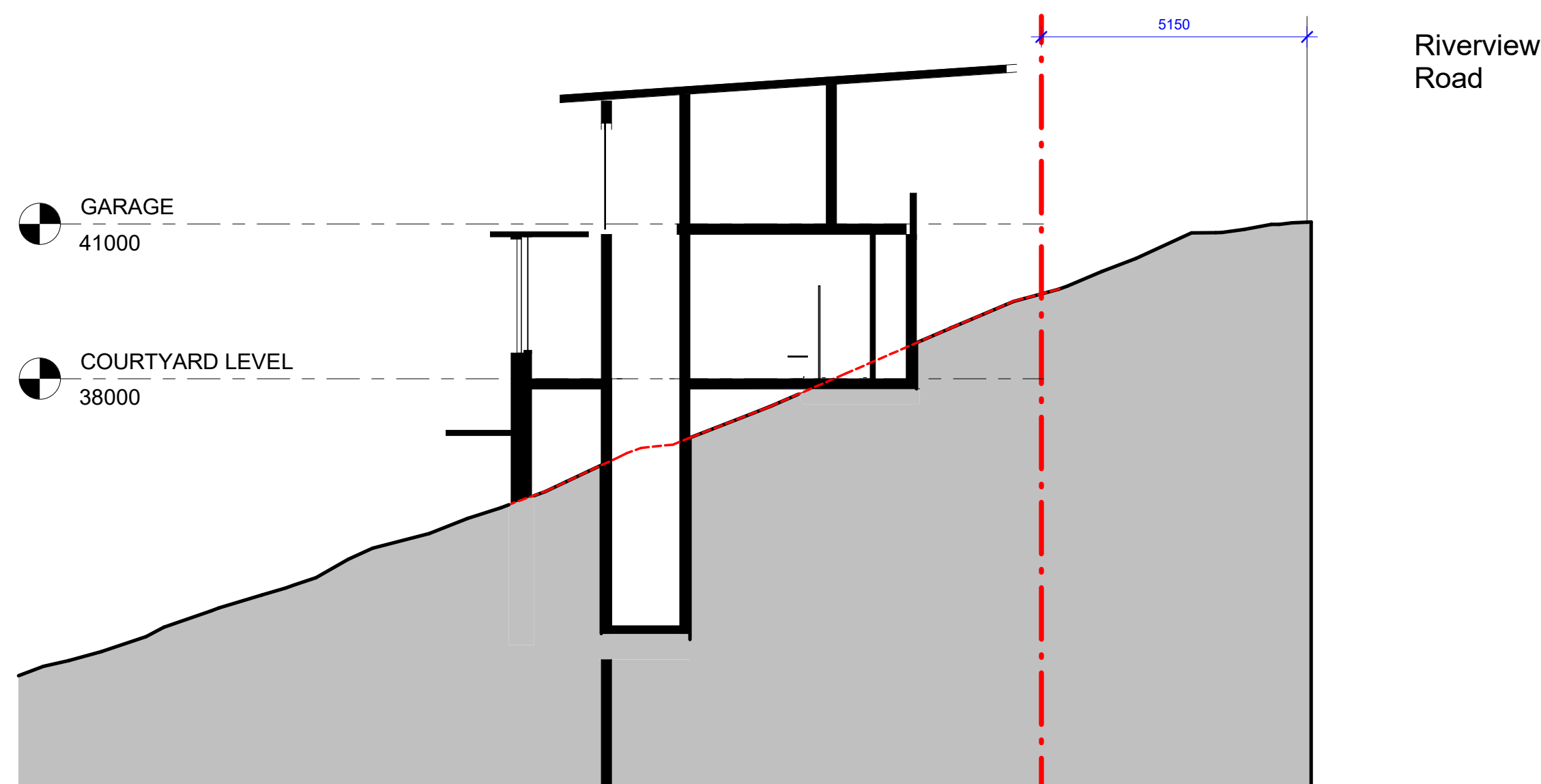
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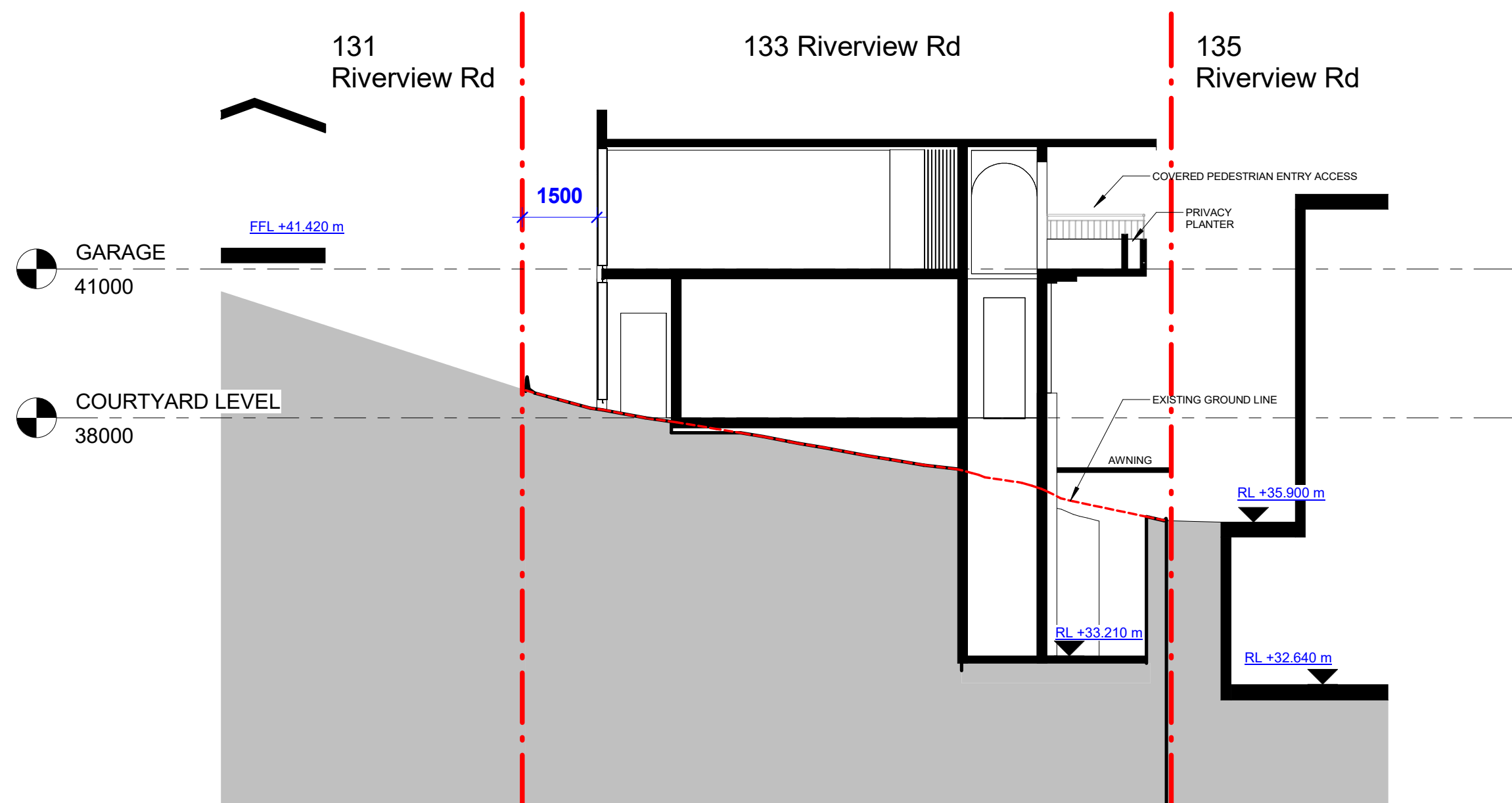
FOR INFORMATION



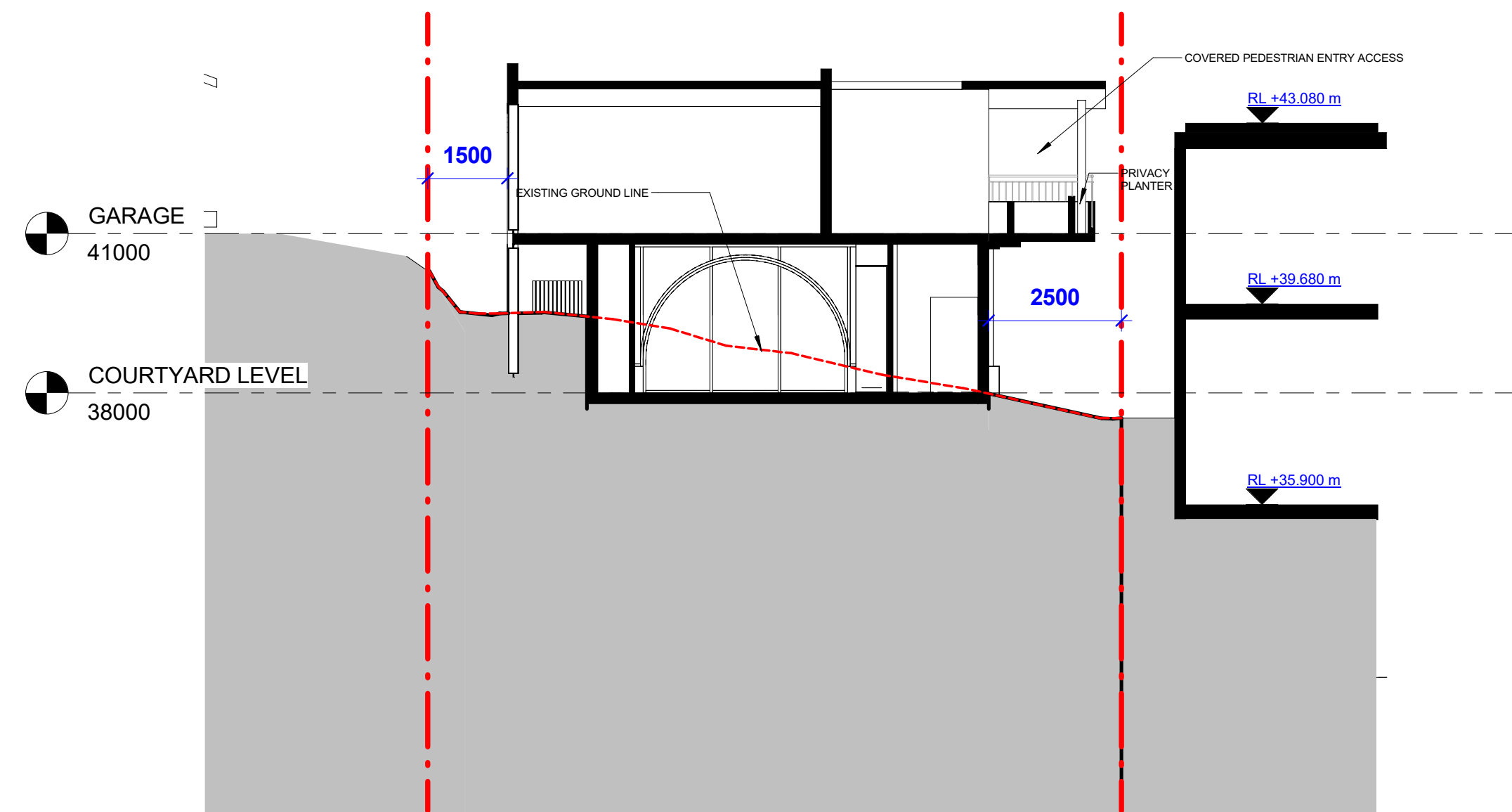
2 SECTION BB'
A1@ 1 : 100 /A3@ 1:200



1 SECTION CC'
A1@ 1 : 100 /A3@ 1:200



5 SECTION DD'
A1@ 1 : 100 /A3@ 1:200



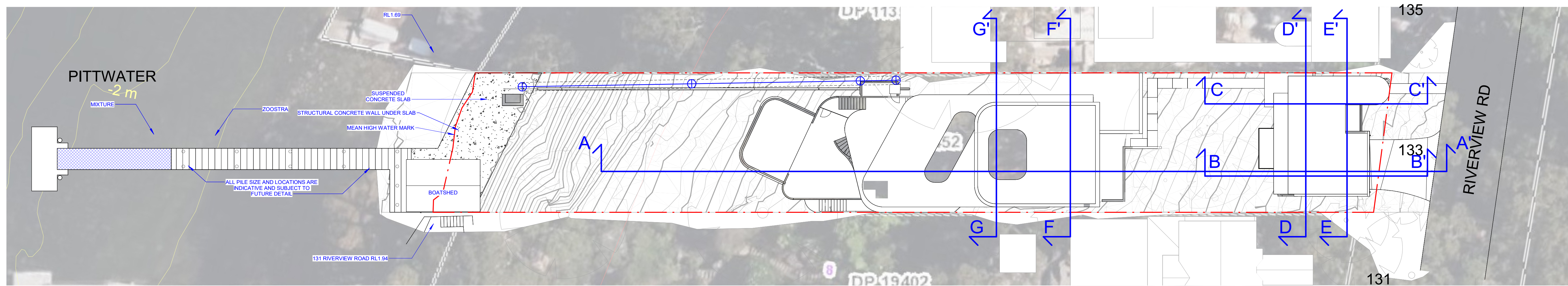
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Certificate No. # LUL8JEQKWN

Scan QR code or follow website link for rating details.

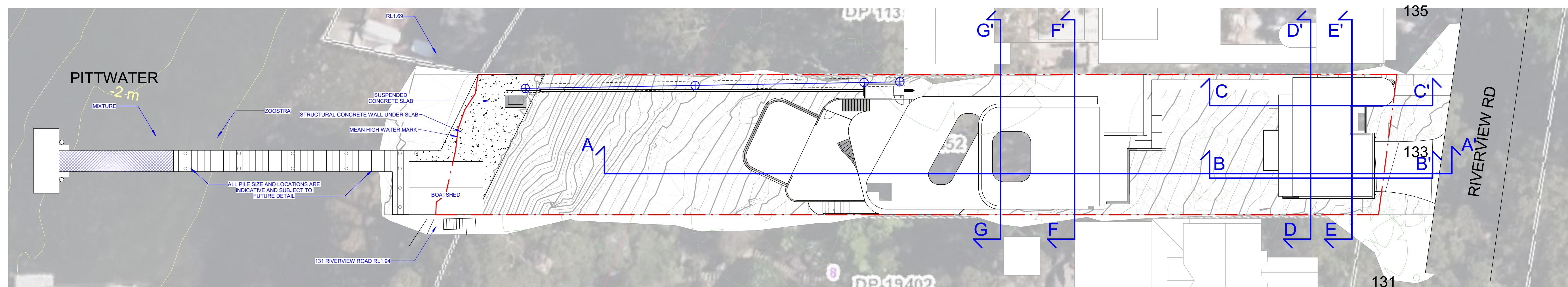
Assessor name: Claude-Francois Sookloll
Accreditation No.: DMN/14/1662
Property Address: Lot 1 (#133) Riverview Road, AVALON BEACH, 2107, NSW, 2107

<https://www.fr5.com.au/QRCodeLanding?PublicId=LUL8JEQKWN>

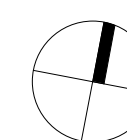


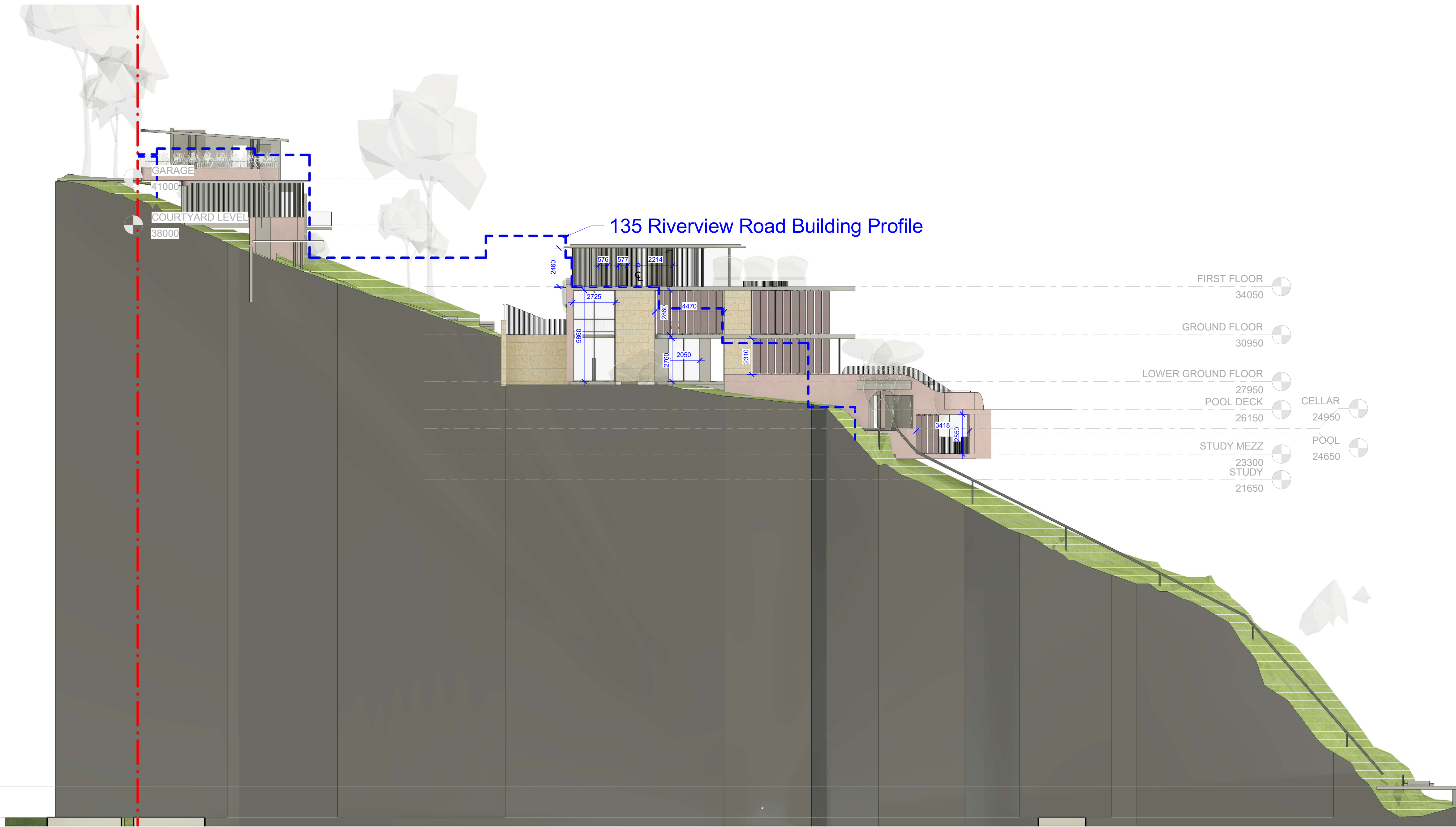
FOR INFORMATION

REV	Date	Description
A	22.05.25	For DA Lodgement
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DRAWN BY: AS		CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: SECTIONS - GARAGE BUILDING		
JOB No : A302		REV: A
SCALE : A1/As indicated		
DATE: 22.05.25		
DW No. A302		



