

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1273080S\_03

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

Secretary

Date of issue: Monday, 30 May 2022

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



Planning,  
Industry &  
Environment

Project summary		
Project name	155 Suzanne Road Tallawang_03	
Street address	155 Suzanne Road Tallawang 2852	
Local Government Area	Mid-Western Regional Council	
Plan type and plan number	deposited 253275	
Lot no.	14	
Section no.	n/a	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✓ 40	Target 30
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 95	Target 45

Certificate Prepared by
Name / Company Name: Certified Energy 1
ABN (if applicable): 95164564210

# Description of project

## Project address

Project name	155 Suzanne Road Tallawang_03
Street address	155 Suzanne Road Tallawang 2852
Local Government Area	Mid-Western Regional Council
Plan type and plan number	Deposited Plan 253275
Lot no.	14
Section no.	n/a

## Project type

Project type	separate dwelling house
No. of bedrooms	4

## Site details

Site area (m <sup>2</sup> )	260000
Roof area (m <sup>2</sup> )	181
Conditioned floor area (m2)	165.2
Unconditioned floor area (m2)	6.2
Total area of garden and lawn (m2)	300

## Assessor details and thermal loads

Assessor number	10056
Certificate number	0006977938-03
Climate zone	48
Area adjusted cooling load (MJ/m <sup>2</sup> .year)	50
Area adjusted heating load (MJ/m <sup>2</sup> .year)	87
Ceiling fan in at least one bedroom	Yes
Ceiling fan in at least one living room or other conditioned area	Yes

## Project score

Water	 40	Target 30
Thermal Comfort	 Pass	Target Pass
Energy	 95	Target 45

## 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 3 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 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 100000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 100 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <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> <li>• all hot water systems in the development</li> <li>• all indoor cold water taps (not including taps that supply clothes washers) in the development</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 show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓
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 - suspended floor/open subfloor	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).	✓	✓	✓
<b>Cooling system</b>			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
<b>Heating system</b>			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: wood heater; Energy rating: n/a		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
The wood heater must have a compliance plate confirming that it complies with the relevant Australian standards, and must be installed in accordance with the requirements of all applicable regulatory authorities.			✓
<b>Ventilation</b>			
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: individual fan, not ducted; Operation control: manual switch on/off</p> <p>Kitchen: individual fan, not ducted; Operation control: manual switch on/off</p> <p>Laundry: individual fan, not ducted; Operation control: manual switch on/off</p>		<p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</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 4 of the bedrooms / study; dedicated</li> <li>• at least 4 of the living / dining rooms; dedicated</li> </ul>		<p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p>

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>• the kitchen; dedicated</li> <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 3 bathroom(s)/toilet(s) in the development for natural lighting.			
<b>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 10 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.			
<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.			

## 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. 0006977938-03

Generated on 30 May 2022 using BERS Pro v4.4.1.5 (3.21)

### Property

**Address** 155 Suzanne Road , Tallawang , NSW ,  
2852

**Lot/DP** 14/253275

**NCC Class\*** 1A

**Type** New Dwelling

### Plans

**Main Plan** Rev C - Issued on - 05.10.2022

**Prepared by** Imagine Kit Homes

### Construction and environment

Assessed floor area (m <sup>2</sup> *)	Exposure Type	
Conditioned*	165.0	Open
Unconditioned*	6.0	<b>NatHERS climate zone</b>
Total	171.0	48
Garage	0.0	

### Accredited assessor

**Name** Jamie Bonnefin

**Business name** Certified Energy

**Email** jobs@certifiedenergy.com.au

**Phone** 1300 443 674

**Accreditation No.** 10056

**Assessor Accrediting Organisation**  
HERA

**Declaration of interest** None

### 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.

**4.9**  
The more stars  
the more energy efficient

**NATIONWIDE  
HOUSE**  
ENERGY RATING SCHEME

**136.4 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>86.5</b> MJ/m <sup>2</sup>	<b>49.9</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=qrojMtecD](http://hstar.com.au/QR/Generate?p=qrojMtecD).

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



## 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? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

### 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

\*The dwelling has been assessed without recessed light fittings as no lighting or electrical plan has been provided.

\*Obscure glazing has been modelled as clear glass as it has similar thermal properties.

I have not modeled the shading, no shading is applicable

## 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
ALM-004-04 A	ALM-004-04 A Aluminium B DG Air Fill Low Solar Gain low-E -Clear	4.9	0.33	0.31	0.35

### Custom\* windows

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

## Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-04 A	n/a	1500	525	n/a	00	NE	No
Kitchen/Living	ALM-004-04 A	n/a	1500	750	n/a	00	E	No
Kitchen/Living	ALM-004-04 A	n/a	1500	525	n/a	00	SE	No
Kitchen/Living	ALM-004-04 A	n/a	1800	1500	n/a	35	E	No
Kitchen/Living	ALM-004-04 A	n/a	1500	525	n/a	00	NE	No
Kitchen/Living	ALM-004-04 A	n/a	1500	750	n/a	00	E	No
Kitchen/Living	ALM-004-04 A	n/a	1500	525	n/a	00	SE	No
Kitchen/Living	ALM-004-04 A	n/a	2100	4800	n/a	45	S	No
Kitchen/Living	ALM-004-04 A	n/a	1800	2100	n/a	35	W	No
Media	ALM-004-04 A	n/a	600	1800	n/a	45	W	No
Bedroom 4	ALM-004-04 A	n/a	1800	2100	n/a	35	S	No
Bedroom 2	ALM-004-04 A	n/a	900	1800	n/a	45	N	No
Bedroom 3	ALM-004-04 A	n/a	900	1800	n/a	45	N	No
Bath	ALM-004-04 A	n/a	1200	1200	n/a	45	N	No
Retreat	ALM-004-04 A	n/a	1200	2400	n/a	45	E	No
Retreat	ALM-004-04 A	n/a	1200	2400	n/a	45	N	No
Bedroom 1	ALM-004-04 A	n/a	2100	3200	n/a	65	S	No
ENS	ALM-004-04 A	n/a	2100	900	n/a	30	E	No
ENS	ALM-004-04 A	n/a	2100	1800	n/a	35	S	No
WC	ALM-004-04 A	n/a	600	600	n/a	45	E	No
Stairs-FF	ALM-004-04 A	n/a	1800	300	n/a	00	N	No
Stairs-FF	ALM-004-04 A	n/a	1800	300	n/a	00	N	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
No Data Available					

## Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

## Skylight type and performance

Skylight ID	Skylight description
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame

## Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m <sup>2</sup> )	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bedroom 1	GEN-04-008a	n/a	50	1.40	W	None	No	0.50
Bedroom 1	GEN-04-008a	n/a	50	1.40	W	None	No	0.50

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	820	90	W
Laundry	2100	820	90	N

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.85	Dark	Anti-glare foil with bulk no gap R2.7	No
EW-2	Weatherboard Cavity Panel Direct Fix	0.85	Dark	Anti-glare foil with bulk no gap R2.7	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R5	No
EW-4	Fibro Cavity Panel Direct Fix	0.85	Dark	Bulk Insulation R5	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	2440	3195	N	100	NO
Kitchen/Living	EW-1	2440	600	E	0	YES
Kitchen/Living	EW-1	2440	721	NE	0	YES
Kitchen/Living	EW-1	2440	900	E	0	NO
Kitchen/Living	EW-1	2440	781	SE	0	YES
Kitchen/Living	EW-1	2440	2900	E	0	YES
Kitchen/Living	EW-1	2440	781	NE	0	YES
Kitchen/Living	EW-1	2440	800	E	0	NO
Kitchen/Living	EW-1	2440	781	SE	0	YES
Kitchen/Living	EW-1	2440	595	E	0	YES
Kitchen/Living	EW-2	2440	6000	S	3800	YES
Kitchen/Living	EW-2	2440	4095	W	2200	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Media	EW-1	2440	3995	S	500	NO
Media	EW-1	2440	3695	W	8200	YES
Bedroom 4	EW-1	2440	3695	E	0	NO
Bedroom 4	EW-1	2440	2995	S	500	NO
Bedroom 2	EW-1	2440	3090	N	100	NO
Bedroom 3	EW-1	2440	2995	N	100	NO
Bedroom 3	EW-1	2440	2200	S	7900	YES
Bedroom 3	EW-1	2440	3600	W	0	NO
Laundry	EW-1	2440	1690	N	100	NO
Bath	EW-1	2440	1590	N	100	NO
Sairs-GF	EW-1	2440	2590	N	100	NO
Retreat	EW-1	3300	3595	E	100	NO
Retreat	EW-1	3300	3295	N	0	NO
Bedroom 1	EW-2	3300	3795	S	3900	NO
Bedroom 1	EW-1	1140	4395	W	0	NO
Bedroom 1	EW-4	2160	4395	W	100	NO
WIR	EW-1	1890	1590	W	0	NO
WIR	EW-4	1410	1590	W	100	NO
ENS	EW-1	3300	3295	E	100	NO
ENS	EW-2	3300	1995	S	3900	NO
WC	EW-1	3300	1090	E	100	NO
Stairs-FF	EW-1	2700	1995	W	0	NO
Stairs-FF	EW-4	600	1995	W	100	NO
Stairs-FF	EW-1	3300	2495	N	0	NO

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
W-1	Cavity wall, direct fix plasterboard, single gap	166.00	No insulation

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation (R-value)	Added insulation (R-value)	Covering
Kitchen/Living	Suspended Timber Floor 19mm	67.10	Very Open	Bulk Insulation in Contact with Floor R4.5	Ceramic Tiles 8mm
Media	Suspended Timber Floor 19mm	13.90	Very Open	Bulk Insulation in Contact with Floor R4.5	Ceramic Tiles 8mm
Bedroom 4	Suspended Timber Floor 19mm	10.80	Very Open	Bulk Insulation in Contact with Floor R4.5	Carpet 10mm
Bedroom 2	Suspended Timber Floor 19mm	10.70	Very Open	Bulk Insulation in Contact with Floor R4.5	Carpet 10mm

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 3	Suspended Timber Floor 19mm	10.60	Very Open	Bulk Insulation in Contact with Floor R4.5	Ceramic Tiles 8mm
Corridor	Suspended Timber Floor 19mm	4.70	Very Open	Bulk Insulation in Contact with Floor R4.5	Carpet 10mm
Laundry	Suspended Timber Floor 19mm	2.50	Very Open	Bulk Insulation in Contact with Floor R4.5	Ceramic Tiles 8mm
Bath	Suspended Timber Floor 19mm	3.70	Very Open	Bulk Insulation in Contact with Floor R4.5	Ceramic Tiles 8mm
WIP	Suspended Timber Floor 19mm	2.70	Very Open	Bulk Insulation in Contact with Floor R4.5	Ceramic Tiles 8mm
Sairs-GF	Suspended Timber Floor 19mm	4.90	Very Open	Bulk Insulation in Contact with Floor R4.5	Cork Tiles or Parquetry 8mm
Retreat/Kitchen/Living	Timber Above Plasterboard 300mm	11.40		No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 300mm	15.70		No Insulation	Carpet 10mm
WIR/Kitchen/Living	Timber Above Plasterboard 300mm	0.90		No Insulation	Carpet 10mm
WIR/WIP	Timber Above Plasterboard 300mm	2.80		No Insulation	Carpet 10mm
ENS/Kitchen/Living	Timber Above Plasterboard 300mm	5.80		No Insulation	Ceramic Tiles 8mm
ENS/Bedroom 4	Timber Above Plasterboard 300mm	0.60		No Insulation	Ceramic Tiles 8mm
WC/Kitchen/Living	Timber Above Plasterboard 300mm	2.00		No Insulation	Ceramic Tiles 8mm
Stairs-FF/Sairs-GF	Timber Above Plasterboard 300mm	4.80		No Insulation	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 R5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Media	Plasterboard	Bulk Insulation R5	No
Bedroom 4	Plasterboard	Bulk Insulation R5	No
Bedroom 4	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R5	No
Bedroom 3	Plasterboard	Bulk Insulation R5	No
Corridor	Plasterboard	Bulk Insulation R5	No
Laundry	Plasterboard	Bulk Insulation R5	No
Bath	Plasterboard	Bulk Insulation R5	No
WIP	Timber Above Plasterboard	No Insulation	No
Sairs-GF	Timber Above Plasterboard	No Insulation	No
Retreat	Plasterboard	Bulk Insulation R5	No
Bedroom 1	Plasterboard	Bulk Insulation R5	No
WIR	Plasterboard	Bulk Insulation R5	No
ENS	Plasterboard	Bulk Insulation R5	No
WC	Plasterboard	Bulk Insulation R5	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Stairs-FF	Plasterboard	Bulk Insulation R5	No

### Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm <sup>2</sup> )	Sealed/unsealed
No Data Available				

### Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 4	1	900
Bedroom 2	1	900
Bedroom 3	1	900
Bedroom 1	1	900

### Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.8	0.85	Dark

## 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 (also known as foil)</b>	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 (also known as roof lights)</b>	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).

# LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852

NCC 2019 - SPECIFICATIONS FOR RESIDENTIAL (CLASS 1 AND 10) BUILDINGS  
NOTE: THE BUILDING WILL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS REFERRED TO BELOW, NOT ALL STANDARDS REFERENCED BELOW WILL BE APPLICABLE

CLIENT: KIRSTEN & DECLAN BOYCE

- 3.1.1 EARTHWORKS**
- All earthworks will be carried out in accordance with relevant conditions of consent and Part 3.1.1 of the BCA or in accordance with details designed by a practising structural engineer.
- 3.1.3 DRAINAGE**
- All drainage works will be carried out in accordance with AS/NZS 3500.5 – Domestic Installations – Stormwater Drainage or in accordance with Parts 3.1.2.3 to 3.1.2.6 of the BCA.
- 3.1.4 TERMITE RISK MANAGEMENT**
- Termite barriers will be installed to minimise the risk of termite attack to primary building elements in accordance with AS 3602.1 – Termite Management – New Building Work.
  - Termite barriers will be installed to minimise the risk of termite attack to primary building elements for concrete slabs on ground in accordance with Part 3.1.3.3 of the BCA.
  - Termite barriers will be installed to minimise the risk of termite attack to primary building elements or suspended floors in accordance with Part 3.1.3.4 of the BCA.
  - Attachments to buildings will be installed to minimise the risk of termite attack to primary building elements in accordance with Part 3.1.3.5 of the BCA.
- 3.2 FOOTINGS AND SLABS**
- Footings and slabs will be designed and installed in accordance with AS 2870 – Residential Slabs and Footings – Construction, except that for the purposes of Clause 5.3.3.1 of AS 2870 a damp-proofing membrane is required to be provided; or
  - Footings and slabs will be designed by a practising structural engineer in accordance with AS 2870 – Residential Slabs and Footings – Construction.
- 3.3 MASONRY**
- Unreinforced masonry, reinforced masonry, masonry accessories and weatherproofing of masonry will be designed and installed in accordance with AS 3700 – Masonry Structures, or AS 4773 – Masonry for Small Buildings, Parts 1 and 2. Earthwall construction will be designed and installed in accordance with CSIRO – NBTU Bulletin 5, Earthwall Construction 4th Edition 1987.
- 3.4.1 SUB-FLOOR VENTILATION**
- Sub-floor ventilation will be designed and installed in accordance with Part 3.4.1.2 (Acceptable Construction Practice) of the BCA
- 3.4.2 STEEL FRAMING**
- Steel framing will be designed and constructed by a practising structural engineer in accordance with one of the following manuals:
    - AS 4100 – Steel structures.
    - AS/NZS 4600 – Cold-formed steel structures.
  - Residential and low-rise steel framing: NASH Standard 'Residential and Low-Rise Steel Framing' Part 1 or Part 2.
  - Steel framing will be designed and constructed in accordance with Parts 3.4.2.1 to 3.4.2.6 (Acceptable Construction Practice) of the BCA.
- 3.4.3 TIMBER FRAMING**
- Timber framing will be designed and constructed in accordance with AS 1684.2 – Residential Timber Framed Construction – Non-Cyclonic Areas; or
  - Timber framing will be designed and constructed in accordance with details provided by a practising structural engineer.
  - Prefabricated wall frames and roof trusses will be designed and constructed in accordance with structural engineer's details supplied by the manufacturer.
- 3.4.4 STRUCTURAL STEEL MEMBERS**
- Structural steel members will be designed and constructed in accordance with the details provided by a practising structural engineer; or
  - Structural steel framing will be designed and constructed in accordance with Parts 3.4.4.1 to 3.4.4.4 (Acceptable Construction Practice) of the BCA.
- 3.5 ROOF CLADDING**
- Roof tiles will be installed in accordance with AS 2040 – Roof Tiles & AS 2055 – Installation of Roof Tiles.
  - Metal sheet roofing will be installed in accordance with AS 1562.1 – Design and installation of sheet roof and wall cladding – Metal.
  - Corrugated fibre-reinforced cement roofing will be installed in accordance with AS/NZS 1562.2 – Design and Installation of Sheet Roof and Wall Cladding.
  - Asphalt shingles will be installed in accordance with ASTM D3018-80 – Asphalt shingles.
  - A pliable membrane underlay will be installed in accordance with AS/NZS 4200 – Installation of pliable membrane underlay.
- 3.5.3 OUTTERS AND DOWNPIPES**
- Gutters and downpipes will be designed and installed in accordance with Parts 3.5.2.1 to 3.5.2.5 (Acceptable Construction Practice) of the BCA.

- 3.5.5 WALL CLADDING**
- Metal wall cladding will be designed and constructed in accordance with AS 1562.1 – Design and Installation of Sheet Roof & Wall Cladding – Metal.
  - Timber weatherboard cladding will be installed in accordance with Part 3.5.3.2 (Acceptable Construction Practice) of the BCA.
  - Openings in cladding will be flashed in accordance with Part 3.5.3.6.
  - Fibre cement and hardboard wall cladding boards will be installed in accordance with Part 3.5.3.3 (Acceptable Construction Practice) of the BCA. Openings in cladding will be flashed in accordance with Part 3.5.3.6.
  - Fibre cement, hardboard and plastered sheet cladding will be installed in accordance with Part 3.5.3.4 (Acceptable Construction Practice) of the BCA. Openings in cladding will be flashed in accordance with Part 3.5.3.6.
  - Eaves and soffits linings will be designed and installed in accordance with part 3.5.3.5 (Acceptable Construction Practice) of the BCA.
- 3.6 GLAZING AND WINDOWS**
- Glazing and windows will be designed and constructed in accordance with AS 2047 for the following glazed assemblies in an external wall:
    - Windows excluding those listed in (b).
    - Sliding and swinging glazed doors with a frame, including french and bi-fold doors with a frame.
      - Adjustable louvers.
        - Window walls with one piece framing. The following glazed assemblies will be designed and constructed in accordance with AS 1298 – Glass in buildings – Selection and Installation:
          - All glazed assemblies not in an external wall
          - Hinged doors including French doors and bi-fold doors
          - Revolving doors
          - Fixed Louvers
          - Skylights and roof lights and windows in other than the vertical plane
          - Sliding doors without a frame
          - Windows constructed on-site and architectural one-off windows that are not design tested in accordance with AS 2047
          - Second hand, reused, recycled, and replacement windows
          - Heritage windows
        - Glazing will be designed and constructed in accordance with AS 1268 for all glazed assemblies not covered by (a) and the following glazed assemblies:
          - All glazed assemblies not in an external wall.
          - Revolving doors.
          - Fixed louvers.
          - Skylights, roof lights and windows in other than the vertical plane.
          - Sliding and swinging doors without a frame.
          - Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047.
          - Second-hand windows, re-used windows and recycled windows.
          - Heritage windows.
          - Glazing used in balustrades and sloping overhead glazing.
- 3.7.2 FIRE SEPARATION**
- Fire separation will be designed and constructed in accordance with parts 3.7.1.1 to 3.7.1.10 (Acceptable Construction Practice) of the BCA.
- 3.7.5 SMOKE ALARMS**
- 240 volt smoke alarms will be designed and constructed and interconnected in accordance with Parts 3.7.2.1 to 3.7.2.5 (Acceptable Construction Practice) of the BCA.
- 3.10.5 BUSHFIRE PROTECTION**
- The building will be constructed in accordance with the following:
    - AS 3959, except for Section 9 Construction for Bushfire Attack Level FZ (BAL-FZ); or
    - NASH Standard 'Steel Framed Construction in Bushfire Areas', except for buildings subject to Bushfire Attack Level FZ (BAL-FZ); or
    - the requirements of (c) or (d) above as modified by the development consent following consultation with the NSW Rural Fire Service under section 796A of the Environmental Planning and Assessment Act 1979; or
    - the requirements of (c) or (d) above as modified by development consent with a bushfire safety authority issued under section 100B of the Rural Fires Act 1997 for the purposes of integrated development.
- 3.8.1 WET AREAS & EXTERNAL WATERPROOFING**
- Wet areas will be constructed to be waterproof or water resistant in accordance with AS3740 – Waterproofing of domestic wet areas.
  - Waterproofing for external above ground membranes will comply with AS4654 Parts 1 & 2.
- 3.8.2 ROOM HEIGHTS**
- Ceiling heights will be constructed in accordance with Part 3.8.2 (Acceptable Construction Practice) of the BCA.
- 3.8.3 SANITARY COMPARTMENTS**
- Sanitary compartments will be constructed in accordance with part 3.8.3 (Acceptable Construction Practice) of the BCA.

- 3.8.4 LIGHT**
- Lighting will be provided in accordance with Part 3.8.4 (Acceptable Construction Practice) of the BCA.
- 3.8.5 VENTILATION**
- Ventilation will be provided in accordance with Part 3.8.5 (Acceptable Construction Practice) of the BCA.
- 3.8.6 SOUND INSULATION**
- Sound insulation will be provided in accordance with part 3.8.6 (Acceptable Construction Practice) of the BCA.
- 3.9.1 STAIR CONSTRUCTION**
- Stairs will be constructed in accordance with Part 3.9.1.1 to 3.9.1.5 (Acceptable Construction Practice) of the BCA.
  - Stair treads will have a slip resistance classification in accordance with Table 3.9.1.1 of the BCA.
- 3.9.2 BARRIERS & HANDRAILS**
- Barriers and handrails will be constructed in accordance with Part 3.9.2.1 to 3.9.2.4 (Acceptable Construction Practice) of the BCA.
- 3.9.2.6 PROTECTION OF OPENABLE WINDOWS**
- Openable walls will be constructed and protected in accordance with Part 3.9.2.5 (Acceptable Construction Practice) of the BCA.
- 3.10 ADDITIONAL CONSTRUCTION REQUIREMENTS**
- Where relevant the entire building will be designed and constructed in accordance with Part 3.10.2 (Earthquake Zones) of the BCA.
  - Where relevant the entire building will be designed and constructed in accordance with Part 3.10.3 (Flood Hazard Areas) of the BCA.
  - Where relevant the entire building will be designed and constructed in accordance with Part 3.10.5 (Bushfire Prone Areas) of the BCA.
- 3.10.1 SWIMMING POOLS**
- Child proof barriers around the swimming pool will comply with the Swimming Pools Act 1992 and regulations and AS 1926.1 – Swimming Pool Safety, Part 1: Safety Barriers for Swimming Pools and AS 1926.2 – Swimming Pool Safety, Part 2: Location of Safety Barriers for Swimming Pools.
  - Swimming pool water recirculation systems shall comply with AS 1926.3 – Water Recirculation and Filtration Systems.
  - Spa pool water recirculation systems shall comply with AS 1526.3 – Water Recirculation and Filtration Systems except that the specified distance between two outlets connected to a common line must not be less than 600mm.
- 3.12.1 INSULATION**
- Thermal insulation will be installed in the building fabric in accordance with Part 3.12.1.1 of the BCA.
- 3.12.3 BUILDING SEALING**
- The building will be sealed in accordance with Part 3.12.3.1 of the BCA.
- 3.12.5 BUILDING SERVICES**
- Building services (the hot water service) will be designed and installed in accordance with Part 3.12.5.1 of the BCA.

DRAWING LIST	
000	Cover Page & General Construction Notes
002	Illustration of Design
003	Bushfire Requirements
100	Site Plan - CALLOUT
110	Site Plan - Overall
200	Ground Floor Plan
201	First Floor Plan
210	Roof Plan
300	Elevations
400	Section
401	Section
500	Setout - Floor Setout Plan
600	Electrical Plans
700	Window & Door Schedule
800	BASIX Requirements

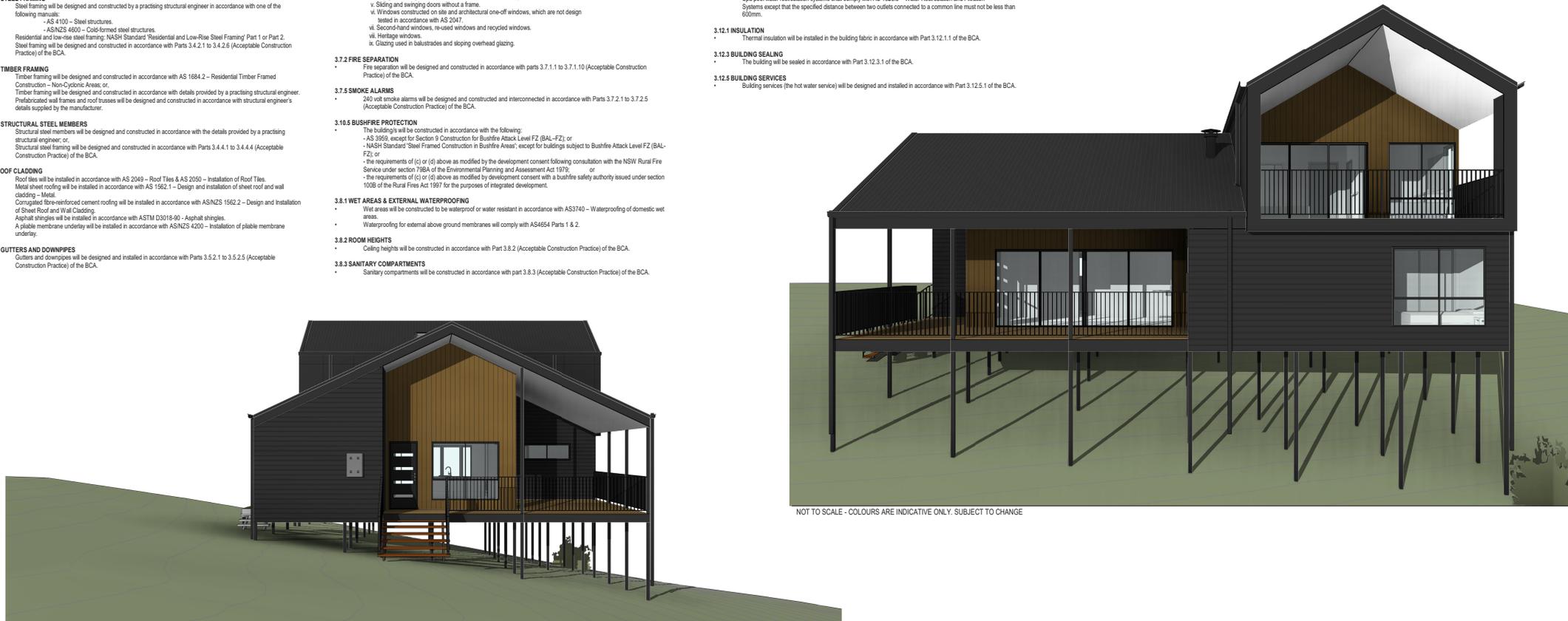
0006977938-03 30 May 2022

4.9 Assessment of Bushfire Hazard

Address: 155 Suzanne Road, Tallawang, NSW, 2852

136.4 Mpa

www.nsw.gov.au hstar.com.au



## Cover Page & General Construction Notes

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. <b>DP253275</b>	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: <b>@ A2</b>		A	20.07.22	ISSUED FOR TENDERS	AM	AMM
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: <b>000</b>	LAND AREA:	B	15.04.22	ISSUED	AM	AMM
				C	05.10.22	FINAL DRAWING AMEND TO SUBMITAL REPORT	AM	AMM

