

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-HRRLKO-01

Generated on 24 Sep 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	128 Grays Lane, TYAGARAH, NSW, 2481
Lot/DP	3//285733
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	25.33
Prepared by	Michael Spiteri Architectural Drafting

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	176.2	Open
Unconditioned*	1.7	NatHERS climate zone
Total	219.3	10 - Brisbane AMO
Garage	41.4	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

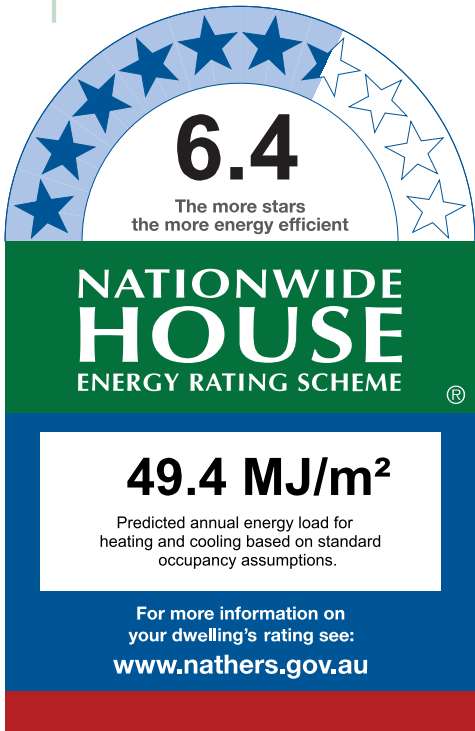
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	7.3	42.1
Load limits	12	56

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-HRRLKO-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.

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 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?		☐	☐	☐	☐
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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 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?	☐	☐	☐	☐	☐
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Does the heating 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?	☐	☐	☐	☐	☐
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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?	☐	☐	☐	☐	☐
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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?	☐	☐	☐	☐	☐
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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.



Room *schedule*

Room	Zone Type	Area (m²)
GARAGE	Garage	41.42
ENS 4	Night Time	4.73
BED 4	Bedroom	21.09
ENS 1	Night Time	7.76
W.I.R 1	Night Time	10.65
BED 1	Bedroom	20.37
PASSAGE	Day Time	2.88
PASSAGE 2	Day Time	6.03
PASSAGE 3	Day Time	5.99
PANTRY	Day Time	2.62
BATH	Day Time	4.78
WC	Unconditioned	1.71
BED 3	Bedroom	13.99
BED 2	Bedroom	11.76
KITCHEN/LIVING	Kitchen/Living	56.43
PASSAGE 4/LAUNDRY	Day Time	7.08

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
AWS-003-001	RESIDENTIAL SERIES 502/504 SLIDING WINDOW - DOUBLE GLAZED	4.2	0.58	0.55	0.61

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
AWS-010-001	RESIDENTIAL SERIES 517 AWNING WINDOW- DOUBLE GLAZED	4.7	0.55	0.53	0.58
AWS-019-001	RESIDENTIAL SERIES 549 ENTRY DOOR - DOUBLE GLAZED	4.1	0.52	0.49	0.54
AWS-069-004	RES SERIES 517 FIXED WINDOW	3.7	0.66	0.63	0.69
AWS-089-094	RES SERIES 704 FLUSH SLIDING DOOR	3.5	0.73	0.69	0.77

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BED 1	AWS-010-001	W03	600	2500	Awning	90	SE	None
BED 1	AWS-089-094	D1	2400	4000	Sliding Door	45	SW	None
BED 1	AWS-010-001	W04	1200	1500	Awning	90	NW	None
BED 2	AWS-069-004	W07	1700	700	Fixed	0	NE	None
BED 2	AWS-003-001	W08	1200	2400	Sliding	45	SE	None
BED 3	AWS-010-001	W05	600	2400	Awning	90	NW	None
BED 3	AWS-069-004	W06	1700	700	Fixed	0	NE	None
BED 4	AWS-089-094	D5	2400	4000	Sliding Door	45	SW	None
BED 4	AWS-010-001	W15	600	2400	Awning	45	SE	None
ENS 1	AWS-010-001	W02	600	1200	Awning	90	SE	None
ENS 1	AWS-010-001	W01	600	1200	Awning	90	NW	None
ENS 4	AWS-010-001	W18	600	1800	Awning	90	NW	None
GARAGE	AWS-010-001	W20	600	1800	Awning	90	SE	None
GARAGE	AWS-010-001	W19	600	1800	Awning	90	SE	None
GARAGE	AWS-010-001	W16	600	1800	Awning	90	NW	None
GARAGE	AWS-010-001	W17	600	1800	Awning	90	NW	None
KITCHEN/LIVING	AWS-069-004	W10	1700	3000	Fixed	0	NW	None
KITCHEN/LIVING	AWS-089-094	D2	2400	4000	Sliding Door	45	SW	None
KITCHEN/LIVING	AWS-069-004	W11	1700	900	Fixed	0	SE	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*
PASSAGE	AWS-069-004	W14	2100	2200	Fixed	0	NE	None
PASSAGE	AWS-069-004	W13	2100	2200	Fixed	0	SW	None
PASSAGE 3	AWS-069-004	D4	2100	600	Fixed	0	NE	None
PASSAGE 3	AWS-069-004	W12	2100	2200	Fixed	0	SW	None
PASSAGE 4/LAUNDRY	AWS-069-004	W09	2100	900	Fixed	0	SE	None
PASSAGE 4/LAUNDRY	AWS-019-001	D3	2100	900	Hinged Door	90	SE	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					

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
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External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
GARAGE	2100	5200	100	NE
PASSAGE 3	2100	1000	90	NE

