

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1198669S

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

Secretary

Date of issue: Friday, 30 April 2021

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



Planning,  
Industry &  
Environment

Project summary		
Project name	13-15 Vane Street, Cranebrook	
Street address	13-15 Vane Street Cranebrook 2749	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 1242079	
Lot no.	3	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	2	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Certificate Prepared by
Name / Company Name: Evergreen Energy Consultants Pty Ltd
ABN (if applicable): 91601503717

# Description of project

Project address	
Project name	13-15 Vane Street, Cranebrook
Street address	13-15 Vane Street Cranebrook 2749
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan 1242079
Lot no.	3
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	2
Site details	
Site area (m <sup>2</sup> )	20000
Roof area (m <sup>2</sup> )	297
Conditioned floor area (m <sup>2</sup> )	91.4
Unconditioned floor area (m <sup>2</sup> )	8.2
Total area of garden and lawn (m <sup>2</sup> )	60

Assessor details and thermal loads		
Assessor number	DMN/18/1887	
Certificate number	0005914180	
Climate zone	28	
Area adjusted cooling load (MJ/m <sup>2</sup> .year)	56	
Area adjusted heating load (MJ/m <sup>2</sup> .year)	53	
Ceiling fan in at least one bedroom	No	
Ceiling fan in at least one living room or other conditioned area	No	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 50	Target 50

## Schedule of BASIX commitments

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

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Fixtures</b>			
The applicant must install showerheads with a minimum rating of 4 star (> 6 but <= 7.5 L/min plus spray force and/or coverage tests) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 1900 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 150 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> <li>• all toilets in the development</li> <li>• the cold water tap that supplies each clothes washer in the development</li> <li>• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)</li> </ul>		✓ ✓ ✓	✓ ✓ ✓

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

Floor and wall construction	Area
floor - concrete slab on ground	All or part of floor area square metres

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Hot water</b>			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: solar (electric boosted) with a performance of 31 to 35 STCs or better.	✓	✓	✓
<b>Cooling system</b>			
The living areas must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
<b>Heating system</b>			
The living areas must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
<b>Ventilation</b>			
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>
<b>Artificial lighting</b>			
<p>The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:</p> <ul style="list-style-type: none"> <li>• at least 2 of the bedrooms / study; dedicated</li> <li>• at least 1 of the living / dining rooms; dedicated</li> <li>• the kitchen; dedicated</li> </ul>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>• all bathrooms/toilets; dedicated</li> <li>• the laundry; dedicated</li> <li>• all hallways; dedicated</li> </ul>		  	  
<b>Natural lighting</b>			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.			
The applicant must install a window and/or skylight in 1 bathroom(s)/toilet(s) in the development for natural lighting.			
<b>Other</b>			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.			
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.			
The applicant must install a fixed outdoor clothes drying line as part of the development.			
The applicant must install a fixed indoor or sheltered clothes drying line as part of the development.			

## Legend

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

Commitments identified with a ✓ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a ✓ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

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

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. 0005914148

Generated on 29 Apr 2021 using BERS Pro v4.4.0.3 (3.21)

### Property

**Address** 13-15 Vane Street , Cranebrook , NSW , 2749  
**Lot/DP** 3/1242079  
**NCC Class\*** 1A  
**Type** New Dwelling

### Plans

**Main Plan** AP03-02  
**Prepared by** LYMT

### Construction and environment

Assessed floor area (m <sup>2</sup> )*	Exposure Type
Conditioned* 89.0	Open
Unconditioned* 85.0	<b>NatHERS climate zone</b>
Total 174.0	28
Garage 77.0	

### Accredited assessor

**Name** Marcello Belcastro  
**Business name** Evergreen Energy Consultants  
**Email** marcello@evergreenec.com.au  
**Phone** 1300 584 010  
**Accreditation No.** DMN/18/1887

#### Assessor Accrediting Organisation

Design Matters National

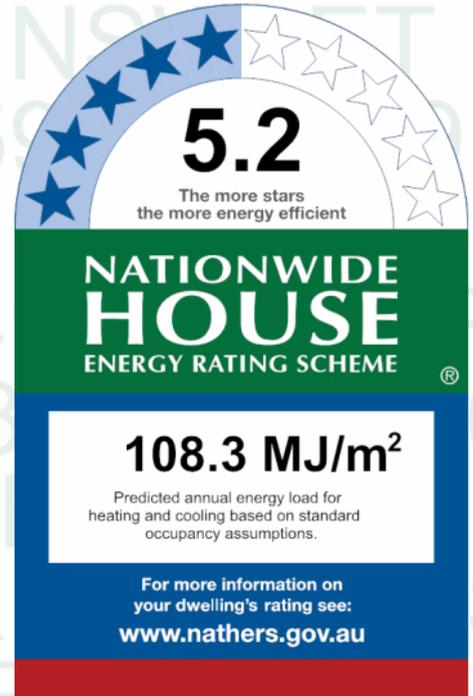
**Declaration of interest** Declaration completed: no conflicts

### National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at [www.abcb.gov.au](http://www.abcb.gov.au).

State and territory variations and additions to the NCC may also apply.