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DRAWN BY: AS		CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: SECTIONS - MAIN BUILDING		
JOB No :		
SCALE : A1/A5 indicated		
DATE: 22.05.25		
DW No. A303		
		REV: A



**Certificate No. # LUL8JEQKWN**
Scan QR code or follow website link for rating details.

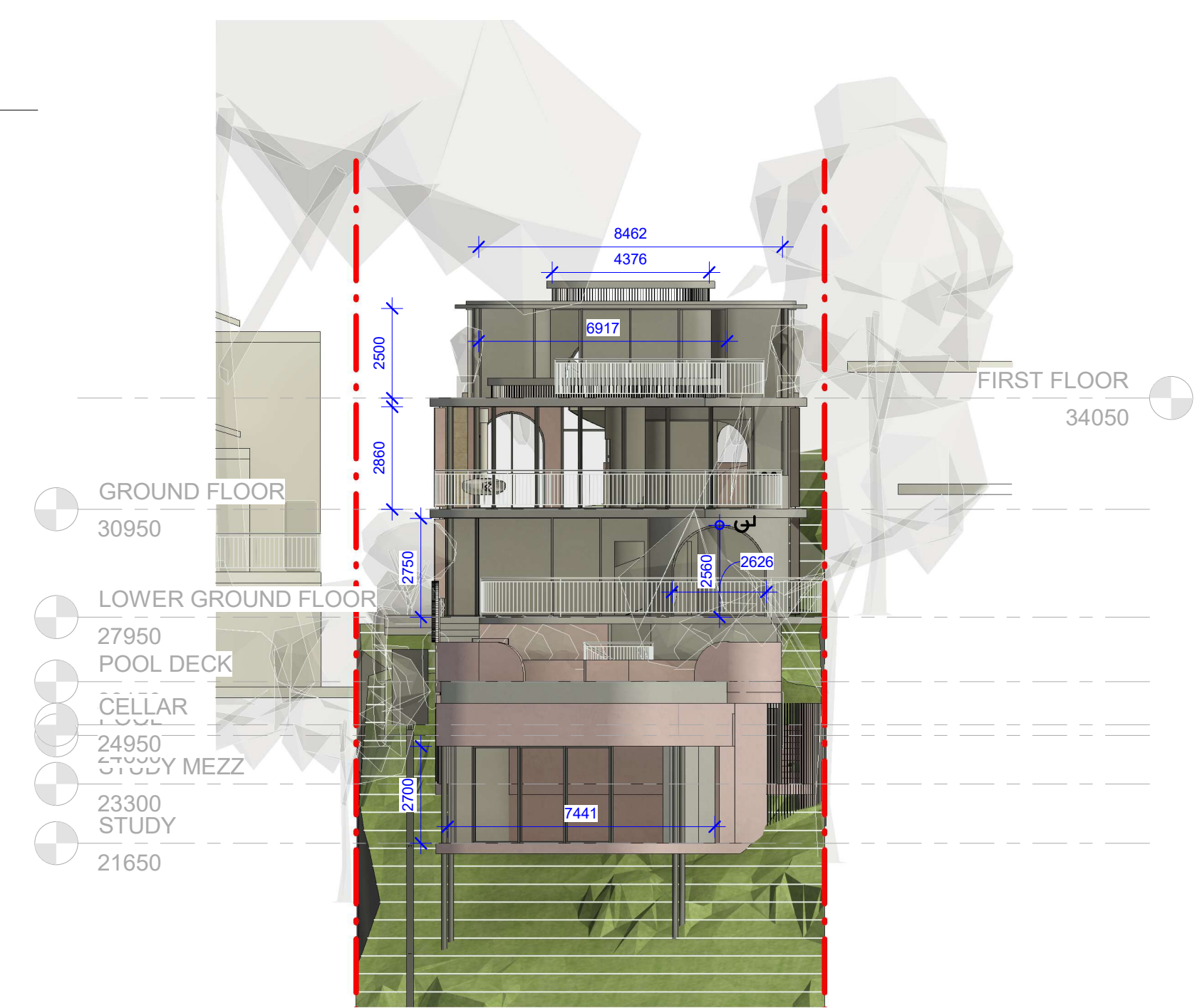
Assessor name
Accreditation No.
Property Address

Claude-Francois Sookloll
DMN/14/1662
Lot 1 (#133) Riverview Road
AVALON BEACH,
2107, NSW, 2107

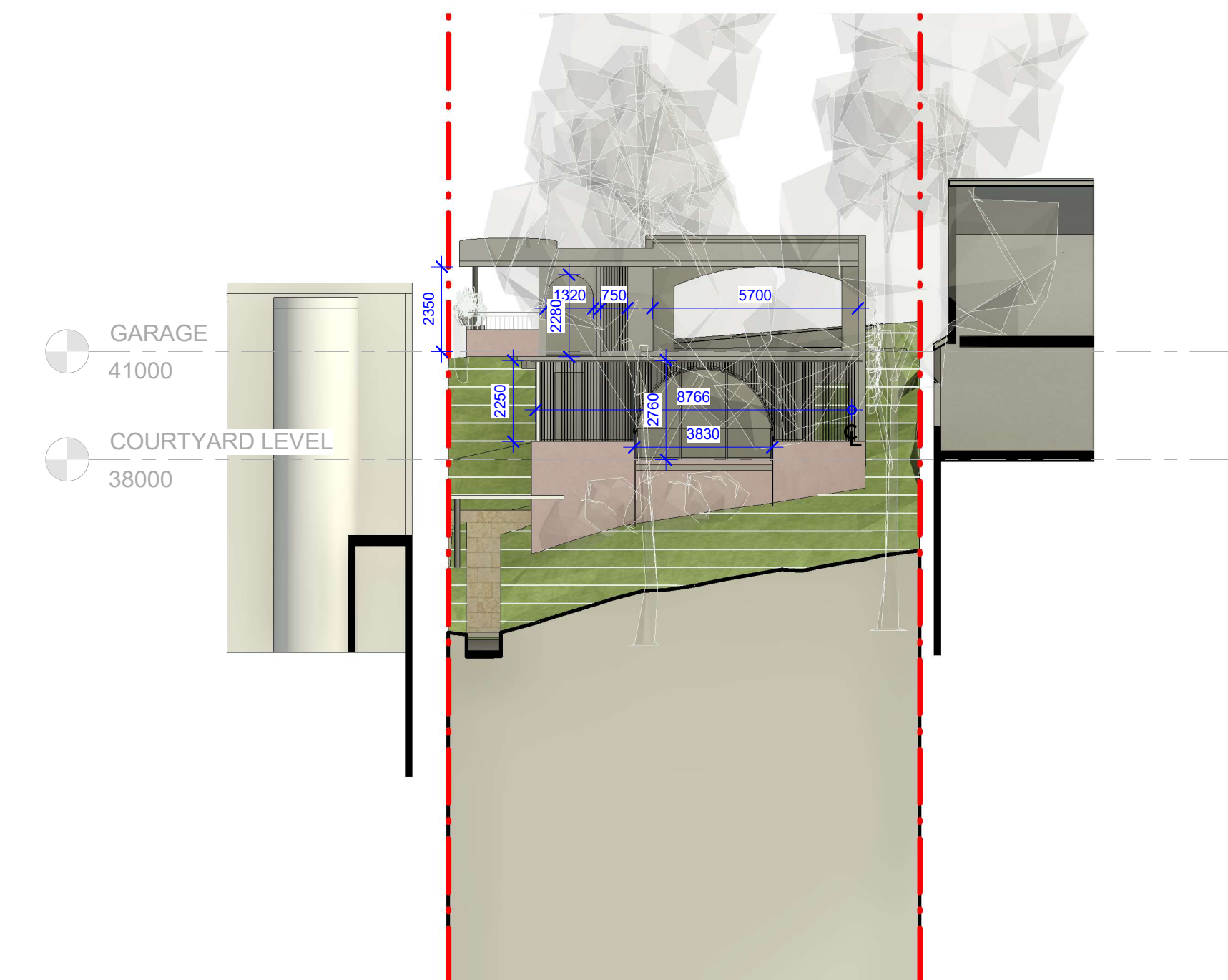


<https://www.fr5.com.au/QRCodeLanding?PublicId=LUL8JEQKWN>

1 NORTH ELEVATION
1 : 150

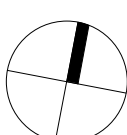


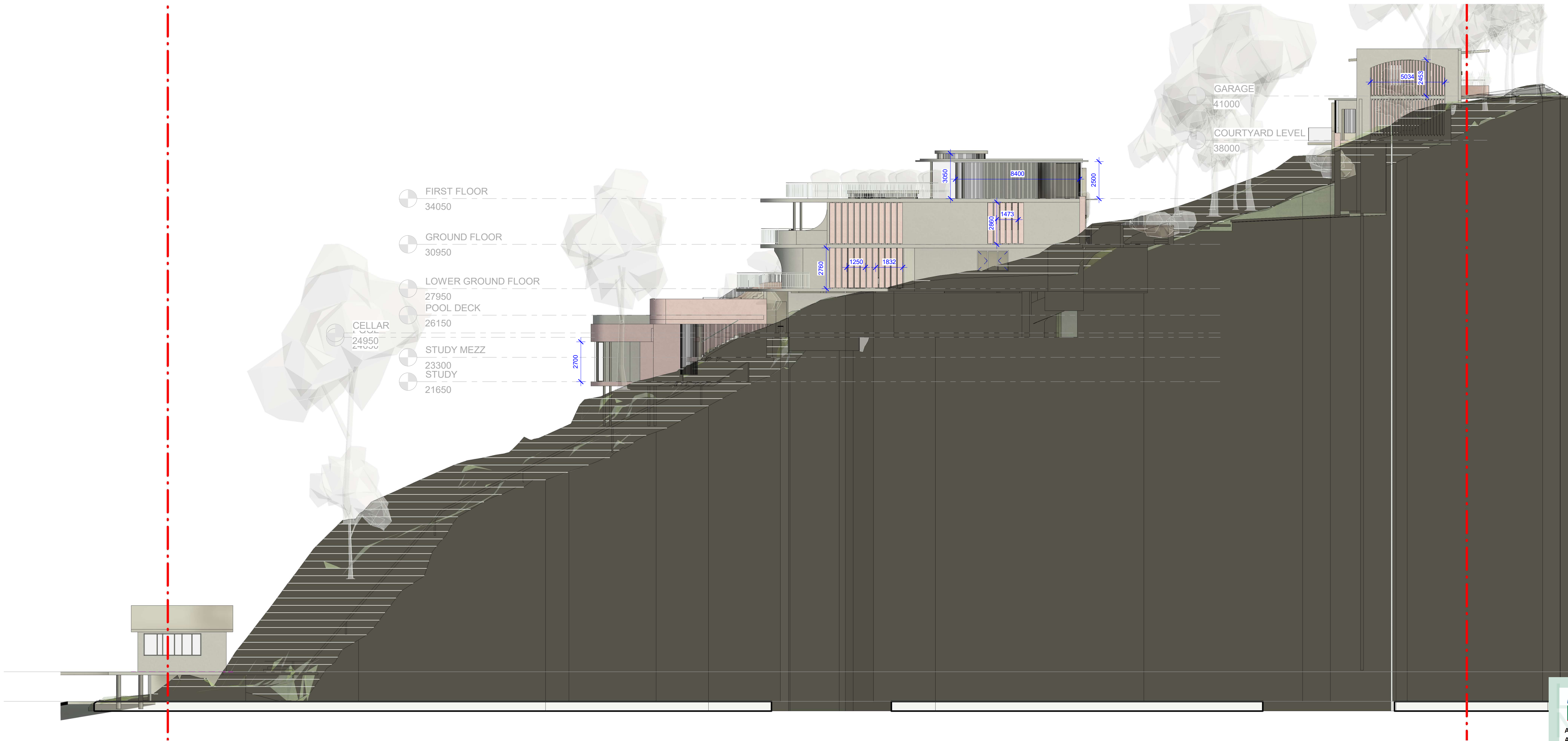
3 WEST ELEVATION
1 : 150



4 WEST ELEVATION - GARAGE
1 : 150

FOR INFORMATION

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DRAWN BY:	AS	CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: ELEVATIONS		
JOB No :		
SCALE :		
DATE:		
DW No.		
REV:	A	