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-NONREFL-CAV	Weatherboard Battened (Non-Refl Cavity) Stud Wall	0.73	Dark (Monument)	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	WB-NONREFL-CAV	3861	2108	NW	350	Yes
BED 1	WB-NONREFL-CAV	3347	4199	SE	350	No
BED 1	WB-NONREFL-CAV	3347	4852	SW	724	Yes
BED 1	WB-NONREFL-CAV	2397	3001	NW	350	Yes
BED 2	WB-NONREFL-CAV	3861	598	SE	1492	Yes
BED 2	WB-NONREFL-CAV	3861	1142	NE	350	Yes
BED 2	WB-NONREFL-CAV	3861	3538	SE	350	Yes
BED 2	WB-NONREFL-CAV	3861	1866	NE		No
BED 3	WB-NONREFL-CAV	3861	3538	NW	350	Yes
BED 3	WB-NONREFL-CAV	3861	1123	NE	350	Yes
BED 3	WB-NONREFL-CAV	3861	598	NW	1473	Yes
BED 3	WB-NONREFL-CAV	3861	2423	NE		No
BED 4	WB-NONREFL-CAV	3726	6700	SW	731	Yes
BED 4	WB-NONREFL-CAV	3726	1791	NW	350	No
BED 4	WB-NONREFL-CAV	3726	2874	SE	350	Yes
ENS 1	WB-NONREFL-CAV	3347	4852	NE	350	Yes
ENS 1	WB-NONREFL-CAV	3347	1599	SE	350	No
ENS 1	WB-NONREFL-CAV	3347	1599	NW	350	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
ENS 4	WB-NONREFL-CAV	3726	2997	NW	350	No
GARAGE	WB-NONREFL-CAV	3726	6700	NE	330	Yes
GARAGE	WB-NONREFL-CAV	3726	6182	SE	330	Yes
GARAGE	WB-NONREFL-CAV	3726	6182	NW	350	No
KITCHEN/LIVING	WB-NONREFL-CAV	3861	4492	NW	350	Yes
KITCHEN/LIVING	WB-NONREFL-CAV	3861	2440	SE	350	Yes
KITCHEN/LIVING	WB-NONREFL-CAV	3861	6641	SW	3732	No
KITCHEN/LIVING	WB-NONREFL-CAV	3861	473	NW	350	Yes
KITCHEN/LIVING	WB-NONREFL-CAV	3861	5299	SE	350	Yes
PANTRY	WB-NONREFL-CAV	3861	1873	NW	350	Yes
PASSAGE	WB-NONREFL-CAV	2397	2400	NE		Yes
PASSAGE	WB-NONREFL-CAV	2397	2400	SW		Yes
PASSAGE 3	WB-NONREFL-CAV	2397	2986	NE		Yes
PASSAGE 3	WB-NONREFL-CAV	2397	2986	SW		Yes
PASSAGE 4/LAUNDRY	WB-NONREFL-CAV	3861	2108	SE	350	Yes
W.I.R 1	WB-NONREFL-CAV	3347	2196	SE	350	No
W.I.R 1	WB-NONREFL-CAV	3347	2196	NW	350	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	22.8	2.00
INT-PB	Internal Plasterboard Stud Wall	146.5	0.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	CSOG-100: Concrete Slab on Ground (100mm)	4.8	N/A	0.00	Tile (8mm)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 1	CSOG-100: Concrete Slab on Ground (100mm)	20.4	N/A	0.00	Exposed
BED 2	CSOG-100: Concrete Slab on Ground (100mm)	11.8	N/A	0.00	Exposed
BED 3	CSOG-100: Concrete Slab on Ground (100mm)	14.0	N/A	0.00	Exposed
BED 4	CSOG-100: Concrete Slab on Ground (100mm)	21.1	N/A	0.00	Exposed
ENS 1	CSOG-100: Concrete Slab on Ground (100mm)	7.8	N/A	0.00	Tile (8mm)
ENS 4	CSOG-100: Concrete Slab on Ground (100mm)	4.7	N/A	0.00	Tile (8mm)
GARAGE	CSOG-100: Concrete Slab on Ground (100mm)	41.4	N/A	0.00	Exposed
KITCHEN/LIVING	CSOG-100: Concrete Slab on Ground (100mm)	56.4	N/A	0.00	Exposed
PANTRY	CSOG-100: Concrete Slab on Ground (100mm)	2.6	N/A	0.00	Exposed
PASSAGE	CSOG-100: Concrete Slab on Ground (100mm)	2.9	N/A	0.00	Exposed
PASSAGE 2	CSOG-100: Concrete Slab on Ground (100mm)	6.0	N/A	0.00	Exposed
PASSAGE 3	CSOG-100: Concrete Slab on Ground (100mm)	6.0	N/A	0.00	Exposed
PASSAGE 4/LAUNDRY	CSOG-100: Concrete Slab on Ground (100mm)	7.1	N/A	0.00	Exposed
W.I.R 1	CSOG-100: Concrete Slab on Ground (100mm)	10.7	N/A	0.00	Exposed
WC	CSOG-100: Concrete Slab on Ground (100mm)	1.7	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
BED 1	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
BED 2	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
BED 3	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
BED 4	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
ENS 1	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
ENS 4	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
GARAGE	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
KITCHEN/LIVING	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
PANTRY	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
PASSAGE	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
PASSAGE 2	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
PASSAGE 3	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
PASSAGE 4/LAUNDRY	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
W.I.R 1	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
WC	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	1	Exhaust Fan	350	Sealed
ENS 1	1	Exhaust Fan	350	Sealed
ENS 4	1	Exhaust Fan	350	Sealed
KITCHEN/LIVING	1	Exhaust Fan	260	Sealed
WC	1	Exhaust Fan	350	Sealed
WC	1	Downlight	100	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 1	1	1200
BED 2	1	1200
BED 3	1	1200
BED 4	1	1200
KITCHEN/LIVING	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	1.30	0.73	Dark (Monument)

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)

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	

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 home's 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 home's 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.

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SEPTEMBER 2025
JOB NO. 25.33

PROJECT DETAILS

PROPOSED NEW RESIDENCE
LOT 3 DP TBC
128 GRAYS LANE. TYAGARAH

CLIENT DETAILS

ROB ROBERTSON
128 GRAYS LANE. TYAGARAH

CONTENTS

SITE PLAN.....	01
FLOOR PLAN.....	02
ELEVATIONS.....	03
ELEV. & DRIVEWAY.....	04
SECTION & NOTES.....	05

CONSTRUCTION

NOTE: THE PROPOSED RESIDENCE IS MADE UP OF 3
PREFABRICATED MODULES - SCANDI MOD 1 & 2 ,&
SKOGSPIRE . REFER WWW.SCANDIGROUP.COM.AU

STANDARD NOTES:

ALL CONSTRUCTION WILL COMPLY WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA

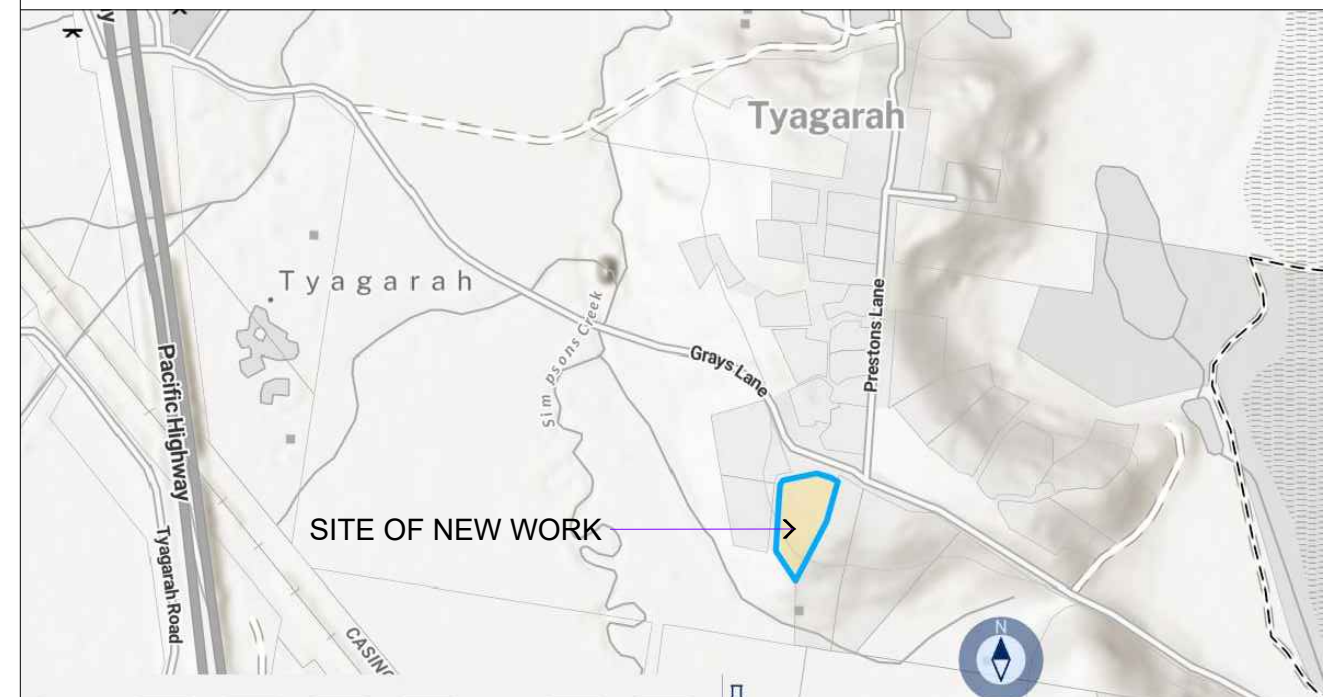
DO NOT SCALE FROM DRAWING

ENSURE ALL BUILDING CONSTRUCTION WITHIN BUILDING ENVELOPE.

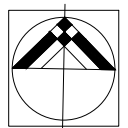
CHECK FOR UNDERGROUND OBSTACLES PRIOR TO CONSTRUCTION

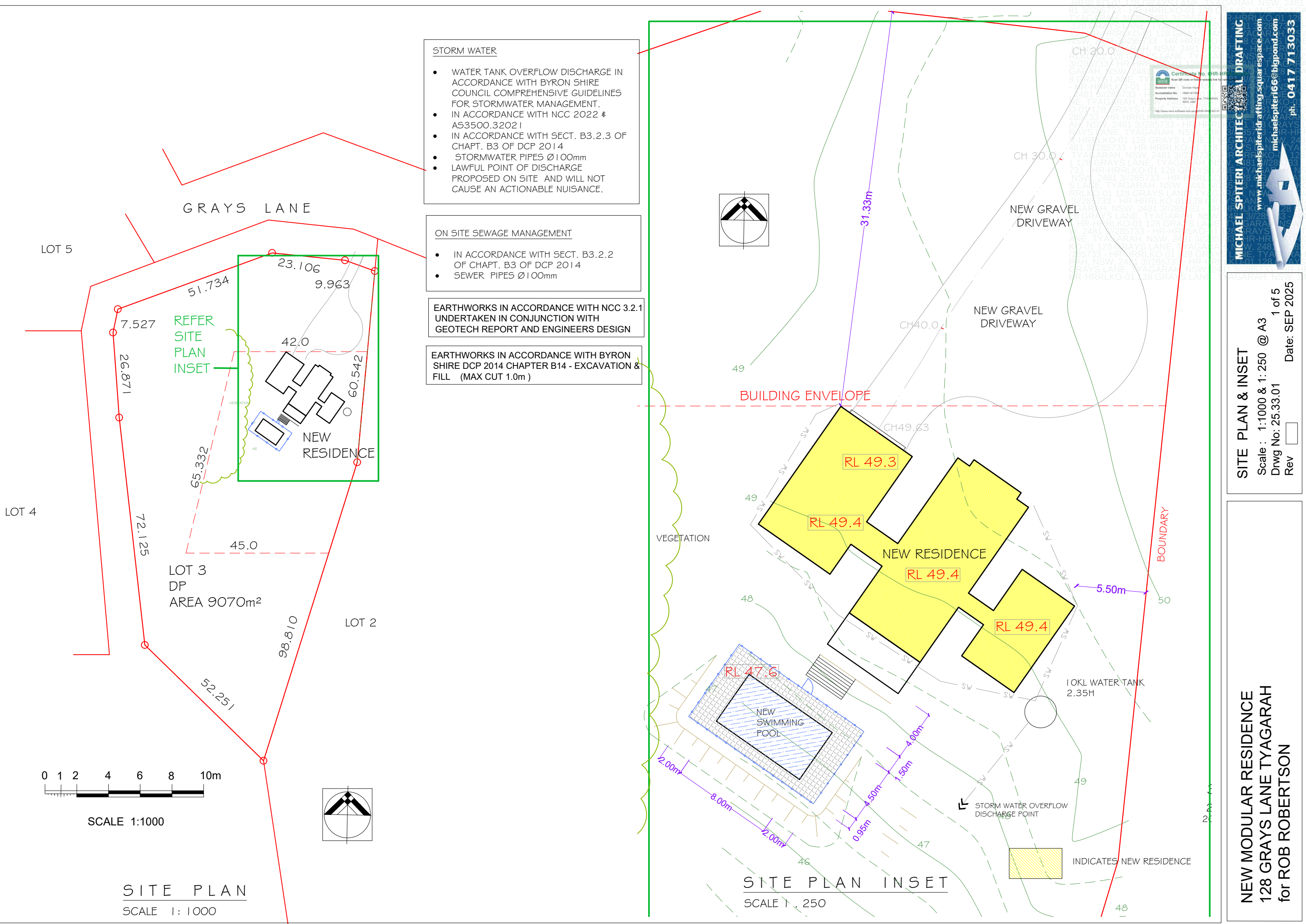
CONFIRM DIMENSIONS AND RELEVANT INFORMATION ON SITE BEFORE COMMENCING WORK.

