Energy@greenchoiceconsulting.com.au
1300 864 944

Energy Efficiency Report

Address:
Lot 104 (#50) Jiparu Drive, Murrumbateman, NSW 2582

Building Classification:
Class 1

GC Consulting Job Number:
ER1-T3108

Client Job Number:
2412

Compliance achieved?
Yes

Date of Report:
15/01/2025

Home Performance

Achieved Rating		Target Rating	
Total (MJ/m²)	121.2	Total (MJ/m²)	122
Heating (MJ/m²)	103.5	Heating (MJ/m²)	117.0
Cooling (MJ/m²)	17.7	Cooling (MJ/m²)	30.0

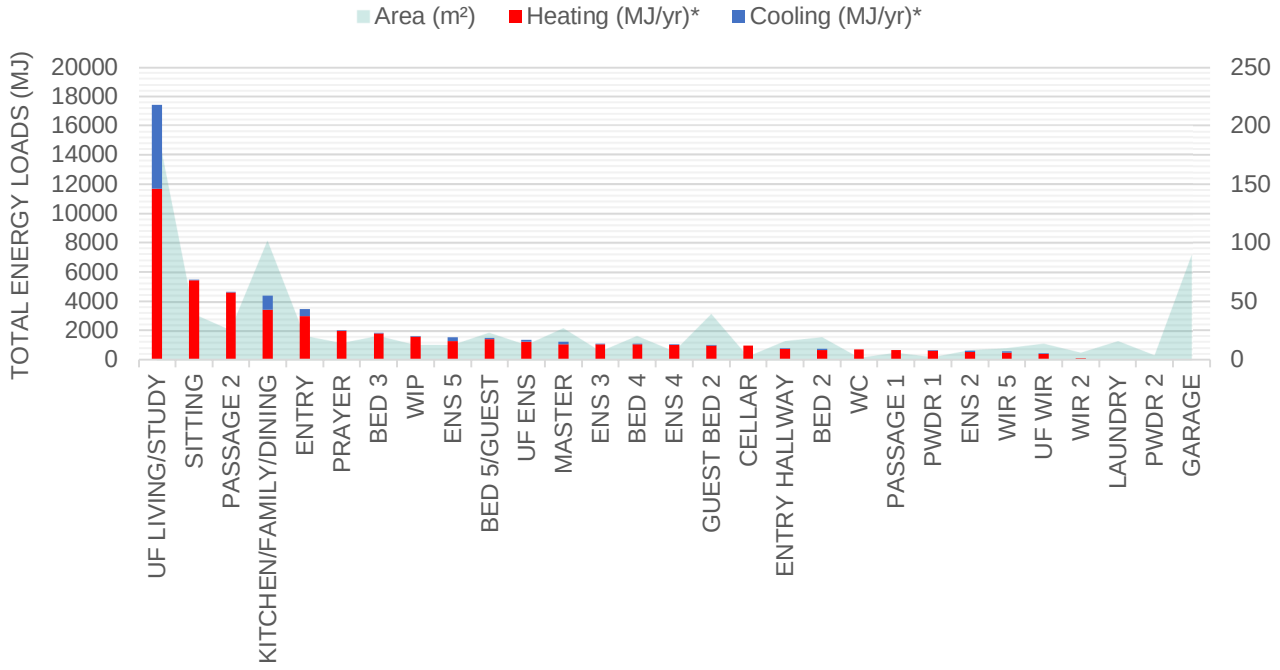
7.0 Stars

Compliance is achieved when the following conditions are met:

1. *The Star Rating heating load must be lower than the Limit heating load.*
2. *The Star Rating cooling load must be lower than the Limit cooling load.*
3. *The Star Rating total Energy must be lower than the Limit total energy.*

NatHERS Climate Zone: 24

ZONED ENERGY LOAD DISTRIBUTION TOTALS (MJ)



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Certificate No. #HR-G8N172-01
Scan QR code or follow website link for rating details.
Assessor name Albert Burton
Accreditation No. DMN/21/2045
Property Address Lot 104 (#50) Jipanu Drive, Murrumbateman, NSW, 2582
http://www.hero-software.com.au/pdf/HR-G8N172-01

Building Specifications

External Wall Construction	Insulation	Frame Material	Notes
75mm Hebel Panel/AAC	R2.5 Insulation + Wrap	Timber Frame	Living
75mm Hebel Panel/AAC	Wrap	Timber Frame	Garage
Double Brick	None	No Frame	Garage

If a steel frame is nominated, then a thermal break with an R-Value of 0.2 (or greater) must be installed between the frame and any external cladding, if applicable.

If reflective wrap is used it may need to be class 4 to meet Vapour Permeable requirements. It is the client's responsibility to ensure the product selected is compliant with all NCC provisions.

Internal Wall Construction	Insulation	Notes
Stud Frame	R2.0 Insulation	Internal Laundry & Powder room walls
Stud Frame	R2.5 Insulation	Garage only
Stud Frame	None	Remainder

Floor Construction Type/s	Underfloor Insulation	Slab Edge Insulation	Notes
Waffle Pod 225/100	None	None	Ground floor
Framed Suspended	None	None	Suspended floors

Floor coverings as per drawings/client notes (NatHERS Defaults modelled if not specified)

Ceiling Construction Type	Insulation	Notes
Plasterboard	R6.0 Insulation	Throughout (excl. Garage)
Plasterboard	R3.0 Insulation	450mm ceiling perimeter reduced to R3.0 as per NatHERS protocols | must be installed as per AS3999)

Roof Construction Type	Insulation	Notes	Colour
Colorbond	R1.3 Anticon	As per drawings	Medium

All ceiling penetrations are to be sealed.

Glazing Supplier
Trend

Ceiling Penetrations
If downlights are installed, Non-IC Rated Downlights are compliant

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Type	U-Value	SHGC	Glass	Notes
Fixed Windows	3.35	0.67	Double Glazed	As per documentation
Sliding Windows	4.15	0.58	Double Glazed	As per documentation
Sliding Doors	3.75	0.63	Double Glazed	As per documentation
Awning Windows	4.07	0.57	Double Glazed	As per documentation
Hinged Doors	4.18	0.51	Double Glazed	As per documentation
Sliding Windows	3.50	0.55	DG + Low-E	As per documentation
Awning Windows	3.45	0.53	DG + Low-E	As per documentation
Sliding Doors	3.03	0.59	DG + Low-E	As per documentation
Fixed Windows	2.92	0.60	DG + Low-E	As per documentation
Sliding Windows	2.60	0.62	TB Double Glazed	As per documentation
Sliding Doors	2.25	0.61	TB Double Glazed	As per documentation
Fixed Windows	2.05	0.66	TB Double Glazed	As per documentation

If the window type is default A the values apply to the following window/door types: Awning, Casement, hinged, French and Tilt'n'turn windows.
If the window type is default B the values apply to the following window/door types: Fixed, Bi-Fold, Double-Hung, Louvre, Sliding, and stacker.
A 5% tolerance is allowed to the nominated SHGC values. The U-Value must be the same or lower than the nominated values.
Please contact us if your supplier does not meet the values noted above.

Additional Notes
-

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Declaration of Compliance

I certify that the details provided within this energy efficiency report are true, correct, and reflective of the plans and specifications of this dwelling. I certify that I am a specialist in the relevant discipline and compliance has been demonstrated with the requirements of the National Construction Code (NCC) as outlined in this report.

Name of assessor:	Albert Burton
Qualification:	CPP41212 Certificate IV in NatHERS Assessment
Accreditation number:	DMN/21/2045
Signature:	Albert Burton
Company Name:	Green Choice Consulting Pty Ltd (ABN 63 658 893 415)

Green Choice Consulting Pty Ltd (ACN 658 893 415) holds no responsibility if the project is not constructed in accordance with the requirements of the current National Construction Code (NCC) or and/or the requirements detailed in this report. Any changes to the design elements of the building may void this assessment and require the project to be recertified to confirm compliance.

This report demonstrates compliance with the energy efficiency provisions of the national construction code only. It is the client's responsibility to ensure all products are compliant with the relevant building codes and project specific requirements. Green Choice Consulting does not accept responsibility for the selection of non-compliant products.

Provisions for this assessment

This assessment demonstrates compliance with Part H6 of the NCC. Calculations have been done using Hero and the Chenath Engine (v3.22).

(1) Building must comply with Section 13 of the ABCB Housing Provisions clauses—
- (a) 13.2.2, for building fabric thermal insulation; and
- (b) 13.2.3(7) and 13.2.5(5), for thermal breaks; and
- (c) 13.2.3(5), for compensating for a loss of ceiling insulation, other than where the *house energy rating software* has compensated for a loss of ceiling insulation; and
- (d) 13.2.6(4), 13.2.6(5) and 13.2.6(6) for floor edge insulation; and
- (e) Part 13.4, for building sealing

(2) To comply with H6P2, in addition to S42C3, a building must comply with Part 13.7 of the ABC Housing Provisions.

Services must be installed as per Part 13.7.
All metal roof framing must have a thermal break, consisting of a material with an R-Value of greater than or equal to 0.2, installed between the metal sheet roofing and its supporting metal purlins, metal rafters or metal battens.
All metal wall framing must have a thermal break, consisting of a material with an R-Value greater than or equal to 0.2, installed between the external cladding and the metal frame.

QLD only provisions (to apply if this project is in QLD)
In accordance with the Queensland Development Code Part 4.1—
For applying S42C2 of Specification 42 of the BCA, a reference to climate zones 1 and 2 is taken to be a reference to climate zones 1, 2, 3 or 5.
Toilet cisterns must have a dual flush function, minimum 4-star WELS rating and be compatible with the size of the toilet bowl to allow for proper functioning of the toilet.

WA only provisions *(to apply if this project is in WA)*
All tap fittings other than bath outlets and garden taps must be a minimum of 4 stars WELS rated.
All showerheads must be a minimum of 3 stars WELS rated.
All sanitary flushing systems must be a minimum of 4 stars WELS rated dual flush.
An outdoor private swimming pool or spa associated with a Class 1 building must be supplied with a cover, blanket or the like that is designed to reduce water evaporation and is accredited under the Smart Approved Watermark Scheme governed by the Australian Water Association, the Irrigation Association of Australia, the Nursery and Garden Industry Australia and the Water Services Association of Australia.
All internal heated water outlets (such as taps, showers and washing machine water supply fittings) must be connected to a heated water system or a re-circulating heated water system with pipes installed and insulated in accordance with AS/NZS 3500: Plumbing and Drainage, Part 4 Heated Water Services. The pipe from the heated water system or re-circulating heated water system to the furthest heated water outlet must not be more than 20 m in length or 2 liters of internal volume.

NSW only provisions *(to apply if this project is in NSW)*
All requirements in this report are in accordance with the BASIX requirements.
All insulation must be installed as per NSW H6P1.
Building must be sealed as per NSW H6P2.
Domestic services must be selected and have features as per NSW H6P3.

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Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. #HR-G8N172-01

Generated on 14 Jan 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	Lot 104 (#50) Jiparu Drive, Murrumbateman, NSW, 2582
Lot/DP	104/DP270586
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	2412
Prepared by	Sunny Homes

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	575.0	Open	
Unconditioned*	20.9	**NatHERS climate zone**	
Total	685.5	24 - Canberra Airport	
Garage	89.7		

Accredited assessor

Name	Albert Burton
Business name	Green Choice Consulting
Email	albert@greenchoiceconsulting.com.au
Phone	+61 045219132
Accreditation No.	DMN/21/2045
Assessor Accrediting Organisation	DMN
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

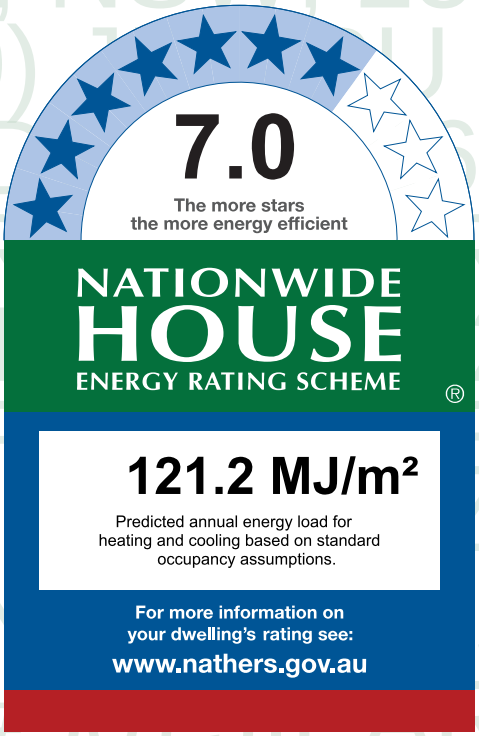
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) 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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	103.5	17.7
Load limits	117	30

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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 http://www.hero-software.com.au/pdf/HR-G8N172-01. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

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 and 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 Standard: NatHERS heating and cooling load limits* 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 onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

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.

* Refer to glossary.