**5.2**  
The more stars  
the more energy efficient

**NATIONWIDE  
HOUSE**  
ENERGY RATING SCHEME

**108.3 MJ/m<sup>2</sup>**  
Predicted annual energy load for  
heating and cooling based on standard  
occupancy assumptions.

For more information on  
your dwelling's rating see:  
[www.nathers.gov.au](http://www.nathers.gov.au)

### Thermal performance

Heating	Cooling
<b>52.6</b> MJ/m <sup>2</sup>	<b>55.7</b> MJ/m <sup>2</sup>

### About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

### Verification

To verify this certificate, scan the QR code or visit [hstar.com.au/QR/Generate?p=QLWrwsQRC](http://hstar.com.au/QR/Generate?p=QLWrwsQRC).

When using either link, ensure you are visiting [hstar.com.au](http://hstar.com.au)



\* Refer to glossary.

## Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

### Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

### Ceiling penetrations\*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

### Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

### Provisional\* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

## Additional notes

## Window and glazed door *type and performance*

### Default\* windows

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

### Custom\* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
GJA-070-25 A	GJA-070-25 A Type 245 Aluminium Sliding Door SG 6EA	4.4	0.60	0.57	0.63
GJA-001-22 A	GJA-001-22 A Type 048 Series Awning Window SG 6EA	4.8	0.52	0.49	0.55
GJA-011-21 A	GJA-011-21 A Type 130 Series Fixed Window SG 6EA	3.9	0.66	0.63	0.69

## Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	GJA-070-25 A	n/a	2700	3485	n/a	45	NE	No
Kitchen/Living	GJA-070-25 A	n/a	2700	3485	n/a	45	NE	No
Kitchen/Living	GJA-070-25 A	n/a	2700	1200	n/a	45	SE	No
Bath	GJA-001-22 A	n/a	1200	1200	n/a	90	SW	No
Garage	GJA-001-22 A	n/a	1200	1200	n/a	90	SE	No
Bedroom 1	GJA-070-25 A	n/a	2700	3900	n/a	60	NW	No
Bedroom 1	GJA-011-21 A	n/a	1400	4200	n/a	00	NW	No
Bedroom 2	GJA-070-25 A	n/a	2700	3800	n/a	60	NW	No
Bedroom 2	GJA-011-21 A	n/a	1400	4200	n/a	00	NW	No
Bedroom 2	GJA-070-25 A	n/a	2700	3560	n/a	45	NE	No

## Roof window type and performance

### Default\* roof windows

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

### Custom\* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
VEL-011-01 W	Glass	2.6	0.24	0.23	0.25

## Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	VEL-011-01 W	n/a	0	1200	1500	SW	No	No

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m <sup>2</sup> )	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2700	1500	90	SW
Garage	2400	3400	90	SW
Garage	2400	6200	90	SW

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

## External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	7595	NE	900	NO
Kitchen/Living	EW-1	3300	1600	SE	10900	YES
Kitchen/Living	EW-1	3900	1645	SW	2400	YES
Kitchen/Living	EW-1	2700	1790	SW	400	NO
Bath	EW-1	3300	1995	SE	12600	YES
Bath	EW-1	2700	4095	SW	400	NO
Garage	EW-1	3900	10745	NE	2500	YES
Garage	EW-1	4000	7200	SE	100	NO
Garage	EW-1	2700	10800	SW	400	NO
Garage	EW-1	3300	2000	NW	15500	YES
Bedroom 1	EW-1	2700	4095	SW	400	NO
Bedroom 1	EW-1	4000	4595	NW	3800	NO
Bedroom 2	EW-1	4000	4195	NW	3800	NO
Bedroom 2	EW-1	2700	4095	NE	900	NO

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
IW-1 - Brick Veneer		21.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		74.00	No insulation

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Waffle pod slab 175 mm 100mm	54.00	None	Waffle Pod 175mm	Cork Tiles or Parquetry 8mm

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	Waffle pod slab 175 mm 100mm	7.90	None	Waffle Pod 175mm	Ceramic Tiles 8mm
Garage	Waffle pod slab 175 mm 100mm	77.20	None	Waffle Pod 175mm	Bare
Bedroom 1	Waffle pod slab 175 mm 100mm	18.50	None	Waffle Pod 175mm	Cork Tiles or Parquetry 8mm
Bedroom 2	Waffle pod slab 175 mm 100mm	16.80	None	Waffle Pod 175mm	Cork Tiles or Parquetry 8mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bath	Plasterboard	Bulk Insulation R4	No
Garage	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm <sup>2</sup> )	Sealed/unsealed
Kitchen/Living	2	Exhaust Fans	200	Sealed
Bath	1	Exhaust Fans	200	Sealed

## Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium

## Explanatory notes

### About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

### Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

### Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

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

## Glossary

<b>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<b>Assessed floor area</b>	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.
<b>Ceiling penetrations</b>	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, 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.
<b>Conditioned</b>	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.
<b>Custom windows</b>	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
<b>Default windows</b>	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
<b>Entrance door</b>	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.
<b>Exposure category – exposed</b>	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
<b>Exposure category – open</b>	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).
<b>Exposure category – suburban</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category – protected</b>	terrain with numerous, closely spaced obstructions over 10m e.g. city and industrial areas.
<b>Horizontal shading feature</b>	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
<b>National Construction Code (NCC) Class</b>	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 <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> .
<b>Opening percentage</b>	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
<b>Provisional value</b>	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 <a href="http://www.nathers.gov.au">www.nathers.gov.au</a>
<b>Reflective wrap</b> (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.
<b>Roof window</b>	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.
<b>Shading device</b>	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
<b>Shading features</b>	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
<b>Solar heat gain coefficient (SHGC)</b>	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.
<b>Skylight</b> (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.
<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b>	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
<b>Vertical shading features</b>	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).