DRAWINGS TO BE READ IN CONJUNCTION WITH BASIX CERTIFICATE & ENGINEERING DRAWINGS.



LOCALITY PLAN





STORM WATER

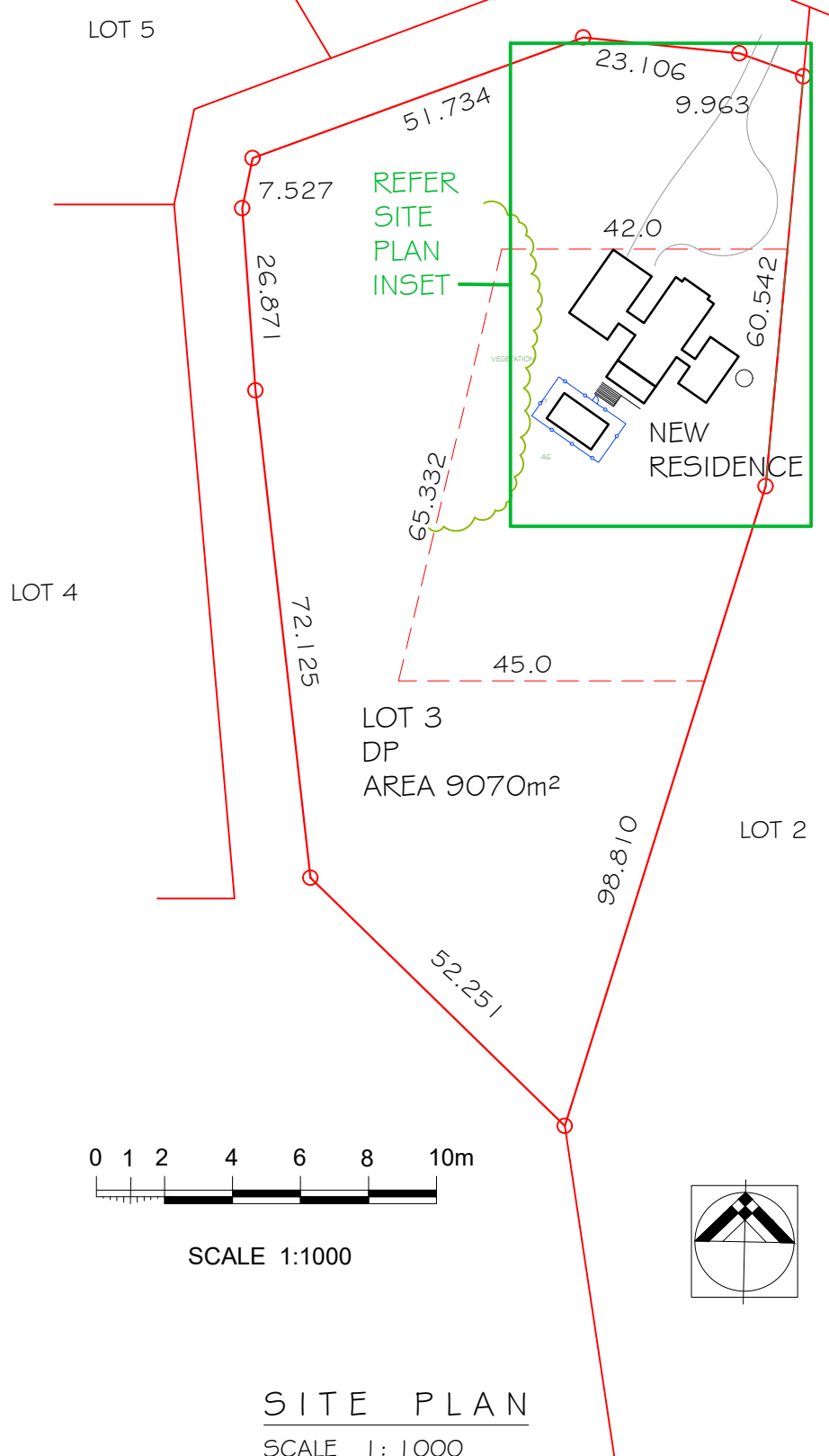
- WATER TANK OVERFLOW DISCHARGE IN ACCORDANCE WITH BYRON SHIRE COUNCIL COMPREHENSIVE GUIDELINES FOR STORMWATER MANAGEMENT.
- IN ACCORDANCE WITH NCC 2022 # A53500.32021
- IN ACCORDANCE WITH SECT. B3.2.3 OF CHAPT. B3 OF DCP 2014
- STORMWATER PIPES Ø100mm
- LAWFUL POINT OF DISCHARGE PROPOSED ON SITE AND WILL NOT CAUSE AN ACTIONABLE NUISANCE.

ON SITE SEWAGE MANAGEMENT

- IN ACCORDANCE WITH SECT. B3.2.2 OF CHAPT. B3 OF DCP 2014
- SEWER PIPES Ø100mm

EARTHWORKS IN ACCORDANCE WITH NCC 3.2.1 UNDERTAKEN IN CONJUNCTION WITH GEOTECH REPORT AND ENGINEERS DESIGN

EARTHWORKS IN ACCORDANCE WITH BYRON SHIRE DCP 2014 CHAPTER B14 - EXCAVATION & FILL (MAX CUT 1.0m)