**imagine**  
by design

3968 PACIFIC HIGHWAY  
LOGANHOLME, QLD 4129  
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QBCC: 1511 1256



NOT TO SCALE - COLOURS ARE INDICATIVE ONLY. SUBJECT TO CHANGE



## Illustration of Design

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: <b>@ A2</b>		A	22.07.22	PROPOSED SERVICES	AM	AM
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 002	LAND AREA:	B	13.04.22	SETBACK	AM	AM
				C	05.10.22	FINAL ADDRESS AMEND TO STATE BAL REPORT	AM	AM

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**CONSTRUCTION STANDARDS TO COMPLY WITH AUSTRALIAN STANDARD 3959 – 2009 & APPENDIX 3 OF PLANNING FOR BUSHFIRE PROTECTION - BUSHFIRE ATTACK LEVEL (BAL - 29)**

**NOTE: THE BUILDING WILL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS REFERRED TO BELOW, NOT ALL STANDARDS REFERENCED BELOW WILL BE APPLICABLE**

ANY ELEMENT OF CONSTRUCTION OR SYSTEM THAT SATISFIES THE TEST CRITERIA OF AS 1530.8.1 MAY BE USED IN LIEU OF THE APPLICABLE REQUIREMENTS BELOW (SEE CLAUSE 3.8 OF THE STANDARD).

**1.0 SARKING**

- SARKING, WHERE USED FOR BUSHFIRE PROTECTION SHALL BE:
  - NON-COMBUSTIBLE; OR
  - BREATHER-TYPE SARKING COMPLYING WITH AS/NZS4200.1 AND WITH A FLAMMABILITY INDEX OF NOT MORE THAN 5 AND SARKED ON THE OUTSIDE OF THE FRAME; OR
  - AN INSULATION MATERIAL, CONFORMING TO THE APPROPRIATE AUSTRALIAN STANDARD FOR THAT MATERIAL.

**2.0 SUBFLOOR SUPPORTS**

- THIS STANDARD DOES NOT PROVIDE CONSTRUCTION REQUIREMENTS FOR SUBFLOOR SUPPORTS WHERE THE SUBFLOOR SPACE IS ENCLOSED WITH—
  - A WALL THAT COMPLIES WITH THE REQUIREMENTS FOR AN EXTERNAL WALL BELOW; OR
  - A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2MM, MADE OF CORROSION RESISTANT STEEL, BRONZE OR ALUMINIUM; OR
  - A COMBINATION OF ITEMS (A) AND (B) ABOVE.
- WHERE THE SUBFLOOR SPACE IS UNENCLOSED, THE SUPPORT POSTS, COLUMNS, STUMPS, PIERS AND POLES SHALL BE—
  - OF NON-COMBUSTIBLE MATERIAL; OR
  - (OR BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT)) OR
  - A COMBINATION OF ITEMS (I) AND (II) ABOVE.

NOTE: THIS REQUIREMENT APPLIES TO THE PRINCIPAL BUILDING ONLY. SEE REQUIREMENTS BELOW FOR VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS.

**3.0 FLOORS**

- ELEVATED FLOORS
  - ENCLOSED SUBFLOOR SPACE

THE STANDARD DOES NOT PROVIDE CONSTRUCTION REQUIREMENTS FOR ELEVATED FLOORS, INCLUDING BEARERS, JOISTS AND FLOORING, WHERE THE SUBFLOOR SPACE IS ENCLOSED WITH—

  - A WALL THAT COMPLIES WITH THE STANDARDS FOR AN EXTERNAL WALL BELOW; OR
  - A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION RESISTANT STEEL, BRONZE OR ALUMINIUM; OR
  - A COMBINATION OF ITEMS (A) AND (B) ABOVE.
- UNENCLOSED SUBFLOOR SPACE
  - ENCLOSED SUBFLOOR SPACE

WHERE THE SUBFLOOR SPACE IS UNENCLOSED, THE BEARERS, JOISTS AND FLOORING, LESS THAN 400mm ABOVE FINISHED GROUND LEVEL, SHALL BE ONE OF THE FOLLOWING:

  - MATERIALS THAT COMPLY WITH THE FOLLOWING:
    - BEARERS AND JOISTS SHALL BE—
      - NON-COMBUSTIBLE; OR
      - BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR
      - A COMBINATION OF ITEMS (I) AND (II) ABOVE.
    - FLOORING SHALL BE—
      - NON-COMBUSTIBLE; OR
      - BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR
      - TIMBER (OTHER THAN BUSHFIRE-RESISTING TIMBER), PARTICLEBOARD OR PLYWOOD FLOORING WHERE THE UNDERSIDE IS LINED WITH SARKING-TYPE MATERIAL, OR MINERAL WOOL INSULATION; OR
      - A COMBINATION OF ANY OF ITEMS (I), (II) OR (III) ABOVE; OR
      - A SYSTEM COMPLYING WITH AS 1530.8.1

WHERE THE SUBFLOOR SPACE IS UNENCLOSED, THE BEARERS, JOISTS AND FLOORING, LESS THAN 400mm ABOVE FINISHED GROUND LEVEL, SHALL BE ONE OF THE FOLLOWING:

- MATERIALS THAT COMPLY WITH THE FOLLOWING:
  - BEARERS AND JOISTS SHALL BE—
    - NON-COMBUSTIBLE; OR
    - BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR
    - A COMBINATION OF ITEMS (I) AND (II) ABOVE.
  - FLOORING SHALL BE—
    - NON-COMBUSTIBLE; OR
    - BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR
    - TIMBER (OTHER THAN BUSHFIRE-RESISTING TIMBER), PARTICLEBOARD OR PLYWOOD FLOORING WHERE THE UNDERSIDE IS LINED WITH SARKING-TYPE MATERIAL, OR MINERAL WOOL INSULATION; OR
    - A COMBINATION OF ANY OF ITEMS (I), (II) OR (III) ABOVE; OR
    - A SYSTEM COMPLYING WITH AS 1530.8.1

THIS STANDARD DOES NOT PROVIDE CONSTRUCTION REQUIREMENTS FOR ELEMENTS OF ELEVATED FLOORS, INCLUDING BEARERS, JOISTS AND FLOORING, IF THE UNDERSIDE OF THE ELEMENT IS 400mm OR MORE ABOVE FINISHED GROUND LEVEL.

**4.0 EXTERNAL WALLS**

- WALLS
 

THE EXPOSED COMPONENTS OF AN EXTERNAL WALL SHALL BE:

  - NON-COMBUSTIBLE MATERIAL SUCH AS CAVITY BRICK, MASONRY VENEER WALLS WITH AN OUTER LEAF OF CLAY CONCRETE, CALCIUM SILICATE OR NATURAL STONE, PRECAST OR IN SITU WALLS OF CONCRETE OR AERATED CONCRETE OR EARTH WALLING INCLUDING MUD BRICK; OR
  - TIMBER LOGS OF A SPECIES WITH A DENSITY OF 880 KG/M3 OR GREATER AT A 12 PERCENT MOISTURE CONTENT; OF A MINIMUM NOMINAL OVERALL THICKNESS OF 90mm AND A MINIMUM THICKNESS OF 70mm (SEE CLAUSE 3.11 OF STANDARD); AND GAUGE PAVED; OR
  - CLADDING THAT IS FIXED EXTERNALLY TO A TIMBER-FRAMED OR A STEEL-FRAMED WALL AND IS—
    - FIBRE-CEMENT A MINIMUM OF 6mm IN THICKNESS; OR
    - BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR
    - STEEL SHEETING; OR
    - A COMBINATION OF ANY OF ITEMS (I), (II) OR (III) ABOVE; OR
    - A COMBINATION OF ANY OF ITEMS (A), (B) OR (C) ABOVE.
- JOINTS
 

ALL JOINTS IN THE EXTERNAL SURFACE MATERIAL OF WALLS SHALL BE COVERED, SEALED, OVERLAPPED, BACKED OR BUTT-JOINTED TO PREVENT GAPS GREATER THAN 3mm.
- VENTS AND WEEPHOLES
 

VENTS AND WEEPHOLES IN EXTERNAL WALLS SHALL BE SCREENED WITH A MESH WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM, EXCEPT WHERE THE VENTS AND WEEPHOLES HAVE AN APERTURE LESS THAN 3mm.

**5.0 EXTERNAL WINDOWS AND DOORS**

- WINDOWS
 

WINDOW ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING:

  - THEY SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER THAT COMPLIES WITH NOTE 1 BELOW; OR
  - THEY SHALL COMPLY WITH THE FOLLOWING:
    - WINDOW FRAMES AND WINDOW JOINERY SHALL BE MADE FROM:
      - BUSHFIRE-RESISTING TIMBER; OR
      - METAL; OR
      - METAL-REINFORCED PVC-U, THE REINFORCING MEMBERS SHALL BE MADE FROM ALUMINIUM, STAINLESS STEEL, OR CORROSION-RESISTANT STEEL AND THE FRAME AND SASH SHALL SATISFY THE DESIGN LOAD, PERFORMANCE AND STRUCTURAL STRENGTH OF THE MEMBER.
    - EXTERNALLY FITTED HARDWARE THAT SUPPORTS THE SASH IN ITS FUNCTIONS OF OPENING AND CLOSING SHALL BE METAL.
    - GLAZING SHALL BE A MINIMUM OF 5 MM TOUGHENED GLASS.

- DOORS
 

DOORS SHALL COMPLY WITH ONE OF THE FOLLOWING:

  - DOORS AND DOOR FRAMES SHALL BE PROTECTED BY BUSHFIRE SHUTTERS THAT COMPLY WITH NOTE 1; OR
  - DOORS AND DOOR FRAMES SHALL BE PROTECTED EXTERNALLY BY SCREENS THAT COMPLY WITH NOTE 2; OR
  - DOORS AND DOOR FRAMES SHALL COMPLY WITH THE FOLLOWING:
    - DOORS SHALL BE—
      - NON-COMBUSTIBLE; OR
      - A SOLID TIMBER, LAMINATED TIMBER OR RECONSTITUTED TIMBER DOOR, HAVING A MINIMUM THICKNESS OF 35mm FOR THE FIRST 400mm ABOVE THE THRESHOLD; OR
      - A DOOR, INCLUDING A HOLLOW CORE DOOR, PROTECTED EXTERNALLY BY A SCREEN THAT COMPLIES WITH NOTE 2 BELOW; OR
      - A FULLY FRAMED GLAZED DOOR, WHERE THE FRAMING IS MADE FROM NONCOMBUSTIBLE MATERIALS OR FROM BUSHFIRE RESISTING TIMBER.
    - EXTERNALLY FITTED HARDWARE THAT SUPPORTS THE PANEL IN ITS FUNCTION OF OPENING AND CLOSING SHALL BE METAL.
    - WHERE DOORS INCORPORATE GLAZING, THE GLAZING SHALL BE TOUGHENED GLASS WITH MINIMUM THICKNESS OF 6mm.
    - DOORS SHALL BE TIGHT-FITTING TO THE DOOR FRAME AND TO AN ABUTTING DOOR, IF APPLICABLE.
    - DOOR FRAMES SHALL BE MADE FROM:
      - BUSHFIRE-RESISTING TIMBER
      - METAL; OR
      - METAL-REINFORCED PVC-U, THE REINFORCING MEMBERS SHALL BE MADE FROM ALUMINIUM, STAINLESS STEEL, OR CORROSION-RESISTANT STEEL AND THE DOOR ASSEMBLY SHALL SATISFY THE DESIGN LOAD, PERFORMANCE AND STRUCTURAL STRENGTH OF THE MEMBER.
    - WHERE GLAZING IS LESS THAN 400mm FROM THE GROUND OR LESS THAN 400mm ABOVE DECKS, CARPORT ROOFS, AWNINGS AND SIMILAR ELEMENTS OR FITTINGS, HAVING AN ANGLE LESS THAN 18 DEGREES TO THE HORIZONTAL AND EXTENDING MORE THAN 110mm IN WIDTH FROM THE WINDOW FRAME, THAT PORTION SHALL BE SCREENED WITH A SCREEN THAT COMPLIES WITH NOTE 2 BELOW.
    - WEATHER STRIPS, DRAUGHT EXCLUDERS OR DRAUGHT SEALS SHALL BE INSTALLED AT THE BASE OF SIDE-HUNG EXTERNAL DOORS.