# PROPOSED DWELLING

LOT 3 DP 1242079  
13-15 Vane St, CRANEBROOK

## DRAWING LIST

Drawing No:	Description	Rev.
AP01	Cover Sheet	02
AP02	Plan / Sections	03
AP03	Elevations	01
AP04	Site Analysis Plan	02
AP05	Notification Plans	

## DEVELOPMENT DATA

SITE AREA: 2.084Ha  
PROPOSED GFA: 93.91sqm  
PROPOSED BUILDING FOOTPRINT: 242.39sqm

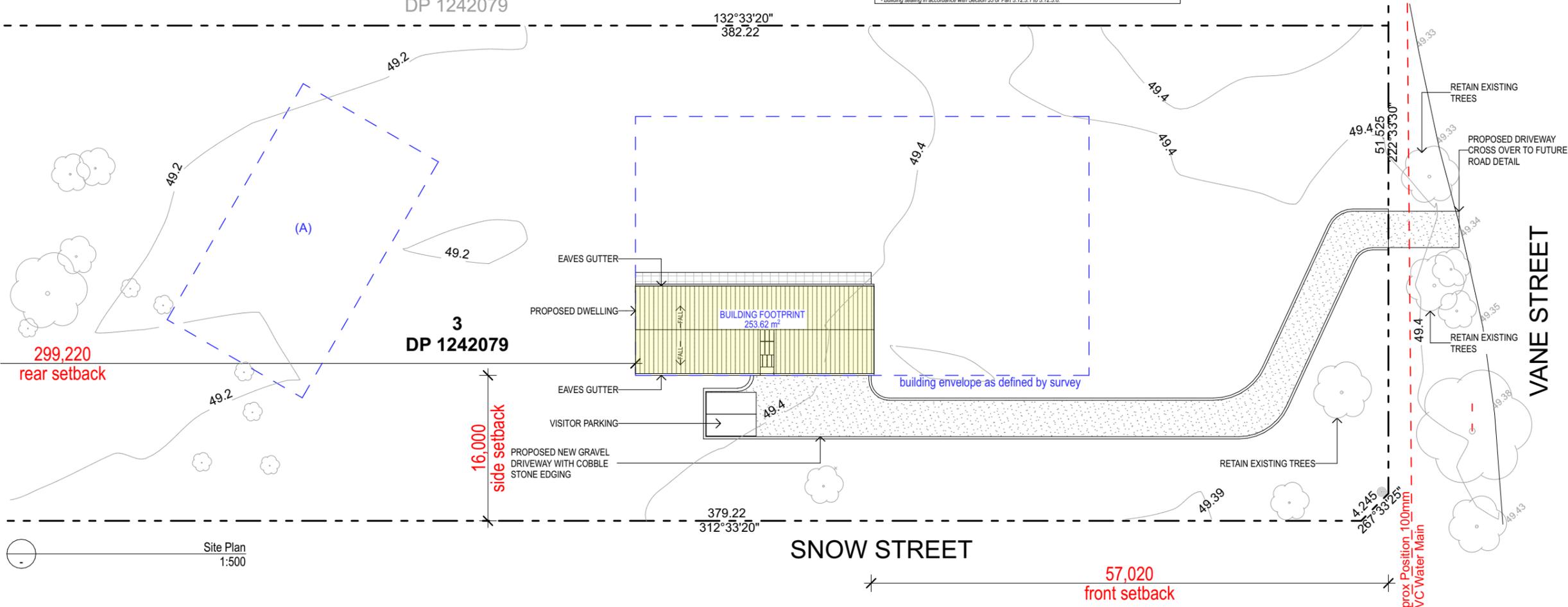
## SCHEDULE OF FINISHES



01 COLORBOND NAIL STRIP ROOF SHEET WOODLAND GREY OR SIMILAR  
02 FACE BRICK PALE BRICK COLOUR  
03 PANEL LIFT ROLLER DOOR WOODLAND GREY OR SIMILAR  
04 GLASS ROOF  
05 ALUMINIUM FRAMED GLASS WINDOW/DOOR