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SITE PLAN & INSET

Scale : 1:1000 & 1:250 @ A3

Drwg No: 25.33.01

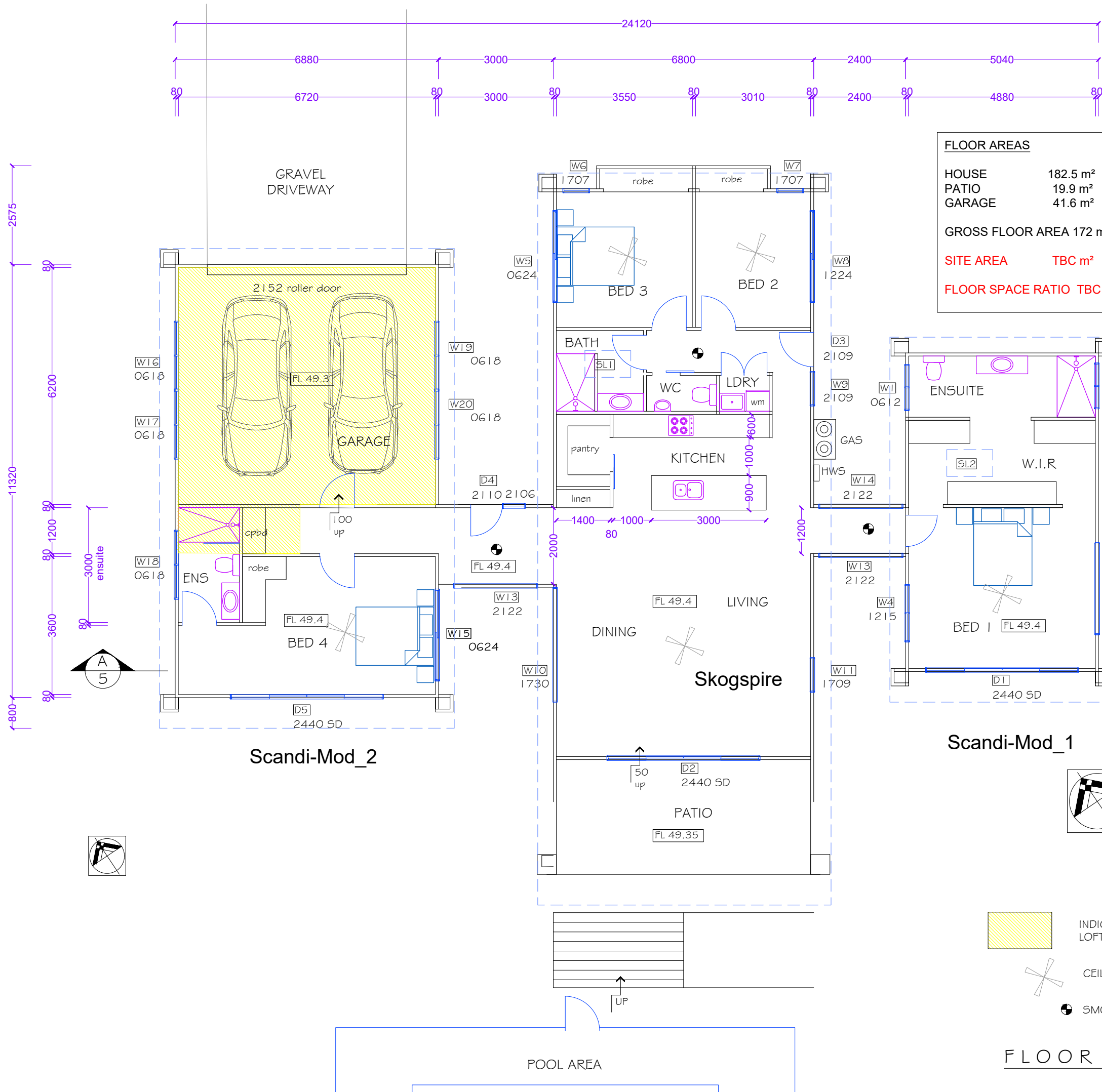
Rev

Date: SEP 2025

NEW MODULAR RESIDENCE

128 GRAYS LANE TYAGARAH

for ROB ROBERTSON



FLOOR AREAS	
HOUSE	182.5 m ²
PATIO	19.9 m ²
GARAGE	41.6 m ²
GROSS FLOOR AREA 172 m ²	
SITE AREA	TBC m ²
FLOOR SPACE RATIO	TBC