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 Certifi cate?	☐	☐	☐	☐	☐
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 what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home 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?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			

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.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
ENTRY	Day Time	21.00
GUEST BED 2	Bedroom	39.33
SITTING	Day Time	39.24
WIP	Day Time	13.25
ENTRY HALLWAY	Day Time	16.05
KITCHEN/FAMILY/DINING	Kitchen/Living	101.91
PASSAGE 1	Day Time	6.44
PRAYER	Day Time	14.71
BED 5/GUEST	Bedroom	23.61
WIR 5	Night Time	10.37
ENS 5	Night Time	13.25
PASSAGE 2	Day Time	25.37
LAUNDRY	Unconditioned	16.33
WC	Day Time	2.12
PWDR 1	Day Time	2.86
BED 2	Bedroom	19.82
WIR 2	Night Time	6.34
ENS 2	Night Time	8.54
BED 4	Bedroom	20.75
ENS 4	Night Time	7.71
BED 3	Bedroom	20.74
ENS 3	Night Time	7.81
PWDR 2	Unconditioned	4.54
CELLAR	Day Time	3.18

Room *schedule*

Room	Zone Type	Area (m²)
GARAGE	Garage	89.68
MASTER	Bedroom	27.07
UF WIR	Night Time	13.91
UF ENS	Night Time	13.04
UF LIVING/STUDY	Living	198.77

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
TND-001-015	Trend Al Sliding Window	4.15	0.58	0.55	0.61
TND-001-017	Trend Al Sliding Window	3.50	0.55	0.52	0.57
TND-002-015	Trend Al Awning Window	4.07	0.57	0.54	0.60
TND-002-017	Trend Al Awning Window	3.45	0.53	0.51	0.56
TND-017-009	Aluminium Sliding Door	3.75	0.63	0.59	0.66
TND-017-011	Aluminium Sliding Door	3.03	0.59	0.56	0.62
TND-030-001	Trend Al Provincial Door	4.18	0.51	0.49	0.54
TND-031-002	Trend Al Internal offset glazed window	3.35	0.67	0.63	0.70
TND-032-005	Trend Crestlite Center Glazed Window	2.92	0.60	0.57	0.63
TND-100-006	Trend ThermaRes Thermally Broken Fixed Window	2.05	0.66	0.63	0.70
TND-104-040	Trend ThermaRes Thermally Broken Sliding Window	2.60	0.62	0.59	0.65
TND-108-007	Trend ThermaRes Thermally Broken Sliding Door	2.25	0.61	0.58	0.65

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BED 2	TND-017-011	W07	2400	2100	Sliding Door	45	NNW	None
BED 3	TND-001-017	W18	1800	2400	Sliding	45	SSE	None
BED 4	TND-001-017	W15	1800	2400	Sliding	45	SSE	None
BED 5/GUEST	TND-001-017	W10	1800	2600	Sliding	45	SSE	None
ENS 2	TND-002-015	W32-1	1050	1300	Awning	90	NNW	None
ENS 2	TND-031-002	W32-2	1050	1300	Fixed	0	NNW	None
ENS 3	TND-002-015	W17	1800	1400	Awning	90	SSE	None
ENS 4	TND-002-015	W16	1800	1400	Awning	90	SSE	None
ENS 5	TND-001-015	W29	1500	2100	Sliding	45	NNW	None
ENS 5	TND-002-015	W22-1	900	2000	Awning	90	WSW	None
ENS 5	TND-031-002	W22-2	900	2000	Fixed	0	WSW	None
ENTRY	TND-030-001	W01	2400	820	Hinged Door	90	SSE	None
ENTRY	TND-030-001	W02	2400	820	Hinged Door	90	SSE	None
ENTRY	TND-032-005	W03	2400	800	Fixed	0	SSE	None
ENTRY	TND-032-005	W04	2400	800	Fixed	0	SSE	None
ENTRY	TND-032-005	W06	600	3240	Fixed	0	SSE	None
GARAGE	TND-031-002	W34-B	2100	900	Fixed	0	NNW	None
GARAGE	TND-002-015	W34-A1	1050	900	Awning	90	NNW	None
GARAGE	TND-031-002	W34-A2	1050	900	Fixed	0	NNW	None
GARAGE	TND-031-002	W19	600	1800	Fixed	0	SSE	None
GARAGE	TND-031-002	W20	600	1800	Fixed	0	SSE	None
GARAGE	TND-031-002	W21	600	1800	Fixed	0	SSE	None
GUEST BED 2	TND-001-017	W13	1800	4000	Sliding	45	SSE	None
KITCHEN/FAMILY/DINING	TND-108-007	W40	2400	3000	Sliding Door	45	ENE	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
KITCHEN/FAMILY/DINING	TND-104-040	W30	1200	1900	Sliding	45	NNW	None
KITCHEN/FAMILY/DINING	TND-100-006	W24	2100	3000	Fixed	0	WSW	None
KITCHEN/FAMILY/DINING	TND-100-006	W27	2100	1800	Fixed	0	NNW	None
KITCHEN/FAMILY/DINING	TND-100-006	W28	2100	1800	Fixed	0	NNW	None
LAUNDRY	TND-017-009	W08	2400	2100	Sliding Door	45	NNW	None
MASTER	TND-017-011	W38	2100	3600	Sliding Door	30	NNW	None
PWDR 2	TND-030-001	W33	2400	820	Hinged Door	90	NNW	None
SITTING	TND-001-017	W11	1800	4000	Sliding	45	SSE	None
UF ENS	TND-002-015	W39	1000	1900	Awning	10	NNW	None
UF ENS	TND-002-015	W09	1000	1500	Awning	10	ENE	None
UF LIVING/STUDY	TND-002-017	W26	1200	1200	Awning	90	WSW	None
UF LIVING/STUDY	TND-032-005	W25	1800	3000	Fixed	0	WSW	None
UF LIVING/STUDY	TND-032-005	W35	1800	1800	Fixed	0	NNW	None
UF LIVING/STUDY	TND-032-005	W36	1800	2100	Fixed	0	NNW	None
UF LIVING/STUDY	TND-032-005	W37	1800	1800	Fixed	0	NNW	None
UF LIVING/STUDY	TND-032-005	W12	1800	4000	Fixed	0	SSE	None
UF LIVING/STUDY	TND-032-005	W05	2700	3200	Fixed	0	SSE	None
UF LIVING/STUDY	TND-032-005	W14	1800	4000	Fixed	0	SSE	None
WIP	TND-001-017	W31	1200	1900	Sliding	45	NNW	None
WIR 5	TND-032-005	W23	1800	900	Fixed	0	WSW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

* Refer to glossary.

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
GARAGE	2600	5410	100	ENE
GARAGE	2600	5410	100	ENE
GARAGE	2400	820	90	NNW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-REFL-CAV1-A	AAC (75mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes
AAC-75-REFL-CAV1-B	AAC (75mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	Yes
DBL-BRICK-110-110-EXP	Double Brick - 110mm/110mm Exposed	0.50	Medium	0.00	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 2	AAC-75-REFL-CAV1-A	3000	4042	NNW	658	Yes
BED 3	AAC-75-REFL-CAV1-A	3000	4230	SSE	658	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 4	AAC-75-REFL-CAV1-A	3000	4230	SSE	657	Yes
BED 5/GUEST	AAC-75-REFL-CAV1-A	3000	999	SSE	656	Yes
BED 5/GUEST	AAC-75-REFL-CAV1-A	3000	4002	WSW	652	No
BED 5/GUEST	AAC-75-REFL-CAV1-A	3000	594	SSE	656	Yes
BED 5/GUEST	AAC-75-REFL-CAV1-A	3000	696	SSE	656	Yes
BED 5/GUEST	AAC-75-REFL-CAV1-A	3000	2669	SSE	656	Yes
BED 5/GUEST	AAC-75-REFL-CAV1-A	3000	713	SSE	656	Yes
ENS 2	AAC-75-REFL-CAV1-A	3000	2011	NNW	658	Yes
ENS 2	AAC-75-REFL-CAV1-A	3000	602	ENE	658	Yes
ENS 2	AAC-75-REFL-CAV1-A	3000	838	NNW	658	Yes
ENS 2	AAC-75-REFL-CAV1-A	3000	602	WSW	658	Yes
ENS 3	AAC-75-REFL-CAV1-A	3000	1515	SSE	657	Yes
ENS 3	AAC-75-REFL-CAV1-A	3000	298	SSE	657	Yes
ENS 4	AAC-75-REFL-CAV1-A	3000	298	SSE	658	Yes
ENS 4	AAC-75-REFL-CAV1-A	3000	1494	SSE	658	Yes
ENS 5	AAC-75-REFL-CAV1-A	3000	2580	NNW	658	Yes
ENS 5	AAC-75-REFL-CAV1-A	3000	5506	WSW	656	No
ENTRY	AAC-75-REFL-CAV1-A	3000	3690	SSE		Yes
GARAGE	DBL-BRICK-110-110-EXP	3000	12752	ENE	698	Yes
GARAGE	AAC-75-REFL-CAV1-B	3000	471	SSE	1330	Yes
GARAGE	AAC-75-REFL-CAV1-B	3000	602	WSW	12156	Yes
GARAGE	AAC-75-REFL-CAV1-B	3000	6831	NNW	704	Yes
GARAGE	AAC-75-REFL-CAV1-B	3000	661	WSW	705	Yes
GARAGE	AAC-75-REFL-CAV1-B	3000	514	SSE	1330	Yes
GARAGE	AAC-75-REFL-CAV1-B	3000	5846	SSE	1330	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
GUEST BED 2	AAC-75-REFL-CAV1-A	3000	961	ENE	12104	Yes
GUEST BED 2	AAC-75-REFL-CAV1-A	3000	800	SSE		Yes
GUEST BED 2	AAC-75-REFL-CAV1-A	3000	1038	SSE		Yes
GUEST BED 2	AAC-75-REFL-CAV1-A	3000	5063	SSE		Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	442	NNW		Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	4302	ENE		Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	3394	NNW	658	Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	3241	NNW	658	Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	4302	WSW	9659	Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	1847	NNW		Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	3000	NNW		Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	1814	NNW		Yes
KITCHEN/FAMILY /DINING	AAC-75-REFL-CAV1-A	3000	433	NNW		Yes
LAUNDRY	AAC-75-REFL-CAV1-A	3000	4460	NNW	658	Yes
MASTER	AAC-75-REFL-CAV1-A	2700	4500	NNW	7151	Yes
PRAYER	AAC-75-REFL-CAV1-A	3000	3000	NNW	658	Yes
PWDR 2	AAC-75-REFL-CAV1-A	3000	1601	NNW	658	Yes
SITTING	AAC-75-REFL-CAV1-A	3000	961	WSW	6418	Yes
SITTING	AAC-75-REFL-CAV1-A	3000	779	SSE		Yes
SITTING	AAC-75-REFL-CAV1-A	3000	1038	SSE		Yes
SITTING	AAC-75-REFL-CAV1-A	3000	5084	SSE		Yes
UF ENS	AAC-75-REFL-CAV1-A	2700	2391	NNW	7151	Yes
UF ENS	AAC-75-REFL-CAV1-A	2700	6322	ENE	659	No
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	4330	ENE	7737	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	3501	ENE	649	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	12453	WSW	657	No
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	3241	NNW	658	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	4300	WSW	3898	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	7530	NNW	2821	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	810	SSE	7318	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	790	SSE	7318	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	5079	SSE	7318	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	1202	SSE	7318	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	3690	SSE	7318	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	1212	SSE	7318	Yes
UF LIVING/STUDY	AAC-75-REFL-CAV1-A	2700	5069	SSE	7318	Yes
UF WIR	AAC-75-REFL-CAV1-A	2700	2415	ENE	659	No
WIP	AAC-75-REFL-CAV1-A	3000	2701	NNW	658	Yes
WIR 5	AAC-75-REFL-CAV1-A	3000	1800	WSW	656	No

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	395.4	0.00
INT-PB	Internal Plasterboard Stud Wall	53.5	2.00
INT-PB	Internal Plasterboard Stud Wall	39.4	2.50

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	19.8	N/A	0.59	Carpet
BED 3	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	20.7	N/A	0.59	Carpet
BED 4	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	20.7	N/A	0.59	Carpet

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 5/GUEST	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	23.6	N/A	0.59	Carpet
CELLAR	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	3.2	N/A	0.59	Carpet
ENS 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	8.5	N/A	0.59	Tile (8mm)
ENS 3	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	7.8	N/A	0.59	Tile (8mm)
ENS 4	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	7.7	N/A	0.59	Tile (8mm)
ENS 5	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	13.3	N/A	0.59	Tile (8mm)
ENTRY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	21.0	N/A	0.59	Carpet
ENTRY HALLWAY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	16.1	N/A	0.59	Carpet
GARAGE	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	89.7	N/A	0.59	Exposed
GUEST BED 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	39.3	N/A	0.59	Carpet
KITCHEN/FAMILY/DINING	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	101.9	N/A	0.59	Tile (8mm)
LAUNDRY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	16.3	N/A	0.59	Tile (8mm)
MASTER	TIMB-001: Suspended Timber Floor	27.1	N/A	0.15	Carpet
PASSAGE 1	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	6.4	N/A	0.59	Carpet
PASSAGE 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	25.4	N/A	0.59	Carpet
PRAYER	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	14.7	N/A	0.59	Carpet
PWDR 1	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.9	N/A	0.59	Tile (8mm)
PWDR 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.5	N/A	0.59	Tile (8mm)
SITTING	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	39.2	N/A	0.59	Carpet
UF ENS	TIMB-001: Suspended Timber Floor	13.0	N/A	0.15	Tile (8mm)
UF LIVING/STUDY	TIMB-001: Suspended Timber Floor	198.8	N/A	0.15	Carpet
UF WIR	TIMB-001: Suspended Timber Floor	13.8	N/A	0.15	Carpet
WC	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.1	N/A	0.59	Tile (8mm)
WIP	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	13.2	N/A	0.59	Tile (8mm)

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
WIR 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	6.3	N/A	0.59	Carpet
WIR 5	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	10.4	N/A	0.59	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
BED 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
BED 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
BED 5/GUEST	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
BED 5/GUEST	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
CELLAR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ENS 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
ENS 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ENS 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ENS 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
ENS 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ENS 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
ENS 5	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
ENS 5	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
GARAGE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	0.00	Yes
LAUNDRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
LAUNDRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
MASTER	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PASSAGE 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PASSAGE 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PRAYER	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
PRAYER	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PWDR 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PWDR 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
PWDR 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
UF ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
UF ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
UF LIVING/STUDY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
UF LIVING/STUDY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
UF WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
UF WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
WC	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
WIR 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
WIR 5	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
WIR 5	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BED 2	4	Downlight	90	Sealed
BED 3	4	Downlight	90	Sealed
BED 4	4	Downlight	90	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BED 5/GUEST	5	Downlight	90	Sealed
CELLAR	1	Downlight	90	Sealed
ENS 2	2	Downlight	90	Sealed
ENS 2	1	Exhaust Fan	350	Sealed
ENS 3	2	Downlight	90	Sealed
ENS 3	1	Exhaust Fan	350	Sealed
ENS 4	2	Downlight	90	Sealed
ENS 4	1	Exhaust Fan	350	Sealed
ENS 5	3	Downlight	90	Sealed
ENS 5	1	Exhaust Fan	350	Sealed
ENTRY	4	Downlight	90	Sealed
ENTRY HALLWAY	1	Downlight	90	Sealed
GUEST BED 2	8	Downlight	90	Sealed
KITCHEN/FAMILY/DINING	3	Downlight	90	Sealed
KITCHEN/FAMILY/DINING	1	Exhaust Fan	350	Sealed
LAUNDRY	3	Downlight	90	Sealed
MASTER	5	Downlight	90	Sealed
PASSAGE 1	1	Downlight	90	Sealed
PASSAGE 2	5	Downlight	90	Sealed
PRAYER	3	Downlight	90	Sealed
PWDR 1	1	Downlight	90	Sealed
PWDR 2	1	Downlight	90	Sealed
PWDR 2	1	Exhaust Fan	350	Sealed
SITTING	8	Downlight	90	Sealed
UF ENS	3	Downlight	90	Sealed
UF ENS	1	Exhaust Fan	350	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
UF LIVING/STUDY	40	Downlight	90	Sealed
UF WIR	3	Downlight	90	Sealed
WC	1	Downlight	90	Sealed
WC	1	Exhaust Fan	350	Sealed
WIP	3	Downlight	90	Sealed
WIR 2	1	Downlight	90	Sealed
WIR 5	2	Downlight	90	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
BED 2	1	1300
BED 3	1	1300
BED 4	1	1300
BED 5/GUEST	1	1300
GUEST BED 2	1	1500
MASTER	1	1300
SITTING	1	1500
UF LIVING/STUDY	2	1500

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.50	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)
None				

Appliance *schedule*

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

* Refer to glossary.