Thermal Performance Specifications	
<b>External Wall Construction</b>	Insulation Colour (Solar Absorbance) Detail
Brick Veneer	Anti-glare foil with bulk no gap R2.5 Medium
<b>Internal Wall Construction</b>	Insulation Detail
Cavity wall, direct fix plasterboard, single gap	None
Brick Veneer	Bulk insulation R2.5 Internal walls adjoining garage
<b>Ceiling Construction</b>	Insulation Detail
Plasterboard with Timber	Bulk insulation R4.0 Raked ceilings
<b>Roof Construction</b>	Insulation Colour (Solar Absorbance) Detail
Corrugated Iron	Bulk, reflective side down, air gap above R1.3 Medium 29° pitch
<b>Floor Construction</b>	Insulation Covering
175mm Waffle Pod Slab	None Timber, Tiles and Bare
<b>Windows</b>	Glass and frame type U Value SHGC Area m2
GJA-070-25 A Aluminium framed 6EA Sliding Doors Single Glazed	4.41 0.60
GJA-001-22 A Aluminium framed 6EA Awning Windows Single Glazed	4.78 0.52
GJA-011-21 A Aluminium framed 6EA Fixed Windows Single Glazed	3.91 0.66
Roof Window - Velux U-Value 2.60, SHGC 0.24	
U and SHGC values are according to NFRC. Alternative products may be used if the U value is lower and the SHGC is less than 5% higher or lower than the above figures.	
<b>Fixed shading - Eaves</b>	Width includes guttering, offset is distance above windows
As drawn	Nominal only, refer to plan for detail
<b>Fixed shading - Other</b>	Verandah to certain units only
Shaded areas and shade devices as drawn, adjoining buildings and boundary fences	
For construction in NSW the BCA Vol 1 or 2 must be complied with, in particular the following:	
- Thermal construction in accordance with Vol 1 Section J1.2 or Vol 2 Part 3.12.1.1	
- Thermal breaks in accordance with Section J1.3(a) & 1.5(c) or Part 3.12.1.2(c) & 3.12.1.4(b)	
- Compensating for loss of ceiling insulation in accordance with Section J1.3(c) or Part 3.12.1.2(e)	
- Floor insulation in accordance with Section J1.5(c) & (g) or Part 3.12.1.5(a)(ii) or (c) & (g)	
- Building sealing in accordance with Section J3 or Part 3.12.3.1 to 3.12.3.6.	

13-15 Vane Street, Cranebrook			
SUMMARY OF BASIX COMMITMENTS			
This is a summary of the BASIX Commitments as detailed in the BASIX Certificate. Refer to the CURRENT BASIX Certificate for Complete details.			
<b>WATER COMMITMENTS</b>			
Fixtures			
Alternative Water – Rainwater Tank Size 1,900(L) Tank Connected To:			
One Outdoor Tap	All Toilets	Washing Machine cold tap	
Fixtures			
4 Star Shower Heads	4 Star Toilet	4 Star Kitchen Taps	4 Star Basin Taps
<b>THERMAL COMFORT COMMITMENTS - Refer to TPA Specification on plans</b>			
<b>ENERGY COMMITMENTS</b>			
Hot Water	Solar (electric boosted) 31 to 35 STCs or better		
Cooling System	Living	None	
Heating System	Bedrooms	None	
Ventilation	Bathrooms	Fan ducted to roof/façade	Manual on/off
	Kitchen	Fan ducted to roof/façade	Manual on/off
	Laundry	Fan ducted to roof/façade	Manual on/off
Natural Lighting	Window/Skylight in Kitchen		As Drawn
Artificial Lighting (Primarily lit by fluoro or LED)	Number of bedrooms	2	Dedicated Yes
	Number of Living/Dining rooms	1	Dedicated Yes
	Kitchen	Yes	Dedicated Yes
	All Bathrooms/Toilets	Yes	Dedicated Yes
	Laundry	Yes	Dedicated Yes
All Hallways	Yes	Dedicated Yes	
<b>OTHER COMMITMENTS</b>			
Outdoor clothes line	Yes	Indoor or sheltered clothes drying line	Yes
Stove/Oven	Gas cooktop, Electric oven		
Other	"Well ventilated" refrigerator space		



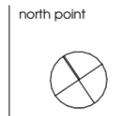
Site Plan  
1:500



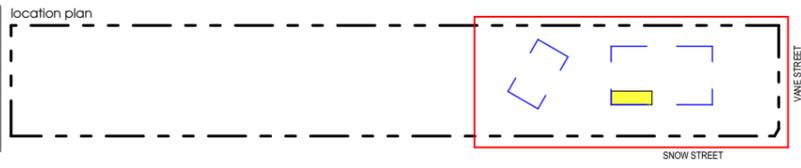
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amendments			
Revision	Description	By	Date
01	Preliminary for Client Review	JM	27.11.20
02	Preliminary for Coordination	JM	29.03.21