- INDICATES STORAGE LOFT ABOVE
- CEILING FAN
- SMOKE DETECTOR

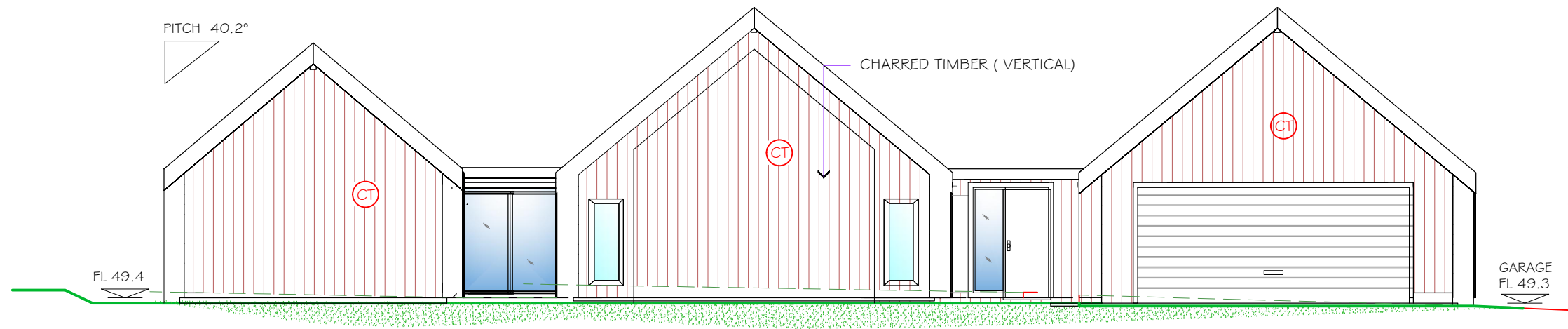
FLOOR PLAN

NEW MODULAR RESIDENCE
128 GRAYS LANE TYAGARAH
for ROB ROBERTSON

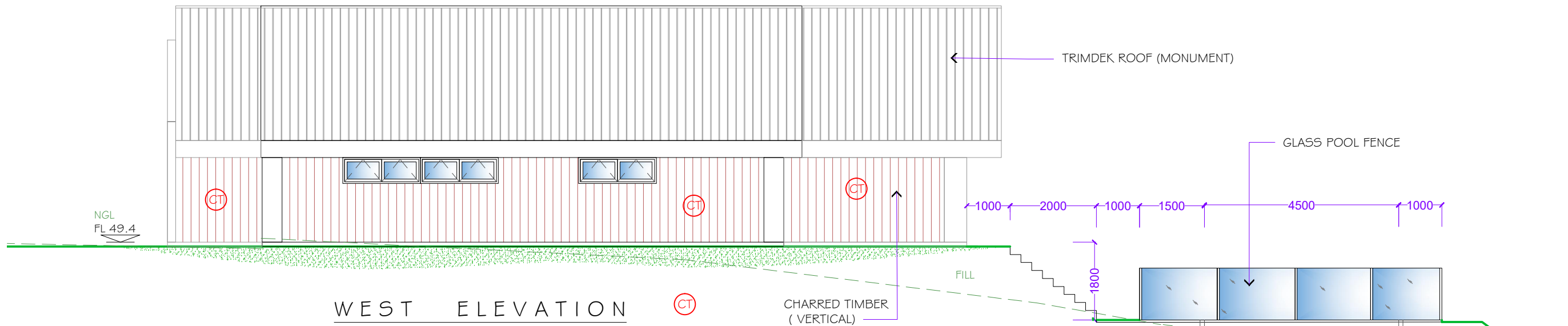
FLOOR PLAN
Scale : 1:100 @ A3
Drwg No: 25.33.02
Rev

2 of 5
Date: SEP 2025

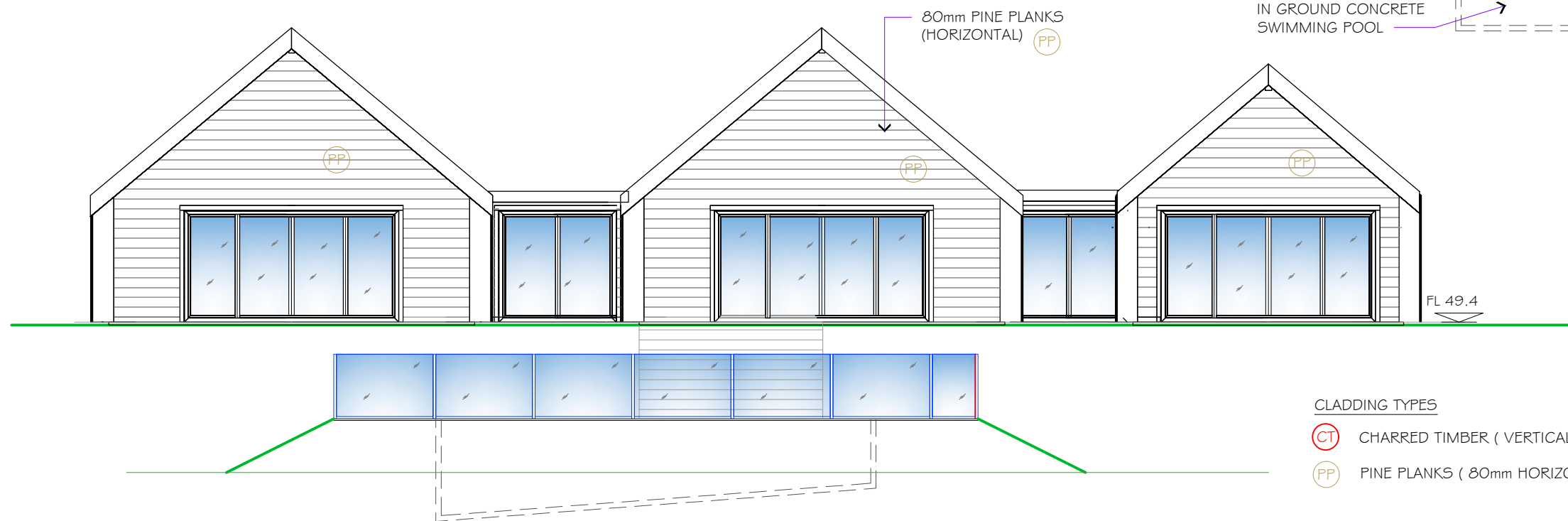
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NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION

CLADDING TYPES

CT CHARRED TIMBER (VERTICAL)

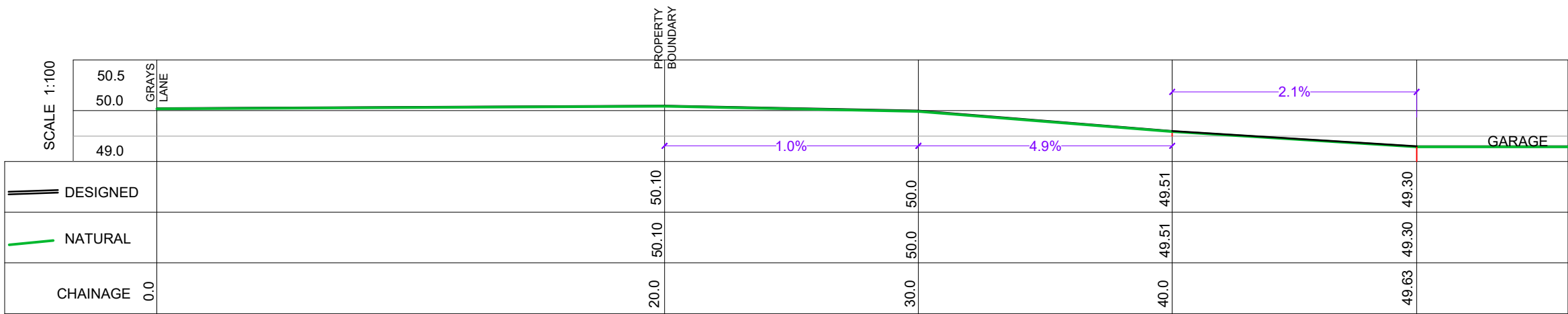
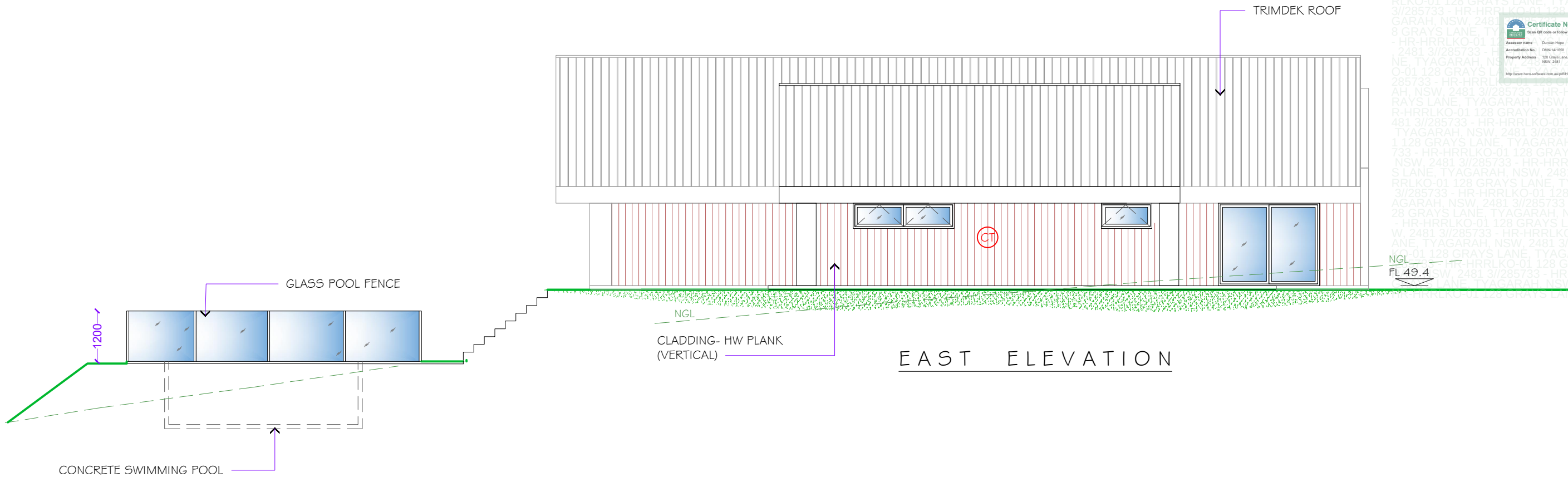
PP PINE PLANKS (80mm HORIZONTAL)