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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	see exposure categories below
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 airgap 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.
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)

* Refer to glossary.

CONTEXT

C100-	COVER PAGE
SP01-	SPECIFICATIONS PAGE
BX01-	BASIX & ENERGY RATING NOTES
DA01-	SITE PLAN 1
DA02-	SITE PLAN 2
DA03-	OVERALL GROUND FLOOR LAYOUT
DA04-	GROUND FLOOR PLAN (MAIN RESIDENCE)
DA05-	UPPER FLOOR PLAN (MAIN RESIDENCE)
DA06-	ROOF PLAN (MAIN RESIDENCE)
DA07-	ELEVATIONS (MAIN RESIDENCE)
DA08-	SECTIONS (MAIN RESIDENCE)
DA09-	SHED (FLOOR PLAN, ROOF PLAN, ELEVATIONS & SECTION)

IMAGES ABOVE CONCEPT ONLY

R INVENTIVE BUILDING DESIGN

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LOT 104 DP 270586 MURRUMBATEMAN

DRAWING COVER PAGE

PROJECT PROPOSED NEW RESIDENCE

CLIENT GURPREET SINGH

SCALE	NTS
DRAWN	RJ
PRINT DATE	13/01/2025
PROJ No.	2412
DWG No	CP001

PART 5.6 MASONRY COMPONENTS AND ACCESSORIES

5.6.4 Mortar Joints

(1) Unless otherwise specified, masonry bed and perpend joints must have a nominal thickness of 10 mm.
(2) Raked joints are not to be used in saline environments or areas subject to heavy industrial airborne pollution.
(3) Where raked joints are used the depth of raking must not be—
(a) closer than 5 mm to any perforation in cored unit masonry or 20 mm in hollow unit masonry; or
(b) more than 5 mm for masonry units at least 90 mm wide; or
(c) more than 10 mm for masonry units at least 110 mm wide

5.6.8 Vertical Articulation Joints

5.6.8 Vertical articulation joints
(1) Vertical articulation joints must be provided in masonry walls in accordance with (2), except in walls constructed on where the soil classification is A or S (see 4.2.24).
(2) Articulation joints between masonry elements must have a width of not less than 10 mm and be provided (see Figures 5.6.8a and 5.6.8b)—
(a) in straight, continuous walls with openings less than 900 mm x 900 mm or walls without openings — at not more than 6 m centres and within 4.5 m, but not closer than 470 mm of all corners; and
(b) in straight, continuous walls with openings more than 900 mm x 900 mm — at not more than 5 m centres and located so that they are not more than 1.2 m away from openings; and
(c) where the height of the wall changes by more than 20% — at the position of change in height; and
(d) where a wall changes in thickness; and
(e) at control or construction joints in footings or slabs; and
(f) at junctions of walls constructed of different masonry materials.
(3) Articulation joints must not be located adjacent to arched openings.
(4) Articulation joints must be filled with flexible sealant that is supported during installation by—
(a) a compressible foam or polystyrene filler (see Figures 5.6.8d and 5.6.8e); or
(b) a purpose made backer rod (see Figures 5.6.8c, 5.6.8d, 5.6.8e and 5.6.8f).

5.7.3 Damp-proof courses and flashings – material

Damp-proof courses and flashings must consist of—
(a) a material that complies with AS/NZS 2904; or
(b) embossed black polyethylene film of high impact resistance and low slip, with a nominal thickness of 0.5 mm prior to embossing, and comply with clause 7.6 of AS/NZS 2904; or
(c) polyethylene coated metal, that has an aluminium core of not less than 0.1 mm thick, is coated both sides with bitumen adhesive enclosed in polyethylene film of not less than 0.1 mm thick oneach face, and has a nominal total thickness of not less than 0.5 mm prior to embossing; or
(d) bitumen impregnated materials of not less than 2.5 mm thick, that comply with clause 7.5 of AS/NZS 2904; or
(e) termite sheet materials complying with Part 3.45 (with no penetrations) serving the purpose of a and/or that is continuous through the wall or pier.

5.7.4 Damp-proof courses and flashings – installation

(1) and must be—
(a) located so as to form a continuous damp-proofing barrier—
(i) around the bottom perimeter of walls where constructed on a concrete slab; and
(ii) in walls and piers below suspended floors; and
(iii) where a masonry wall passes through a roof; and
(iv) where a roof abuts an external masonry wall; and
(v) to the bottom and tops of and doors and the like in accordance with (3), except a or a need not be provided to the top of a or door where the opening is protected by an eave of a width more than 3 times the height of the masonry veneer above the opening; and
(b) continuous through the wall or pier and be visible from the outside face of the wall.
(2) The location of a , or serving as a , must be not less than—
(a) 150 mm above the adjacent ground level; or
(b) 75 mm above the finished surface level of adjacent paved, concreted or landscaped areas that slope away from the wall; or
(c) 50 mm above finished paved, concreted or landscaped areas complying with 3.3.3(b)(ii)6 and protected from the direct effects of the weather by a carport, verandah or the like; or
(d) in —
(i) 15 mm above finished paved, concreted or landscaped areas; or
(ii) 0 mm above finished paved, concreted or landscaped areas if the is protected from the direct effects of the weather by a carport, verandah or the like.
(3) Sill and head serving openings must be—
(a) installed so that the extends not less than 150 mm beyond the reveals on each side of the opening; and
(b) located not more than—
(i) one course below the sill brick course; and
(ii) 300 mm above the opening; and
(c) turned up in the not less than 150 mm above the opening; and
(d) embedded not less than 30 mm into—
(i) for masonry veneer, the masonry leaf; and
(ii) for masonry, the outer masonry leaf; and
(e) attached to the or wall framing.

5.7.5 Weepholes

(1) Except where excluded by (2), open perpend joints (weepholes) must be created in the course immediately above any (including above any acting as a) and be—
(a) a minimum of 50 mm in height, by the width of the vertical mortar joint; and
(b) at not more than 1.2 m centres; and
(2) Weepholes are not in the following locations:
(a) Where head openings are less than 1.2 m wide.
(b) Beneath and door sills.

FLASHING

Location: Sandwich flashing between mortar except where on lintels.
Pointing: Point up joints around flashing to fill voids.

MEMBRANE SYSTEMS

Provide a proprietary membrane system certified as suitable for a current Branz Appraisal Certificate intended external water proofing by the following: A current BRANZ appraisal certificate.
Shower tray: Purpose made water proof jointless shower tray with all upstands at least 50mm higher then the hob upstand. Set the hob masonary on the inside of the tray hob upstand.
Provide bond breakers at wall/floor and hob/wall junctions and at control joints where the membrane is bonded to the substrate.

MORTAR MIXING

Measure volumes accurately to achieve the documented proportions, machine mix for at least 6 minute.
Bond: stretcher bond.
Clearance for timber frame shrinkage: as follows: Timber frame shrinkage in brick veneer timber frame construction, leave clearance between window frames and brick sills and between roof frames and brick veneer as follows:
Accommodate for unseasoned floor timbers.
single story frames and ground floor windows 10mm , 2 storey frames and upper floor windows 20mm.
Mortar joints:
Externally tool to give a dense water shedding finish.
Internally if walls are to be plastered to not rake more then 10mm to give a key.
Thickness: 10mm
Face brickwork:
Clean progressively as the work proceeds to remove mortar smears, stains and discoloration. Do not erode joints if using pressure spraying.
Sills and thresholds:
Solidly bed sills and thresholds and lay them with the top surface drain away from the building.
Cavity work:
Provide minimum cavity widths in conformance with the following:
Masonary walls 50mm.
Masonary veneer walls 40mm between the masonary leaf and the load bearing frame and a 25mm min. gap between the masonary leaf and sheet bracing.

NCC 2022 PART 9.2 FIRE SEPERATION OF EXTERNAL WALLS

9.2.3 Construction of external walls

External walls (including gable walls) require to be fire resisting, and must commence from footings or ground slab, extend to the underside of a non-combustible roof covering or a non-combustible eaves lining. for further details of wall protection refer to:

9.2.5 Protection of Class 1 buildings — Class 10a between Class 1 and the allotment boundary

9.2.6 Protection of Class 1 buildings—Class 10a between Class 1 and other buildings on allotment

9.2.7 Protection of Class 1 buildings—separation of Class 10a buildings on an allotment

NCCS 2022 PART 9.3 FIRE PROTECTION OF SEPARATING WALLS AND FLOORS

9.3 SEPERATING WALLS

(a) Seperating wall between class 1 building, or a wall that separates a class 1 building from a class 10a building which is not associated to that class 1 building must:
(a) be constructed-
(i) have an FRL of not less then 60/60/60 and
(ii) of masonry not less than 90 mm thick; and
(b) Commence at footings or ground slab (see Figure 9.3.1a), except for horizontal projections to which 9.3.41 applies (see Figure 9.3.4); and
(c) extend-
(i) if the building has a roof covering, to the underside of the roof covering (see Figure 9.3.1a and Figure 9.3.1b); or
(ii) if the building has a roof covering, to not less than 450 mm above the roof covering (see Figure 9.3.1a); and
(d) comply with (2) to (5) and 9.3.22 as applicable.

9.3.3 Roof Lights

Combustible roof lights, skylights or the like installed in a roof or part of a roof to have a covering must—
(a) have an aggregate area not more than 20% of the roof or part of the roof; and
(b) be not less than 900 mm from the vertical projection of a extending to the underside of the roof covering.
(c)

NCC 2022 PART 9.5 SMOKE ALARMS AND EVACUATION LIGHTING

9.5.1 Smoke alarm requirements

Smoke alarms must—
(a) be located in—
(i) a Class 1a building in accordance with 9.5.26 and 9.5.47 and
(ii) a Class 1b building in accordance with 9.5.38 and 9.5.49 and
(b) comply with AS 3786, except that in a Class 10a where the use of the area is likely to result in smoke alarms causing spurious signals, any other alarm deemed suitable in accordance with AS 1670.1 may be installed provided that smoke alarms complying with AS 3786 are installed elsewhere in the Class 1 building; and
(c) be powered from the consumer mains source where a consumer mains source is supplied to the building; and
(d) be interconnected where there is more than one alarm

STAIRCASE CONSTRUCTION

In accordance with NCC 2022 Part 3.9.1 Stairways and ramp construction & Part 3.9.2 Barriers and handrails

DOORS AND WINDOWS

All windows to be aluminium framed, unless otherwise specified.

LIGHTS

To comply with NCC 2022 Part 13.7.6

ARTIFICIAL LIGHTING

13.7.6 Artificial lighting

(1) The or 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 allowance in (1) may be increased by dividing it by the relevant adjustment factor for a control device in (6) as applicable.
(3) When designing the or , 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.

WATER HEATER

In hot water supply system to comply with NCC 2022 Part 13.7.7

TIMBER FRAMING

All timber works to be done in accordance with the timber framing code and manufacturers spec. Frames to be built and constructed to AS 1684.

INSULATION REQUIREMENTS

Refer to EER report.

BUSHFIRE

There is no bushfire mitigation on this block

BRICKS

Materials and construction to AS 4773.1 Clause 4.3 Standard to AS 4455.1 and 4455.3

Mortar materials sand: fine aggregate with a low clay content and free from effloresing salts, selected for grading and colour for brickwork. Proportions: to AS 4773.1 table 3.1

DRAINAGE CONNECTIONS

Floor wastes: Turn membrane down at least 50mm into the floor waste drainage flanges and adhere to form a water proof connection.
Enclosed shower with hob: Extend internal membrane over the hob and into the room at least 50mm.
Uninclosed showers: Extend membranes at least 1500mm into the room from the shower rose outlet on the wall.
Membrane vertical penetrations: Pipes, ducts and vents: Provide seperate sleeves for all pipes, ducts and vents and have fixed to the substrate .
Membrane horizontal Protection: Sleeves: provide a flexible flange to all penetrations, bonded to the penetration and to the membrane.
Overlaying finishes on membrane: Protect water proof membrane with compatible water resistant surface materials that do not cause damage to the membrane bonded or partially bonded systems.
If the topping or bedding mortar requires to be bonded to the membrane provide control joints in the topping or bedding mortar to reduce the control over the membrane.
Keep traffic off membrane surfaces until bonding has set 24 hours after laying. Replace or repair any damaged work.

STEEL LINTELS

Angles and flats sizes to AS 4773.1 table 12.1, cold framed lintels designed to AS 4600, corrosion protection to AS 2699.3
Galvanizing: do not cut after galvanizing.

BUILT IN COMPONENTS

Durability class of built in comonents to AS 4773.1 table 4.1

WALL TIES

Standard to AS 2699.1
Type A
Spacing: to AS 4773.2 Clause 9.7 and 10.6
Corrosion protection to AS 2699.1

FLASHING AND DAMP PROOF COURSE

Standard to AS 2904

WINDOW AND GLAZING DETAILS TO EER REPORT

Windows selection and installation to AS 2047.
Glazing selection and installation to AS 1288.
Flashing to AS 2904.
Aluminium extrusions to AS 1866.
Safety glass to AS 2208.
Aluminium frame finishes powder coating to AS 3715- grade architectural coating.
Anodising to AS1231, Thickness : >= 15 microns to 20 microns.
Insect screens: Aluminium extruded or folded box frame sections with mesh fixing channels, mitered, staked and screwed at corners. Provide and extruded frame section where necessary to adapt to window opening gear.
Mesh: Bend the mesh into the frame channel with a continuous resistant gasket so that the mesh is taut and without distortion.
Bushfire screen and sills: Protect windows and doors from the ingress of embers to AS 3959.

RETAINING WALLS

All retaining walls to engineers specification and design.

WATER SUPPLY AND DRAINAGE

To Hydraulics engineers specification and design.

ELECTRICAL INSTALLATION

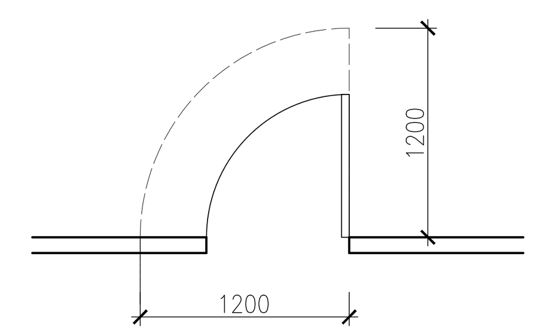
Electrical installation to AS 3008.1.1 and SAA HB 301
Luminairs to AS 60598.1
Minimum enegry performance standards:
-general to AS 4783.2 and AS 4782.2
-Self ballasted lamps to AS 4847.2
-Incandescent lamps to AS 4934.2

SERVICES PLAN

To hydraulic engineers specifications.