- SLIDING DOORS
 

SLIDING DOORS SHALL COMPLY WITH ONE OF THE FOLLOWING:

  - THEY SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER THAT COMPLIES WITH NOTE 1; OR
  - THEY SHALL BE COMPLETELY PROTECTED EXTERNALLY BY SCREENS THAT COMPLY WITH NOTE 2; OR
  - THEY SHALL COMPLY WITH THE FOLLOWING:
    - ANY GLAZING INCORPORATED IN SLIDING DOORS SHALL BE TOUGHENED GLASS WITH A MINIMUM THICKNESS OF 6mm.
    - BOTH THE DOOR FRAME SUPPORTING THE SLIDING DOOR AND THE FRAMING SURROUNDING ANY GLAZING SHALL BE MADE FROM:
      - BUSHFIRE-RESISTING TIMBER; OR
      - METAL; OR
      - METAL-REINFORCED PVC-U, THE REINFORCING MEMBERS SHALL BE MADE FROM ALUMINIUM, STAINLESS STEEL, OR CORROSION-RESISTANT STEEL AND THE FRAME AND THE SASH SHALL SATISFY THE DESIGN LOAD, PERFORMANCE AND STRUCTURAL STRENGTH OF THE MEMBER.
    - WHERE THERE IS NO REQUIREMENT TO SCREEN THE OPENABLE PART OF THE SLIDING DOOR, HOWEVER, IF SCREENED, THE SCREENS SHALL COMPLY WITH NOTE 2.

NOTE: THE CONSTRUCTION OF MANUFACTURED SLIDING DOORS SHOULD PREVENT THE ENTRY OF EMBERS WHEN THE DOOR IS CLOSED, THERE IS NO REQUIREMENT TO PROVIDE SCREENS TO THE OPENABLE PART OF THESE DOORS AS IT IS ASSUMED THAT A SLIDING DOOR WILL BE CLOSED IF OCCUPANTS ARE NOT PRESENT DURING A BUSHFIRE EVENT. SCREENS OF MATERIALS OTHER THAN THOSE SPECIFIED MAY NOT RESIST EMBER ATTACK.

NOTE: EXTERNALLY FITTED HARDWARE THAT SUPPORTS THE PANEL IN ITS FUNCTION OF OPENING AND CLOSING SHALL BE METAL.

NOTE: SLIDING DOORS SHALL BE TIGHT-FITTING IN THE FRAMES.

NOTE: THE CONSTRUCTION OF MANUFACTURED SLIDING DOORS SHOULD PREVENT THE ENTRY OF EMBERS WHEN THE DOOR IS CLOSED, THERE IS NO REQUIREMENT TO PROVIDE SCREENS TO THE OPENABLE PART OF THESE DOORS AS IT IS ASSUMED THAT A SLIDING DOOR WILL BE CLOSED IF OCCUPANTS ARE NOT PRESENT DURING A BUSHFIRE EVENT. SCREENS OF MATERIALS OTHER THAN THOSE SPECIFIED MAY NOT RESIST EMBER ATTACK.

NOTE: EXTERNALLY FITTED HARDWARE THAT SUPPORTS THE PANEL IN ITS FUNCTION OF OPENING AND CLOSING SHALL BE METAL.

NOTE: SLIDING DOORS SHALL BE TIGHT-FITTING IN THE FRAMES.

NOTE: WHERE DOUBLE-GLAZED UNITS ARE USED, THE ABOVE REQUIREMENTS APPLY TO THE EXTERNAL FACE OF THE WINDOW ASSEMBLY ONLY.

- SCREENS
  - WHERE GLAZING IS LESS THAN 400mm FROM THE GROUND OR LESS THAN 400mm ABOVE DECKS, CARPORT ROOFS, AWNINGS AND SIMILAR ELEMENTS OR FITTINGS, HAVING AN ANGLE LESS THAN 18 DEGREES TO THE HORIZONTAL AND EXTENDING MORE THAN 110mm IN WIDTH FROM THE WINDOW FRAME, THAT PORTION SHALL BE SCREENED WITH A SCREEN THAT COMPLIES WITH NOTE 2 BELOW.
  - THE OPENABLE PORTION OF WINDOWS SHALL BE SCREENED WITH SCREENS COMPLYING WITH NOTE 2 BELOW.

SCREENING OF THE OPENABLE PORTIONS OF ALL WINDOWS IS REQUIRED IN ALL BALs TO PREVENT THE ENTRY OF EMBERS TO THE BUILDING WHEN THE WINDOW IS OPEN. SCREENING OF THE OPENABLE AND FIXED PORTIONS OF WINDOWS IS REQUIRED IN SOME BALs TO REDUCE THE EFFECTS OF RADIANT HEAT ON SOME TYPES OF GLASS.

IF THE SCREENING IS REQUIRED TO REDUCE THE EFFECTS OF RADIANT HEAT ON THE GLASS, THE SCREENING HAS TO BE EXTERNAL SO THAT THE GLASS IN THE OPENABLE PORTION OF THE WINDOW WILL BE PROTECTED WHEN IT IS SHUT.

IF THE SCREENING IS REQUIRED ONLY TO PREVENT THE ENTRY OF EMBERS, THE SCREENING MAY BE FITTED EXTERNALLY OR INTERNALLY.

3) DOORS—SIDE-HUNG EXTERNAL DOORS (INCLUDING FRENCH DOORS, PANEL FOLD AND BI-FOLD DOORS)

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2) TILED ROOFS
 

TILED ROOFS SHALL BE FULLY SARKED. THE SARKING SHALL—

- BE LOCATED ON TOP OF THE ROOF FRAMING, EXCEPT THAT THE ROOF BATTENS MAY BE FIXED ABOVE THE SARKING;
- COVER THE ENTIRE ROOF AREA INCLUDING RIDGES AND HIPS; AND
- EXTEND INTO GUTTERS AND VALLEYS.

3) SHEET ROOFS
 

SHEET ROOFS SHALL—

- BE FULLY SARKED, EXCEPT THAT FOIL-BACKED INSULATION BLANKETS MAY BE INSTALLED OVER THE BATTENS; AND
- HAVE ANY GAPS GREATER THAN 3mm (SUCH AS UNDR CORRUGATIONS OR RISBS OF SHEET ROOFING AND BETWEEN ROOF COMPONENTS) SEALED AT THE FASCIA OR WALL LINE AND AT VALLEYS, HIPS AND RIDGES—
  - A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM; OR
  - MINERAL WOOL; OR
  - OTHER NON-COMBUSTIBLE MATERIAL; OR
  - A COMBINATION OF ANY OF ITEMS (I), (II) OR (III) ABOVE.

NOTE: SARKING IS USED AS A SECONDARY FORM OF EMBER PROTECTION FOR THE ROOF SPACE TO ACCOUNT FOR MINOR GAPS THAT MAY DEVELOP IN SHEET ROOFING.

VERANDAH, CARPORT AND AWNING ROOFS— THE FOLLOWING APPLY TO VERANDA, CARPORT AND AWNING ROOFS:

(A) A VERANDA, CARPORT OR AWNING ROOF FORMING PART OF THE MAIN ROOF SPACE SHALL MEET ALL THE REQUIREMENTS FOR THE MAIN ROOF.

(B) A VERANDA, CARPORT OR AWNING ROOF SEPARATED FROM THE MAIN ROOF SPACE BY A WALL THAT COMPLIES WITH THE SPECIFICATION ABOVE FOR AN EXTERNAL WALL SHALL HAVE A NON-COMBUSTIBLE ROOF COVERING AND THE SUPPORT STRUCTURE SHALL BE—

(I) OF NON-COMBUSTIBLE MATERIAL; OR

(II) BUSHFIRE-RESISTING TIMBER; OR

(III) TIMBER RAFTERS LINED ON THE UNDERSIDE WITH FIBRE-CEMENT SHEETING A MINIMUM OF 6mm IN THICKNESS, OR WITH MATERIAL COMPLYING WITH AS 1530.8.1; OR

(IV) A COMBINATION OF ANY OF ITEMS (I), (II) OR (III) ABOVE.

ROOF PENETRATIONS— THE FOLLOWING APPLY TO ROOF PENETRATIONS:

(A) ROOF PENETRATIONS, INCLUDING ROOF LIGHTS, ROOF VENTILATORS, ROOF-MOUNTED EVAPORATIVE COOLING UNITS, AERIALS, VENT PIPES AND SUPPORTS FOR SOLAR COLLECTORS SHALL BE ADEQUATELY SEALED AT THE ROOF TO PREVENT GAPS GREATER THAN 3MM. THE MATERIAL USED TO SEAL THE PENETRATION SHALL BE NON-COMBUSTIBLE.

(B) OPENINGS IN VENTED ROOF LIGHTS, ROOF VENTILATORS OR VENT PIPES SHALL BE FITTED WITH EMBER GUARDS MADE FROM A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM. THIS REQUIREMENT DOES NOT APPLY TO THE EXHAUST FLUES OF HEATING OR COOKING DEVICES WITH CLOSED COMBUSTION CHAMBERS. IN THE CASE OF GAS APPLIANCE FLUES, EMBER GUARDS SHALL NOT BE FITTED.

NOTE: GAS FITTERS ARE REQUIRED TO PROVIDE A METAL FLUE PIPE ABOVE THE ROOF AND TERMINATE WITH A CERTIFIED GAS FLUE COWL, COMPLYING WITH AS 4566. ADVICE MAY BE OBTAINED FROM STATE GAS TECHNICAL REGULATORS.

(C) ALL OVERHEAD GLAZING SHALL BE GRADE A SAFETY GLASS COMPLYING WITH AS 1288.

(D) GLAZED ELEMENTS IN ROOF LIGHTS AND SKYLIGHTS MAY BE OF POLYMER PROVIDED A GRADE A SAFETY GLASS DIFFUSER, COMPLYING WITH AS 1288, IS INSTALLED UNDER THE GLAZING, WHERE GLAZING IS AN INSULATING GLAZING UNIT (IGU). GRADE A TOUGHENED SAFETY GLASS MINIMUM 4mm THICKNESS, SHALL BE USED IN THE OUTER PANE OF THE IGU.

(E) FLASHING ELEMENTS IN ROOF LIGHTS AND SKYLIGHTS, HOWEVER, THEY MAY BE OF AN ALTERNATIVE MATERIAL, PROVIDED THE INTEGRITY OF THE ROOF COVERING IS MAINTAINED BY AN UNDER-FLASHING MADE FROM NON-COMBUSTIBLE MATERIAL.

(F) EXTERNAL, SINGLE PLANE GLAZED ELEMENTS OF ROOF LIGHTS AND SKYLIGHTS, WHERE THE PITCH OF THE GLAZED ELEMENT IS 18 DEGREES OR LESS TO THE HORIZONTAL, SHALL BE PROTECTED WITH EMBER GUARDS MADE FROM A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM.

(G) EVAPORATIVE COOLING UNITS SHALL BE FITTED WITH NON-COMBUSTIBLE BUTTERFLY CLOSERS AS CLOSE AS PRACTICABLE TO THE ROOF LEVEL OR THE UNIT SHALL BE FITTED WITH NON-COMBUSTIBLE COVERS WITH A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2MM, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM.

EAVES LININGS, FASCIAS AND GABLES— THE FOLLOWING APPLY TO EAVES LININGS, FASCIAS AND GABLES:

(A) GABLES SHALL COMPLY WITH THE REQUIREMENTS FOR AN EXTERNAL WALL.

(B) FASCIAS AND BARGEBOARDS SHALL—

(I) WHERE TIMBER IS USED, BE MADE FROM BUSHFIRE-RESISTING TIMBER; OR

(II) WHERE MADE FROM METAL, BE FIXED AT 450 MM CENTRES; OR

(III) BE A COMBINATION OF ITEMS (I) AND (II) ABOVE.

(C) EAVES LININGS SHALL BE—

(I) FIBRE-CEMENT SHEET, A MINIMUM 4.5mm IN THICKNESS; OR

(II) BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR

(III) A COMBINATION OF ITEMS (I) AND (II) ABOVE.

(D) EAVES PENETRATIONS SHALL BE PROTECTED THE SAME AS FOR ROOF PENETRATIONS.

(E) EAVES VENTILATION OPENINGS GREATER THAN 3 MM SHALL BE FITTED WITH EMBER GUARDS MADE OF NON-COMBUSTIBLE MATERIAL OR A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM.

(F) JOINTS IN EAVES LININGS, FASCIAS AND GABLES MAY BE SEALED WITH PLASTIC JOINING STRIPS OR TIMBER STORM MOULDS.

GUTTERS AND DOWNPIPES

THE STANDARD DOES NOT PROVIDE MATERIAL REQUIREMENTS FOR DOWNPIPES. IF INSTALLED, GUTTER AND VALLEY LEAF GUARDS SHALL BE NON-COMBUSTIBLE WITH THE EXCEPTION OF BOX GUTTERS. GUTTERS SHALL BE METAL OR PVC-U. BOX GUTTERS SHALL BE NON-COMBUSTIBLE AND FLASHED AT THE JUNCTION WITH THE ROOF WITH NON-COMBUSTIBLE MATERIAL.

**7.0 VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS**

1) GENERAL
 

DECKING MAY BE SPACED, THERE IS NO REQUIREMENT TO ENCLOSE THE SUBFLOOR SPACES OF VERANDAS, DECKS, STEPS, RAMPS OR LANDINGS.