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ELEVATIONS 1
Scale : 1:100 @ A3
Drwg No: 25.33.03
Rev
3 of 5
Date: SEP 2025

NEW MODULAR RESIDENCE
128 GRAYS LANE TYAGARAH
for ROB ROBERTSON



DRIVEWAY LONG SECTION

VERTICAL SCALE 1: 200

NOTE:
MAXIMUM SAG 14.9% IN ACCORDANCE
WITH AS 2890.1 SECTION 2.5.3(d)

DRIVEWAY LONGITUDINAL GRADIENTS FOR KERBED
ROADS IN ACCORDANCE WITH NORTHERN RIVERS
LOCAL GOVERNMENT STANDARD DRAWING R-06

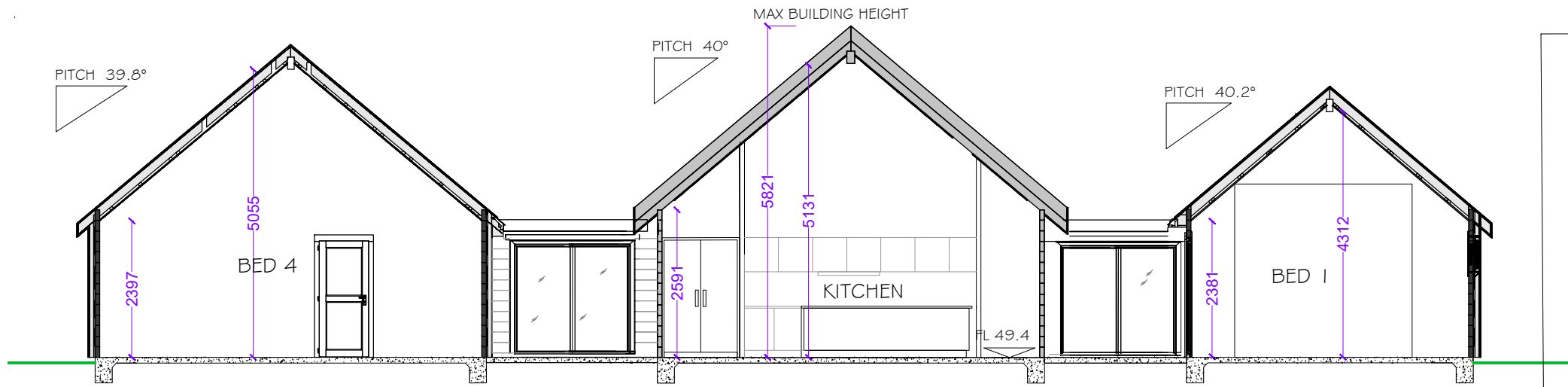
DRIVEWAY CROSSOVER IN ACCORDANCE WITH
NORTHERN RIVERS LOCAL GOVERNMENT STANDARD
DRAWING FOR NON KERBED ROADS R-05



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ELEV. & DRIVEWAY
Scale : 1:100 @ A3
Drwg No: 25.33.04
Rev
Date: SEP 2025
4 of 5

NEW MODULAR RESIDENCE
128 GRAYS LANE TYAGARAH
for ROB ROBERTSON



Scandi-Mod_2

Skogspire

Scandi-Mod_1

SECTION A 02

CONSTRUCTION

THE PROPOSED RESIDENCE IS MADE UP OF 3 PREFABRICATED MODULES - SCANDI MOD 1 & 2 ,& SKOGSPIRE . REFER WWW.SCANDIGROUP.COM.AU

ROOF

ROOF TO BE COMPLIANT WITH NCC 2022 H1 D7

ROOF GUTTERING - 150 QUAD WITH 90 DIA DOWNPIPES

COLORBOND TRIMDEK ROOF WITH MATCHING CAPPINGS AND FLASHINGS. MONUMENT COLOUR

CONDENSATION CONTROL MEASURES- ANTI CONDENSATION SARKING

INSULATION AS PER BASIX CERT.

CEILING - 80mm PINE PLANKS

STORMWATER IN ACCORDANCE WITH NCC 2022 & A53500.32021

WALLS

SOLID 80mm PINE PLANKS

EXTERNAL CLADDING - CARRED HW TIMBER (DARK)

VAPOUR PERMEABLE SARKING TO EXTERNAL WALLS

FLOOR

POLISHED CONCRETE SLAB

TILES TO WET AREAS

FOOTINGS- CONCRETE SLAB TO ENGINEERS SPECS

OTHER

SOLAR PANELS TO BE INSTALLED TO OWNERS SELECTION

INSTANT GAS HOT WATER SERVICE

ELECTRIC COOKTOP & OVEN WITH EXTERNALLY DUCTED RANGEHOOD OVER

CEILING FANS THRU OUT

LANDSCAPED STAIRS INTO POOL AREA

EXHAUST FLOW RATES AS PER BCA Part 3.8.7.3 BATHROOM 25 L/ SEC, LAUNDRY 20 L/ SEC. & KITCHEN 50 L/ SEC. EXTERNALLY DUCTED

AIR CONDITIONING- REVERSE CYCLE SPLIT SYSTEM

MIN 3 STAR RATING TOILET & ALL TAPS

POOL

IN GROUND CONCRETE POOL TO ENGINEERS SPECS.