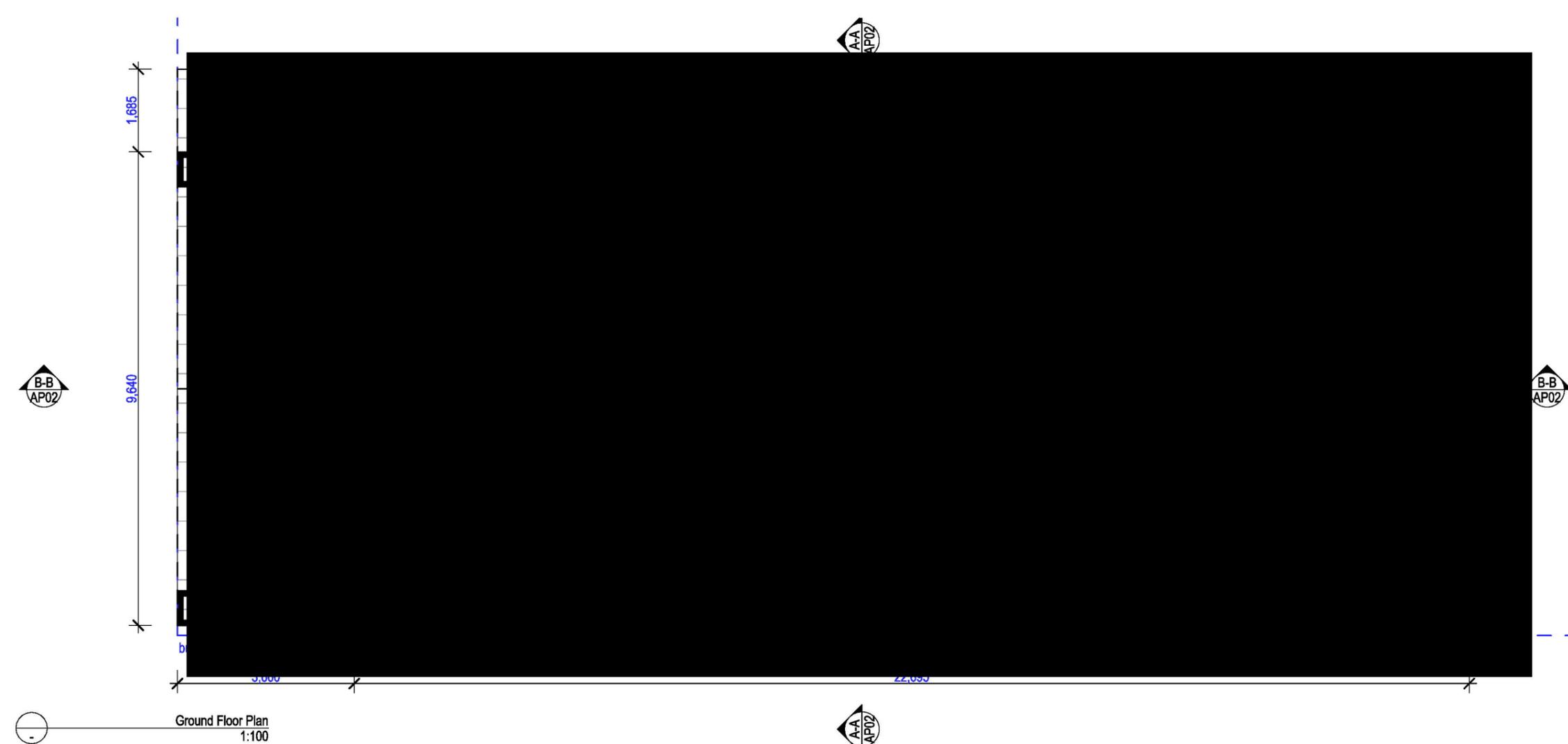
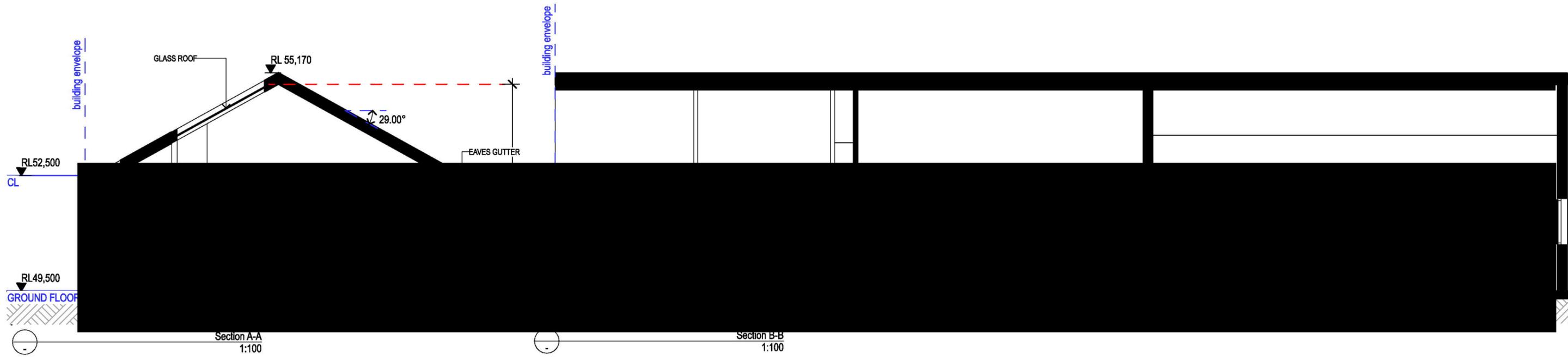