2) ENCLOSED SUBFLOOR SPACES OF VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS

A) MATERIALS TO ENCLOSE A SUBFLOOR SPACE
 

THE SUBFLOOR SPACES OF VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS ARE CONSIDERED TO BE ENCLOSED WHEN—

- THE MATERIAL USED TO ENCLOSE THE SUBFLOOR SPACE COMPLIES WITH THE STANDARDS FOR EXTERNAL WALLS ABOVE; AND
- ALL OPENINGS GREATER THAN 3 MM ARE SCREENED WITH A MESH OR PERFORATED SHEET WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM.

B) SUPPORTS
 

THE STANDARD DOES NOT PROVIDE CONSTRUCTION REQUIREMENTS FOR SUPPORT POSTS, COLUMNS, STUMPS, STRINGERS, PIERS AND POLES.

C) FRAMING
 

THE STANDARD DOES NOT PROVIDE CONSTRUCTION REQUIREMENTS FOR THE FRAMING OF VERANDAS, DECKS, RAMPS OR LANDINGS (I.E. BEARERS AND JOISTS).

D) DECKING, STAIR TRENDS AND THE TRAFFICABLE SURFACES OF RAMPS AND LANDINGS SHALL BE—

(I) OF NON-COMBUSTIBLE MATERIAL; OR

(II) OF BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR

(III) A COMBINATION OF ITEMS (I) AND (II) ABOVE.

3) UNENCLOSED SUBFLOOR SPACES OF VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS

A) SUPPORTS
 

SUPPORT POSTS, COLUMNS, STUMPS, STRINGERS, PIERS AND POLES SHALL BE—

- OF NON-COMBUSTIBLE MATERIAL; OR
- (OR BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT)) OR
- A COMBINATION OF ITEMS (I) AND (II) ABOVE.

B) FRAMING
 

FRAMING OF VERANDAS, DECKS, RAMPS OR LANDINGS (I.E. BEARERS AND JOISTS) SHALL BE—

- OF NON-COMBUSTIBLE MATERIAL; OR
- (OR BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT)) OR
- A COMBINATION OF ITEMS (I) AND (II) ABOVE.

C) DECKING, STAIR TRENDS AND THE TRAFFICABLE SURFACES OF RAMPS/LANDINGS/DECKING, STAIR TRENDS AND THE TRAFFICABLE SURFACES OF RAMPS AND LANDINGS SHALL BE—

(I) OF NON-COMBUSTIBLE MATERIAL; OR

(II) OF BUSHFIRE-RESISTING TIMBER (REFER TO THE TABLE AT THE END OF THIS DOCUMENT); OR

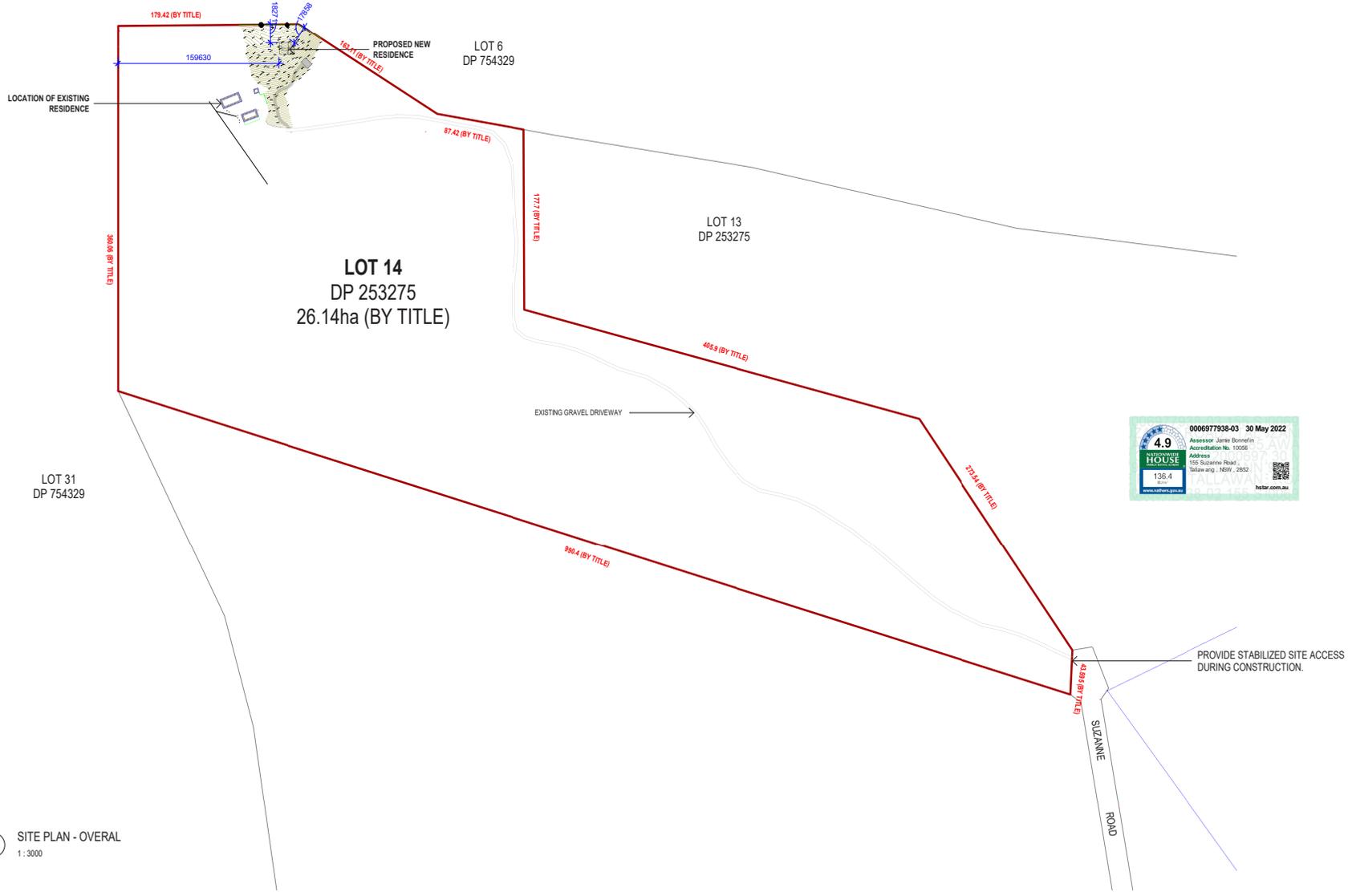
(III) A COMBINATION OF ITEMS (I) AND (II) ABOVE.



ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR 'BAL 29' RATING

PROPOSED RESIDENCE	
LOT & PLAN	L15 SP174860
LA	REDLAND
SITE AREA:	618000 m <sup>2</sup>
SITE COVERAGE:	T.B.C
ZONE:	RURAL
SITE CLASSIFICATION	M
CLIMATIC ZONE:	T.B.C
WIND RATING:	N2
GROUND FLOOR F.F.L RL	@ 584.400
FIRST FLOOR F.F.L RL	@ 590.215

AREA SCHEDULE	
Name	Area
LAUNDRY LANDING	1.8 m <sup>2</sup>
GROUND FLOOR LIVING	138.0 m <sup>2</sup>
DECK	30.5 m <sup>2</sup>
PORCH DECK	8.9 m <sup>2</sup>
Ground Floor	179.2 m <sup>2</sup>
FIRST FLOOR LIVING	48.5 m <sup>2</sup>
FF BALCONY	20.7 m <sup>2</sup>
First Floor	69.2 m <sup>2</sup>
Grand total	248.4 m <sup>2</sup>



**NOTE:**

- STORMWATER DRAINAGE CALCULATED FOR BUILDING ROOF AREAS AND OR PAVED AREAS SHOWN ON THIS PROPOSED DEVELOPMENT ONLY, AND MAY NOT BE ADEQUATE FOR ANY SUBSEQUENT ROOF OR PAVED AREAS.
- MIN GRADE TO RUBBLE PITS ON SITE TO BE 1%. ALL STORMWATER & DRAINAGE TO BE IN COMPLIANCE WITH BCA PARTS 3.1.2 & 3.5.2 AS WELL AS AS/NZS3500
- BATTERS TO COMPLY WITH APPROPRIATE SOIL CLASSIFICATION DESCRIBED IN TABLE 3.1.1 & BCA V0.2
- ENGINEER TO PROVIDE DESIGN TO ADDRESS FOOTINGS IF BUILT IN CLOSE PROXIMITY TO SEWER, STORMWATER OR EASEMENTS.
- BUILDER TO CHECK ALLEYS AND DIMENSIONS PRIOR TO COMMENCEMENT OF WORK.
- ALL STRUCTURAL REINFORCED CONCRETE TO ENGINEERS SPECIFICATIONS

SEWERAGE CONNECTION IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS AND APPROVED DRAINAGE PLAN.

CONNECT STORMWATER DRAINAGE TO LEGAL POINT OF DISCHARGE TO THE SATISFACTION OF THE RESPONSIBLE LOCAL AUTHORITY.

FINAL POSITIONS OF DOWNPIPES, METERBOX, TAPS, A.C. ODU, WATERTANK, GAS BOTTLES AND HOT WATER SYSTEM, MAY DIFFER TO PLAN DUE TO SITE CONDITIONS.

1 SITE PLAN - OVERAL  
1 : 3000

Site Plan \_ Overall

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P: DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED WORK: <b>WORKING DRAWINGS</b>		SCALE: <b>1 : 3000 @ A2</b>		1	22.07.22	PROPOSED DEVELOPMENT	JMB	JMB
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 110	LAND AREA:	2	13.04.22	SETBACK	JMB	JMB
				3	05.05.22	SETBACK ADDRESS AMEND TO SUITE BAL REPORT	JMB	JMB



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LOGANHOLME, QLD 4129  
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QBCC: 1511 1256



AREA SCHEDULE	
Name	Area
LAUNDRY LANDING	1.8 m <sup>2</sup>
GROUND FLOOR LIVING	138.0 m <sup>2</sup>
DECK	30.5 m <sup>2</sup>
PORCH DECK	19.9 m <sup>2</sup>
Ground Floor	179.2 m <sup>2</sup>
FIRST FLOOR LIVING	48.5 m <sup>2</sup>
FF BALCONY	20.7 m <sup>2</sup>
First Floor	69.2 m <sup>2</sup>
Grand total	248.4 m <sup>2</sup>

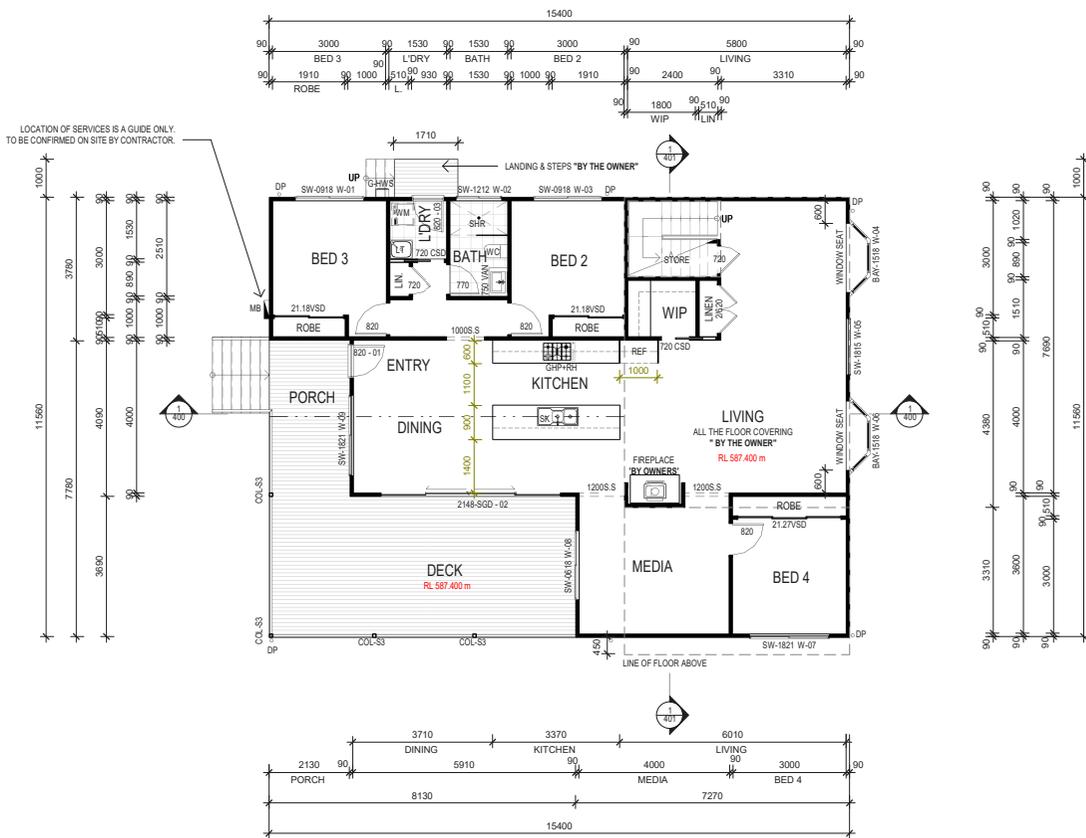
**ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR 'BAL 29' RATING**