NCC 2022 PART 10.4.2 construction of sanitary compartments

The door to fully close in sanitary compartments must:
a) open outwards, or
b) slide, or
c) be readily removable from outside of compartment, unless there is a clear space of at least 1.2m, measured in accordance with figure 10.4.2, between the closet pan within the sanitary compartment and the doorway.



NCC 2022 figure 10.4.2
Construction on sanitary compartments

Certificate No. #HR-G8N172-01

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M: 0407908688

INVENTIVE BUILDING DESIGN

LOT 104 DP 270586 MURRUMBATEMAN		SCALE	1:400 @ A3
		DRAWN	RJ
DRAWING	SPECIFICATIONS	PRINT DATE	13/01/2025
		PROJ No.	2412
PROJECT	PROPOSED NEW RESIDENCE		
CLIENT	GURPREET SINGH	DWG No	SP01

BASIX & ENERGY RATING COMMITMENTS CERTIFICATE

WATER

FIXTURES;
- ALL SHOWERHEADS WITH A MINIMUM RATING OF 4 STARS (>6 BUT <=7.5L/MIN)
- ALL TOILET FLUSHING SYSTEM WITH A MINIMUM RATING OF 4 STAR
- KITCHEN TAPS WITH A MINIMUM RATING OF 4 STAR
- THE APPLICATION MUST INSTALL BASIN TAPS WITH A MINIMUM RATING OF 4 STARS IN EACH BATHROOM IN THE DEVELOPMENT

ALTERNATIVE WATER;
RAINWATER TANK
- INSTALL MINIMUM 700L RAINWATER TANK
- COLLECT RAIN RUNOFF FROM AT LEAST 600m² ALL SHED AND RESIDENCE ROOF AREA
- CONNECT TO;
  - AT LEAST 1 OUTDOOR TAP
  - COLD WATER TAP THAT SUPPLY CLOTHES WASHERS IN THE DEVELOPMENT

SWIMMING POOL

SWIMMING POOL MUST NOT HAVE A VOLUME GREATER THEN 80 KILOLITRES. MUST INSTALL A PUMP AND A TIMER FOR THE PUMP IN THE DEVELOPMENT.

THERMAL PERFORMANCE & MATERIALS

FLOOR;
- CONCRETE WAFFLE SLAB ON GROUND TO RESIDENTIAL PART OF THE DEVELOPMENT

EXTERNAL WALL (EXCLUDING GARAGE);
- AAC VENEER, TIMBER FRAME, H2 TREATED SOFTWOOD- R2.5 INSULATION + SISILATION

INTERNAL WALL;
- INTERNAL GARAGE WALLS- R2.5 INSULATION
- INTERNAL LAUNDRY & POWDER 2 WALLS- R2.0 INSULATION

CEILING AND ROOF (EXCLUDING GARAGE);
- CEILING INSULATION TO BE R6.0 + SISILATION BELOW ROOF SHEETING

WINDOWS, GLAZED DOORS AND SKYLIGHTS;
WINDOWS
- ALUMINUM DOUBLE GLAZED THROUGHTOUT
  - WINDOWS TO KITCHEN/LIVING & DINING TO BE THERMALLY BROKEN
  - ALL OTHER WINDOWS TO BE LOW-E EXCEPT WET AREAS AND GARAGE WITH THE FOLLOWING VALUES:

Glazing Values used in this compliance option

Opening Type	Type of Glass	U-Value	SHGC
Fixed Windows	TB Double Glazed	2.05	0.66
Sliding Window	TB Double Glazed	2.60	0.62
Sliding Door	TB Double Glazed	2.25	0.61
Fixed Windows	DG + Low-E	2.92	0.60
Sliding Windows	DG + Low-E	3.50	0.55
Awning Windows	DG + Low-E	3.45	0.53
Sliding Doors	DG + Low-E	3.03	0.59

ENERGY COMMITMENTS

HOT WATER;
- THE APPLICANT MUST INSTALL THE FOLLOWING HOT WATER SYSTEM IN THE DEVELOPMENT, OR A SYSTEM WITH A HIGHER ENERGY RATING: GAS INSTANTANEOUS WITH A PERFORMANCE OF 5 STAR.

COOLING SYSTEM;
- THE APPLICANT MUST INSTALL THE FOLLOWING COLING SYSTEM, OR HIGHER ENERGY RATING, IN AT LEAST 1 LIVING AND 1 BEDROOM AREA: 1-PHASE AIRCONDITIONING NOT DUCTED - 2.5 STAR

HEATING SYSTEM;
- THE APPLICANT MUST INSTALL THE FOLLOWING HEATING SYSTEM, OR HIGHER ENERGY RATING, IN AT LEAST 1 LIVING AND 1 BEDROOM AREA: 1-PHASE AIRCONDITIONING NOT DUCTED - 2.5 STAR

VENTILATION;
- THE APPLICANT MUST INSTALL FOLLOWING EXHAUST SYSTEMS IN THE DEVELOPMENT:
  - AT LEAST 1 BATHROOM: INDIVIDUAL FAN, DUCTED TO FAÇADE; OPERATION CONTROL: MANUAL SWITCH ON/OFF
  - KITCHEN: INDIVIDUAL FAN, DUCTED TO FAÇADE OR ROOF; OPERATION CONTROL: MANUAL SWITCH ON/OFF
  - LAUNDRY: NATURAL VENTILATION ONLY, OR NO LAUNDRY; OPERATION CONTROL: N/A

NATURAL LIGHTING;
- THE APPLICANT MUST INSTALL A WINDOW AND /OR SKYLIGHT IN KITCHEN & 5 BATHROOMS/TOILETS OF THE DWELLING FOR NATURAL LIGHTING.

ARTIFICIAL LIGHTING;
THE APPLICANT MUST ENSURE THAT THE A MINIMUM OF 80% OF LIGHTING FIXTURES ARE FITTED WITH FLUORESCENT, COMPACT FLUORESCENT, OR LIGHT-EMITTING DIODE (LED) LAMPS: NOMINATING IC/ICF DOWNLIGHTS

ALTERNATIVE ENERGY;
THE APPLICANT MUST INSTALL A PHOTOVOLTAIC SYSTEM AS PART OF THE DEVELOPMENT'S ELECTRICAL SYSTEM. THE SYSTEM MUST CONSIST OF PHOTOVOLTAIC COLLECTORS WITH THE CAPACITY TO GENERATE AT LEAST 4.5 PEAK KILOWATTS OF ELECTRICITY, INSTALLED AT AN ANGLE BETWEEN 10° AND 25° TO THE HORIZONTAL FACING NORTHWEST

OTHER;
- THE APPLICANT MUST INSTALL A GAS COOKTOP & ELECTRIC OVEN IN THE KITCHEN OF THE DWELLING .
- THE APPLICANT MUST INSTALL A FIXED OUTDOOR CLOTHES DRYING LINE AS PART OF THE DEVELOPMENT.

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LOT 104 DP 270586 MURRUMBATEMAN

DRAWING SITE PLAN

PROJECT PROPOSED NEW RESIDENCE

CLIENT GURPREET SINGH

SCALE	1:400 @ A1 1:800 @ A3
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DWG No	DA01

GENERAL NOTES

-Brick on edge sills throughout
-All concrete slabs and footings shall be determined by site classification and AS 2870.1
-Provide termite protection to code in accordance with AS 3660-2000 part 1,2 and 3.
-All timber framing and construction must comply with the current version of the timber framing code AS 1684 and the NCC 2022
-All insulation to comply with Energy Rating Report.

-Provide smoke alarms in accordance with NCC 2022 Part 9.5 and AS 3766. Wiring to AS 3000

-All windows and glazing to all relevant codes and standards and in accordance with Energy Rating Report.
-All operable windows and doors to have fly screens on aluminium frames, powdercoat colour to match door and window frames.
-All operable doors and windows to have factory fitted fly screens on exterior

-All fire rated separation must be undertaken in accordance with the NCC 2022 and all relevant Australian standards. All fire rating construction must be certified by a qualified professional.

-Refer to structural engineers documents for all structural components.
-Bathroom, w.c, Ens and Laundry doors: fit frame type so that door is readily removable from outside of compartment. Sliding cavity doors allow lock set readily openable from outside of compartment.

-All windows to have brick on edge window sills with damp proof membrane under, all to meet code.

-Where proprietary light weight party wall systems specified between dwellings, all to manufacturers details as per NCC requirements.

-Provide mechanical ventilation and artificial lighting to NCC requirements where required.

-FFL's are subject to change and are up to builders discretion, to be discussed and agreed upon with client.

-Confirm all levels and contours on site against levels shown on site plan prior to commencement of construction. Builder is responsible to ensure all information shown in these documents regarding levels is accurate and represents existing on site levels.

-For sites less than 3,000m2, development complies with the Environment Protection Authority, *Environment Protection Guidelines for Construction and Land Development in the ACT*, August 2007.

-Block boundaries, contours, services and easements to be verified on site prior to construction.

-Retaining wall heights and all levels to suite site conditions, final heights to be confirmed by builder.

-Builder to provide all labour, materials, fittings, paint, permits, insurances etc. necessary for the proper completion of the works and ensure that all labour and materials in all trades are the best of the respective kinds.

- Verify all services, ie storm water and sewer ties.

-All contractore to inform themselves of the scope of work before commencing.

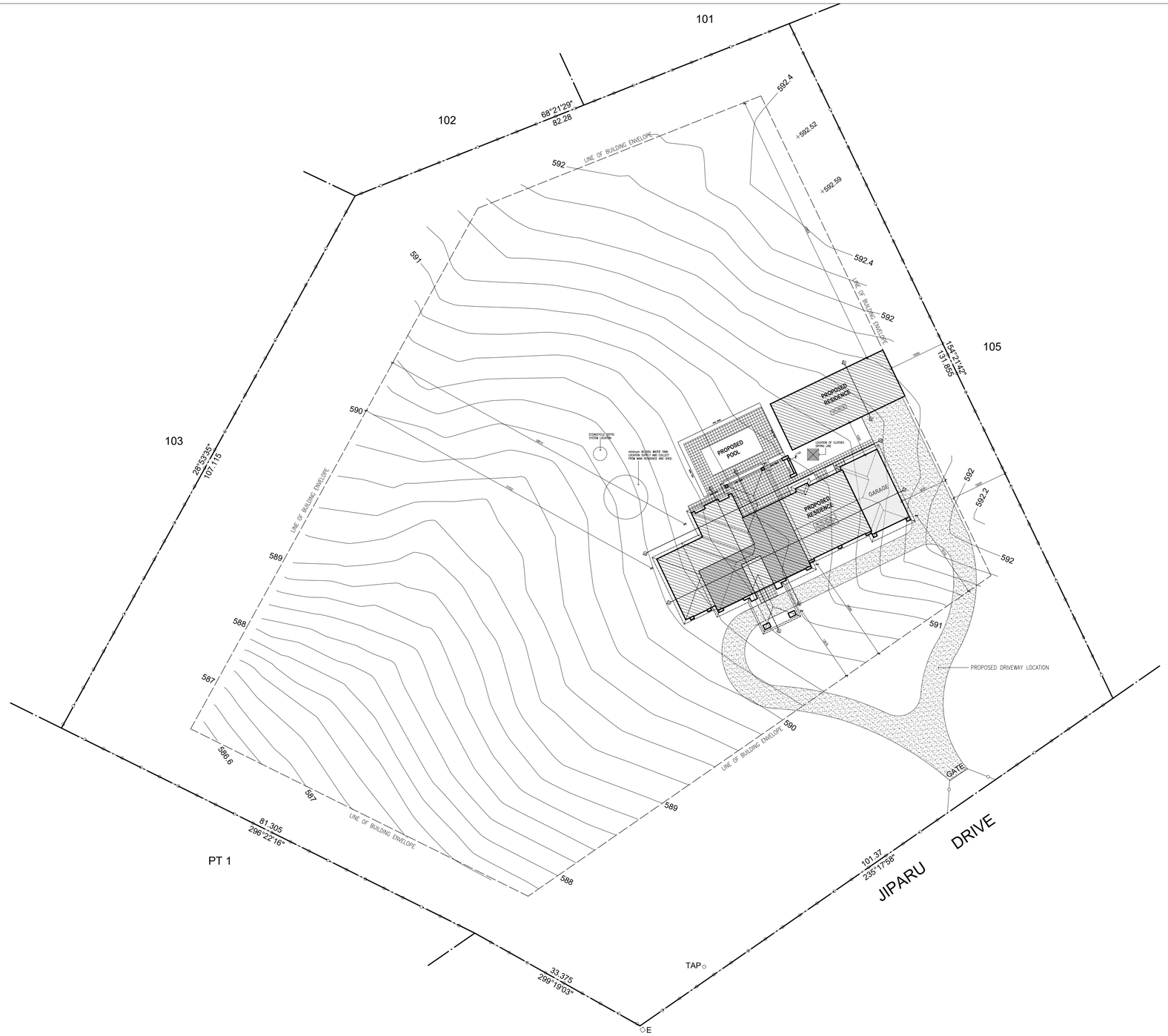
-Follow figure dimensions only. Check and verify dimensions before starting and report any discrepancies to designer.

-Building setbacks, easements and dimensions to be verified by the surveyor and certifier prior to commencing of any work.

-Materials and workmanship to be in accordance with the NCC, and all other relevant codes and Australian Standards.

-Water tightness to main subcontractors responsibility.