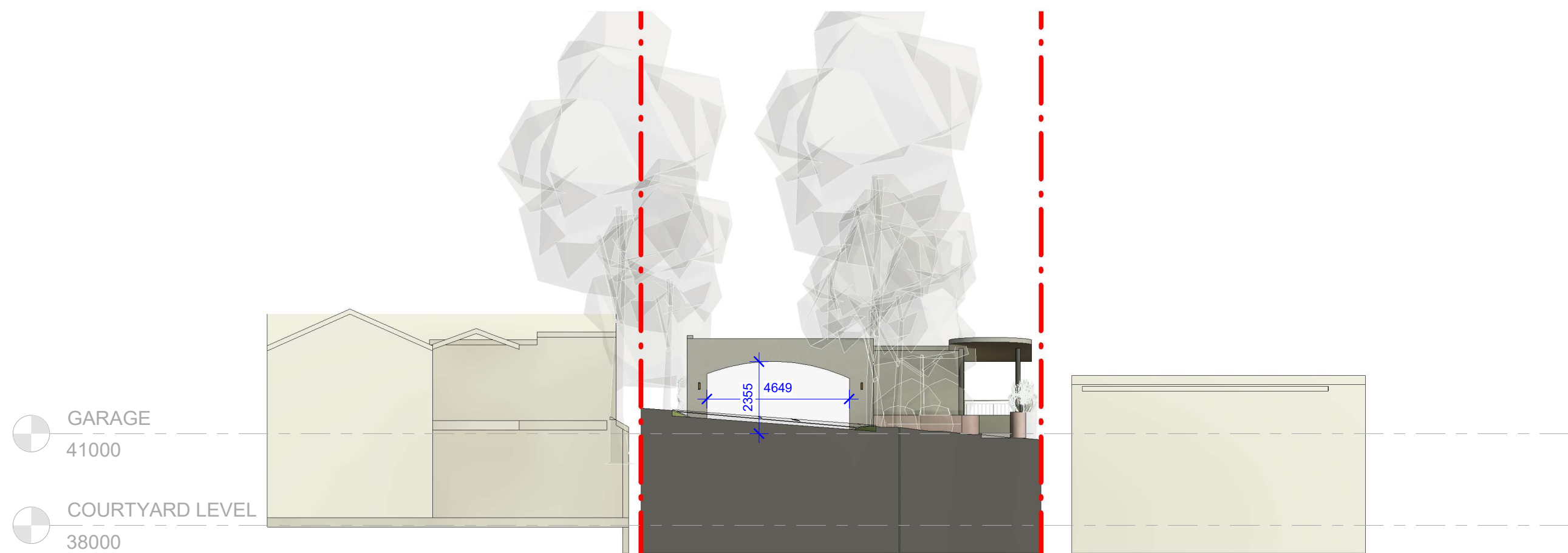
3 SOUTH ELEVATION
A402 1 : 150

Certificate No. # LUL8JEQKWN

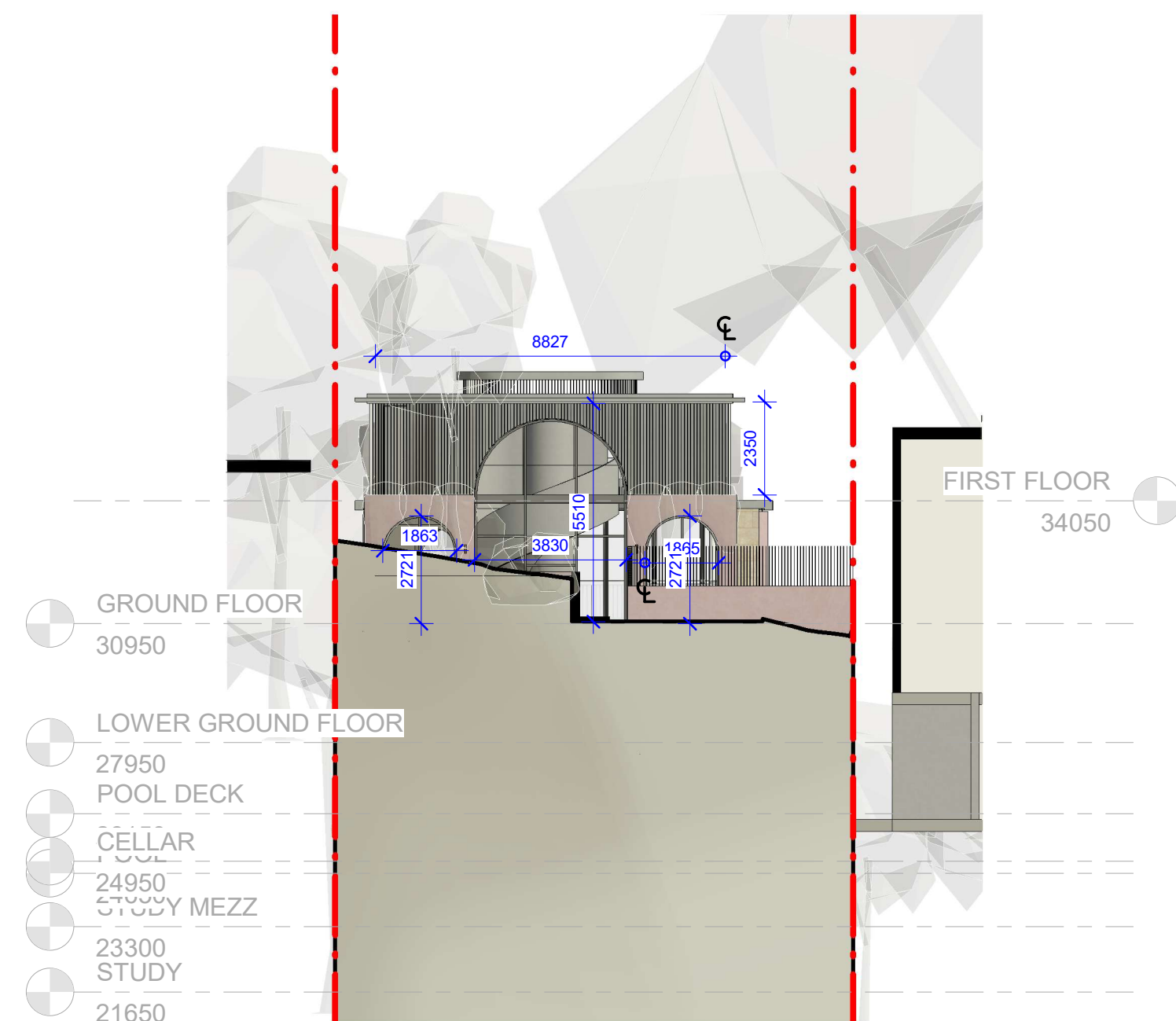
Scan QR code or follow website link for rating details.

Assessor name: Claude-Francois Sookloll
Accreditation No.: DMN/14/1662
Property Address: Lot 1 (#133) Riverview Road, AVALON BEACH, 2107, NSW, 2107

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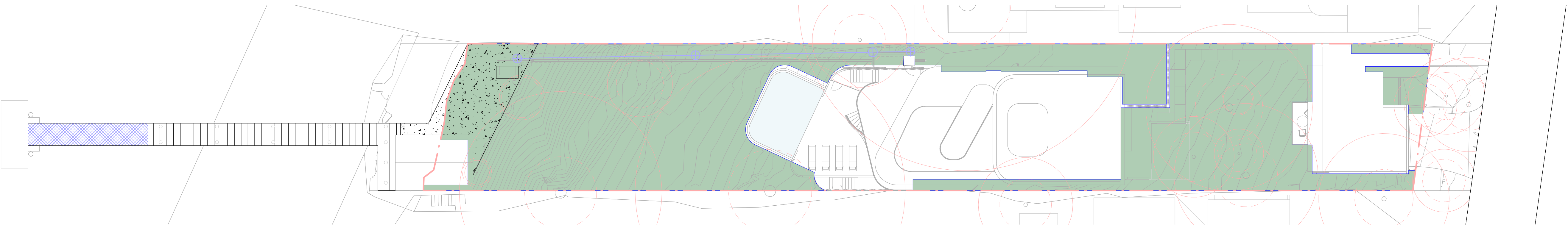
2 EAST ELEVATION - RIVERVIEW RD
A402 1 : 150



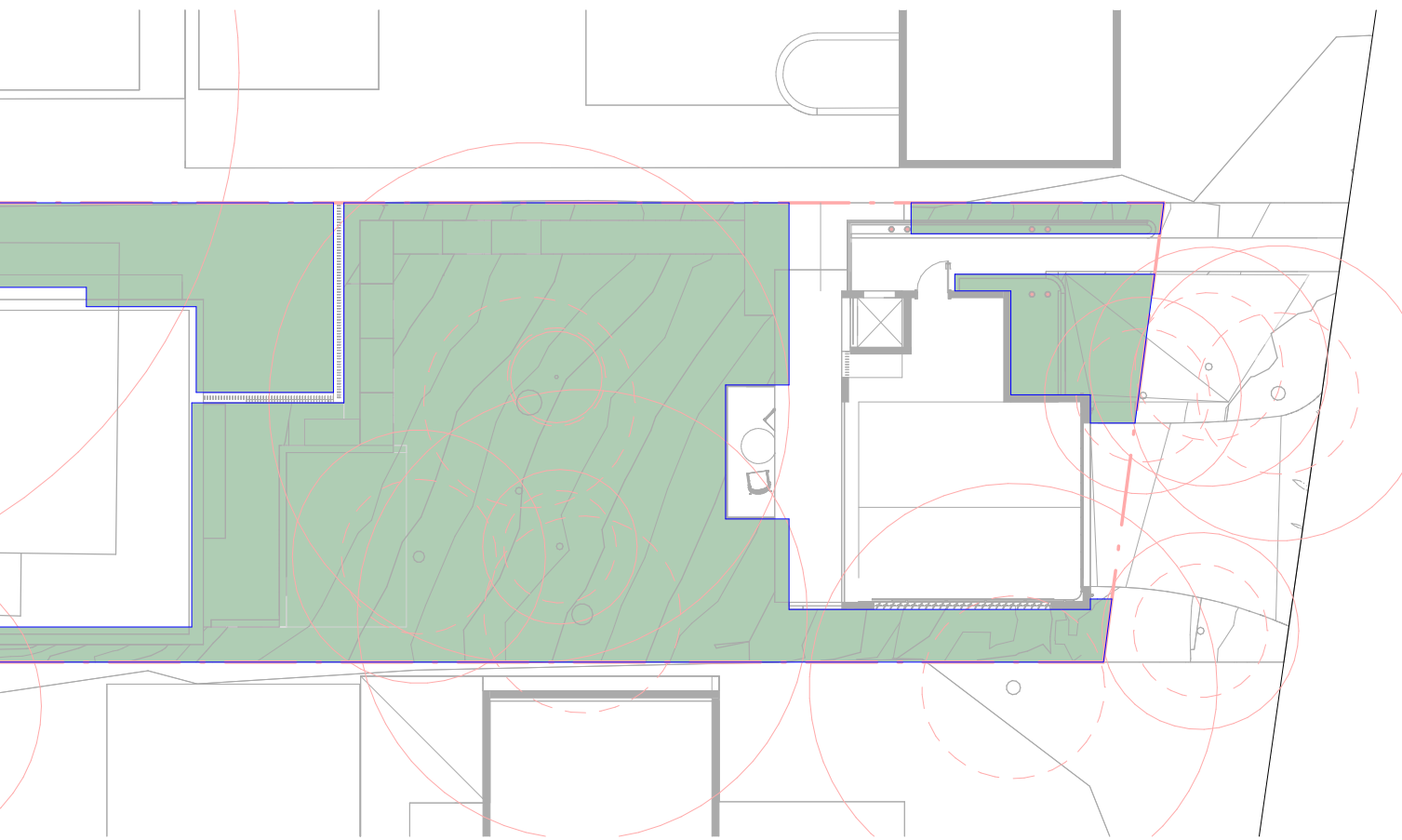
1 EAST ELEVATION
A402 1 : 150

FOR INFORMATION

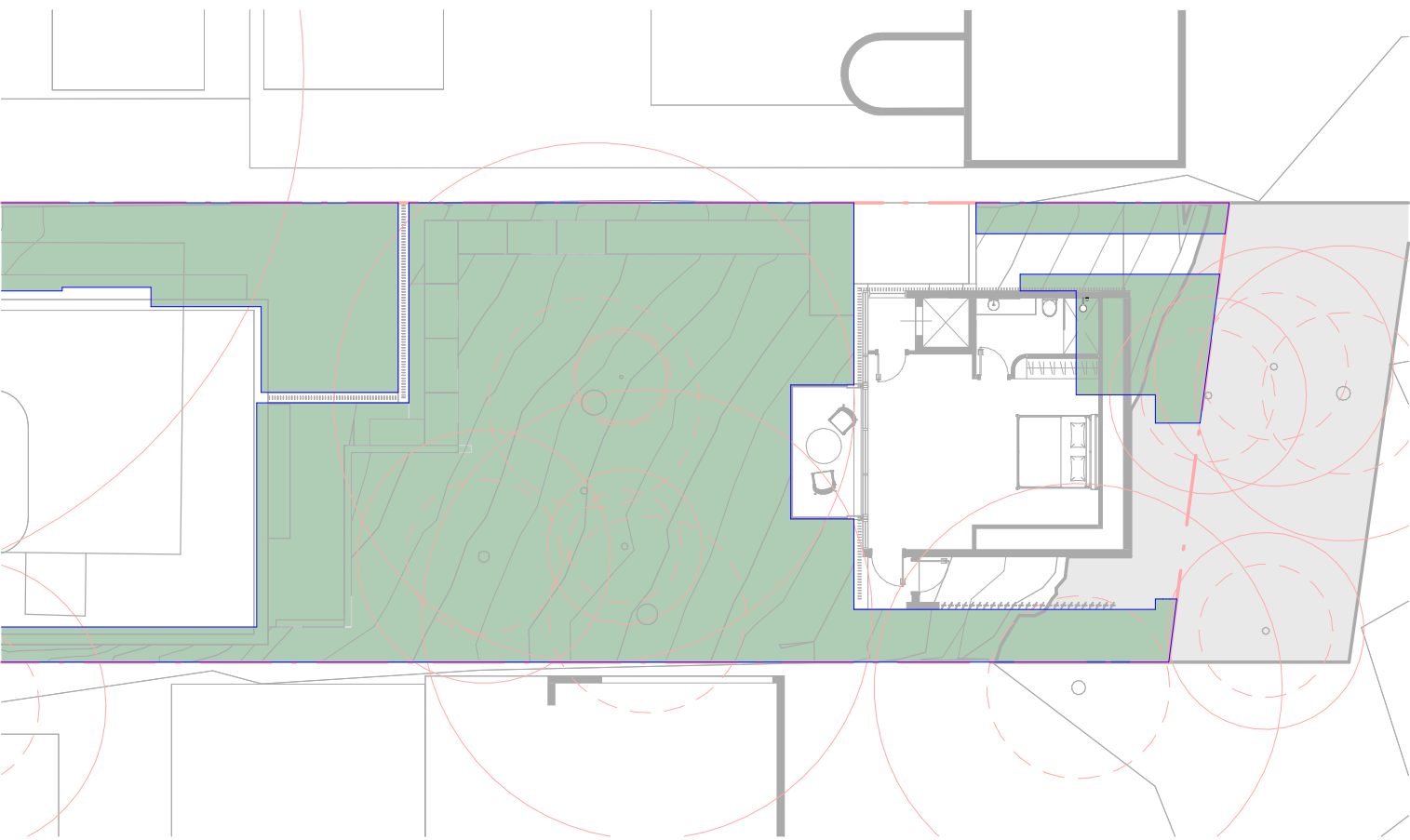
REV	Date	Description
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DRAWN BY:	AS	CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: ELEVATIONS		
JOB No :		
SCALE :		
DATE:		
DW No.		
22.05.25	REV:	A
A402		