WINDOW SCHEDULE				
No.	Type	Height	Width	Description
01	SW-0918	900	1810	Sliding Window - XO
02	SW-1212	1200	1210	Sliding Window - XO
03	SW-0918	900	1810	Sliding Window - XO
04	BAY-1518	1500	1927	Bay Window
05	SW-1815	1800	1510	Sliding Window - XO-OO
06	BAY-1518	1500	1927	Bay Window
07	SW-1821	1800	2110	Sliding Window - XO-OO
08	SW-0618	600	1810	Sliding Window - XO
09	SW-1821	1800	2110	Sliding Window - XO-OO
10	FG-1803	1800	300	Fixed Glass - O
11	FG-1803	1800	300	Fixed Glass - O
12	SW-1224	1200	2410	Sliding Window - XDX
13	SW-1224	1200	2410	Sliding Window - XDX
14	SW-0606	600	610	Sliding Window - XO
15	SW-2109	2100	910	Sliding Window - XO-O
16	SW-2118	2100	1810	Sliding Window - XO-OO
Grand total: 16				

DOOR SCHEDULE.				
Mark	Type	Height	Width	Comments
01	820	2040	820	820 External Door
02	2148-SGD	2100	4788	Sliding Glass Door_XCOO
03	820	2040	820	820 Third Glass Door
04	2132-STK	2100	3120	Stacker Door_XOO
Grand total: 4				

LEGEND	
750 VAN	VANITY UNIT - 750 LONG
COL-S3	COLUMN - 90x90 SHS. REFER MANU. DWGS
DP	DOWNPIPE
G-HWS	GAS HOT WATER SYSTEM
GHP+RH	GAS HOT PLATE AND RANGEHOOD
LT	LAUNDRY TUB
MB	METER BOX
SHR	SHOWER
SK	SINK
WC	WATER CLOSET
WM	WASHING MACHINE SPACE

**4.9** **HOUSE** **136.4** **0006977938-03 30 May 2022**  
 Assessor: Jamie Bornein  
 Accreditation No. 10056  
 Address: 155 Suzanne Road, Tallawang, NSW, 2802  
 www.nsw.gov.au hstar.com.au



1 GROUND FLOOR PLAN  
1:100

- NOTES:**
- LIFT OFF HINGES TO WC DOOR.
  - UNDER ROOF INSULATION - ANTICORN BLANKET.
  - INSULATION TO EXTERNAL WALLS & SARKING.
  - ROOMS WITH NO NATURAL VENTILATION TO HAVE MECHANICAL VENTILATION INSTALLED.
  - PROVIDE WATER AND POWER PROVISION TO DISHWASHER SPACE.
  - WINDOW, SGD & INTERNAL DOOR SIZES ARE NOMINAL ONLY & TO BE CONFIRMED WITH MANUFACTURER.
  - ARTICULATION JOINTS ARE TO BE LOCATED IN ACCORDANCE WITH GENERAL NOTES AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER, STRUCTURAL ENGINEER & BUILDING SUPERVISOR. FLOOR WASTES SHOWN DIAGRAMMATICALLY ONLY.
  - THIS DRAWINGS IS TO BE READ IN CONJUNCTION WITH ENGINEER'S DWGS.
  - FINAL HEIGHTS & FRAME THICKNESS TO BE CONFIRMED BY MANUFACTURER PRIOR TO ORDERING.
  - ALL APPLIANCES, PLUMBING FIXTURES & SPECIALTY EQUIPMENT SHOWN DIAGRAMMATICALLY ONLY. FINAL ARRANGEMENTS TO OWNERS REQUIREMENTS.

**Ground Floor Plan**

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P: DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: <b>1:100 @ A2</b>		1	22.07.22	WORKING DRAWINGS	AM	AM
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 200	LAND AREA:	2	13.04.22	REVISIONS	AM	AM
				3	05.05.22	FINAL DRAWING AMEND TO STATE BAL REPORT	AM	AM



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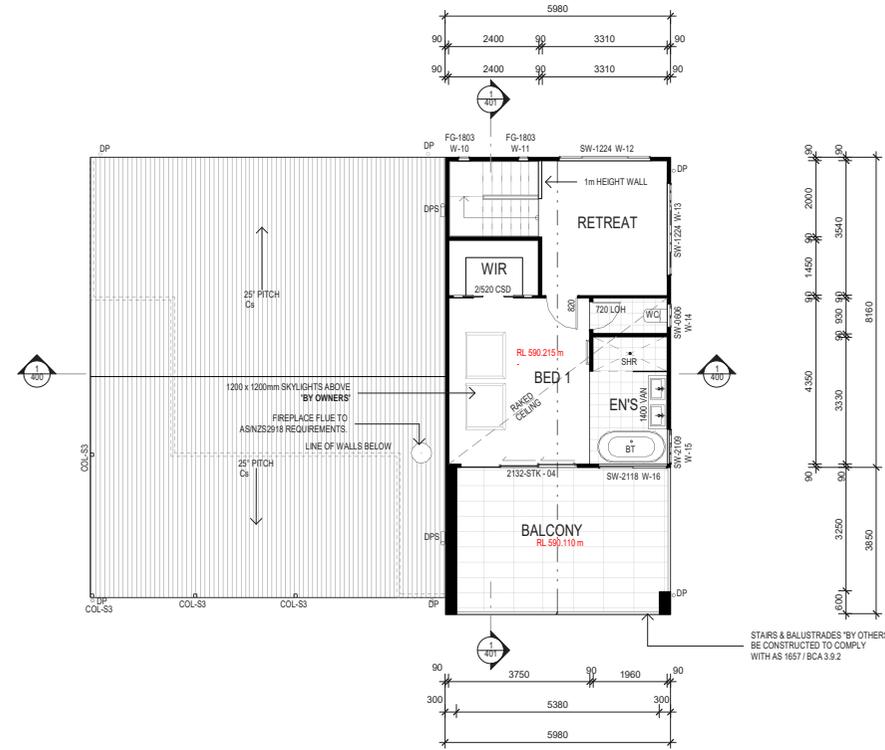
AREA SCHEDULE	
Name	Area
LAUNDRY LANDING	1.8 m <sup>2</sup>
GROUND FLOOR LIVING	138.0 m <sup>2</sup>
DECK	30.5 m <sup>2</sup>
PORCH DECK	8.9 m <sup>2</sup>
Ground Floor	179.2 m <sup>2</sup>
FIRST FLOOR LIVING	48.5 m <sup>2</sup>
FF BALCONY	20.7 m <sup>2</sup>
First Floor	69.2 m <sup>2</sup>
Grand total	248.4 m <sup>2</sup>

ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR 'BAL 29' RATING

WINDOW SCHEDULE				
No.	Type	Height	Width	Description
01	SW-0918	900	1810	Sliding Window - XO
02	SW-1212	1200	1210	Sliding Window - XO
03	SW-0918	900	1810	Sliding Window - XO
04	BAY-1518	1500	1927	Bay Window
05	SW-1815	1800	1510	Sliding Window - XO-OO
06	BAY-1518	1500	1927	Bay Window
07	SW-1821	1800	2110	Sliding Window - XO-OO
08	SW-0618	600	1810	Sliding Window - XO
09	SW-1821	1800	2110	Sliding Window - XO-OO
10	FG-1803	1800	300	Fixed Glass - O
11	FG-1803	1800	300	Fixed Glass - O
12	SW-1224	1200	2410	Sliding Window - XOX
13	SW-1224	1200	2410	Sliding Window - XOX
14	SW-0608	600	810	Sliding Window - XO
15	SW-2109	2100	910	Sliding Window - XO-O
16	SW-2118	2100	1810	Sliding Window - XO-OO
Grand total: 16				

DOOR SCHEDULE.				
Mark	Type	Height	Width	Comments
01	820	2040	820	820 External Door
02	2148-SGD	2100	4788	Sliding Glass Door - XCOX
03	820	2040	820	820 Third Glass Door
04	2132-STK	2100	3120	Stacker Door - XOO
Grand total: 4				

LEGEND	
25° PITCH	ROOF PITCH @ 25°
1400 VAN	VANITY UNIT - 1400 LONG
BT	BATHTUB
COL-S3	COLUMN - 90x90 SHS. REFER MANU. DWG'S
Cs	Colorbond Steel Roofing
DP	DOWNPIPE
DPS	DOWNPIPE WITH SPREADER. To lower roof
SHR	SHOWER
WC	WATER CLOSET



1 FIRST FLOOR PLAN  
1:100

**NOTES:**  
 - LIFT OFF HINGES TO WC DOOR.  
 - UNDER ROOF INSULATION - ANTICON BLANKET.  
 - INSULATION TO EXTERNAL WALLS & SARKING.  
 - ROOMS WITH NO NATURAL VENTILATION TO HAVE MECHANICAL VENTILATION INSTALLED.  
 - PROVIDE WATER AND POWER PROVISION TO DSHWASHER SPACE.  
 - WINDOW, SGD & INTERNAL DOOR SIZES ARE NOMINAL ONLY & TO BE CONFIRMED WITH MANUFACTURER.  
 - ARTICULATION JOINTS ARE TO BE LOCATED IN ACCORDANCE WITH GENERAL NOTES AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER, STRUCTURAL ENGINEER & BUILDING SUPERVISOR/FLOOR WASTES SHOWN DIAGRAMMATICALLY ONLY.  
 - THIS DRAWINGS IS TO BE READ IN-CONJUNCTION WITH ENGINEER'S DWG'S.  
 - FINAL HEIGHTS & FRAME THICKNESS TO BE CONFIRMED BY MANUFACTURER PRIOR TO ORDERING.  
 - ALL APPLIANCES, PLUMBING FIXTURES & SPECIALTY EQUIPMENT SHOWN DIAGRAMMATICALLY ONLY. FINAL ARRANGEMENTS TO OWNERS REQUIREMENTS.

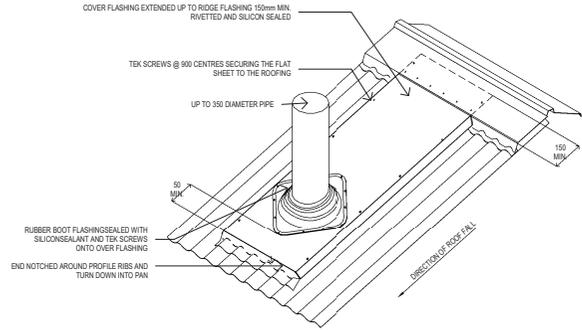
**First Floor Plan**

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: <b>1:100 @ A2</b>		1	22.07.22	PRELIMINARY DRAWINGS	JMB	JMB
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 201	LAND AREA:	2	13.04.22	REVISION	JMB	JMB
				3	05.10.22	FINAL DRAWING AMEND TO SUITE BAL REPORT	JMB	JMB



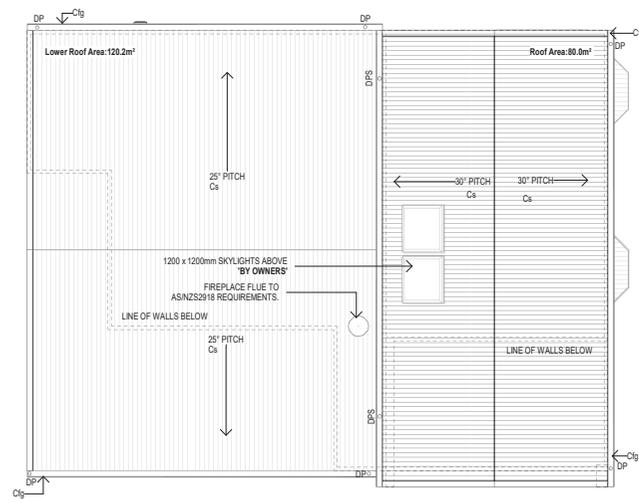
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NOTE:  
 \* DETAIL IS ONLY APPLICABLE FOR PENETRATIONS UP TO 350mm DIAMETER

2 ROOF PIPE PENETRATION DETAIL  
 1:15



1 ROOF PLAN  
 1:100

LEGEND	
25° PITCH	ROOF PITCH @ 25°
30° PITCH	ROOF PITCH @ 30°
Cfg	Colorbond Fascia & Gutter
Cs	Colorbond Steel Roofing
DP	DOWNPIPE
DPS	DOWNPIPE WITH SPREADER. To lower roof