AREA ANALYSIS:	
SITE AREA	19021m²
RESIDENCE	
GROUND FLOOR LIVING AREA	486.7m²
UPPER FLOOR LIVING AREA	157.9m²
GARAGE AREA	93.4m²
TOTAL AREA GFA	738.0m²
ALFRESCO	46.5m²
BALCONY	46.5m²
PORTICO	43.3m²
SHED	
FLOOR AREA	198m²



SITE PLAN
1:400 @ A1 1:800 @ A3

NORTH

INVENTIVE BUILDING DESIGN
7 DIBBLER CRESCENT
THROSBY
ACT
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LOT 104 DP 270586 MURRUMBATEMAN

DRAWING SITE PLAN
PROJECT PROPOSED NEW RESIDENCE
CLIENT GURPREET SINGH

SCALE	1:400 @ A1 1:800 @ A3
DRAWN	RJ
PRINT DATE	13/01/2025
PROJ No.	2412
DWG No	DA01


591
592.4
592
LINE OF BUILDING ENVELOPE
105
154°21'42"
131.855
10000
PROPOSED RESIDENCE
FFL 591.20
PROPOSED POOL
ECONOCYCLE SEPTIC SYSTEM LOCATION
minimum 90,000L WATER TANK LOCATION SUPPLY AND COLLECT FROM MAIN RESIDENCE AND SHED.
LOCATION OF CLOTHES DRYING LINE
GARAGE
PROPOSED RESIDENCE
GF FFL 591.20
590
589
588
587
592.2
592
591
590
PROPOSED DRIVEWAY LOCATION
LINE OF BUILDING ENVELOPE
GATE
NORTH
SITE PLAN
1:200 @ A1 1:400 @ A3
589
Certificate No. #HR-G8N172-01
Scan QR code or follow website link for rating details.
Assessor name Albert Burton
Accreditation No. DMN/21/2045
Property Address Lot 104 (#50) Jiparu Drive, Murrumbateman, NSW, 2582
http://www.hero-software.com.au/pdf/HR-G8N172-01

INVENTIVE BUILDING DESIGN

7 DIBBLER CRESCENT
THROSBY
ACT
2914
M: 0407908688

LOT 104 DP 270586 MURRUMBATEMAN

DRAWING	SITE PLAN	SCALE	1:200 @ A1 1:400 @ A3
PROJECT	PROPOSED NEW RESIDENCE	DRAWN	RJ
CLIENT	GURPREET SINGH	PRINT DATE	13/01/2025
		PROJ No.	2412
		DWG No	DA02

592

592

592.2

OVERALL GROUND FLOOR LAYOUT

1:100 @ A1 1:200 @ A3

INVENTIVE BUILDING DESIGN

7 DIBBLER CRESCENT
THROSBY
ACT
2914
M: 0407908688

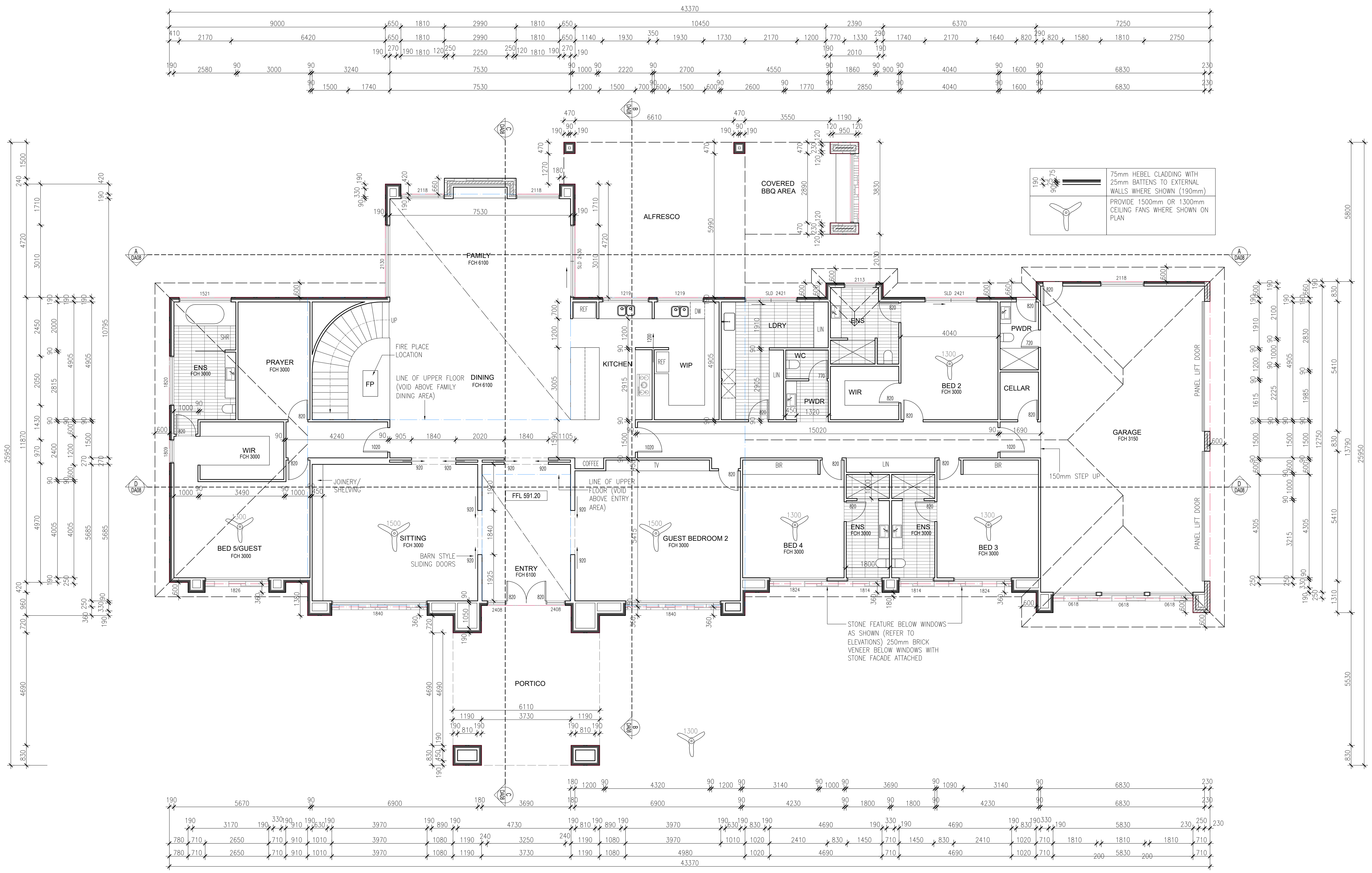
LOT 104 DP 270586 MURRUMBATEMAN

DRAWING	OVERALL GROUND FLOOR LAYOUT
PROJECT	PROPOSED NEW RESIDENCE
CLIENT	GURPREET SINGH

SCALE	1:100 @ A1 1:200 @ A3
DRAWN	RJ
PRINT DATE	13/01/2025
PROJ No.	2412
DWG No.	DA03

AREA ANALYSIS:

SITE AREA	19021m²
RESIDENCE	
GROUND FLOOR LIVING AREA	486.7m²
UPPER FLOOR LIVING AREA	157.9m²
GARAGE AREA	93.4m²
TOTAL AREA GFA	738.0m²
ALFRESCO	46.5m²
BALCONY	46.5m²
PORTICO	43.3m²



GROUND FLOOR PLAN (MAIN RESIDENCE)

1:100 @ A1 1:200 @ A3

INVENTIVE BUILDING DESIGN
7 DIBBLER CRESCENT THROSBY ACT 2914
M: 0407908688

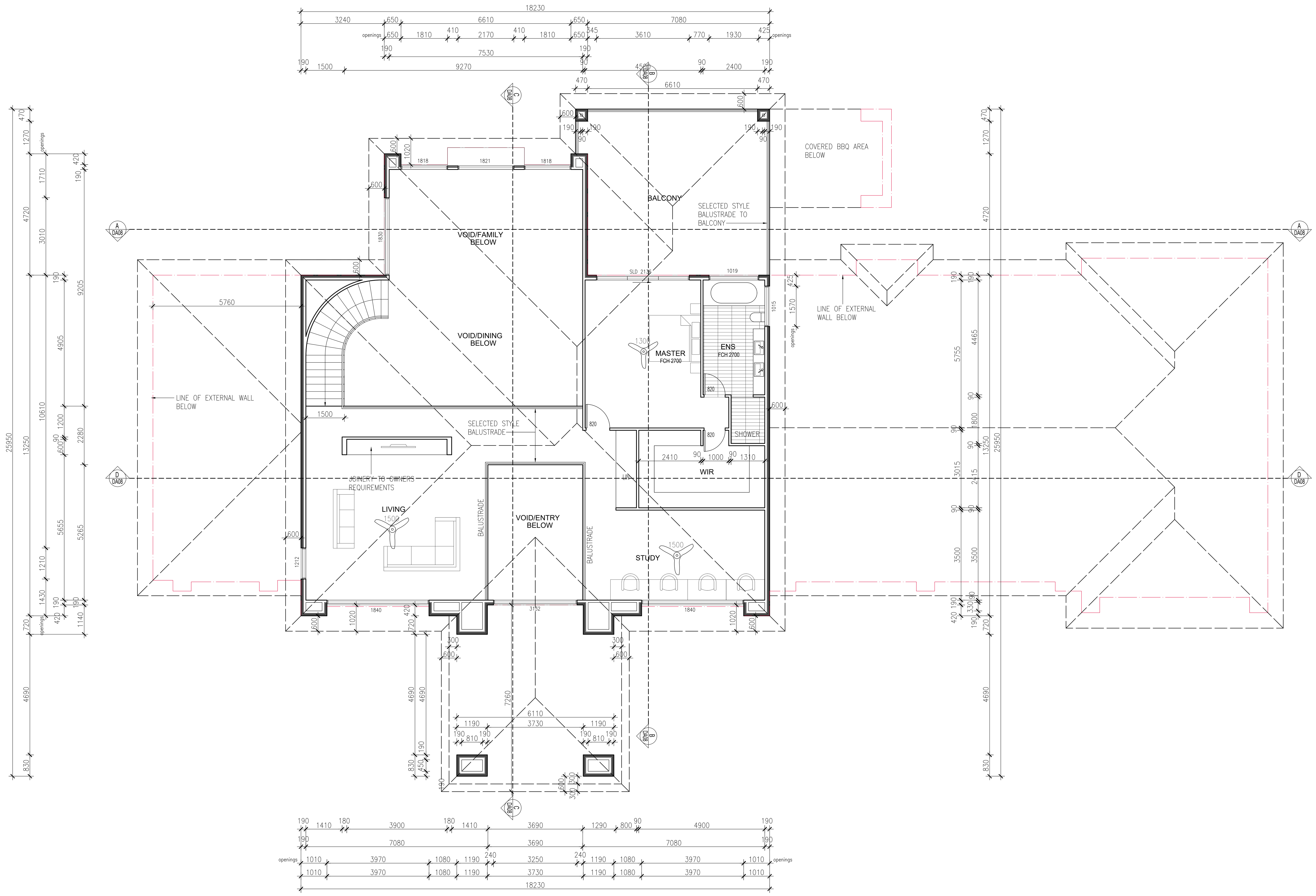
LOT 104 DP 270586 MURRUMBATEMAN

DRAWING	GROUND FLOOR PLAN (MAIN RESIDENCE)
PROJECT	PROPOSED NEW RESIDENCE
CLIENT	GURPREET SINGH
SCALE	1:100 @ A1 1:200 @ A3
DRAWN	RJ
PRINT DATE	13/01/2025
PROJ No.	2412
DWG No	DA04

Certificate No. #HR-G8N172-01

AREA ANALYSIS:

SITE AREA	19021m²
RESIDENCE	
GROUND FLOOR LIVING AREA	486.7m²
UPPER FLOOR LIVING AREA	157.9m²
GARAGE AREA	93.4m²
TOTAL AREA GFA	738.0m²
ALFRESCO	46.5m²
BALCONY	46.5m²
PORTICO	43.3m²



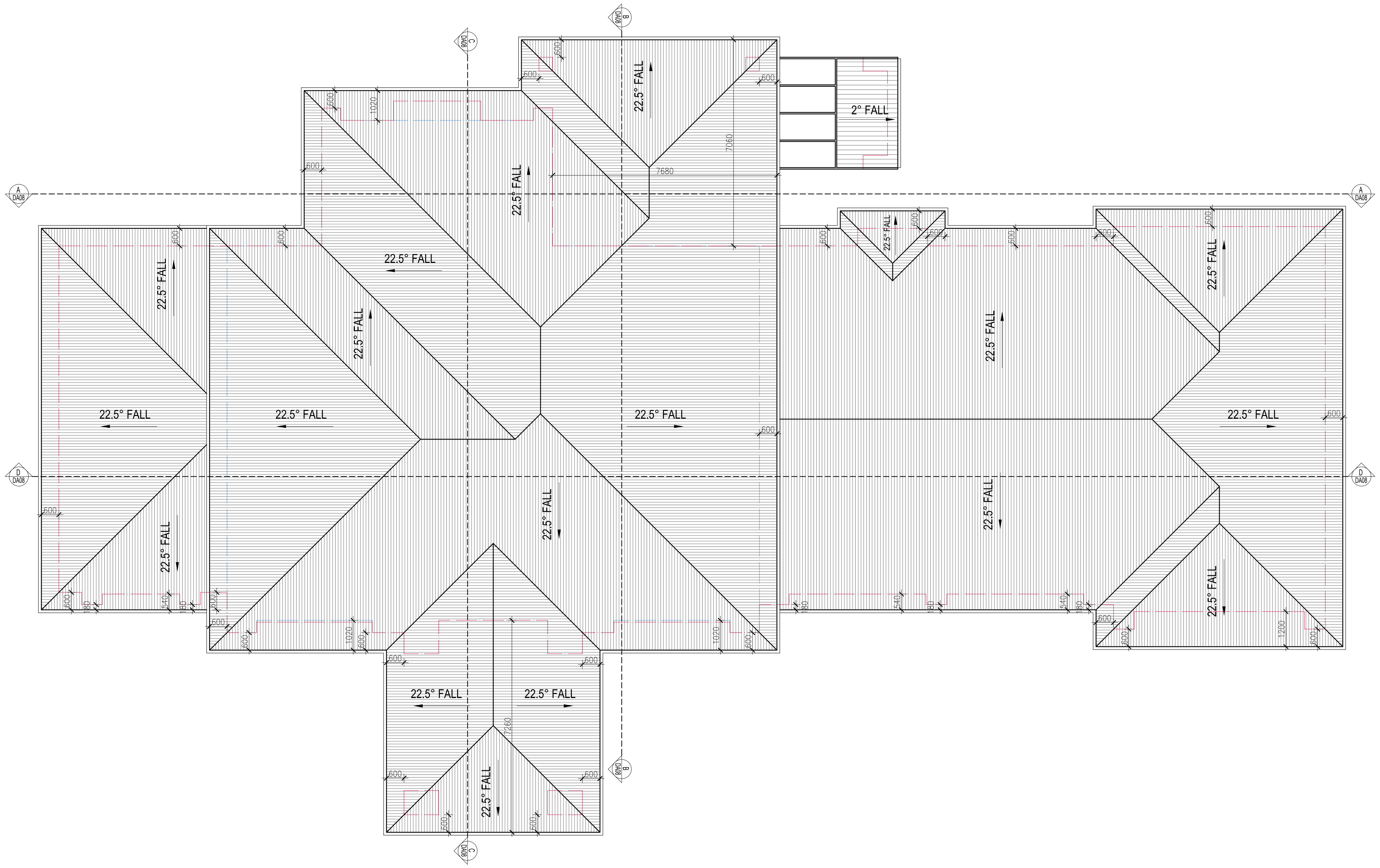
UPPER FLOOR PLAN (MAIN RESIDENCE)

1:100 @ A1 1:200 @ A3

INVENTIVE BUILDING DESIGN
7 DIBBLER CRESCENT
THROSBY
ACT
2914
M: 0407908688

LOT 104 DP 270586 MURRUMBATEMAN

DRAWING	UPPER FLOOR PLAN (MAIN RESIDENCE)	SCALE	1:100 @ A1 1:200 @ A3
PROJECT	PROPOSED NEW RESIDENCE	DRAWN	RJ
CLIENT	GURPREET SINGH	PRINT DATE	13/01/2025
		PROJ No.	2412
		DWG No	DA05



ROOF NOTES:

-KLIP LOCK COLORBOND ROOF SHEETING ON 2° ROOF PITCH.
-CUSTOM ORB COLORBOND ROOF SHEETING ON 22.5° ROOF PITCH.