client  
MR & MRS ROSITANO

project  
20014 - Proposed Dwelling  
13-15 Vane St, CRANEBROOK

drawing  
Cover Sheet  
1:500 @ A3 \ drawing no. \ AP01 02

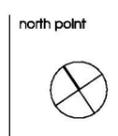




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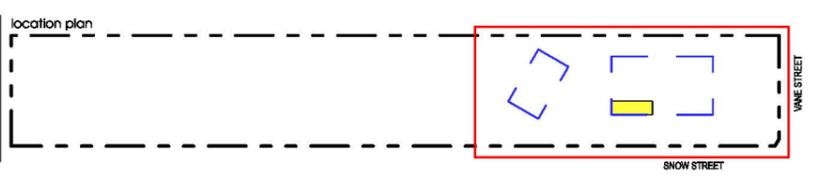
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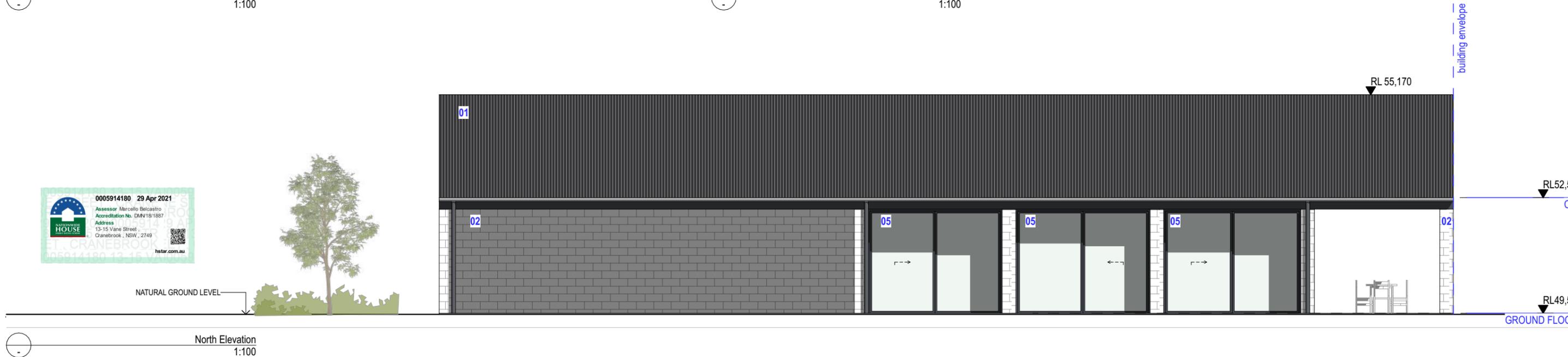
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drawing  
 Plan / Sections  
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north point

amendments		By	Date
Revision	Description		
01	Preliminary for Coordination	JM	29.03.21