BASIS Project Commitments		BASIS Number: 12730805_03	
Proposed: Single Dwelling			
Address: 155 Suzanne Road Tallawang			
Lot No / DP: 14/253275			
<b>Water</b>			
Fixtures	Specification		
Shower head rating	4 star (6 bar <= 7.5 L/min)		
Toilet rating	3 star		
Kitchen taps rating	3 star		
Bathroom taps rating	3 star		
<b>Alternative water details</b>			
Rainwater tank size	Individual	10000L	
Connected to:	Garden and lawn areas	No	
	All toilets	Yes	
	Laundry	No	
<b>Thermal Comfort</b>			
Accreditation Number: HERA 10056		NATHERS Number: 006977938-03	
<b>External walls</b>			
Requirements			
Fibre cavity panel direct fix	Dark colour	R2.7	Bulk + Anti-glare foil
Fibre cavity panel direct fix	Dark colour	R5.0	Bulk insulation
Weatherboard	Dark colour	R2.7	Bulk + Anti-glare foil
<b>Internal walls</b>			
Cavity wall, direct fix plasterboard			
No insulation			
<b>Ceiling</b>			
External ceiling - Plasterboard			
R5.0 Bulk insulation			
Internal ceiling - Plasterboard			
No insulation			
<b>Roof</b>			
Corrugated iron			
Dark Colour (solar absorbance >0.70)			
R1.8 Bulk + Reflective side down, No air gap above (Anticon 75, 80mm)			
<b>Floors</b>			
Suspended timber			
R4.5 Bulk insulation			
<b>Windows</b>			
Aluminium frame ALM-04-04			
Double air-fill low-glazing with U-value 4.9 and SHGC 0.33 for Group 8 windows (double hung, fixed, lowres and sliding type windows/doors)			
<b>Downlights</b>			
Downlight Covers			
Approved fireproof downlight covers must be installed to all downlights in ceilings where insulation is installed.			
<b>Lighting specification</b>			
Dwelling is rated without downlight			
<b>Overshadowing details</b>			
Adjoining units calculated into model calculations			
<b>Site</b>			
Orientation of nominal north elevation			
As shown on plans			
<b>Energy</b>			
<b>Hot water</b>			
Specification		Rating	
Individual system			
Solar (electric boosted)		Not specified	
<b>Ventilation</b>			
Bathroom exhaust		Individual fan, not ducted	
Control switch		Manual switch on/off	
Kitchen exhaust		Individual fan, not ducted	
Control switch		Manual switch on/off	
Laundry		Individual fan, not ducted	
Control switch		Manual switch on/off	
<b>Cooling</b>			
Individual systems - living areas		Ceiling fans + 1-phase airconditioning	
Individual systems - bedroom areas		Ceiling fans + 1-phase airconditioning	
EER 3.0 - 3.5			
EER 3.0 - 3.5			
<b>Heating</b>			
Individual systems - living areas		Wood Heater	
Individual systems - bedroom areas		N/A	
<b>Appliances</b>			
Cooktop/oven		Gas cooktop & electric oven	
Ventilated fridge space		Yes	
Private outdoor clothes drying line		Yes	
Private indoor or sheltered clothes drying line		No	
Zoned Air-conditioning		No	
<b>Alternative Energy</b>			
Photovoltaic System		10kW	

**NOTES:**

DOWNPIPES ARE TO SERVICE 12m MAXIMUM GUTTER LENGTH & BE LOCATED AS CLOSE AS POSSIBLE TO VALLEY GUTTERS AND BE SELECTED IN ACCORDANCE WITH THE APPROPRIATE GAGES GUTTER SELECTION AS SHOWN IN (NCC VOL 2, TABLE 3.5.2.2)

GUTTERS, DOWNPIPES & FLASHINGS FABRICATED WITH METAL ARE TO MEET AS/NZ2179 REQUIREMENTS WHILE UPVC COMPONENTS ARE TO COMPLY WITH AS1273

ALL SARKING MATERIAL TO BE INSTALLED ACCORDING TO MANUFACTURERS INSTALLATION INSTRUCTIONS & AS/NZS4200 INSTALLATION OF PLASIBLE MEMBRANE AND UNDERLAY (NCC VOL 2, P.3.5.1(F) & HAVE A MAXIMUM 5 FLAMMABILITY INDEX (NCC VOL 2, P.3.7.19(A))

ANY FLEXIBLE DUCTING THAT HAS A SOURCE FROM A FLAME HAZARD MUST MEET AS4254 HAZARD PROPERTIES

DOWNPIPES ARE TO BE PROTECTED FROM POTENTIAL MECHANICAL DAMAGE, BE INSTALLED NO LESS THAN 100mm FROM ELECTRICAL CABLES & GAS PIPES & NO LESS THAN 50mm FROM OTHER SERVICES (AS/NZS3500.3.2.54.11)

CONNECT STORMWATER DRAINAGE TO LEGAL POINT OF DISCHARGE TO THE SATISFACTION OF THE RESPONSIBLE LOCAL AUTHORITY

CALCULATED ROOF CATCHMENTS & ROOFING TO BE INSTALLED AS PER AS/NZS3500.3

OVERFLOW MEASUREMENTS IN ACCORDANCE WITH (NCC0916 VOL 2 TABLE 3.5.2.4)

ROOF PLAN PROVIDED IS A GUIDE ONLY.

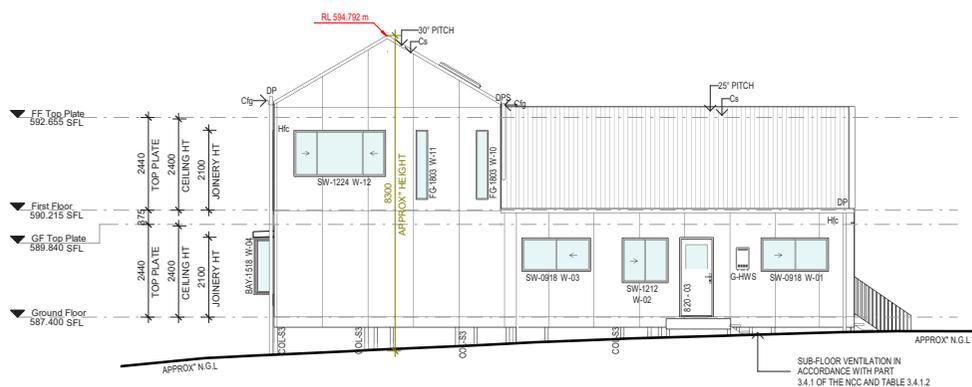
**Roof Plan**

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: As indicated @ A2		1	22.07.22	ISSUED DRAWINGS	AM	AM
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 210	LAND AREA:	2	03.08.22	ISSUE	AM	AM
				3	05.10.22	REVISED DRAWING TO SUITE BAL REPORT	AM	AM

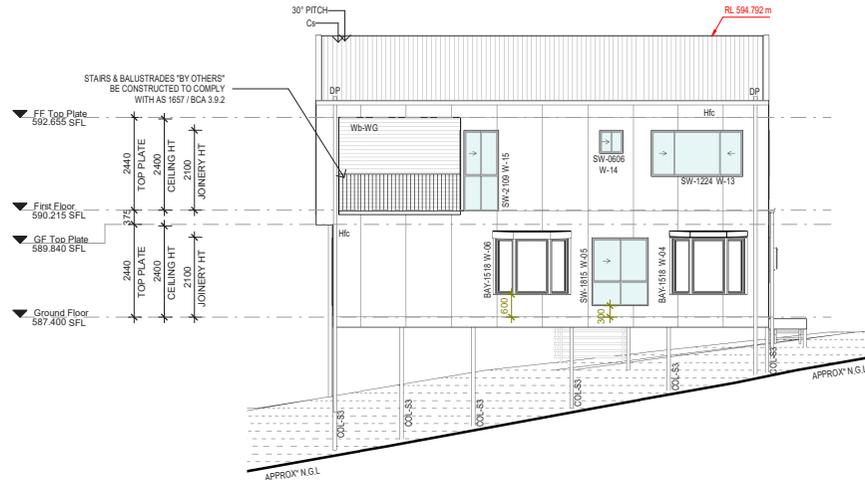


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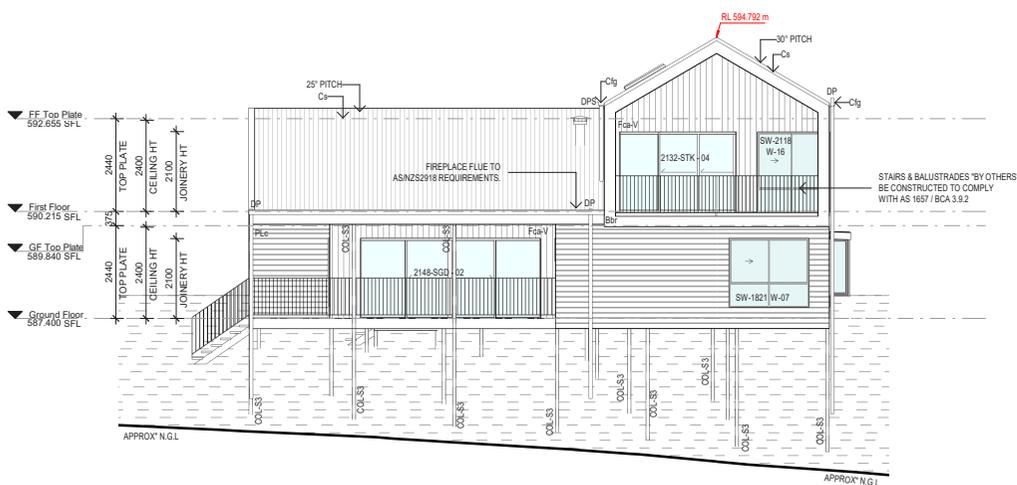




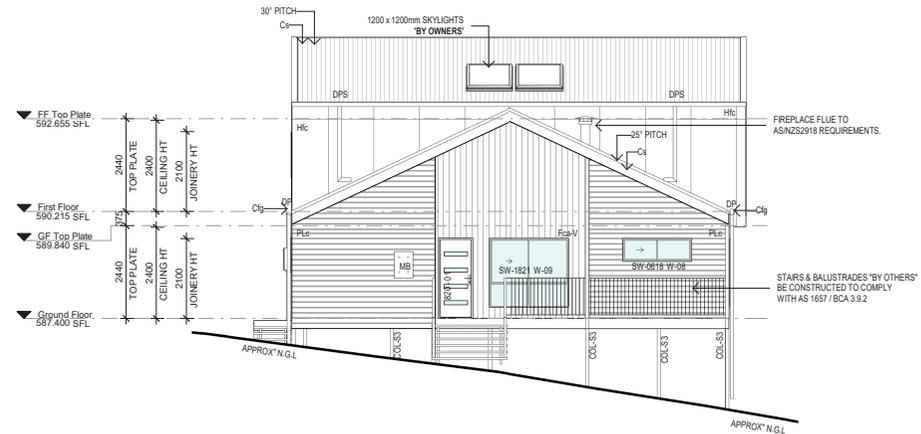
1 NORTH ELEVATION  
1:100



2 EAST ELEVATION  
1:100



3 SOUTH ELEVATION  
1:100



4 WEST ELEVATION  
1:100

LEGEND	
25° PITCH	ROOF PITCH @ 25°
30° PITCH	ROOF PITCH @ 30°
Bbr	Harditex Blue Board lining, Render Finish
Cfg	Colorbond Fascia & Gutter
COL-S3	COLUMN - 90x90 SHS. REFER MANU. DWG'S
Cs	Colorbond Steel Roofing
DP	DOWNPIPE
DPS	DOWNPIPE WITH SPREADER. To lower roof
Fca-V	Soyon Axon Vertical Cladding
G-HWS	GAS HOT WATER SYSTEM
Hfc	James Hardie - 'Hardiflex' cladding.
MB	METER BOX
PLC	James Hardie - 'PrimeLine' Chamfer cladding.
Wb-WG	Weatherboard Cladding, Woodgrain



## Elevations

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: 1:100 @ A2		1	22.07.22	PROPOSED DRAWINGS	MB	MB
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORKS TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 300	LAND AREA:	2	13.04.22	REVISION	MB	MB
				3	05.10.22	REVISED ADDRESS AMEND TO STATE BAL REPORT	MB	MB