INSTALL TO MANUFACTURERS RECOMMENDATIONS.
BUILDER TO PROVIDE ROOF INSTALLATION SPECIFICATIONS FROM SELECTED MANUFACTURER.

-ALL EAVES, GUTTERS TO TO BE COLORBOND QUAD GUTTERING, TO BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS.

-PROVIDE FASCIA FLASHING AND PARAPET CAPPING AS REQUIRED.

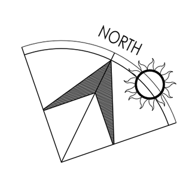
-DOWN PIPES AND SPREADERS TO BE COLORBOND TO MATCH GUTTERING. FOR LOCATION OF DOWN PIPES REFER TO HYDRAULICS PLAN.

-PROVIDE PAINTED F.C SHEET LINING TO ALL EAVES.

-PROVIDE CEILINGS TO ALL OUTDOOR ROOFED AREAS AND UNDER MAIN HOUSE ROOF.

ROOF PLAN (MAIN RESIDENCE)

1:100 @ A1 1:200 @ A3



Certificate No. #HR-G8N172-01
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Assessor name: Albert Burton
Accreditation No.: DMN/21/2045
Property Address: Lot 104 (#50) Jiparu Drive, Murrumbateman, NSW, 2582
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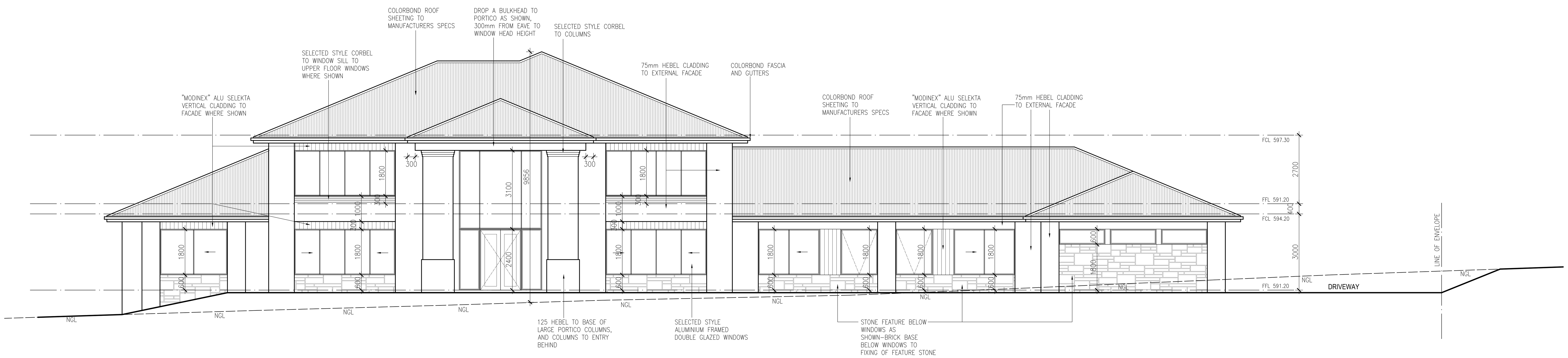
INVENTIVE BUILDING DESIGN
7 DIBBLER CRESCENT
THROSBY
ACT
2914
M: 0407908688

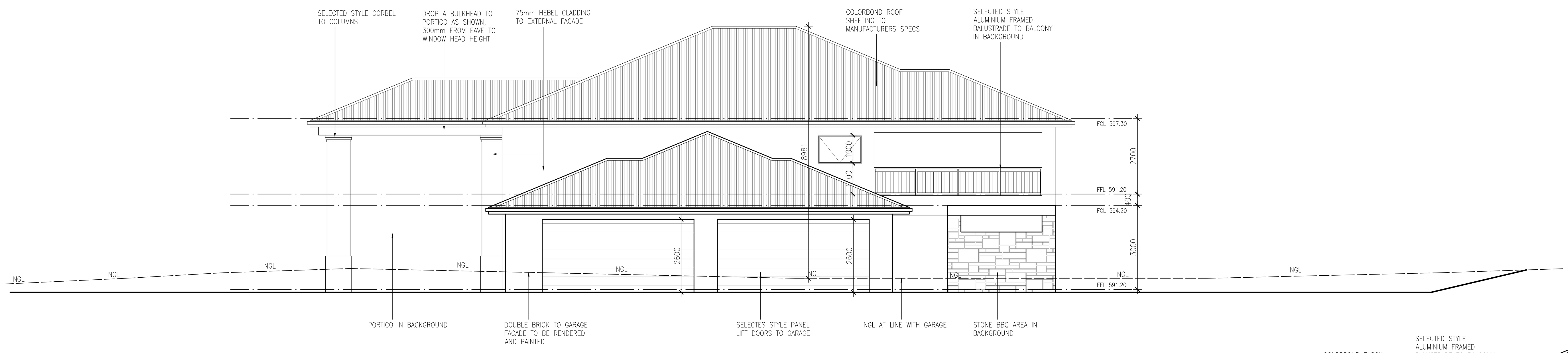
LOT 104 DP 270586 MURRUMBATEMAN

DRAWING	ROOF PLAN (MAIN RESIDENCE)	SCALE	1:100 @ A1 1:200 @ A3
PROJECT	PROPOSED NEW RESIDENCE	DRAWN	RJ
CLIENT	GURPREET SINGH	PRINT DATE	13/01/2025
		PROJ No.	2412
		DWG No	DA06



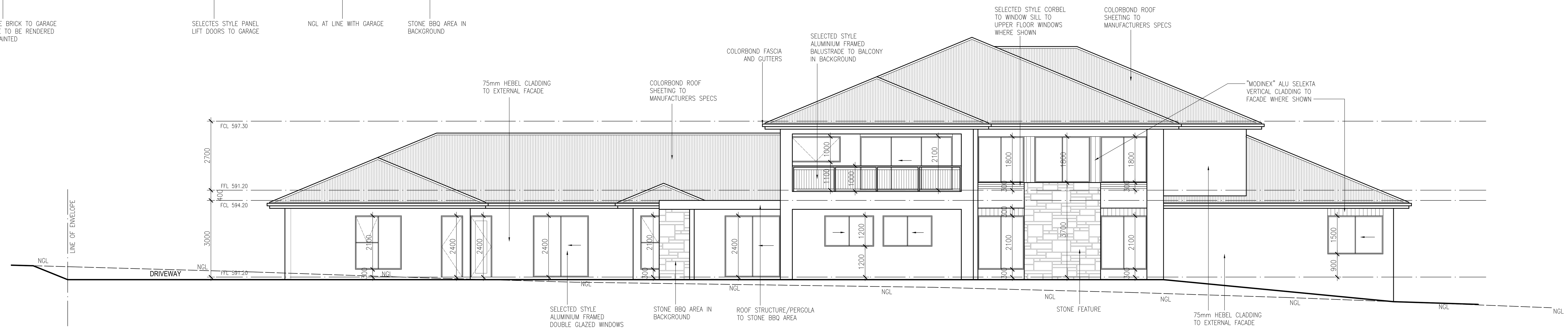
NORTH ELEVATION

1:100 @ A1 1:200 @ A3



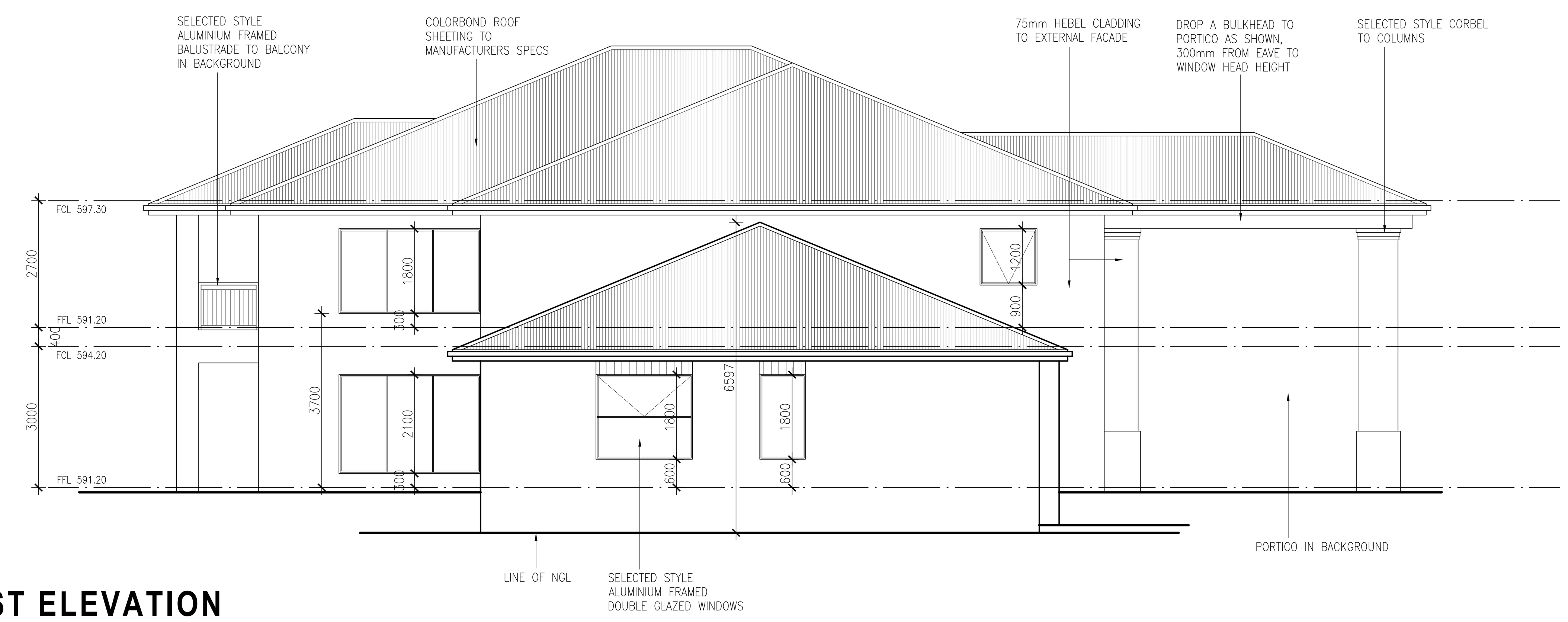
EAST ELEVATION

1:100 @ A1 1:200 @ A3



NORTH ELEVATION

1:100 @ A1 1:200 @ A3



WEST ELEVATION

1:100 @ A1 1:200 @ A3

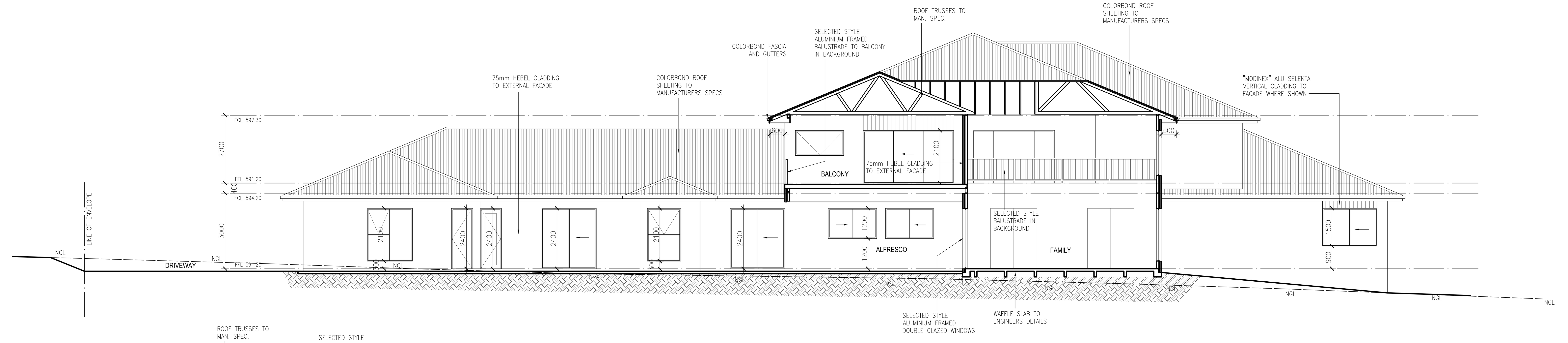
Certificate No. #HR-G8N172-01

INVENTIVE BUILDING DESIGN

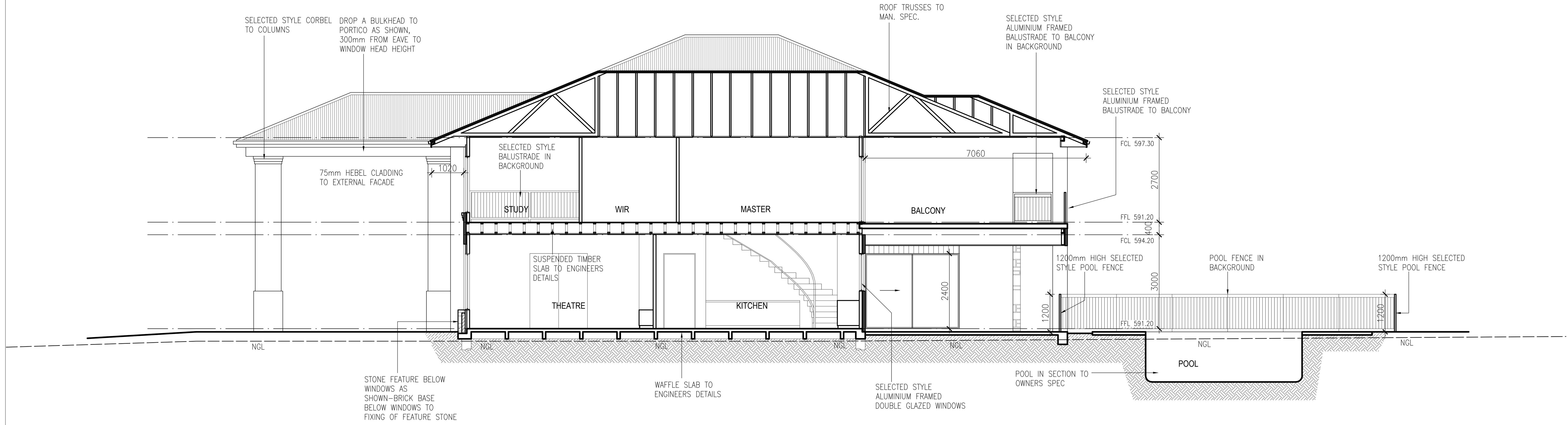
7 DIBBLER CRESCENT
THROSBY
ACT
2914
M: 0407908688