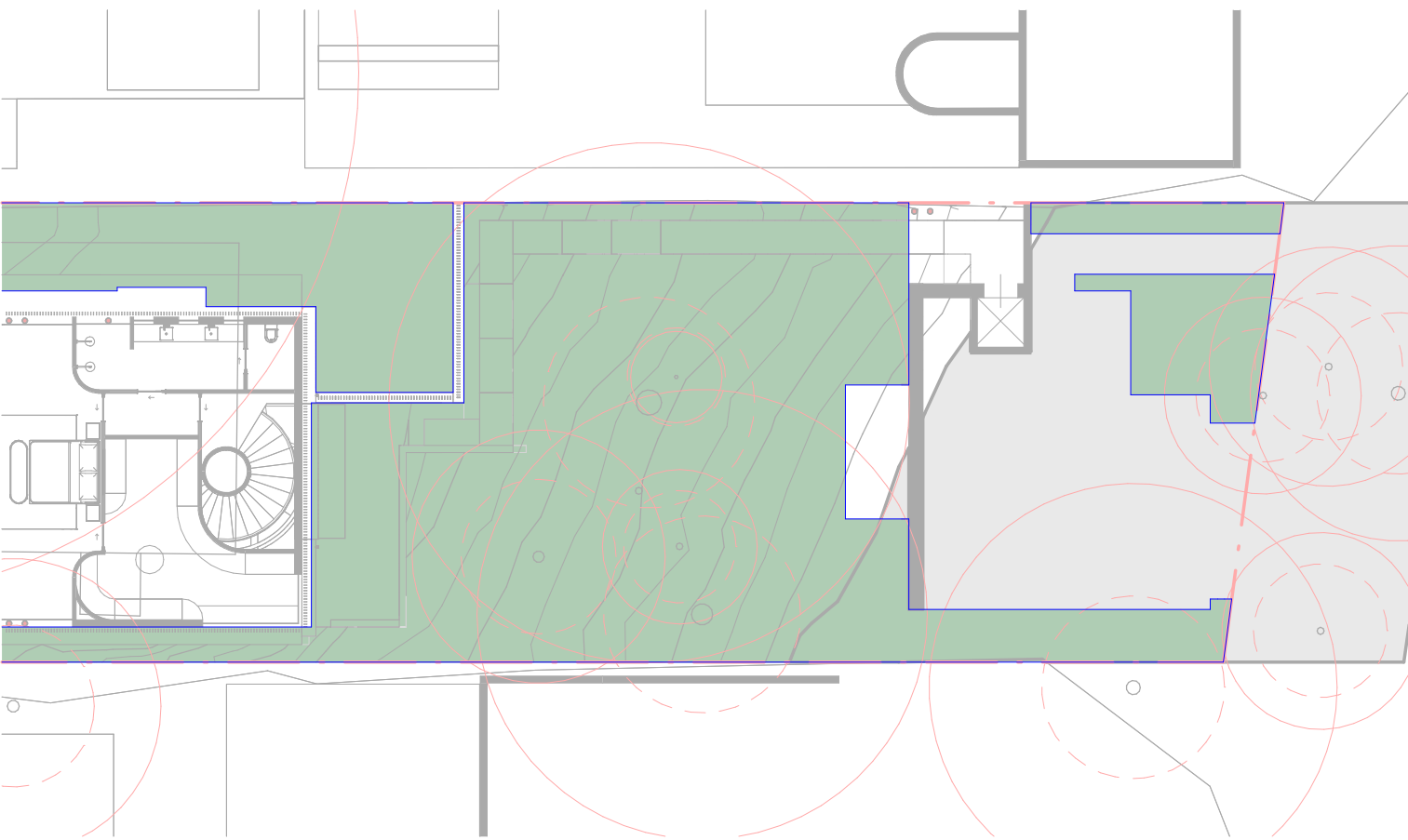
SITE PLAN - Landscape



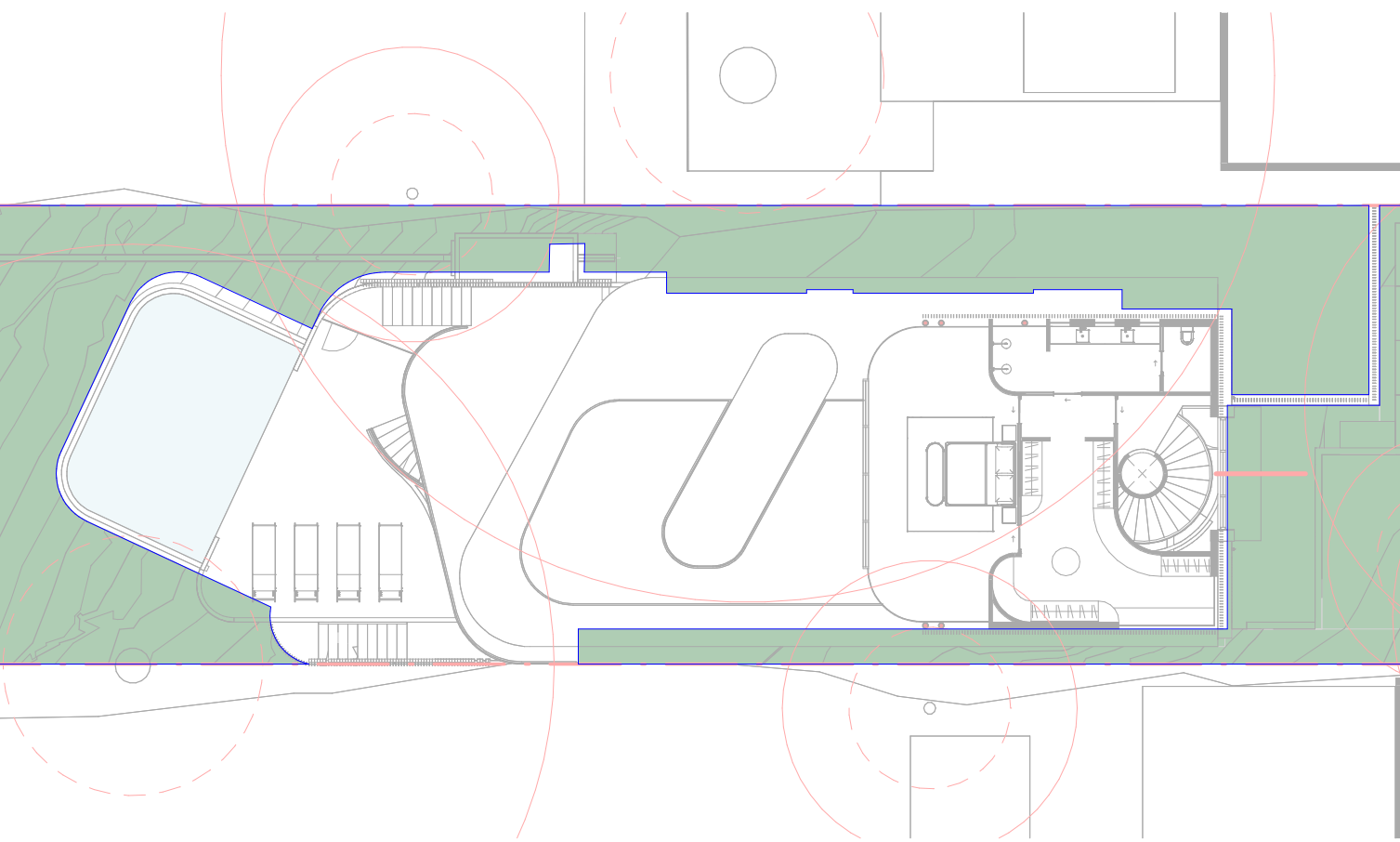
GARAGE LEVEL



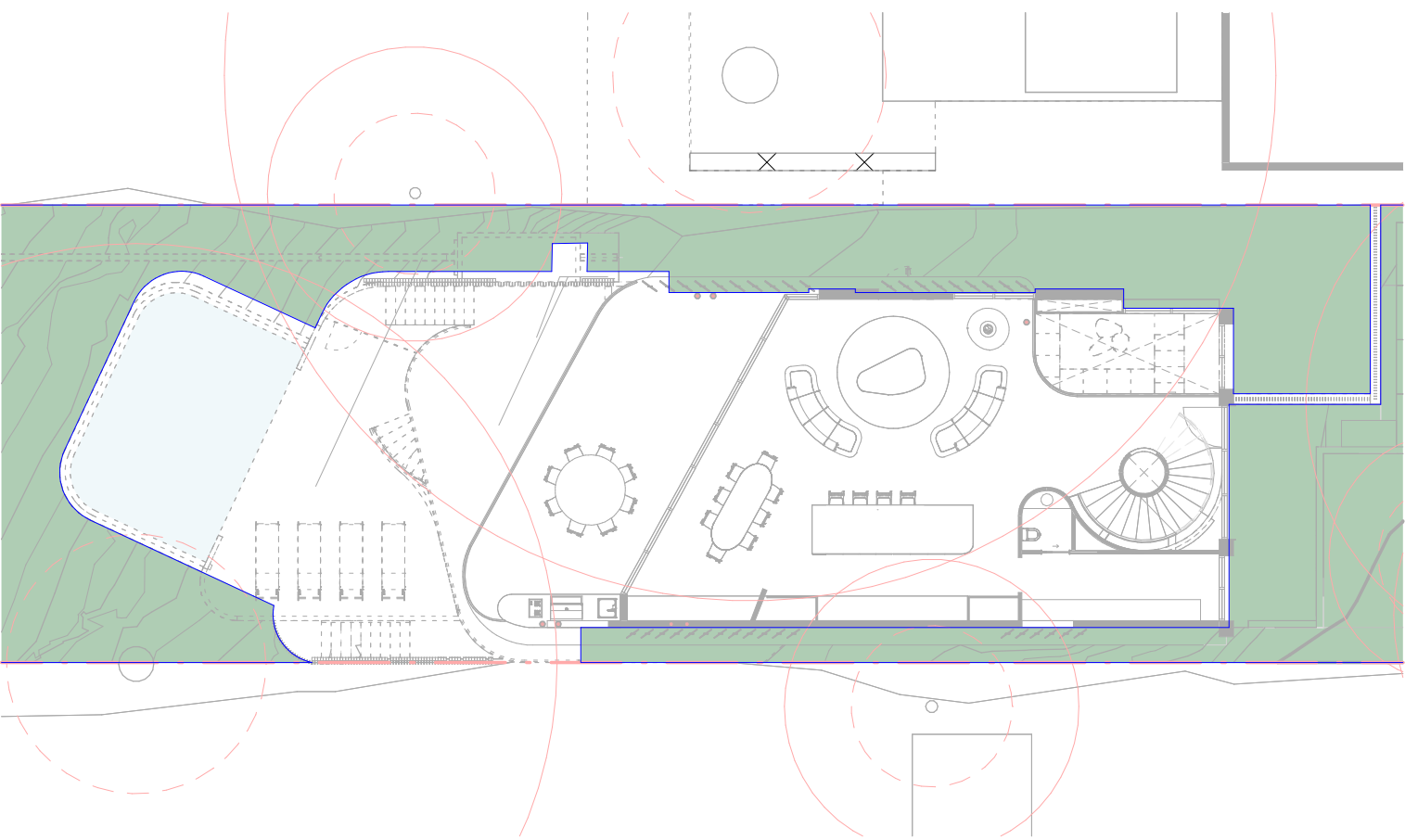
GUEST ROOM - Landscape



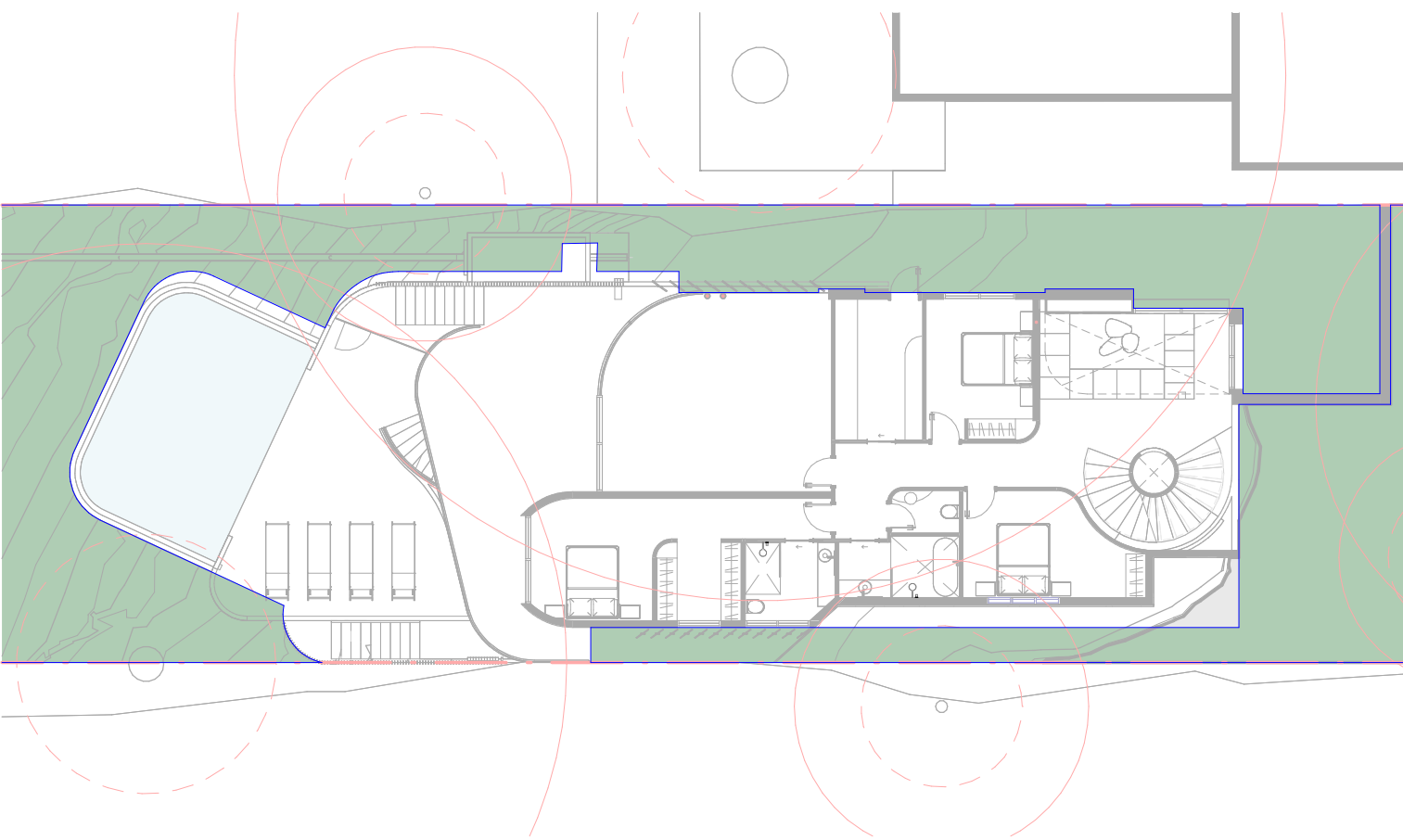
COURTYARD LEVEL - Landscape



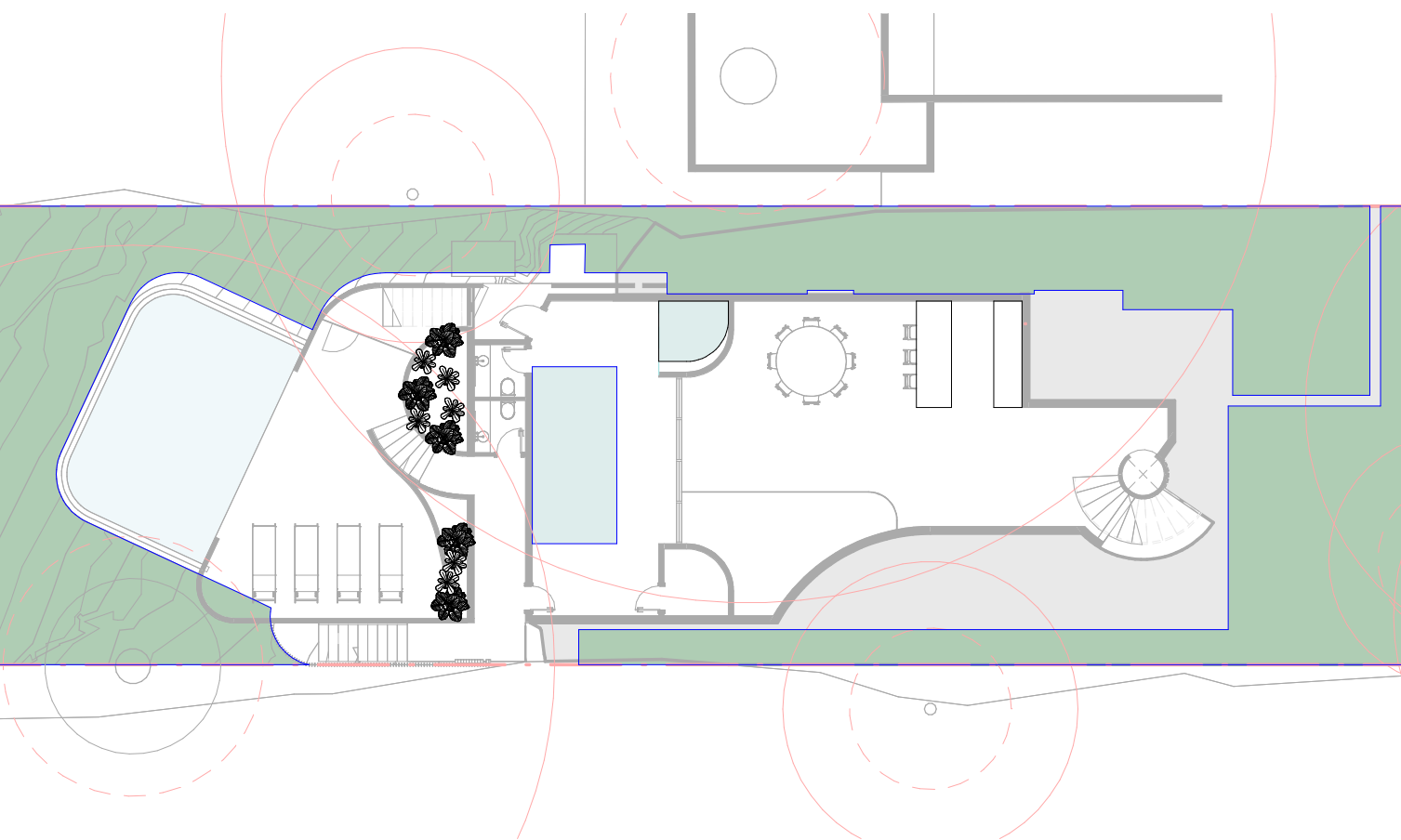
FIRST FLOOR - Landscape



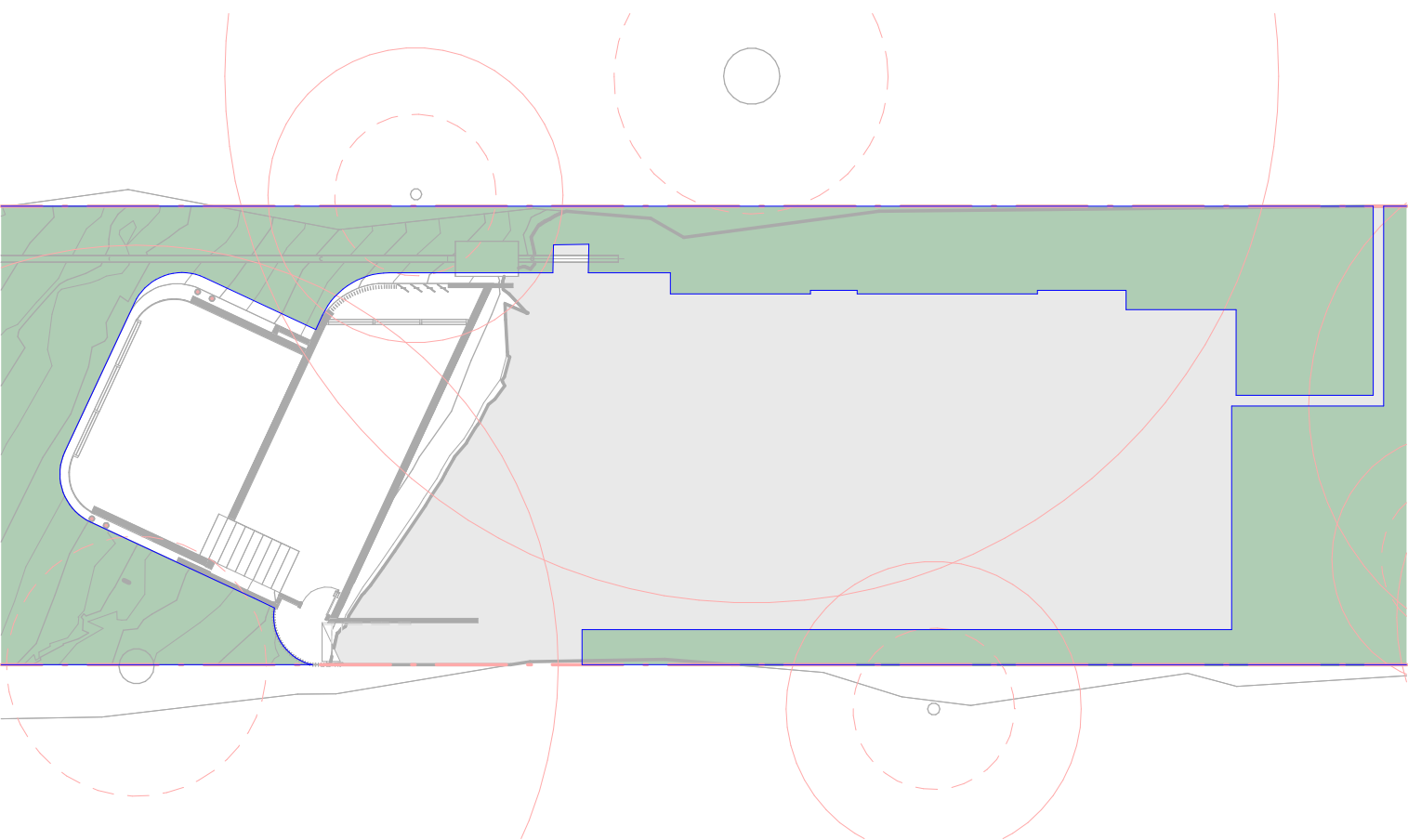
GROUND FLOOR - Landscape



LOWER GROUND FLOOR - Landscape



CELLAR - Landscape



STUDY MEZZ - Landscape

**Certificate No. # LUL8JEQKWN**

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Assessor name
Accreditation No.
Property Address

Claude-Francois Sookloll
DMN/14/1662
Lot 1 (#133) Riverview Road
AVALON BEACH,
2107, NSW, 2107



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SITE AREA: 1,133sqm
LANDSCAPE AREA: 704sqm (Approx. 62% of Site Area)

FOR INFORMATION

A22.05.25For DA Lodgement

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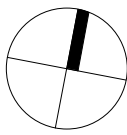
DRAWN BY: **AS** CHECKED BY: **DP**

ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
LANDSCAPE AREA CALC PLAN

JOB No :
SCALE :
DATE:
DW No.