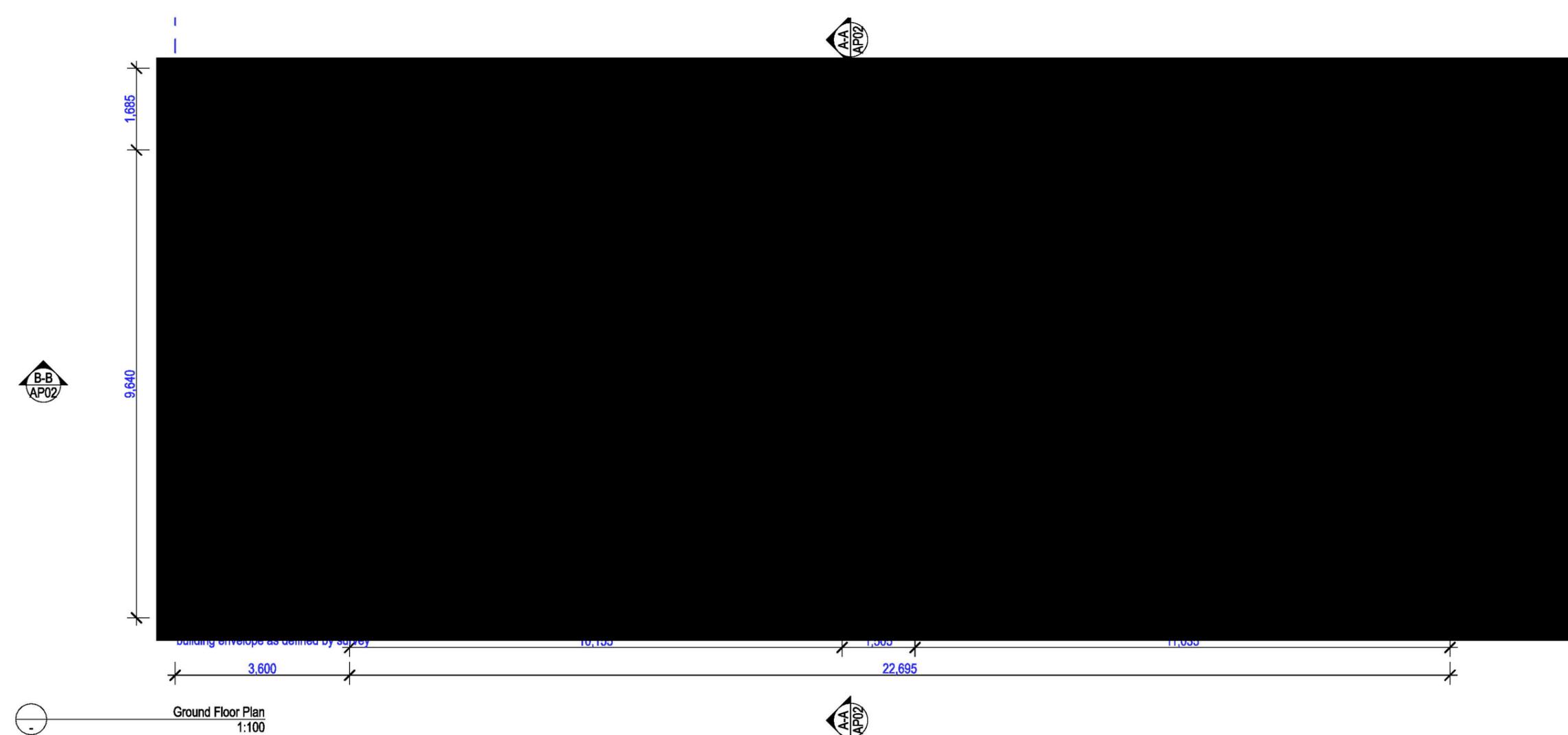
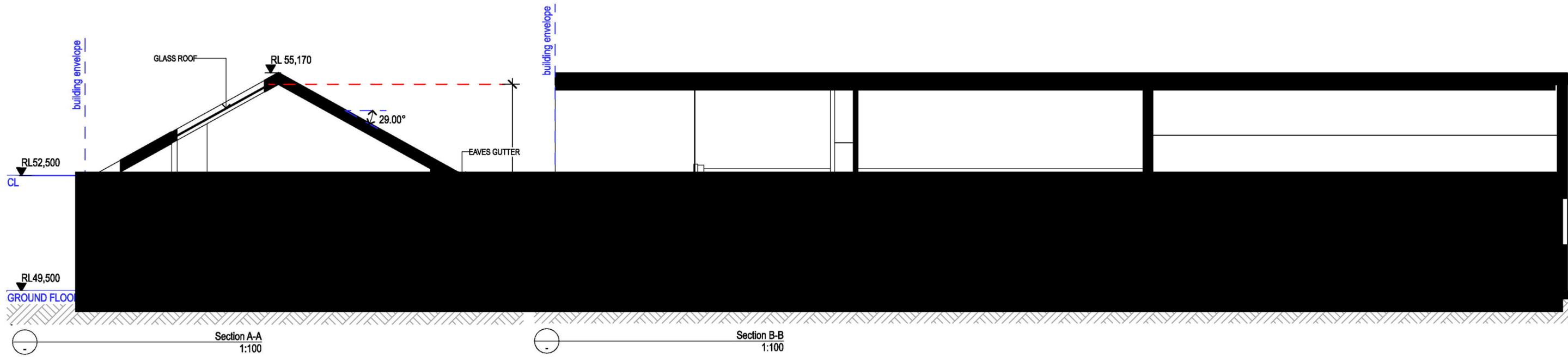
- notes
- SCHEDULE OF FINISHES**
- 01. COLORBOND ROOF SHEET
  - 02. FACEBRICK
  - 03. PANEL LIFT ROLLER DOOR
  - 04. ALUMINIUM FRAMED GLASS ROOF
  - 05. ALUMINIUM FRAMED GLASS WINDOW/DOOR

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drawing  
Elevations  
1:100 @ A3 \ drawing no. \ AP03 01

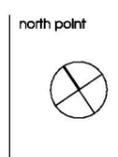
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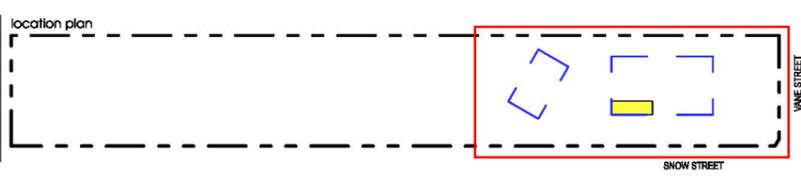
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amendments

Revision	Description	By	Date
02	Preliminary for Client Review	JM	15.12.20
03	Preliminary for Coordination	JM	29.03.21
04	DA Submission	JM	28.04.21



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 Plan / Sections  
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north point

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02	DA Submission	JM	28.04.21