LOT 104 DP 270586 MURRUMBATEMAN

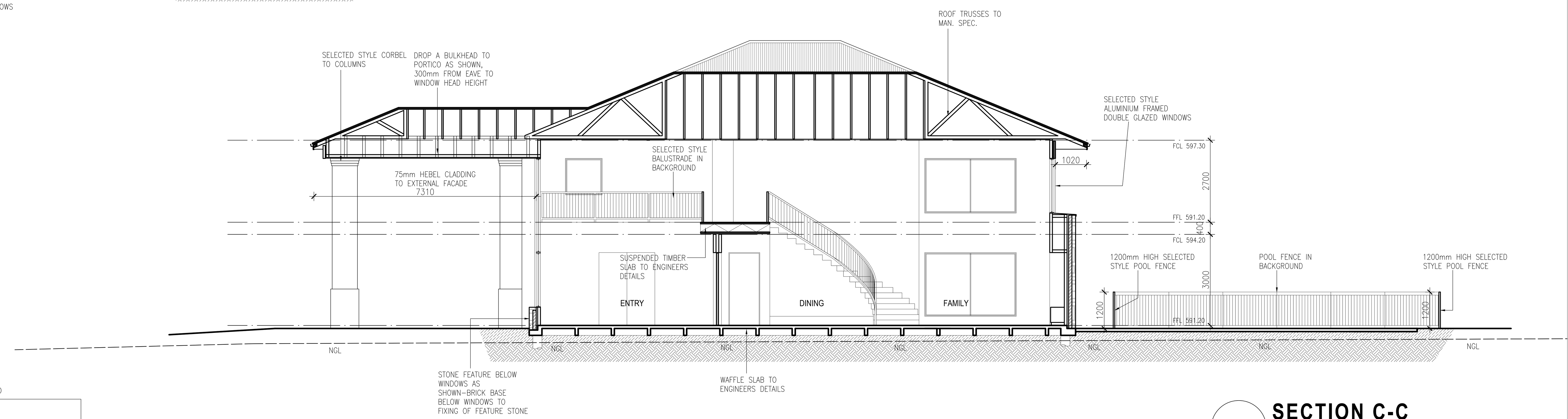
DRAWING	ELEVATIONS
PROJECT	PROPOSED NEW RESIDENCE
CLIENT	GURPREET SINGH
SCALE	1:200 @ A1 1:400 @ A3
DRAWN	RJ
PRINT DATE	13/01/2025
PROJ No.	2412
DWG No	DA07



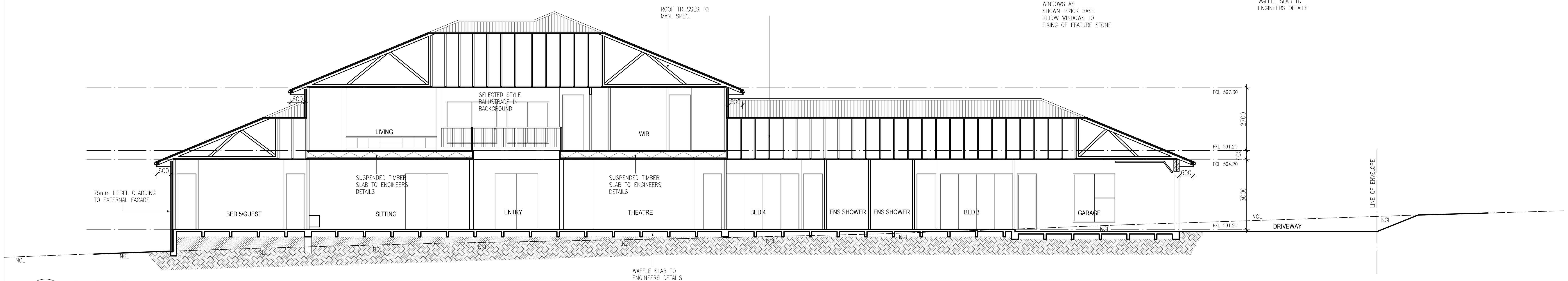
SECTION A-A
1:100 @ A1 1:200 @ A3



SECTION B-B
1:100 @ A1 1:200 @ A3



SECTION C-C
1:100 @ A1 1:200 @ A3



SECTION D-D
1:100 @ A1 1:200 @ A3

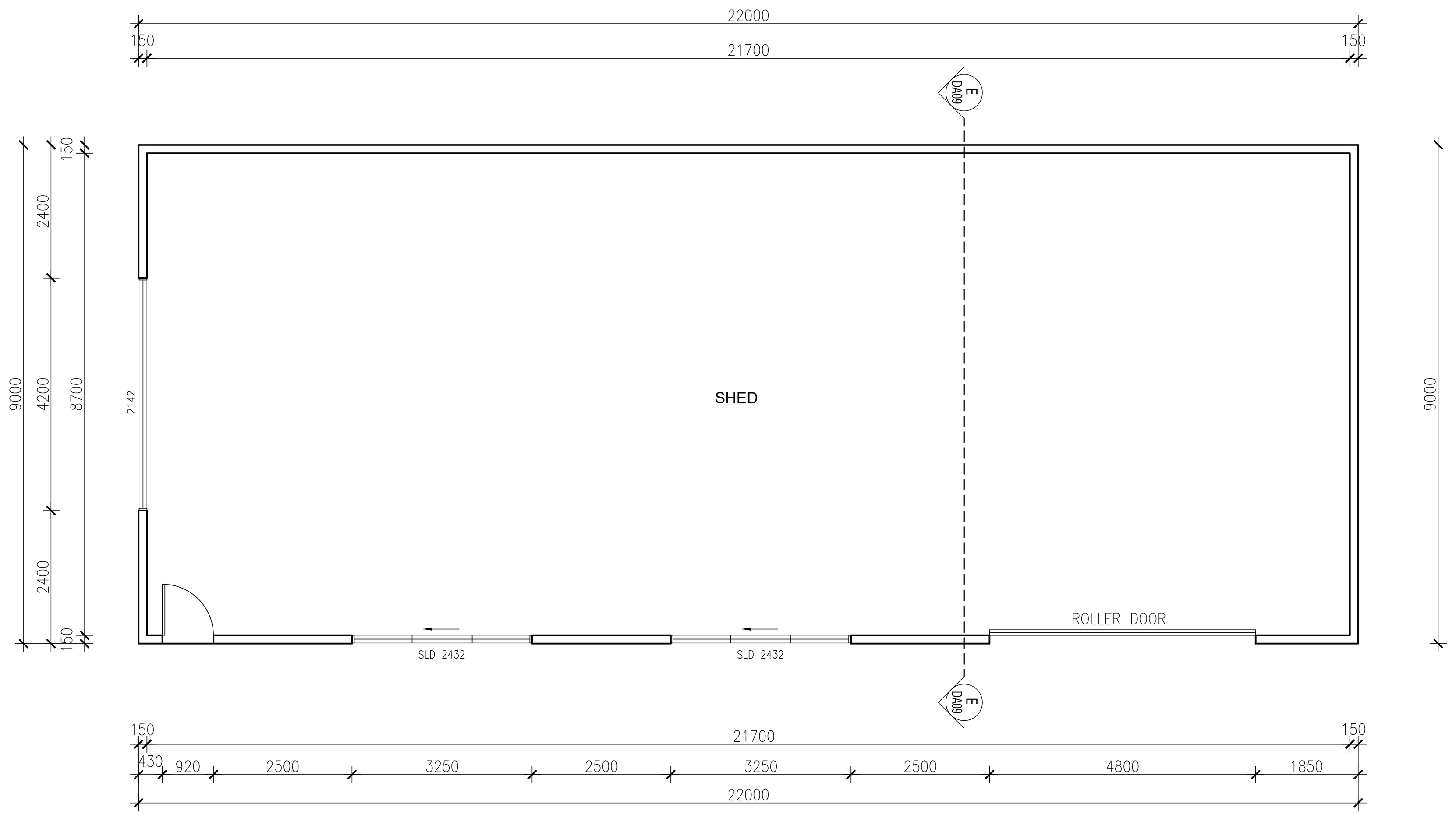
Certificate No. #HR-G8N172-01

INVENTIVE BUILDING DESIGN

7 DIBBLER CRESCENT
THROSBY
ACT
2914
M: 0407908688

LOT 104 DP 270586 MURRUMBATEMAN

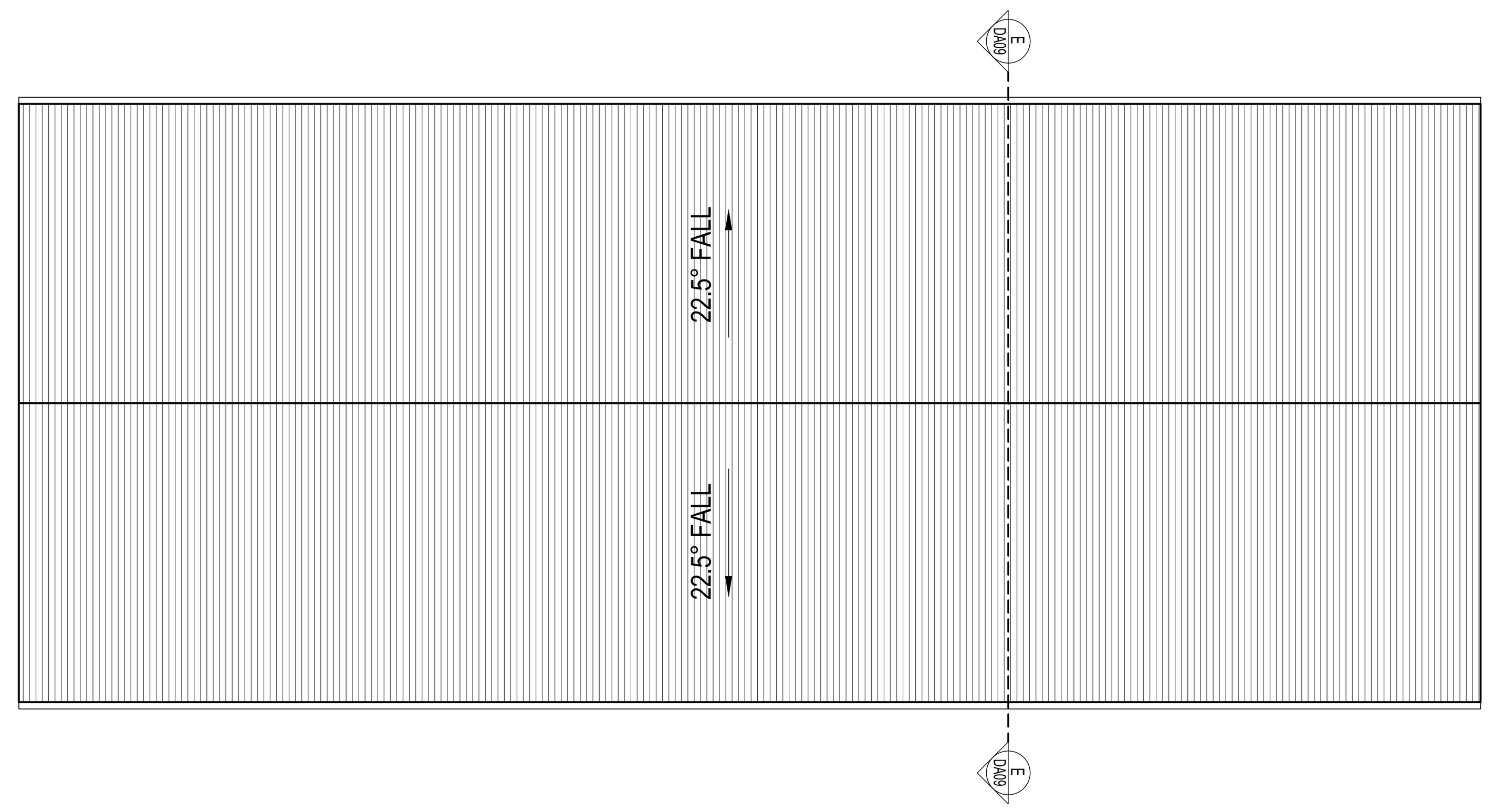
DRAWING	SECTIONS (MAIN RESIDENCE)	SCALE	1:200 @ A1 1:400 @ A3
		DRAWN	RJ
		PRINT DATE	13/01/2025
PROJECT	PROPOSED NEW RESIDENCE	PROJ No.	2412
CLIENT	GURPREET SINGH	DWG No	DA08



FLOOR PLAN

1:100 @ A1 1:200 @ A3

SHED	
FLOOR AREA	198m²



ROOF NOTES:

-CUSTOM ORB COLORBOND ROOF SHEETING ON 10° ROOF PITCH.

INSTALL TO MANUFACTURERS RECOMMENDATIONS. BUILDER TO PROVIDE ROOF INSTALLATION SPECIFICATIONS FROM SELECTED MANUFACTURER.

-ALL EAVES, GUTTERS TO TO BE COLORBOND QUAD GUTTERING, TO BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS.

-PROVIDE FASCIA FLASHING AND PARAPET CAPPING AS REQUIRED.