A1/1 : 200
22.05.25
A1001


REV:
A

SHRUBS



Botanic Name	Common Name	Plant Type	Mature Height	Native
1 Acacia longifolia	Sydney Golden Wattle	Shrub	3–6 m	Yes
2 Banksia ericifolia	Heath-leaved Banksia	Shrub	1–6 m	Yes
3 Callistemon citrinus	Crimson Bottlebrush	Shrub	1–3 m	Yes
4 Leptospermum scoparium	Pink Tea Tree	Shrub	1–4 m	Yes
5 Melaleuca thymifolia	Thyme-leaved Honey Myrtle	Shrub	1–2 m	Yes
6 Dodonaea viscosa	Hop Bush	Shrub	2–5 m	Yes
7 Hakea sericea	Silky Hakea	Shrub	1–4 m	Yes
8 Westringia fruticosa	Coastal Rosemary	Shrub	1–2 m	Yes
9 Grevillea ‘Coastal Gem’	Coastal Gem Grevillea	Shrub	0.3–0.6 m	Yes
10 Melaleuca nesophila	Showy Honey Myrtle	Shrub	2–4 m	Yes
11 Carpobrotus glaucescens	Native Pigface	Groundcover	0.2–0.3 m	Yes
12 Scaevola aemula	Fan Flower	Groundcover	0.2–0.5 m	Yes
13 Myoporum parvifolium	Creeping Boobialla	Groundcover	0.2–0.3 m	Yes

GROUNDCOVERS



Botanic Name	Common Name	Plant Type	Mature Height	Native
14 Enchylaena tomentosa	Ruby Saltbush	Groundcover	0.2–0.5 m	Yes
15 Grevillea obtusifolia	Prostrate Grevillea	Groundcover	0.2–0.4 m	Yes
16 Dianella caerulea	Blue Flax Lily	Herb	0.3–1 m	Yes
17 Lomandra longifolia	Mat-rush	Herb	0.5–1 m	Yes
18 Xerochrysum bracteatum	Golden Everlasting	Herb	0.3–0.6 m	Yes
19 Chrysocephalum apiculatum	Common Everlasting	Herb	0.2–0.4 m	Yes
20 Patersonia sericea	Silky Purple Flag	Herb	0.3–0.5 m	Yes
21 Themeda triandra	Kangaroo Grass	Grass	0.5–1 m	Yes
22 Poa labillardierei	Common Tussock Grass	Grass	0.5–1 m	Yes
23 Austrostipa ramosissima	Stout Bamboo Grass	Grass	0.6–1 m	Yes
24 Microlaena stipoides	Weeping Grass	Grass	0.3–0.5 m	Yes
25 Imperata cylindrica	Blady Grass	Grass	0.5–1.2 m	Yes

HERBS & GRASSES



Landscape design note – planting strategy

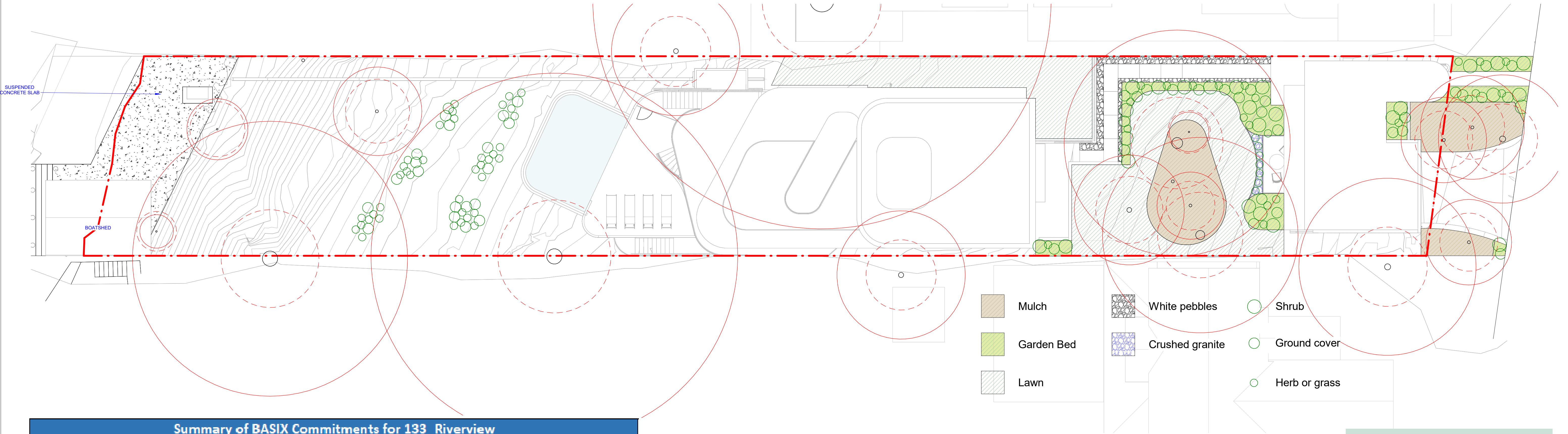
A minimum of 80% of all planting species will be native to the Pittwater area, selected from the Northern Beaches Council’s recommended native plant list. Under no circumstances will environmental weeds, as identified by Northern Beaches Council or the NSW Government, be used in the landscape design.

The list of species shown is only indicative and subject to future design. Final species selection is to be confirmed at the time of planting based on site conditions, microclimate and seasonal availability, and will comply with the above criteria.



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DRAWN BY:	AS	CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: LANDSCAPE PLANTING SCHEDULE		
JOB No :		
SCALE :	A1/	
DATE:	22.05.25	
DW No.	A1002	REV: A

FOR INFORMATION



Summary of BASIX Commitments for 133_Riverview

Commitment	
Water	
Total area of garden and lawn (m2)	350
Area of indigenous planting within total garden (m2) required	0
Rainwater tank capacity (litres)	3000
Area of roof connected to tank (m2)	100
Connected to all toilets in the development?	Yes
Connected to at least one outdoor tap?	Yes
Connected to washing machine?	Yes
Rating of all showerheads installed	4 Star (> 4.5 but <= 6 L/min)
Rating of all toilet cisterns installed	6 Star
Rating of bathroom tap fittings	6 Star
Rating of kitchen tap fittings	6 Star
Thermal Performance	
Refer to Universal Certificate	
Energy	
Active cooling to living areas	3-Phase AC (EER 3.0-3.5)
Active cooling to bedroom areas	3-Phase AC (EER 3.0-3.5)
Active heating to living areas	3-Phase AC (EER 3.5-4.0)
Active heating to bedroom areas	3-Phase AC (EER 3.5-4.0)
Hot water system	Electric Heat Pump
Low energy lighting (If required refer to BASIX certificate)	No
Bathroom ventilation	Ducted (interlocked to light)
Kitchen ventilation	Ducted (interlocked to light)
Laundry ventilation	Ducted (interlocked to light)
Cooktop and oven	Induction Cooktop / Electric Oven
Outdoor Clothesline	Yes
Indoor or Sheltered Clothesline	No
Well Ventilated Fridge Space	No

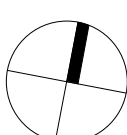
**Certificate No. # LUL8JEQKWN**
Scan QR code or follow website link for rating details.

Assessor name
Accreditation No.
Property Address

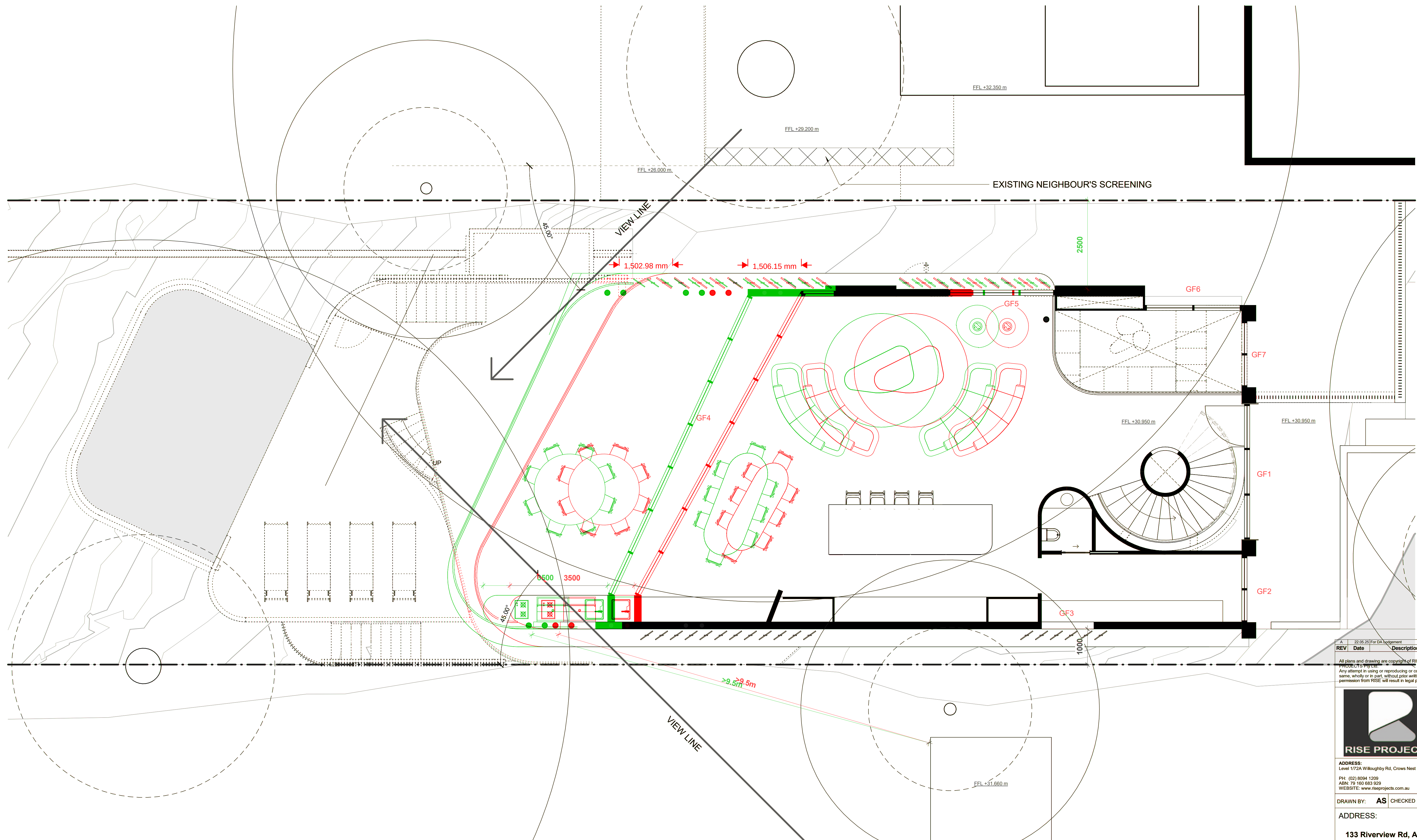
Claude-Francois Sookloll
DMN/14/1662
Lot 1 (#133) Riverview Road
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2107, NSW, 2107



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DRAWN BY: AS		CHECKED BY: DP
ADDRESS: 133 Riverview Rd, Avalon Beach NSW		
VIEW: LANDSCAPE DESIGN PLAN		
JOB No : SCALE : A1/1 : 125		
DATE: 22.05.25		
DW No. A1003		REV: A

FOR INFORMATION



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PH: (02) 8094 1209
ABN: 79 160 683 929
WEBSITE: www.riseprojects.com.au

DRAWN BY: **AS** CHECKED BY: **DP**

ADDRESS:
**133 Riverview Rd, Avalon
Beach NSW**

VIEW:

**GROUND FLOOR
(ACCESS LEVEL)**

JOB No :	
----------	--

SCALE : $A1/1 : 50$

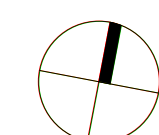
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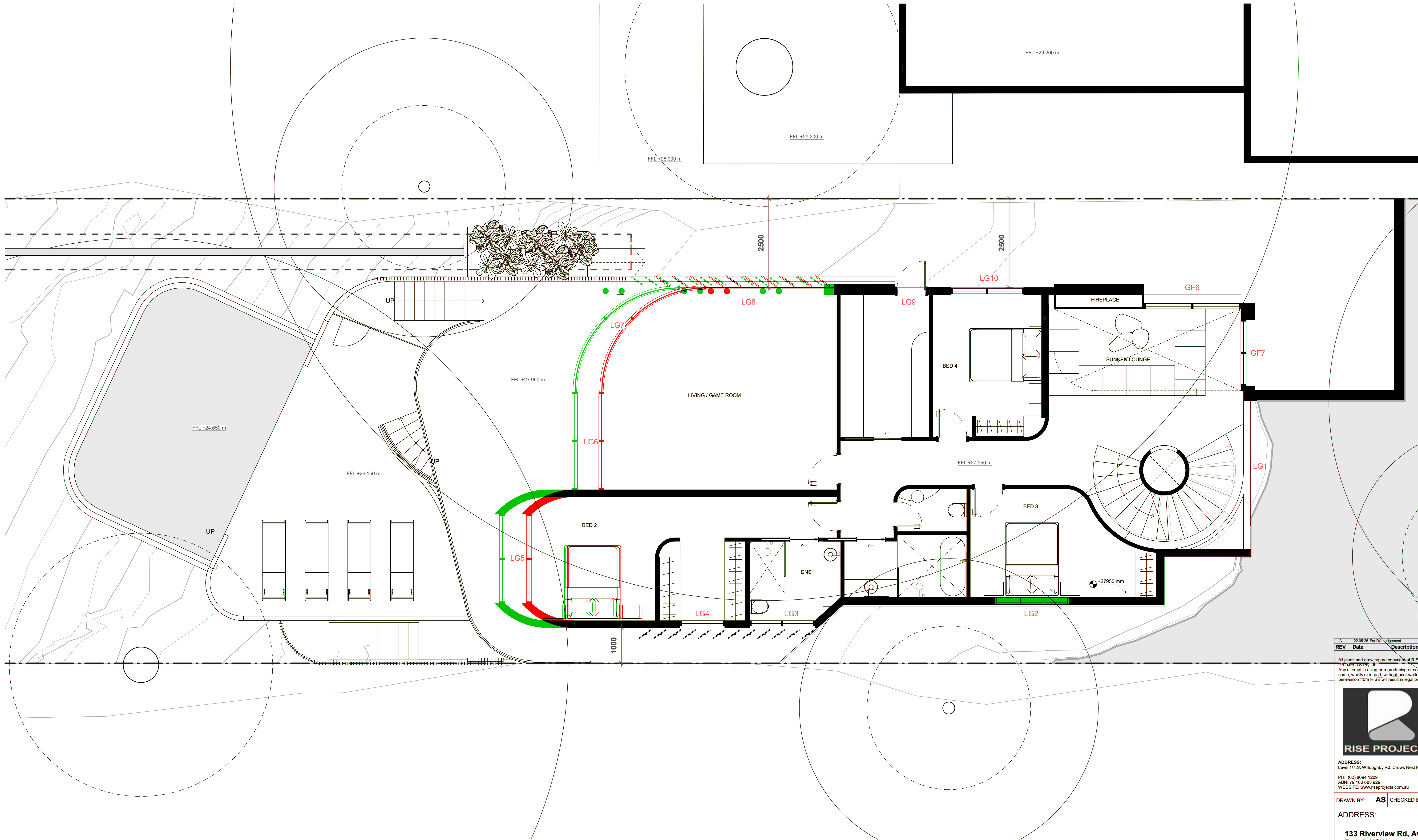
DW No.	REV:
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A205	A
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FOR INFORMATION





REV	Date	Description
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DRAWN BY: **AS** CHECKED BY: **DP**

ADDRESS:
133 Riverview Rd, Avalon Beach NSW

VIEW:
LOWER GROUND FLOOR

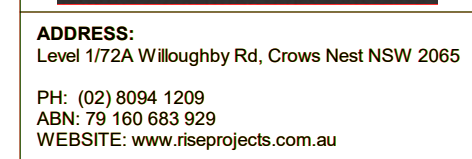
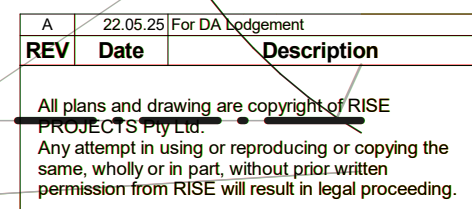
JOB No :		
SCALE :	A1/ 1 : 50	
DATE:	22.05.25	
DW No.	A206	
REV:	A	

Certificate No. # LUL8JEQKWN
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Assessor name	Claude-Francois Sookloll
Accreditation No.	DMN/14/1662
Property Address	Lot 1 (#133) Riverview Road AVALON BEACH, 2107, NSW, 2107

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FOR INFORMATION



ADDRESS:

FIRST FLOOR

A204	A
------	---



Level	Mark	Type	% Openable	Direction facing	Louvred	Width (mm)	Height (mm)
Garage	G1	Open - no glazing	100	South	Yes	5034	2400 (average)
	G2	Fixed glass	0	West	No	5700	2350
	G3	Open - no glazing	100	West	Yes	750	2350
Guest Room	GR1	Hinged glass door	40	West	Partially ~25%	3810	2760
	GR2	Fixed glass	0	West	Yes	875	2250
	GR3	Fixed glass	0	West	Yes	875	2250
	GR4	Awning window	30	West	Yes	1550	2250
	GR5	Awning window	30	North	Yes	1100	2250
First Floor	FF1	Fixed glass	0	East	No	3850	1500 (average)
	FF2	Awning window	40	East	Yes	1400	2350
	FF3	Fixed glass	0	South	Yes	2700	2350
	FF4	Fixed glass	0	South/West	Partially ~50%	4300	2350
	FF5	Sliding glass door	45	West	No	5400	2350
	FF6	Fixed glass	0	North/West	Partially ~50%	4300	2350
	FF7	Fixed glass	0	North	Yes	1540	2350
	FF8	Awning window	40	North	Yes	550	1250
	FF9	Awning window	40	North	Yes	550	1250
	FF10	Awning window	40	North	Yes	550	1250
	FF11	Skylight (Fixed glass)	0	North/East/West/South	Yes	13480	350
Ground Floor	GF1	Hinged glass door	22	East	No	3830	3050
	GF2	Hinged glass door	45	East	No	1860	2300 (average)
	GF3	Sliding window	45	South	Yes	1500	1500
	GF4	Sliding glass door	85	West	No	9770	2850
	GF5	Sliding glass door	60	North	Yes	2355	2850
	GF6	Sliding glass door	20	North	No	2725	5860
	GF7	Sliding glass door	20	East	No	1860	5860
	GF8	Fixed glass	0	North	Yes	950	2850
Lower Ground Floor	LG1	Sliding window	60	East	No	4170	1250
	LG2	Sliding window	60	South	No	2100	1400
	LG3	Sliding window	45	South	Yes	1800	2750
	LG4	Awning window	30	South	Yes	1250	2750
	LG5	Hinged glass door	45	West	No	2625	2000 (average)
	LG6	Sliding glass door	45	West	No	2740	2750
	LG7	Sliding glass door	45	North/West	Partially ~25%	4600	2750
	LG8	Sliding glass window	45	North	Yes	3600	2350
	LG9	Hinged glass door	75	North	No	850	2750
	LG10	Sliding glass door	45	North	No	2050	2750


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Assessor name: Claude-Francois Sookkoll
 Accreditation No. DMN/14/1662
 Property Address: Lot 1 (#133) Riverview Road
 AVALON BEACH,
 2107, NSW, 2107



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NCC 2022



ABCB NCC 2022 VOLUME TWO BASIX Thermal Comfort Energy Efficiency Assessment

Accredited Star Rating
7

REFERENCE
133_Riverview_v2.0

SITE ADDRESS
Lot 1 (#133) Riverview Road AVALON BEACH 2107

DWELLING TYPE
Multi-Level Dwelling

COMMISSIONED BY
Rise Projects

ASSESSMENT DATE
14/07/2025

Energy Advance Australia Pty. Ltd.
NatHERS Accreditation Number: DMN/14/1662
34 Dellamarta Road WANGARA 6065
PO Box 1436 WANGARA DC 6947
ACN: 60 9332014 | 1300 850 228
energy@energyadvance.com.au
1300 850 228



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THE SUMMARY

Address	Lot 1 (#133) Riverview Road AVALON BEACH 2107	
Dwelling Type	Multi-Level Dwelling	Façade Facing
State	New South Wales	West
Site Exposure	Suburban	Garage Side (viewed from the front)
Ground Floor Type	Concrete Slab-on-Ground	Detached Garage
NatHERS Climate Zone	56	Modelled Wall Colour
FirstRate 5 Engine:	Chenath Engine 3.22	Wall Colour: Medium
Certificate Number	LUL8JEQKWN	Modelled Roof Colour
Accredited Star Rating	7	Solar Absorptance: Medium roof colour
		Modelled Glazing Frame Colour
		Glazing Frame Colour: Dark
Conditioned Floor Area (m ²)	448.40	
Unconditioned Floor (m ²)	111.40	
Total (m ²)	559.80	

	Area (m2)	Allowance (W/m2)	Total Maximum Watts
Class 1 Total Area	578.30	5.0	2891.5
Class 10a Total Area	0.00	3.0	0.0
Total Outdoor Areas	85.00	4.0	340.0
Maximum Ceiling Insulation Penetration	Maximum Allowance 0.50%	Maximum Penetration (m2) 2.89	
If approved fireproof downlight covers, which can be fully covered by insulation, are specified and noted on the electrical plan by the building designer or architect or if IC4-rated downlights are installed, then there is no need to allow for the ceiling penetration.			

ASSESSMENT CALCULATIONS & SOFTWARE RESULTS

	Target (MJ/m ² .pa)	Proposed (MJ/m ² .pa)	Efficiency Benchmark
Heating:	25.0	22.1	Pass: 12.3%
Cooling:	18.0	7.9	Pass: 78.0%
Total:	43.0	30.0	



PRELIMINARY REPORT
COMPLIANCE STAMP NOT
REQUIRED

THE ANALYSIS

This dwelling exceeds minimum thermal comfort compliance targets by 30.2%

Cooling the main areas in this home each year uses as much energy as walking around the Earth 3.1 times, or watching Netflix continuously for approximately 1.1 years.



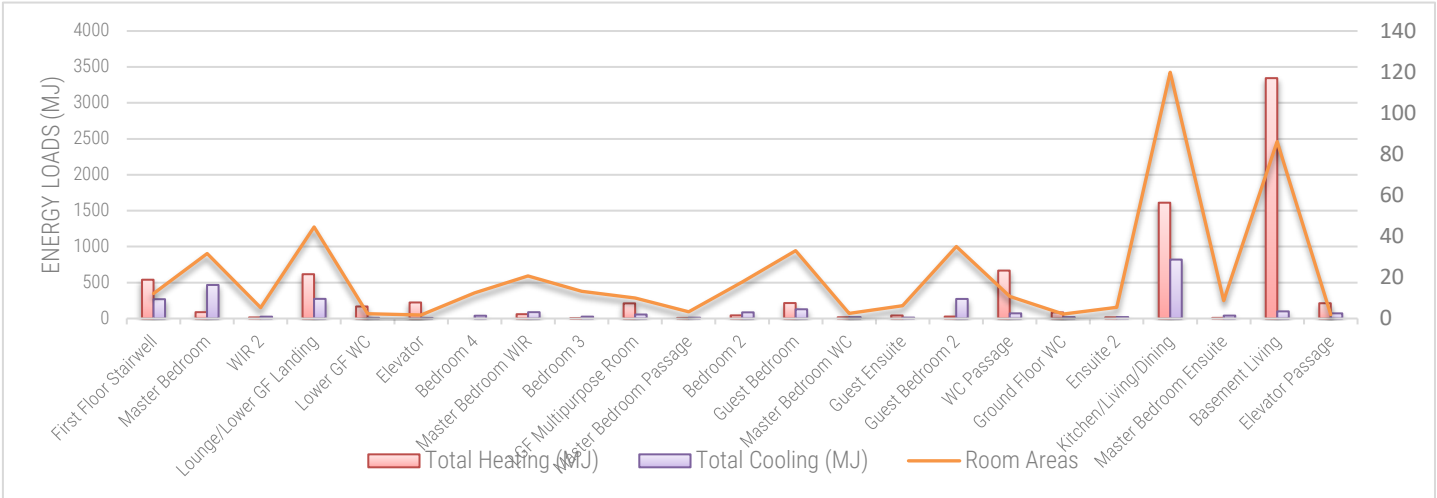
Heating the main areas in this home uses the same amount of energy every year as watching Netflix continuously for approximately 3.1 years, or walking around the Earth 8.6 times.

Room-by-Room Energy Use Analysis

This graph shows the annual energy needed to heat and cool each room to a comfortable temperature. The taller the bar means the room requires either more warmth to stay cozy during cold weather, or energy to remain cool when it's hot outside.

The line represents what would be considered good energy use for the size of each room. When bars rise above this line, it means the room is using more energy than expected, highlighting opportunities for energy-efficient improvements.

The goal is shorter bars, indicating your home is comfortably heated and cooled without excessive energy use. Rooms with the tallest bars are key areas to focus on for energy-saving upgrades.



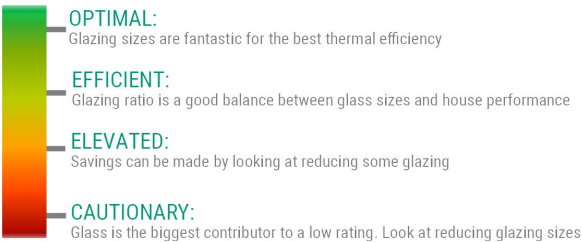
THE ANALYSIS

Understanding the Window Ratio

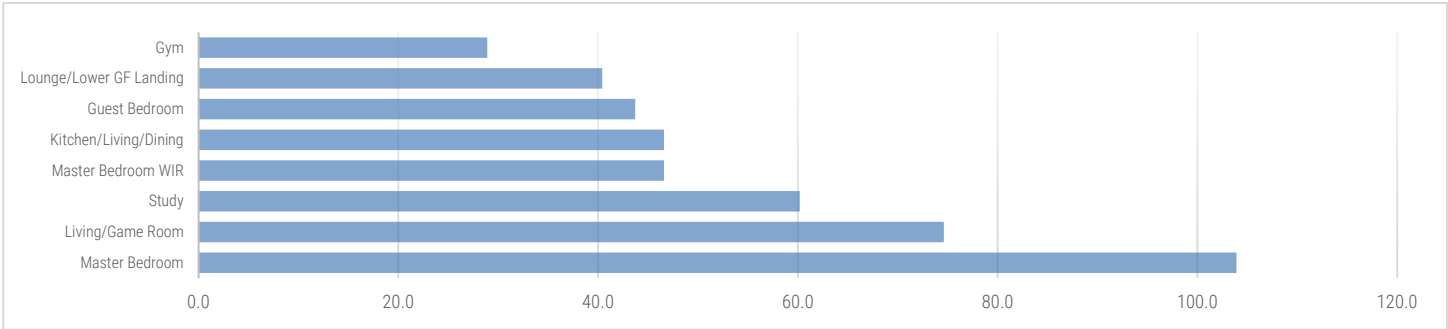
The ratio below shows the percentage of the dwelling's exterior that's made up of glass compared to the floor area. Ideally, a lower percentage contributes to better thermal efficiency, reducing energy loss and lowering energy bills.

This home's fairly high glazing-to-floor area ratio means that there is considerable heat loss, through the glass (conductance) in the colder months but also unwanted heat gain in the hot months. This results in high heating and cooling costs throughout the year. Considering size reductions could significantly improve energy efficiency and help manage costs more effectively.

46.3 %



Top 8 Window to Floor Area Ratios per Room



Mapping Out Glass: Orientation Analysis

The chart maps out the distribution of glass, showing their orientation around the house as percentages of the total floor area.

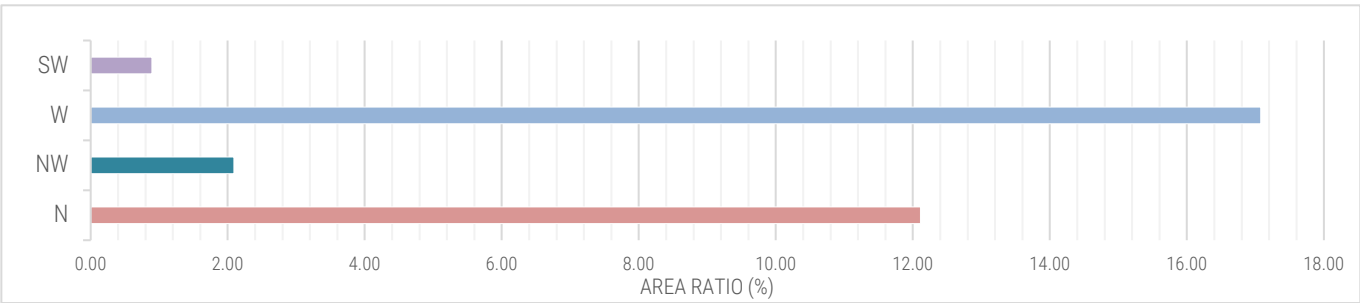
NORTH: Increase the proportion of minimally shaded glass facing north: between 10-15%

EAST: East-facing glass should be kept to under 8%.

SOUTH: South-facing glass should be reduced as much as possible; aiming for 5% or less.

WEST: Aim to limit glass on the west to less than 5% of the floor area to prevent excess heat gain.

These are guides to help enhance your home's thermal efficiency. For detailed shading strategies, refer to the floor plans.



THE SPECIFICATIONS

Walls

CONSTRUCTION TYPE AND INSULATION	FRAME TYPE	LOCATION	THERMAL BREAK?
Concrete w/R2.5 EPS	Unknown	External	Unknown
WDF INT Plasterboard Stud Wall Uninsulated No Wrap	Timber	Internal	N/A
OTH Earth Retaining Wall Uninsulated	None	External	None

ADDITIONAL NOTES

Refer to Plans/Drawings for the location of external walls.
Internal wall insulation: No internal wall insulation
Wall Colour: Medium

Roof and Ceiling

CONSTRUCTION TYPE	CEILING INSULATION (R)	SARKING	THERMAL BREAK?	BLANKET (R)
Colorbond Flat or Low-Pitched Roof	7.0	No	No	1.3
Ceiling with Floor Above	None	No	No	None

ADDITIONAL NOTES

Solar Absorptance: Medium roof colour
Ceiling Insulation to the House Area only

Floor

CONSTRUCTION TYPE	VENTILATION	FLOOR INSUL (R)	SLAB EDGE (R)	FLOOR AREAS (m ²)
CSOG (Raft) Concrete Slab-on-Ground 100mm	Enclosed	None	None	196.0
200mm Suspended Concrete Slab	Unenclosed Subfloor	None	None	28.8
200mm Suspended Concrete Slab	Enclosed	None	None	332.3
200mm Suspended Concrete Slab	Elevated	None	None	13.6
CSOG (Raft) Concrete Slab-on-Ground 100mm	Unenclosed Subfloor	None	None	52.3

ADDITIONAL NOTES

ALL GLAZING IS TRIPLE GLAZED TRIPLE LOW-E

Glazing

Glazing Frame Colour: Dark						
WERS CODE*	CHARACTERISTIC	TYPE	U _w -VALUE	SHGC _w	AREA (m ²)	AS-BUILT GLAZING TYPES
PAR-009-03 W	Other (see notes)	Fixed Window	0.92	0.16	105.51	Fixed windows
PAR-006-03 W	Other (see notes)	Sliding Door	1.12	0.17	110.60	Sliding doors
PAR-002-05 W	Other (see notes)	Awning Window	1.23	0.11	36.82	Awning window, Hinged doors & Sliding windows

This double storey has been modelled with restricted window openings (%) as per
NCC Protection of Openable Windows Advisory Note

THE REGULATIONS

13.7.1 Application of Part 13.7

- (1) This Part applies to (a) a Class 1 building, (b) a Class 10a building, and (c) a Class 10b swimming pool associated with a Class 1 or 10a building.
(2) Part 13.7 must be applied as directed in H6D2(2).

13.7.2 Insulation of services

Thermal insulation for central heating water piping and heating and cooling ductwork must—

- (a) be protected against the effects of weather and sunlight, and (b) be able to withstand the temperatures within the piping or ductwork; and (c) use thermal insulation material by AS/NZS 4859.1.

13.7.3 Central heating water piping

- (1) Central heating water piping that is not within a conditioned space must be thermally insulated to achieve the minimum material R-Values as set out in (2) to (6).
(2) Internal piping including— (a) flow and return piping that is— (i) within an unventilated wall space or (ii) within an internal floor between storeys; or (iii) between ceiling insulation and a ceiling and (b) heated water piping encased within a concrete floor slab (except that which is part of a floor heating system), must, in all climate zones, have a minimum material R-Value of 0.4.
(3) Piping located within a ventilated wall space, an enclosed building subfloor or a roof space, including— (a) flow and return piping; and (b) cold water supply piping within 500 mm of the connection to the central water heating system; and (c) relief valve piping within 500 mm of the connection to the central water heating system, must have a minimum material R-Value by (5).
(4) Piping located outside the building or in an unenclosed building subfloor or roof space, including— (a) flow and return piping; and (b) cold water supply piping within 500 mm of the connection to the central water heating system; and (c) relief valve piping within 500 mm of the connection to the central water heating system, must have a minimum material R-Value by (6).
(5) Piping referred to in (3) must have a minimum material R-Value of— (a) in climate zones 1, 2, 3 and 5 — 0.6; and (b) in climate zones 4, 6 and 7 — 0.9; and (c) in climate zone 8 — 1.3.
(6) Piping referred to in (4) must have a minimum material R-value of— (a) in climate zones 1, 2, 3 and 5 — 0.6; and (b) in climate zones 4, 6 and 7 — 1.3; and (c) in climate zone 8 — 1.3.

13.7.4 Heating and cooling ductwork

- (1) Heating and cooling ductwork and fittings must— (a) achieve the material R-Value in (4), and (b) be sealed against air loss— (i) by closing all openings in the surface, joints and seams of ductwork with adhesives, mastics, sealants or gaskets by AS 4254.1 and AS 4254.2 for a Class C seal; or (ii) for flexible ductwork, with a draw band in conjunction with a sealant or adhesive tape.
(2) Duct insulation must— (a) abut adjoining duct insulation to form a continuous barrier and (b) be installed so that it maintains its position and thickness, other than at flanges and supports; and where located outside the building, under a suspended floor, in an attached Class 10a building or in a roof space— (i) be protected by an outer sleeve of protective sheeting to prevent the insulation becoming damp, and (ii) have the outer protective sleeve sealed with adhesive tape not less than 48 mm wide creating an airtight and waterproof seal.
(3) The requirements of (1) do not apply to heating and cooling ductwork and fittings located within the insulated building envelope including a service riser within the conditioned space, internal floors between storeys and the like.
(4) The material R-Value required by (1)(a) must be determined by the following: (a) In a heating-only system or cooling-only system including an evaporative cooling system— (i) ductwork must have a minimum material R-Value of— (A) in climate zones 1 to 7 — 1.0; and (B) in climate zone 8 — 1.5; and (ii) fittings must have a minimum material R-Value of 0.4.
(b) In a combined heating and refrigerated cooling system— (i) ductwork must have a minimum material R-Value of— (A) in climate zones 1, 3, 4, 6 and 7 — 1.5; and (B) in climate zones 2 and 5 — 1.0; and (C) in climate zone 8 — 1.5; and (ii) fittings must have a minimum material R-Value of 0.4.
(c) For (b)(i), the minimum material R-value required for ductwork may be reduced by 0.5 for combined heating and refrigerated cooling systems in climate zones 1, 3, 4, 6 and 7 if the ducts are— (i) under a suspended floor with an enclosed perimeter; or in a roof space that has an insulation of greater than or equal to R0.5 directly beneath the roofing.