- notes
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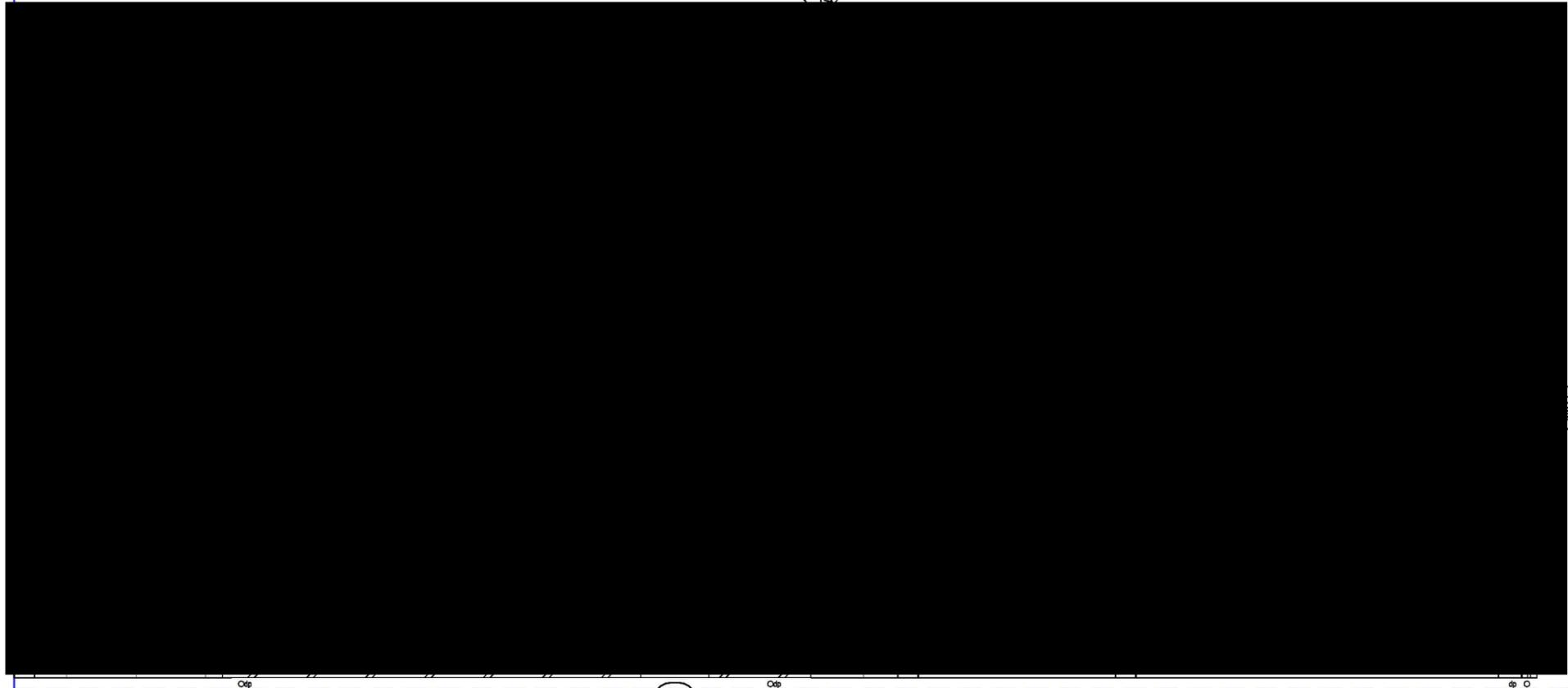
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drawing  
Elevations  
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ALUMINIUM WINDOW		
Window No:	W01	W02
Location		
Front View		
Quantity	2	1
Structural Height	1,200	3,818
Structural Width	1,176	7,710
Opening Type	Awning Restricted	Fixed
Glazing	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey
U-value	As per basix Requirements	As per basix Requirements
Note/Remarks	Flyscreen	

ALUMINIUM DOOR						
Door No:	AD01	AD02	AD03	AD04	AD05	AD06
Location					—	
Front View						
Quantity	2	1	1	1	1	1
Structural Height	2,700	2,700	2,700	2,700	2,720	2,700
Structural Width	3,485	3,560	3,798	3,912	1,500	1,190
Opening Type	Sliding	Sliding	Sliding	Sliding	—	Sliding
Finish	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey	—	Clear glazing to Australian Standard Requirments. Aluminium Frame colour woodland grey
Note/Remarks					—	



building envelope as defined by survey

W01

B-B  
AP02

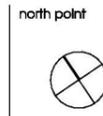
B-B  
AP02

A-A  
AP02

A-A  
AP02

BASIX Plans  
1:100

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amendments			
Revision	Description	By	Date
01	DA Submission	JM	28.04.21

notes

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drawing  
BASIX Plans  
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# LYMT

# Nationwide House Energy Rating Scheme — Multiple Class1-dwelling summary NatHERS Certificate No. 0005914180

Generated on 29 Apr 2021 using BERS Pro v4.4.0.3 (3.21)

## Property

**Address** 13-15 Vane Street , Cranebrook ,  
NSW , 2749

**Lot/DP** 3/1242079

**NatHERS climate zone** 28

**Accredited assessor** 

Marcello Belcastro

Evergreen Energy Consultants

marcello@evergreenec.com.au

1300 584 010

**Accreditation No.** DMN/18/1887

**Assessor Accrediting Organisation** Design Matters  
National



## Verification



To verify this certificate, scan the QR code or visit [hstar.com.au/QR/Generate?p=sFMrGDNAB](https://hstar.com.au/QR/Generate?p=sFMrGDNAB) .  
When using either link, ensure you are visiting [hstar.com.au](https://hstar.com.au)

## Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m <sup>2</sup> /p.a.)	Cooling load (MJ/m <sup>2</sup> /p.a.)	Total load (MJ/m <sup>2</sup> /p.a.)	Star rating
<a href="#">0005914148</a>		52.6	55.7	108.3	5.2

## National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated buildings are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at [www.abcb.gov.au](http://www.abcb.gov.au).

State and territory variations and additions to the NCC may also apply.

## Explanatory Notes

### About this report

This is a summary of NCC Class 1 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances, or energy production of solar panels. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

### Accredited Assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO). AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

### Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content, input and creation of the NatHERS Certificate is by the assessor. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.