GLASS POOL FENCE TO AS 1926 SWIMMING POOL SAFETY

PAVERS (TO OWNERS SELECTION) ON CONCRETE SLAB

POOL PUMP TIMER TO BE INSTALLED

POOL GATE TO BE SELF CLOSING / LATCHING

RECIRCULATION SYSTEM TO COMPLY WITH AS1926.3-2010

BASIX COMMITMENTS:

- To be read in conjunction with Basix certificate
- WATER**
- Roof catchment area
 - Landscape: 10 m² of indigenous vegetation
 - Fixtures : Showerheads 3 stars (>7.5 <9 L/min)
Toilets 3 stars
Taps 3 stars
 - Water : Min Tank 10 KL
 - Tank connected: to All Toilets / Laundry/ Garden Taps
- THERMAL**
- Construction : Timber frame, weather board
Ext. Walls R2.5 (R2.0 incl. construction)
Floor R.... N/A
Ceiling R3.5 Batts & Foil to roof
Wall- Dark tone (Monument)
Roof- Dark tone (Monument)
as per Certificate & Schedule
 - Colours
- Windows:**
- ENERGY**
- Hot Water : Instant Gas
 - Cooling : Ceiling fans through out
 - Heating : Air Conditioning unit 3.5 stars
 - Ventilation : Exhaust fan system to Bathrooms, Laundry & Kitchen
 - Lighting : Energy efficient Lighting through out.
 - Cooking : Electric cooktop & oven
 - Refrigerator: Refrigerator space to be 'well ventilated'
 - Other: Outdoor Clothes line to be installed

NOTES

- ALL WORKS TO COMPLY WITH NATIONAL CONSTRUCTION CODE 2022, BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS AND LOCAL COUNCIL REGULATIONS / APPROVALS
- MASTER BUILDERS RESIDENTIAL SPECS BOOKLET
 - AS 1684 TIMBER FRAMING CODE
 - AS 3700 MASONRY IN BUILDINGS
 - AS 2870-2021 RESIDENTIAL SLABS AND FOOTINGS
 - AS 3660.1 2014 TERMITE MANAGEMENT & NCC 3.4.1/ 3.4.3
 - AS 3500. STORMWATER DISCHARGE & NCC 7.4.3/ 7.4.5
 - AS 3740 2021 WATERPROOFING OF WET AREAS & NCC H4D2 & H4D3
 - AS 2047 WINDOWS IN BUILDINGS
 - CAR PARKING SPACE TO COMPLY WITH AS 2890.1
 - STAIRWAYS IN ACCORDANCE WITH NCC 2022 H5D2, RISER & DOING DIMENSIONS TO BE COMPLIANT WITH NCC. 1.1.2.2
 - AS 1926 - 2012 SWIMMING POOL SAFETY
 - PHOTOELECTRIC SMOKE DETECTORS IN ACCORDANCE WITH A53786 & NCC HOUSING PROVISIONS CLAUSE 9.5.2
 - EXHAUST FLOW RATES AS PER NCC H4D7
 - AS 1530.8- 2018 BUILDING MATERIALS IN BUSHFIRE PRONE AREAS
 - INSULATION INSTALLED IN ACCORDANCE WITH NCC PART 3.1.2.1.1
 - EARTHWORKS IN ACCORDANCE WITH NCC 3.2.1 UNDERTAKEN IN CONJUNCTION WITH GEOTECH REPORT AND ENGINEERS DESIGN
 - ROOM HEIGHTS TO BE COMPLIANT WITH NCC H4D4

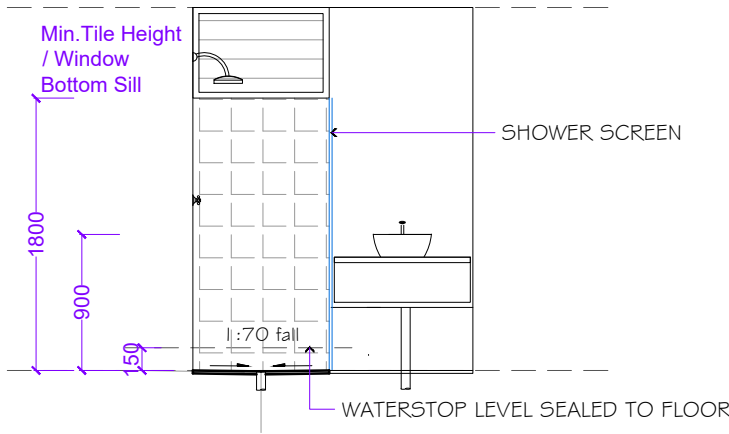
ALL DIMENSIONS TO BE VERIFIED BY BUILDER/ CLIENT PRIOR TO SETOUT, ORDERING OR FABRICATION OF NEW MATERIALS

CHECK FOR UNDERGROUND OBSTACLES PRIOR TO CONSTRUCTION

FOOTINGS AND TIE DOWNS TO ENGINEERS SPECIFICATIONS

DO NOT SCALE FROM DRAWING

ENSURE ALL NEW CONSTRUCTION WITHIN BUILDING ENVELOPE



BATHROOM
TYPICAL DETAIL
WET AREA WATERPROOFING

WET AREA FLOOR WASTES & FLASHING TO COMPLY WITH PERFORMANCE REQUIREMENTS OF THE DEEM-TO -SATISFY PROVISION OF THE NCC VOL 2 2022

FALL TO FLOOR WASTE - MIN 1:80, MAX 1:50

SHOWER AREA TO BE WATERPROOFED 1.8m ABOVE F.L.

WALL / FLOOR JUNCTIONS & PENETRATIONS TO BE WATERPROOFED 1.8m ABOVE F.L.

WALL & FLOOR TILES TO OWNERS SELECTION

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SECTION

Scale : 1:100 @ A3

Drwg No: 25.33.05

Rev

5 of 5

Date: SEP 2025

NEW MODULAR RESIDENCE

128 GRAYS LANE TYAGARAH

for ROB ROBERTSON