PRELIMINARY REPORT
COMPLIANCE STAMP NOT
REQUIRED

THE REGULATIONS

13.7.5 Electric resistance space heating

An electric resistance space heating system that serves more than one room must have— (a) separate isolating switches for each room and (b) a separate temperature controller and time switch for each group of rooms with common heating needs and (c) power loads of not more than 110 W/m² for living areas, and 150 W/m² for bathrooms.

13.7.6 Artificial lighting

(1) The lamp power density or illumination power density of artificial lighting, excluding heaters that emit light, must not exceed the allowance of— (a) 5 W/m² in a Class 1 building and (b) 4 W/m² on a Verandah, balcony or the like attached to a Class 1 building; and (c) 3 W/m² in a Class 10a building associated with a Class 1 building.

(2) The illumination power density allowance in (1) may be increased by dividing it by the relevant illumination power density adjustment factor for a control device in (6) as applicable.

(3) When designing the lamp power density or illumination power density, the power of the proposed installation must be used rather than nominal allowances for exposed batten holders or luminaires.

(4) If halogen lamps are installed, they must be separately switched from fluorescent lamps.

(5) Artificial lighting around the perimeter of a building must— (a) be controlled by a daylight sensor or (b) have an average light source efficacy of not less than 40 Lumens/W.

(6) The following illumination power density adjustment factors apply to control devices for artificial lighting:

(a) Lighting timer for corridor lighting: 0.7. Motion detector — (i) (A) at least 75% of the area of space is controlled by one or more motion detectors; or

(b) an area of less than 200 m² is switched as a block by one or more motion detectors; and (i) 0.7, where up to 6 lights are switched as a block by one or more detectors; and (ii) 0.55, where up to 2 lights are switched as a block by one or more detectors.

(c) Manual dimming system where not less than 75% of the space area is controlled by manually operated dimmers: 0.85.

(d) Programmable dimming system where not less than 75% of the space area is controlled by programmable dimmers: 0.85.

(e) Dynamic dimming system, with automatic compensation for lumen depreciation, the design lumen depreciation factor is not less than — (i) 0.9 for fluorescent lights or (ii) 0.8 for high-pressure discharge lights.

(f) Fixed dimming where at least 75% of the area is controlled by fixed dimmers that reduce the overall lighting level and the power consumption of the lighting — equal to the % of full power to which the dimmer is set divided by 0.95.

(g) Daylight sensor and dynamic lighting control device, with dimmed or stepped switching of lights adjacent to windows: (i) Lights within the space adjacent to windows other than roof lights for a distance from the window equal to the depth of the floor at window head height: 0.5. (ii) Lights within the space adjacent to roof lights: 0.6.

(7) For (6)(c), manual dimming is where lights are controlled by a knob, slider, or other mechanism or where there are pre-selected scenes that are manually selected.

(8) For (6)(d), programmed dimming is where pre-selected scenes or levels are automatically selected by the time of day, photoelectric cell, or occupancy sensor.

(9) For (6)(e), dynamic dimming is where the lighting level is varied automatically by a photoelectric cell to either proportionately compensate for the availability of daylight or the lumen depreciation of the lamps.

(10) For (6)(f), fixed dimming is where lights are controlled to a level, and that level cannot be adjusted by the user.

(11) For (6)(g)(i) and (ii), the illumination power density adjustment factor is only applied to lights controlled by that item — this adjustment factor does not apply to tungsten halogen or other incandescent sources.

13.7.7 Water heater in a heated water supply system

A water heater in a heated water supply system must be designed and installed by Part B2 of NCC Volume Three — Plumbing Code of Australia.

13.7.8 Swimming pool heating and pumping

(1) Heating for a swimming pool must be by— (a) a solar heater not boosted by electric resistance heating or

(b) a heater using reclaimed energy, (c) a gas heater, or (d) a heat pump, or (e) a combination of (a) to (d).

(2) Where some or all of the heating required by (1) is by a gas heater or a heat pump, the swimming pool must have— (a) a cover with a minimum R-Value of 0.05 unless located in a conditioned space and (b) a time switch to control the operation of the heater.

(3) A time switch must be provided to control the operation of a circulation pump for a swimming pool.

(4) For the purposes of 13.7.8, a swimming pool does not include a spa pool.

13.7.9 Spa pool heating and pumping

(1) Heating for a spa pool that shares a water recirculation system with a swimming pool must be by— (a) a solar heater or

(b) a heater using reclaimed energy or a gas heater, or (d) (e) a combination of (a) to (d).

(2) Where some or all of the heating required by (1) is by a gas heater or a heat pump, the spa pool must have— (a) a cover and (b) a push button and a time switch to control the operation of the heater.

(3) A time switch must be provided to control the operation of a circulation pump for a spa pool having a capacity of 680 L or more.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. LUL8JEQKWN

Generated on 2 Jul 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address Lot 1 (#133) Riverview Road AVALON BEACH,
2107, NSW, 2107
Lot/DP 1/1176542
NCC Class* Class 1a
Floor/all Floors
Type New Home

Plans

Main plan 133_Riverview_v2.0
Prepared by Rise Projects

Construction and environment

Assessed floor area [m²]*		Exposure type
Conditioned*	448.4	suburban
Unconditioned*	111.4	NatHERS climate zone
Total	559.8	56 Mascot AMO
Garage	-	



Accredited assessor

Name Claude-Francois Sookloll
Business name Energy Advance
Email energy@energyadvance.com.au
Phone 1300 850 228
Accreditation No. DMN/14/1662
Assessor Accrediting Organisation
Design Matters National
Declaration of interest No

NCC Requirements

NCC provisions Volume 2
State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

30 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:
www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	22.1	7.9
Load limits	N/A	N/A
Features determining load limits		
Floor type (lowest conditioned area)		N/A
NCC climate zone 1 or 2		N/A
Outdoor living area		N/A
Outdoor living area ceiling fan		N/A

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit <https://www.fr5.com.au/QRCodeLandIng?PublicId=LUL8JEQKWN>. When using either link, ensure you are visiting www.fr5.com.au.





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB NatHERS heating and cooling load limits Standard 2022 for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA – not applicable

Outdoor living area:

- Yes
- No
- NA – not applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA – not applicable

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match the values in the ABCB Standard 2022: NatHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐



Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/surveyor checked	Builder checked	Consent authority/surveyor checked	

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			☐	☐	☐
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
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Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	☐	☐	☐	☐	☐
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
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Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	☐	☐			
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Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

BCA Climate Zone 5

Eaves indicated by the 'Horizontal shading feature* maximum projection (mm)' may not be directly opposing the respective wall (i.e. some eaves may be horizontally offset)

Where applicable, an additional 150mm has been added to the projection of all 'Horizontal shading features & eaves' to account for the Gutter & Fascia Board

Please note, restricted window openings (%) have been modelled as per NCC requirements

Please note, IC/IC-F Class Downlights have been nominated to this dwelling



Where applicable, proxy WERS codes may be used to meet U-Value and SHGC limitations while maintaining compliance.

Proxy codes refer to performance values from a comparable product when exact test data for the selected window or glazed door is unavailable.

The selected window or glazed door must have a U-Value lower than the value indicated, and the SHGC must be within +/-5% of the specified value to comply



Room *schedule*

Room	Zone Type	Area [m ²]
External Poolside Shower	unconditioned	2.3
Internal Pool Shower	unconditioned	2.3
Heated Pool/Ice Bath	unconditioned	38.3
Sauna	unconditioned	3.2
Basement Living	living	86.2
Gym Storage	unconditioned	28.8
Gym	unconditioned	30.7
Bedroom 2	bedroom	17.7
WIR 2	nightTime	5.3
Bedroom 3	bedroom	13.3
Bedroom 4	bedroom	12.5
LGF Multipurpose Room	dayTime	10
Guest Bedroom 2	bedroom	35.1
Lounge/Lower GF Landing	living	44.6
Ensuite 2	nightTime	5.5
Lower GF Bath	unconditioned	5.7
Lower GF WC	dayTime	2.3
Kitchen/Living/Dining	kitchen	119.9
WC Passage	dayTime	10.7
Ground Floor WC	dayTime	2.2
Master Bedroom	bedroom	31.7
Master Bedroom Passage	nightTime	3.2
Master Bedroom WIR	nightTime	20.7
Master Bedroom Ensuite	nightTime	8.7
Master Bedroom WC	nightTime	2.5
First Floor Stairwell	dayTime	12.2
Living Area Skylight	doubleHeightVoid	15.2
Elevator Passage	dayTime	1.9
Elevator	dayTime	1.7
Guest Bedroom	bedroom	33.1
Guest Ensuite	nightTime	6.2
Master Bedroom Skylight	doubleHeightVoid	9.3

Window and glazed door *type and performance*

Default* windows

Substitution tolerance ranges



Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
PAR-009-03 W	Scandinavian Fir Fixed Window TG 4SB70XL-12Ar-3SB70XL-12Ar-4SB70XL	0.92	0.16	0.15	0.17
PAR-006-03 W	Sliding Door TG 4SB70XL-12Ar-3-12Ar-4EA	1.12	0.17	0.16	0.18
PAR-002-05 W	Tilt and Turn Window TG 4SB70XL-12Ar-3SB70XL-12Ar-4SB70XL	1.23	0.11	0.1	0.12

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Gym Storage	PAR-009-03 W	Study Fixed windows	2350	590	fixed	0.0	N	No
Gym Storage	PAR-009-03 W	Study Fixed windows	2350	510	fixed	0.0	NW	No
Gym Storage	PAR-009-03 W	Study Fixed windows	2350	600	fixed	0.0	NW	No
Gym Storage	PAR-006-03 W	Study Sliding door	2350	4280	sliding	30.0	W	No
Gym Storage	PAR-009-03 W	Study Fixed windows	2350	475	fixed	0.0	W	No
Gym Storage	PAR-009-03 W	Study Fixed windows	2350	510	fixed	0.0	W	No
Gym Storage	PAR-009-03 W	Study Fixed windows	2350	580	fixed	0.0	SW	No
Gym	PAR-006-03 W	Gym Sliding door	2350	3850	sliding	30.0	N	No
Bedroom 2	PAR-006-03 W	LG5	2000	2625	casement	90.0	W	No
WIR 2	PAR-002-05 W	LG4	2750	1250	awning	30.0	S	No
Bedroom 3	PAR-002-05 W	LG2	1400	2100	sliding	60.0	S	No
Bedroom 4	PAR-006-03 W	LG10	2750	2050	sliding	45.0	N	No
LGF Multipurpose Room	PAR-006-03 W	LG9	2750	850	casement	90.0	N	No
Guest Bedroom 2	PAR-009-03 W	LG7	2750	335	fixed	0.0	N	No
Guest Bedroom 2	PAR-009-03 W	LG8	2350	3600	fixed	0.0	N	No
Guest Bedroom 2	PAR-009-03 W	LG7	2750	900	fixed	0.0	NW	No
Guest Bedroom 2	PAR-009-03 W	LG7	2750	750	fixed	0.0	NW	No
Guest Bedroom 2	PAR-009-03 W	LG7	2750	750	fixed	0.0	NW	No



Guest Bedroom 2	PAR-009-03 W	LG7	2750	750	fixed	0.0	W	No
Guest Bedroom 2	PAR-009-03 W	LG7	2750	750	fixed	0.0	W	No
Guest Bedroom 2	PAR-006-03 W	LG6	2750	2740	sliding	45.0	W	No
Guest Bedroom 2	PAR-009-03 W	LG7	2750	365	fixed	0.0	W	No
Lounge/Lower GF Landing	PAR-002-05 W	LG1	1250	4170	sliding	60.0	E	No
Lounge/Lower GF Landing	PAR-006-03 W	GF7_LGF	2800	1860	sliding	45.0	E	No
Lounge/Lower GF Landing	PAR-006-03 W	GF6_LGF	2800	2725	sliding	45.0	N	No
Ensuite 2	PAR-002-05 W	LG3	2750	1800	sliding	45.0	S	No
Kitchen/Living/-Dining	PAR-006-03 W	GF1_Hinged Door	3050	842	casement	90.0	E	No
Kitchen/Living/-Dining	PAR-009-03 W	GF1_Fixed Glass	3050	2988	fixed	0.0	E	No
Kitchen/Living/-Dining	PAR-009-03 W	GF7_GF	3060	1860	fixed	0.0	E	No
Kitchen/Living/-Dining	PAR-009-03 W	GF6_GF	3060	2725	fixed	0.0	N	No
Kitchen/Living/-Dining	PAR-002-05 W	GF5	2850	2355	sliding	60.0	N	No
Kitchen/Living/-Dining	PAR-009-03 W	Opening 99	2850	950	fixed	0.0	N	No
Kitchen/Living/-Dining	PAR-006-03 W	GF4	2850	9770	sliding	85.0	W	No
WC Passage	PAR-006-03 W	GF2	2300	1860	casement	90.0	E	No
WC Passage	PAR-002-05 W	GF3	1500	1500	sliding	45.0	S	No
Master Bedroom	PAR-009-03 W	FF6	2350	2140	fixed	0.0	N	Yes
Master Bedroom	PAR-009-03 W	FF6	2350	560	fixed	0.0	NW	No
Master Bedroom	PAR-009-03 W	FF6	2350	515	fixed	0.0	NW	No
Master Bedroom	PAR-009-03 W	FF6	2350	440	fixed	0.0	W	No
Master Bedroom	PAR-009-03 W	FF6	2350	465	fixed	0.0	W	No
Master Bedroom	PAR-009-03 W	FF4	2350	120	fixed	0.0	W	No
Master Bedroom	PAR-006-03 W	FF5	2350	5400	sliding	45.0	W	No
Master Bedroom	PAR-009-03 W	FF6	2350	180	fixed	0.0	W	No
Master Bedroom	PAR-009-03 W	FF4	2350	520	fixed	0.0	SW	No
Master Bedroom	PAR-009-03 W	FF4	2350	520	fixed	0.0	SW	No
Master Bedroom	PAR-009-03 W	FF4	2350	520	fixed	0.0	SW	No
Master Bedroom	PAR-009-03 W	FF4	2350	530	fixed	0.0	S	No
Master Bedroom	PAR-009-03 W	FF4	2350	2090	fixed	0.0	S	Yes
Master Bedroom WIR	PAR-009-03 W	FF3	2350	2700	fixed	0.0	S	Yes



Master Bedroom WIR	PAR-002-05 W	FF2	2350	1400	awning	40.0	E	Yes
Master Bedroom Ensuite	PAR-009-03 W	FF7	2350	1540	fixed	0.0	N	Yes
Master Bedroom Ensuite	PAR-002-05 W	FF8	1250	550	awning	60.0	N	Yes
Master Bedroom Ensuite	PAR-002-05 W	FF9	1250	550	awning	60.0	N	Yes
Master Bedroom Ensuite	PAR-002-05 W	FF10	1250	550	awning	60.0	N	Yes
First Floor Stairwell	PAR-009-03 W	FF1	1500	3850	fixed	0.0	E	No
Living Area Skylight	PAR-009-03 W	Living Skylight	350	2300	fixed	0.0	S	Yes
Living Area Skylight	PAR-009-03 W	Living Skylight	350	6660	fixed	0.0	E	Yes
Living Area Skylight	PAR-009-03 W	Living Skylight	350	2296	fixed	0.0	N	Yes
Living Area Skylight	PAR-009-03 W	Living Skylight	350	6660	fixed	0.0	W	Yes
Elevator Passage	PAR-002-05 W	GR4	2250	1550	awning	30.0	W	Yes
Elevator Passage	PAR-002-05 W	GR5	2250	1100	awning	30.0	N	Yes
Guest Bedroom	PAR-006-03 W	GR1	2760	3810	casement	90.0	W	No
Guest Bedroom	PAR-009-03 W	GR2	2250	875	fixed	0.0	W	Yes
Guest Bedroom	PAR-009-03 W	GR3	2250	875	fixed	0.0	W	Yes
Master Bedroom Skylight	PAR-009-03 W	Master Bedroom Skylight	350	4800	fixed	0.0	W	Yes
Master Bedroom Skylight	PAR-009-03 W	Master Bedroom Skylight	350	1940	fixed	0.0	S	Yes
Master Bedroom Skylight	PAR-009-03 W	Master Bedroom Skylight	350	4800	fixed	0.0	E	Yes
Master Bedroom Skylight	PAR-009-03 W	Master Bedroom Skylight	350	1940	fixed	0.0	N	Yes

Roof window* type and performance value

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

*Refer to glossary.



Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
External Poolside Shower	2040	720	100.0	S
Heated Pool/Ice Bath	2040	720	100.0	W
Gym	2040	820	100.0	S
Guest Bedroom	2040	920	100.0	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	133 Riverview - Concrete w/R2.5 EPS	0.5	Medium	Polystyrene expanded: R2.5 (R2.5)	No
2	NCC 2022 MISC - OTH Earth Retaining Wall Uninsulated	0.5	Medium		No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
External Poolside Shower	1	2800	1498	W	0	Yes
External Poolside Shower	1	2800	1545	S	0	Yes
Internal Pool Shower	1	2800	1486	W	0	Yes
Internal Pool Shower	1	2800	1537	N	0	Yes
Heated Pool/Ice Bath	1	2800	1360	W	0	Yes
Heated Pool/Ice Bath	1	2800	4637	W	1130	Yes



Heated Pool/Ice Bath	1	2800	3598	S	0	Yes
Heated Pool/Ice Bath	1	2800	5029	N	0	Yes
Sauna	1	2800	1831	S	0	Yes
Basement Living	1	2800	1122	S	0	Yes
Basement Living	2	2800	1339	SE	0	No
Basement Living	2	2800	993	SE	0	No
Basement Living	2	2800	894	SE	0	No
Basement Living	2	2800	1442	SE	0	No
Basement Living	2	2800	5089	S	0	No
Basement Living	2	2800	974	SW	0	No
Basement Living	2	2800	766	S	0	No
Basement Living	2	2800	917	S	0	No
Basement Living	2	2800	852	SE	0	No
Basement Living	2	2800	894	SE	0	No
Basement Living	2	2800	840	E	0	No
Basement Living	2	2800	810	E	0	No
Basement Living	2	2800	719	NE	0	No
Basement Living	2	2800	727	NE	0	No
Basement Living	2	2800	4634	N	0	No
Basement Living	2	2800	3036	E	0	No
Basement Living	1	2800	8194	N	0	No
Gym Storage	1	2700	3505	N	0	Yes
Gym Storage	1	2700	591	N	0	Yes
Gym Storage	1	2700	512	NW	0	No
Gym Storage	1	2700	610	NW	0	No
Gym Storage	1	2700	4293	W	0	No
Gym Storage	1	2700	477	W	0	No
Gym Storage	1	2700	511	W	0	No
Gym Storage	1	2700	580	SW	0	No
Gym Storage	1	2700	3588	S	0	No
Gym	1	2550	897	W	0	Yes
Gym	1	2625	189	W	0	Yes
Gym	1	750	334	W	0	Yes
Gym	1	2550	2045	S	0	No
Gym	1	2550	324	E	0	Yes
Gym	1	2550	1601	S	0	No
Gym	1	2550	9106	E	0	Yes
Gym	1	2550	3949	N	0	Yes
Bedroom 2	1	2800	874	N	0	Yes



Bedroom 2	1	2800	420	N	0	Yes
Bedroom 2	1	2800	490	NW	0	Yes
Bedroom 2	1	2800	551	NW	0	Yes
Bedroom 2	1	2800	2514	W	0	Yes
Bedroom 2	1	2800	624	SW	0	Yes
Bedroom 2	1	2800	555	S	0	Yes
Bedroom 2	1	2800	2464	S	0	Yes
WIR 2	1	2800	2408	S	0	Yes
Bedroom 3	1	2800	5244	S	616	Yes
Bedroom 3	1	2800	1253	E	2360	Yes
Bedroom 4	1	2800	3146	N	0	Yes
LGF Multipurpose Room	1	2800	2497	N	0	Yes
Guest Bedroom 2	1	2800	136	E	0	Yes
Guest Bedroom 2	1	2800	3761	N	0	Yes
Guest Bedroom 2	1	2800	913	NW	0	Yes
Guest Bedroom 2	1	2800	776	NW	0	Yes
Guest Bedroom 2	1	2800	762	NW	0	No
Guest Bedroom 2	1	2800	782	W	0	No
Guest Bedroom 2	1	2800	751	W	0	Yes
Guest Bedroom 2	1	2800	3189	W	0	Yes
Lounge/Lower GF Landing	1	3000	2422	S	2000	Yes
Lounge/Lower GF Landing	1	3000	4185	E	0	Yes
Lounge/Lower GF Landing	1	3000	273	E	0	Yes
Lounge/Lower GF Landing	1	2800	2299	E	0	Yes
Lounge/Lower GF Landing	1	2800	2771	N	0	Yes
Lounge/Lower GF Landing	1	2800	400	E	0	Yes
Lounge/Lower GF Landing	1	2800	2622	N	0	Yes
Ensuite 2	1	2800	1829	S	0	Yes
Ensuite 2	1	2800	981	SE	0	Yes
Lower GF Bath	1	2800	3436	S	616	Yes
Kitchen/Living/Dining	1	2900	11105	S	0	Yes
Kitchen/Living/Dining	1	3100	311	E	0	Yes
Kitchen/Living/Dining	1	3100	3824	E	0	Yes
Kitchen/Living/Dining	1	2900	464	E	0	Yes
Kitchen/Living/Dining	1	3100	1858	E	0	Yes
Kitchen/Living/Dining	1	3100	310	E	0	Yes
Kitchen/Living/Dining	1	3100	2777	N	0	Yes
Kitchen/Living/Dining	1	3100	401	E	0	Yes
Kitchen/Living/Dining	1	3100	2462	N	0	Yes



Kitchen/Living/Dining	1	2900	7012	N	0	Yes
Kitchen/Living/Dining	1	2900	9594	W	0	Yes
Kitchen/Living/Dining	1	2900	745	W	0	Yes
WC Passage	1	2900	1902	E	0	Yes
WC Passage	1	2900	5637	S	0	Yes
Master Bedroom	1	2500	2142	N	0	Yes
Master Bedroom	1	2500	562	NW	0	Yes
Master Bedroom	1	2500	521	NW	0	Yes
Master Bedroom	1	2500	443	W	0	Yes
Master Bedroom	1	2500	468	W	0	Yes
Master Bedroom	1	2500	5660	W	0	Yes
Master Bedroom	1	2500	522	SW	0	Yes
Master Bedroom	1	2500	521	SW	0	Yes
Master Bedroom	1	2500	517	SW	0	Yes
Master Bedroom	1	2500	528	S	0	No
Master Bedroom	1	2500	2062	S	0	Yes
Master Bedroom WIR	1	2500	6221	S	0	Yes
Master Bedroom WIR	1	2500	1897	E	0	Yes
Master Bedroom Ensuite	1	2500	4771	N	0	Yes
Master Bedroom WC	1	2500	1861	E	0	Yes
Master Bedroom WC	1	2500	1350	N	0	Yes
First Floor Stairwell	1	2700	304	E	0	Yes
First Floor Stairwell	1	2700	208	S	0	Yes
First Floor Stairwell	1	2500	3861	E	0	Yes
First Floor Stairwell	1	2700	203	N	0	Yes
First Floor Stairwell	1	2500	287	E	0	Yes
Living Area Skylight	1	750	2302	S	0	No
Living Area Skylight	1	750	6666	E	0	Yes
Living Area Skylight	1	750	2297	N	0	Yes
Living Area Skylight	1	750	6668	W	0	Yes
Elevator Passage	1	2800	1419	W	0	Yes
Elevator Passage	1	2800	1350	N	0	Yes
Elevator	1	2800	1318	N	0	Yes
Guest Bedroom	1	2800	5640	W	0	Yes
Guest Bedroom	1	2800	2968	S	0	No
Guest Bedroom	1	2800	700	E	0	Yes
Guest Bedroom	1	2800	3590	S	0	Yes
Guest Bedroom	1	2800	4760	E	0	No
Guest Ensuite	1	2800	1599	E	0	No



Guest Ensuite	1	2800	3488	N	0	Yes
Master Bedroom Skylight	1	750	4815	W	0	No
Master Bedroom Skylight	1	750	1941	S	0	No
Master Bedroom Skylight	1	750	4815	E	0	No
Master Bedroom Skylight	1	750	1941	N	0	No

Internal wall type

Wall ID	Wall type	Area [m²]	Bulk insulation
1	NCC 2022 STANDARD - TIMBER - WDF INT Plasterboard Stud Wall Uninsulated No Wrap	335.1	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
External Poolside Shower	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	2.3	Enclosed	R0.0	Tiles
Internal Pool Shower	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	2.3	Enclosed	R0.0	Tiles
Heated Pool/Ice Bath	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	27.5	Enclosed	R0.0	Tiles
Heated Pool/Ice Bath	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	10.8	Enclosed	R0.0	Tiles
Sauna	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	3.2	Enclosed	R0.0	Tiles
Basement Living	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	73	Enclosed	R0.0	Carpet
Basement Living	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	13.1	Enclosed	R0.0	Tiles
Gym Storage	FLOOR - 200mm Suspended Concrete Slab	28.8	Very open	R0.0	Carpet
Gym	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	30.7	Enclosed	R0.0	Carpet
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	4.8	Enclosed	R0.0	Carpet
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	2.9	Enclosed	R0.0	Carpet
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	0.3	Enclosed	R0.0	Carpet

*Refer to glossary.



Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	7.9	Enclosed	R0.0	Carpet
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	1.6	Elevated	R0.0	Carpet
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	0.1	Elevated	R0.0	Carpet
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	0.2	Elevated	R0.0	Carpet
WIR 2	FLOOR - 200mm Suspended Concrete Slab	0.1	Enclosed	R0.0	Carpet
WIR 2	FLOOR - 200mm Suspended Concrete Slab	4.7	Enclosed	R0.0	Carpet
WIR 2	FLOOR - 200mm Suspended Concrete Slab	0.5	Elevated	R0.0	Carpet
Bedroom 3	FLOOR - 200mm Suspended Concrete Slab	3.2	Enclosed	R0.0	Carpet
Bedroom 3	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	10	Enclosed	R0.0	Carpet
Bedroom 4	FLOOR - 200mm Suspended Concrete Slab	12.5	Enclosed	R0.0	Carpet
LGF Multipurpose Room	FLOOR - 200mm Suspended Concrete Slab	10	Enclosed	R0.0	Carpet
Guest Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	21.8	Enclosed	R0.0	Carpet
Guest Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	13.3	Enclosed	R0.0	Carpet
Lounge/Lower GF Landing	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	0	Enclosed	R0.0	Carpet
Lounge/Lower GF Landing	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	15.8	Enclosed	R0.0	Carpet
Lounge/Lower GF Landing	FLOOR - 200mm Suspended Concrete Slab	28.8	Enclosed	R0.0	Carpet
Ensuite 2	FLOOR - 200mm Suspended Concrete Slab	0.2	Elevated	R0.0	Tiles
Ensuite 2	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	1.3	Enclosed	R0.0	Tiles
Ensuite 2	FLOOR - 200mm Suspended Concrete Slab	4	Enclosed	R0.0	Tiles
Lower GF Bath	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	5.6	Enclosed	R0.0	Tiles
Lower GF Bath	FLOOR - 200mm Suspended Concrete Slab	0.1	Enclosed	R0.0	Tiles



Lower GF WC	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	0.3	Enclosed	R0.0	Tiles
Lower GF WC	FLOOR - 200mm Suspended Concrete Slab	2	Enclosed	R0.0	Tiles
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	1.6	Elevated	R0.0	Tiles
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	2.5	Elevated	R0.0	Tiles
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	66	Enclosed	R0.0	Tiles
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	16.1	Enclosed	R0.0	Tiles
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	33.6	Enclosed	R0.0	Tiles
WC Passage	FLOOR - 200mm Suspended Concrete Slab	3.8	Enclosed	R0.0	Tiles
WC Passage	FLOOR - 200mm Suspended Concrete Slab	6.9	Elevated	R0.0	Tiles
Ground Floor WC	FLOOR - 200mm Suspended Concrete Slab	2.2	Enclosed	R0.0	Tiles
Master Bedroom	FLOOR - 200mm Suspended Concrete Slab	9.3	Enclosed	R0.0	Carpet
Master Bedroom	FLOOR - 200mm Suspended Concrete Slab	22.3	Enclosed	R0.0	Carpet
Master Bedroom Passage	FLOOR - 200mm Suspended Concrete Slab	3.2	Enclosed	R0.0	Carpet
Master Bedroom WIR	FLOOR - 200mm Suspended Concrete Slab	20.7	Enclosed	R0.0	Carpet
Master Bedroom Ensuite	FLOOR - 200mm Suspended Concrete Slab	8.7	Enclosed	R0.0	Tiles
Master Bedroom WC	FLOOR - 200mm Suspended Concrete Slab	2.5	Enclosed	R0.0	Tiles
First Floor Stairwell	FLOOR - 200mm Suspended Concrete Slab	12.2	Enclosed	R0.0	Carpet
Living Area Skylight	No Floor	15.2	Enclosed	R0.0	No Floor
Elevator Passage	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	1.9	Very open	R0.0	Carpet
Elevator	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	1.7	Very open	R0.0	Carpet
Guest Bedroom	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	33.1	Very open	R0.0	Carpet
Guest Ensuite	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	6.2	Very open	R0.0	Tiles



Master Bedroom Skylight	No Floor	9.3	Very open	R0.0	No Floor
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Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
External Poolside Shower	Plasterboard	R8.3	Yes
Internal Pool Shower	Plasterboard	R8.3	Yes
Heated Pool/Ice Bath	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Heated Pool/Ice Bath	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Heated Pool/Ice Bath	Plasterboard	R8.3	Yes
Sauna	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Basement Living	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Basement Living	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	R0.0	No
Basement Living	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Basement Living	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	R0.0	No
Gym Storage	Plasterboard	R8.3	Yes
Gym	Plasterboard	R8.3	Yes
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Bedroom 2	Plasterboard	R8.3	Yes
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Bedroom 2	Plasterboard	R8.3	Yes
Bedroom 2	Plasterboard	R8.3	Yes
Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No

*Refer to glossary.



Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
WIR 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
WIR 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
WIR 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Bedroom 3	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Bedroom 3	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Bedroom 4	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
LGF Multipurpose Room	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Guest Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Guest Bedroom 2	Plasterboard	R8.3	Yes
Guest Bedroom 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Lounge/Lower GF Landing	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Lounge/Lower GF Landing	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Lounge/Lower GF Landing	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Ensuite 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Ensuite 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Ensuite 2	FLOOR - 200mm Suspended Concrete Slab	R0.0	No



Lower GF Bath	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Lower GF Bath	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Lower GF WC	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Lower GF WC	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Kitchen/Living/D-ining	Plasterboard	R8.3	Yes
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Kitchen/Living/D-ining	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Kitchen/Living/D-ining	Plasterboard	R8.3	Yes
WC Passage	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
WC Passage	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Ground Floor WC	FLOOR - 200mm Suspended Concrete Slab	R0.0	No
Master Bedroom	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	R0.0	No
Master Bedroom	FLOOR - CSOG (Raft) Concrete Slab-on-Ground 100mm	R0.0	No
Master Bedroom	Plasterboard	R8.3	Yes
Master Bedroom Passage	Plasterboard	R8.3	Yes
Master Bedroom WIR	Plasterboard	R8.3	Yes



Master Bedroom Ensuite	Plasterboard	R8.3	Yes
Master Bedroom WC	Plasterboard	R8.3	Yes
First Floor Stairwell	Plasterboard	R8.3	Yes
Living Area Skylight	Plasterboard	R8.3	Yes
Master Bedroom Skylight	Plasterboard	R8.3	Yes

Ceiling penetrations*

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
External Poolside Shower	1	Exhaust Fans	250	250	Sealed
External Poolside Shower	1	Downlights	0	0	Sealed
Internal Pool Shower	1	Exhaust Fans	250	250	Sealed
Internal Pool Shower	1	Downlights	0	0	Sealed
Heated Pool/Ice Bath	7	Downlights	0	0	Sealed
Sauna	1	Exhaust Fans	250	250	Sealed
Sauna	1	Downlights	0	0	Sealed
Basement Living	18	Downlights	0	0	Sealed
Gym Storage	6	Downlights	0	0	Sealed
Gym	7	Downlights	0	0	Sealed
Bedroom 2	5	Downlights	0	0	Sealed
WIR 2	2	Downlights	0	0	Sealed
Bedroom 3	3	Downlights	0	0	Sealed
Bedroom 4	3	Downlights	0	0	Sealed
LGF Multipurpose Room	2	Downlights	0	0	Sealed
Guest Bedroom 2	8	Downlights	0	0	Sealed
Lounge/Lower GF Landing	9	Downlights	0	0	Sealed
Ensuite 2	1	Exhaust Fans	250	250	Sealed
Ensuite 2	2	Downlights	0	0	Sealed
Lower GF Bath	1	Exhaust Fans	250	250	Sealed
Lower GF Bath	2	Downlights	0	0	Sealed
Lower GF WC	1	Exhaust Fans	250	250	Sealed
Lower GF WC	1	Downlights	0	0	Sealed
Kitchen/Living/Dining	1	Exhaust Fans	250	250	Sealed
Kitchen/Living/Dining	23	Downlights	0	0	Sealed
WC Passage	3	Downlights	0	0	Sealed
Ground Floor WC	1	Exhaust Fans	250	250	Sealed
Ground Floor WC	1	Downlights	0	0	Sealed
Master Bedroom	5	Downlights	0	0	Sealed
Master Bedroom Passage	1	Downlights	0	0	Sealed
Master Bedroom WIR	5	Downlights	0	0	Sealed

*Refer to glossary.



Master Bedroom Ensuite	1	Exhaust Fans	250	250	Sealed
Master Bedroom Ensuite	2	Downlights	0	0	Sealed
Master Bedroom WC	1	Exhaust Fans	250	250	Sealed
Master Bedroom WC	1	Downlights	0	0	Sealed
First Floor Stairwell	3	Downlights	0	0	Sealed
Elevator Passage	1	Downlights	0	0	Sealed
Guest Bedroom	7	Downlights	0	0	Sealed
Guest Ensuite	1	Exhaust Fans	250	250	Sealed
Guest Ensuite	2	Downlights	0	0	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living/Dining	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.5	Medium
Ceil: Ceiling	0.0	0.5	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
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No Whole of Home performance assessment conducted for this certificate.

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary. Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate air gap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.

*Refer to glossary.



STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)