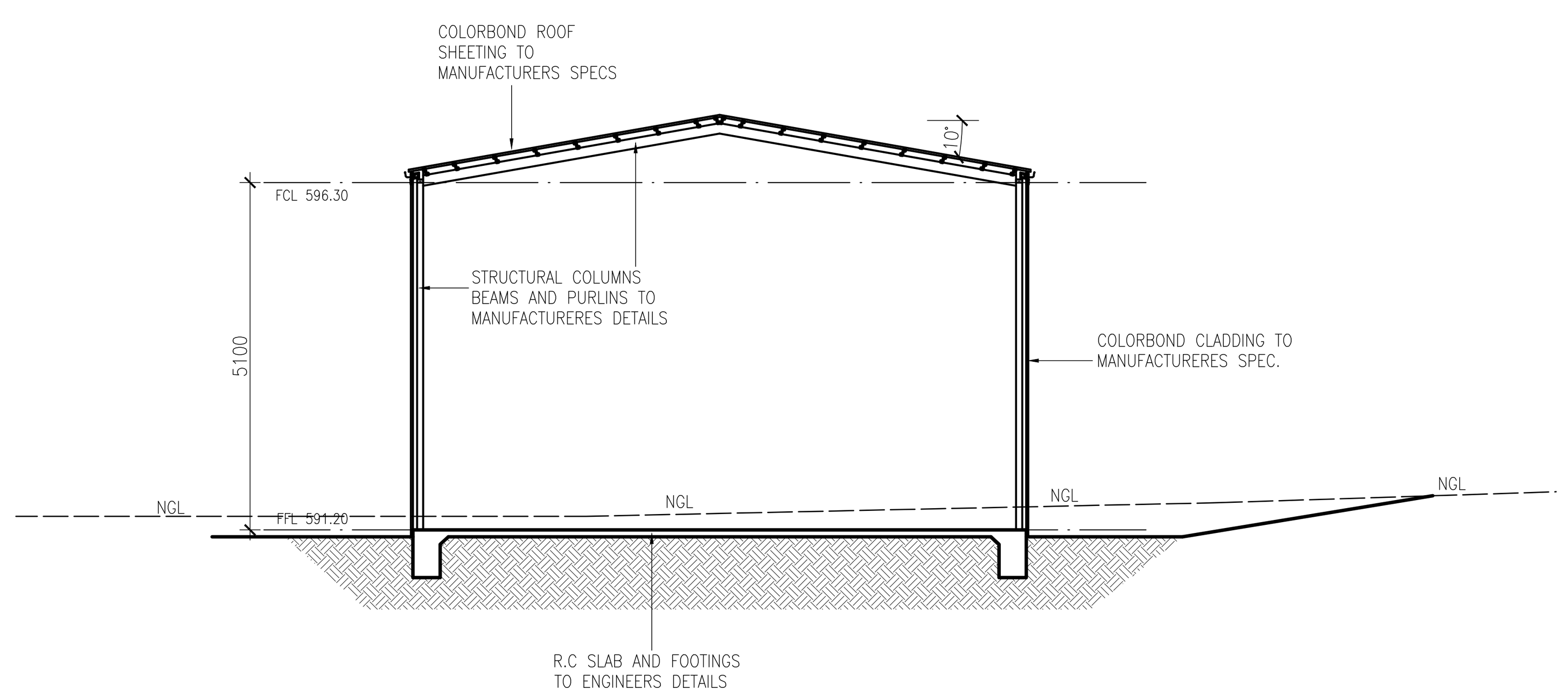
-DOWN PIPES AND SPREADERS TO BE COLORBOND TO MATCH GUTTERING. FOR LOCATION OF DOWN PIPES REFER TO HYDRAULICS PLAN.

-PROVIDE PAINTED F.C SHEET LINING TO ALL EAVES.

-PROVIDE CEILINGS TO ALL OUTDOOR ROOFED AREAS AND UNDER MAIN HOUSE ROOF.

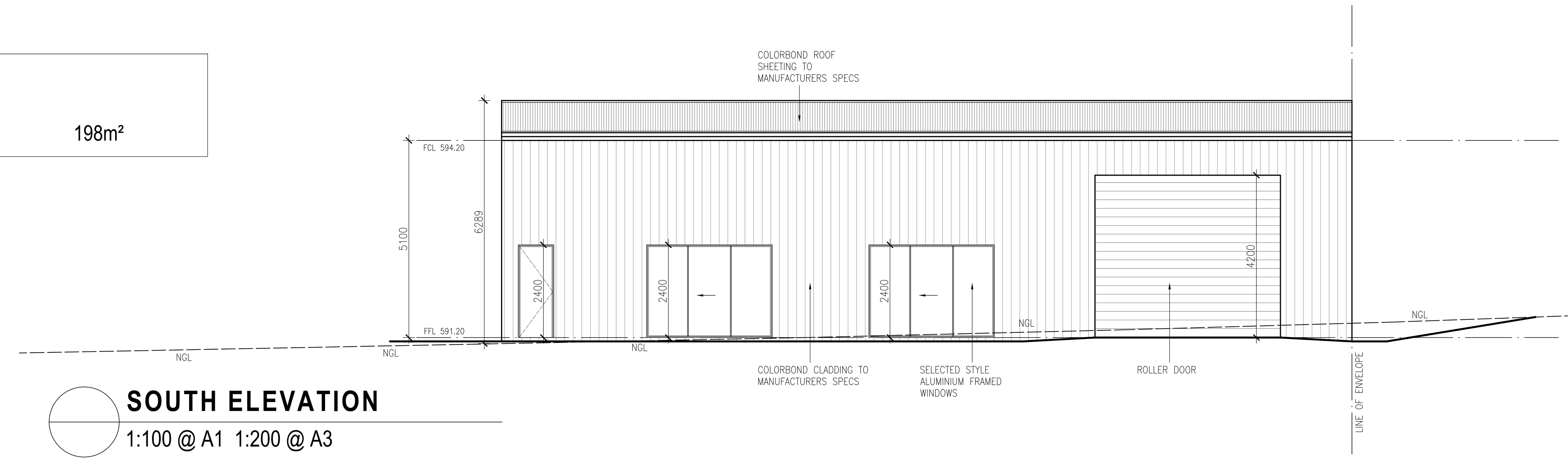
ROOF PLAN

1:100 @ A1 1:200 @ A3



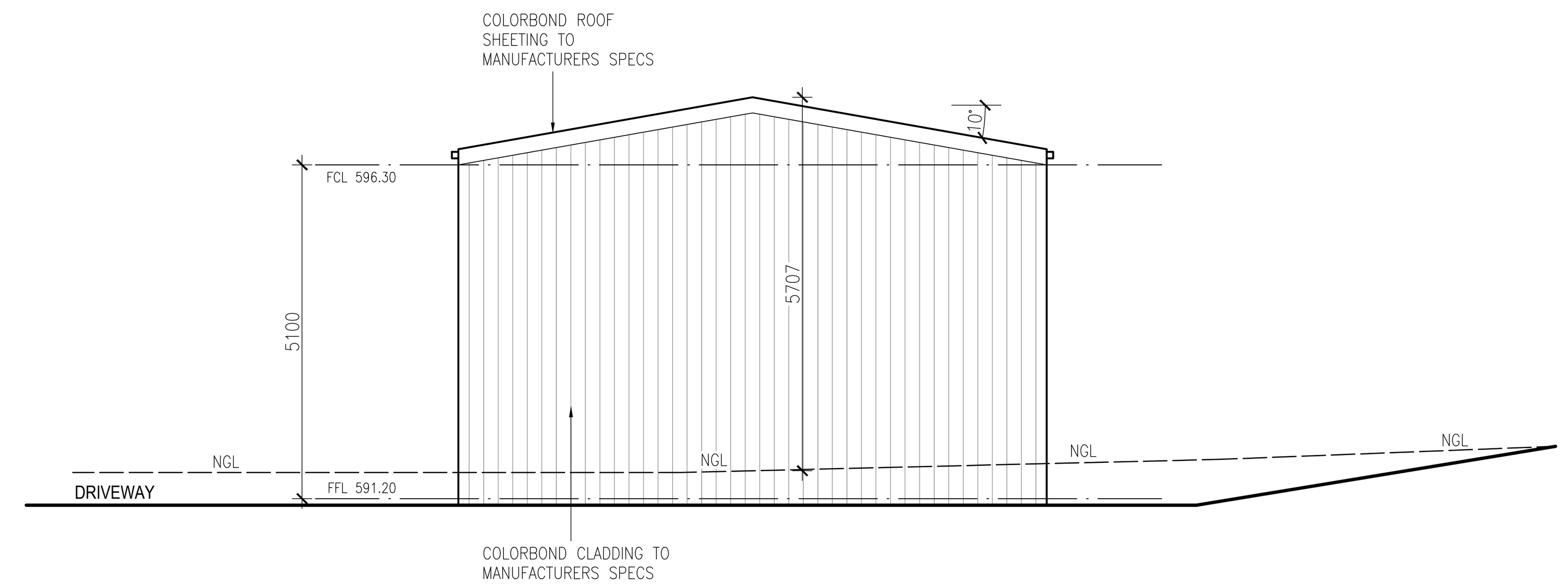
SECTION E-E

1:100 @ A1 1:200 @ A3



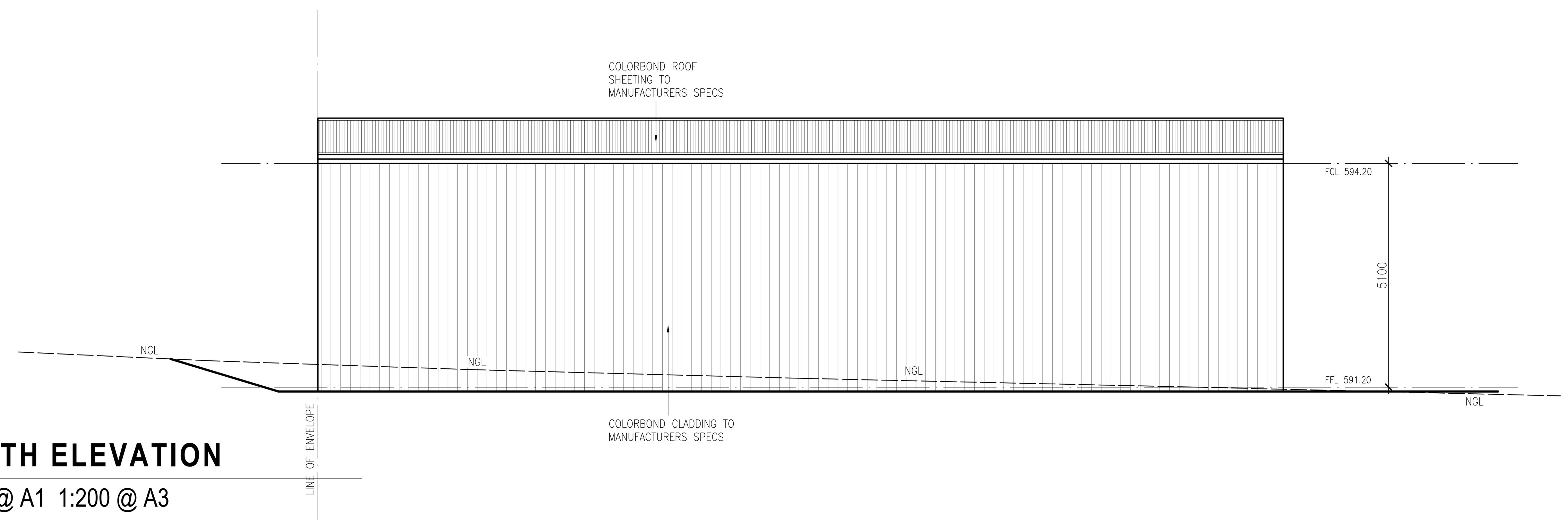
SOUTH ELEVATION

1:100 @ A1 1:200 @ A3



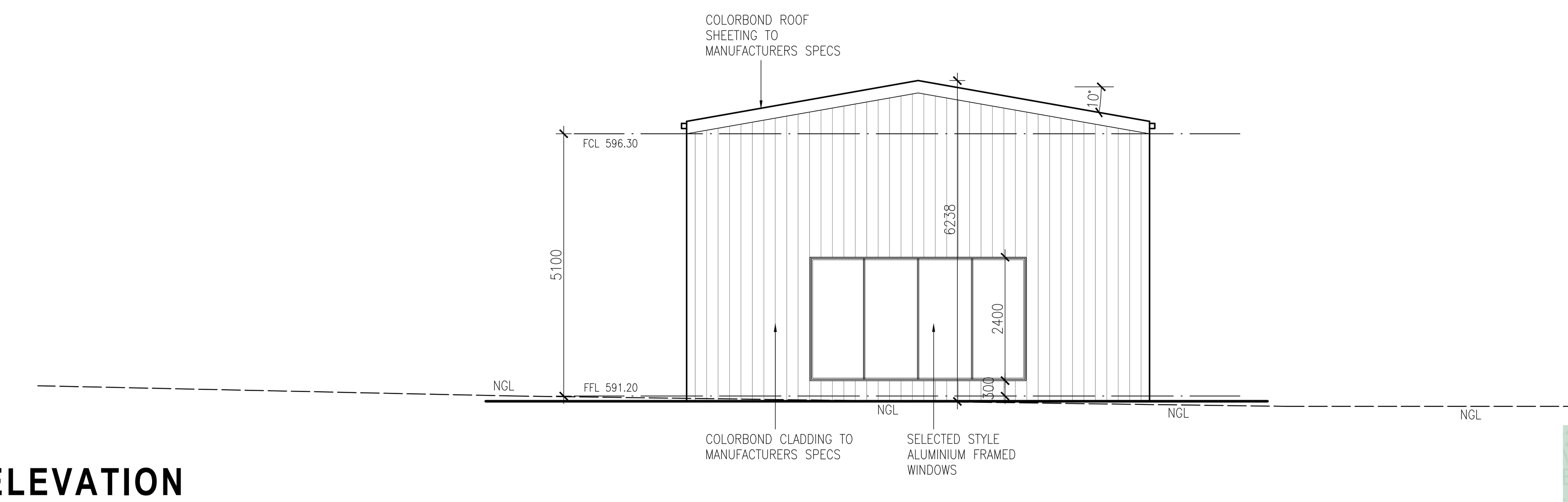
EAST ELEVATION

1:100 @ A1 1:200 @ A3



NORTH ELEVATION

1:100 @ A1 1:200 @ A3



WEST ELEVATION

1:100 @ A1 1:200 @ A3

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INVENTIVE BUILDING DESIGN
7 DIBBLER CRESCENT THROSBY ACT 2914
M: 0407908688

LOT 104 DP 270586 MURRUMBATEMAN

DRAWING	SHED (FLOOR PLAN- ROOF PLAN- ELEVATIONS & SECTION)
PROJECT	PROPOSED NEW RESIDENCE
CLIENT	GURPREET SINGH
SCALE	1:200 @ A1 1:400 @ A3
DRAWN	RJ
PRINT DATE	13/01/2025
PROJ No.	2412
DWG No	DA09