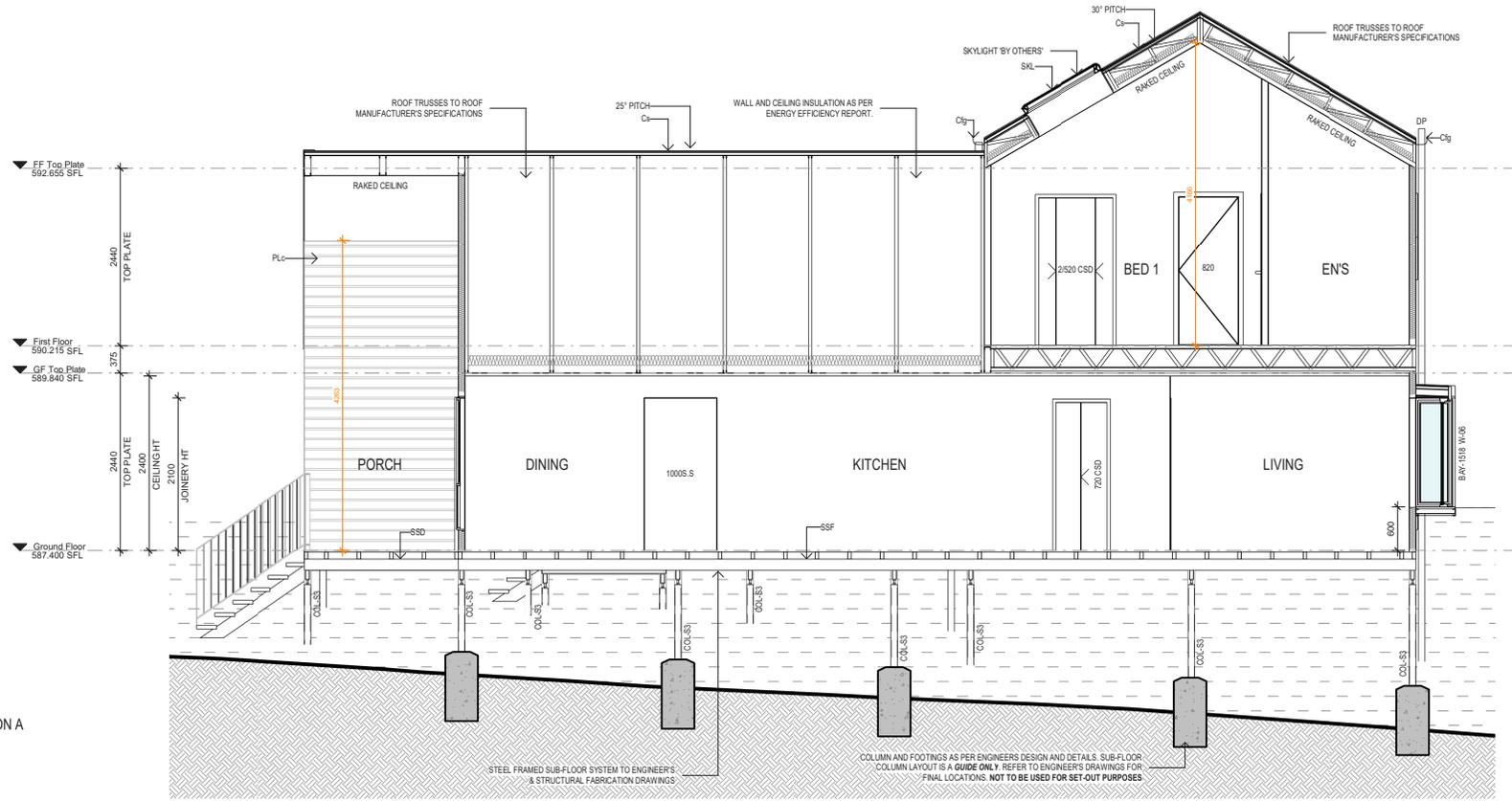
**imagine**  
by design

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**NOTES:**  
 - SELECTED ROOF FIXED IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.  
 - ROOF BATTENS FIXED IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.  
 - ROOF TRUSSES TO STRUCTURAL FABRICATION DRAWINGS.  
 - BRACING OF TRUSSES & SUB-FLOOR TO BE IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.  
 - SLAB & FOOTINGS TO ENGINEERS DETAIL.  
 - FLOORING MEMBERS TO STRUCTURAL FABRICATION DRAWINGS.  
 - TERMITE TREATMENT TO BE INSTALLED AS PER MANUFACTURERS SPEC. & IN ACCORDANCE WITH AS 3660.1 BY LICENSED CONTRACTOR

**ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR 'BAL 29' RATING**

LEGEND	
25° PITCH	ROOF PITCH @ 25°
30° PITCH	ROOF PITCH @ 30°
Cfg	Colorbond Fascia & Gutter
COL-S3	COLUMN - 90x90 SHS, REFER MANU. DWG'S
Cs	Colorbond Steel Roofing
DP	DOWNPIPE
PLc	James Hardie - 'PrimeLine' Chamfer cladding.
SKL	SKYLIGHT - TO MANUFACTURER'S SPECIFICATIONS
SSD	SUSPENDED STEEL FRAMED DECK, To Eng's Details
SSF	SUSPENDED STEEL FRAMED FLOOR, To Eng's Details



1 SECTION A  
1:50

**Section**

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: 1:50 @ A2		1	22.07.22	WORKING DRAWINGS	AM	AM
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 400	LAND AREA:	2	13.04.22	LETTER	AM	AM
				3	05.10.22	SPILL LEAK ADDRESS AMEND TO SUITE BAL REPORT	AM	AM

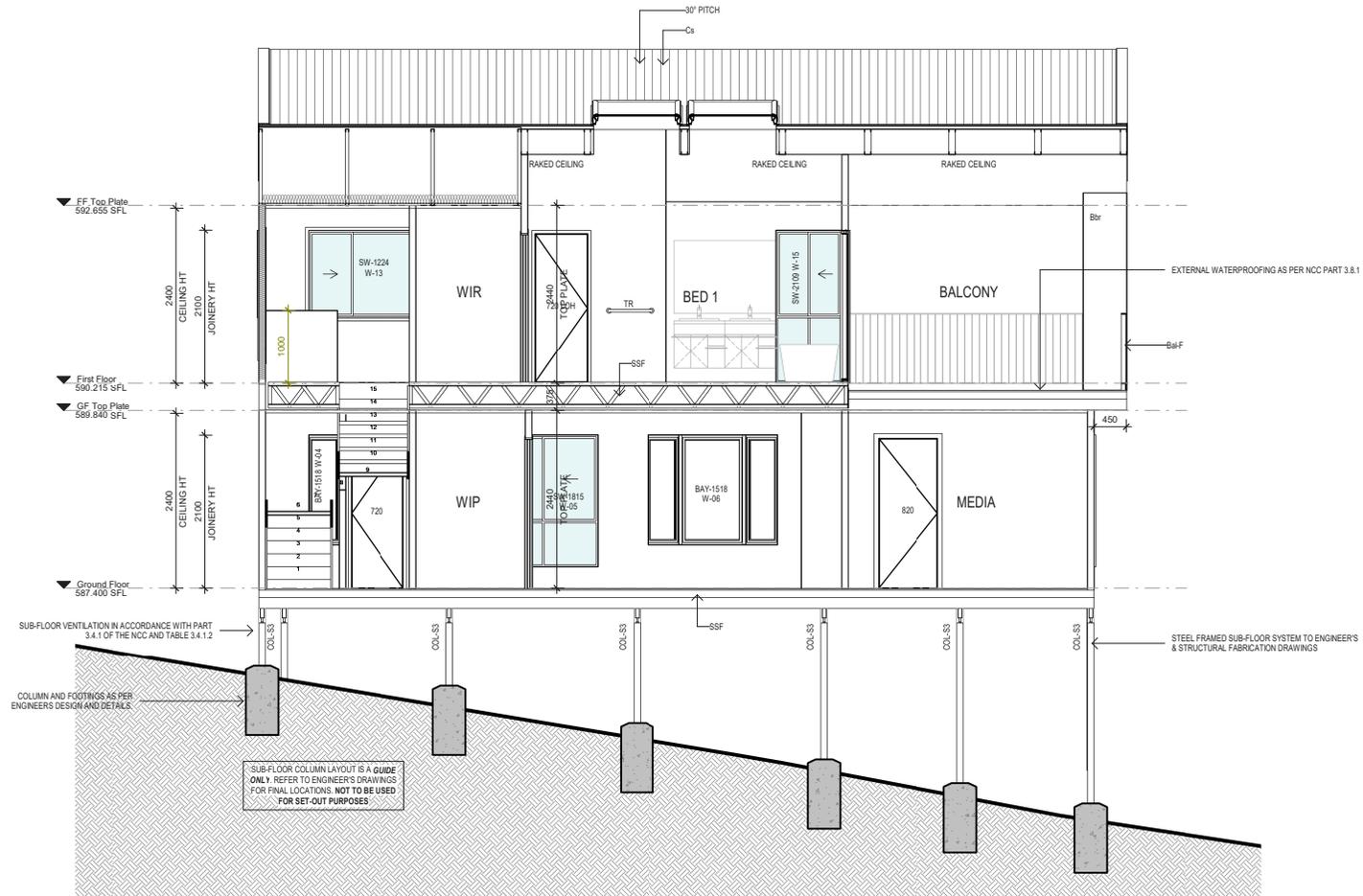


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**NOTES:**  
 - SELECTED ROOF FIXED IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.  
 - ROOF BATTENS FIXED IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.  
 - ROOF TRUSSES TO STRUCTURAL FABRICATION DRAWINGS.  
 - BRACING OF TRUSSES & SUB-FLOOR TO BE IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.  
 - SLAB & FOOTINGS TO ENGINEERS DETAIL.  
 - FLOORING MEMBERS TO STRUCTURAL FABRICATION DRAWINGS.  
 - TERMITE TREATMENT TO BE INSTALLED AS PER MANUFACTURERS SPEC. & IN ACCORDANCE WITH AS 3660.1 BY LICENSED CONTRACTOR

**ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR 'BAL 29' RATING**

LEGEND	
30° PITCH	ROOF PITCH @ 30°
Bal-F	Feature Balustrade - (BCA Compliant)
Bbr	Harditex Blue Board lining, Render Finish
COL-S3	COLUMN - 90x90 SHS. REFER MANU. DWG'S
Cs	Colorbond Steel Roofing
SSF	SUSPENDED STEEL FRAMED FLOOR, To Eng's Details
TR	TOWEL RAIL



1 SECTION B  
1 : 50

**Section**

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: 1 : 50 @ A2		1	22.07.22	ISSUED FOR PERMITS	JMB	JMB
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 401	LAND AREA:	2	13.04.22	REVISED	JMB	JMB
				3	05.05.22	REVISED ADDRESS AMEND TO SUITE BAL REPORT	JMB	JMB



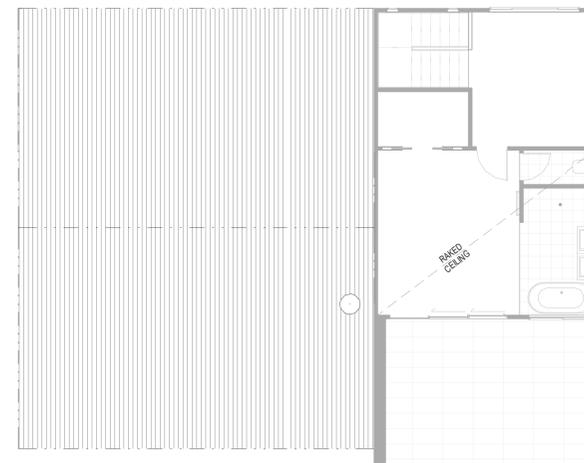
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ELECTRICAL LEGEND	
	Smoke Detector
	Single Flood Light With Sensor
	Single Flood Light
	Pendulum Light
	Batten Light Fitting
	LED Downlight
	Fluorescent Ceiling Light
	Exhaust Fan
	Exhaust Fan with Light
	3 in 1 Heater Fan Light
	Wall Mounted light
	Double Tube Fluorescent
	Single Tube Fluorescent
	Ceiling Fan with Light (900mm minimum)
	Ceiling Fan (900mm minimum)
	Single GPO
	Double GPO
	Ceiling Mounted GPO
	Single External GPO
	Double External GPO
	Telephone Point
	Data Point
	Television Point
	Isolation Switch
	Reverse Cycle AC Condenser
	Water Heater
	Underground Connection Point
	NBN Network Termination Device with GPO as required
	NBN Premises Connection Device
For all lights with GPO attachments please place outlet no further than 500mm from light fitting location IP66 Rated Switches to Ensuite & Bathroom Light Switches at 1150mm AFFL	

LEGEND	
G-HWS	GAS HOT WATER SYSTEM
GHP+RH	GAS HOT PLATE AND RANGEHOOD
MB	METER BOX
WM	WASHING MACHINE SPACE



① G.F ELECTRICAL LAYOUT  
1:100



② F.F Electrical Plan  
1:100

NOTES:

ALL ELECTRICAL WIRING & ELECTRICAL INSTALLATIONS ARE TO COMPLY WITH AS/NZS3000:2007 WIRING RULES

AR CONDITIONING UNITS ARE TO MEET THE RELEVANT MEPS OF AS/NZS3823.1, AS/NZS3823.2 OR AS/NZS3823.3:2011 FOR BOTH SINGLE AND THREE PHASE (http://www.energyrating.gov.au)

AS/NZS3000:2007 S6.2.4.2 REQUIRES NO ELECTRICAL SOCKET OUTLETS, SWITCHES OR ELECTRICAL ACCESSORIES TO BE INSTALLED WITHIN 300mm FROM A WET PLACE

ALLOWANCE FOR NBN TO BE CONFIRMED

ALL ELECTRICAL DRAWINGS ARE PRELIMINARY. FINAL ARRANGEMENTS TO OWNERS REQUIREMENTS.

Electrical Plans

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: <b>1:100 @ A2</b>		A	24.07.22	ISSUED FOR PERMITS	AMB	AMB
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 600	LAND AREA:	B	13.04.22	REVISION	AMB	AMB
				C	05.10.22	FINAL DRAWING AMEND TO SUBMITTAL REPORT	AMB	AMB



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**LEGEND**

- AL ALUMINIUM FRAME
- CL CLEAR GLASS
- BC BRUSHED CHROM
- FG FIXED GLASS
- GL GLASS INFILL
- MF METAL FRAME
- OBS OBSCURE GLASS
- PCF POWDERCOAT FINISH
- PF PAINT FINISH
- TF TIMBER FRAME
- TG TRANSLUCENT GLASS
- MIR MIRROR GLASS FINISH

**ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA REFER TO BUSHFIRE REPORT FOR 'BAL 29' RATING**

**DOOR SCHEDULE**

Mark	Type	Height	Width	Comments	Finish.	Glazing.
01	820	2040	820	820 External Door	ALUMIN.	CLEAR.
02	2148-SGD	2100	4788	Sliding Glass Door_XOX	ALUMIN.	CLEAR.
03	820	2040	820	820 Third Glass Door	ALUMIN.	CLEAR.
04	2132-STK	2100	3120	Stacker Door_XOO	ALUMIN.	CLEAR.

Grand total: 4

**WINDOW SCHEDULE.**

No.	Type	Height	Width	Level	Description	Finish	Glazing
01	SW-0918	900	1810	Ground Floor	Sliding Window - XO	ALUMIN.	CLEAR.
02	SW-1212	1200	1210	Ground Floor	Sliding Window - XO	ALUMIN.	CLEAR.
03	SW-0918	900	1810	Ground Floor	Sliding Window - XO	ALUMIN.	CLEAR.
04	BAY-1518	1500	1927	Ground Floor	Bay Window	ALUMIN.	CLEAR.
05	SW-1815	1800	1510	Ground Floor	Sliding Window - XO-OO	ALUMIN.	CLEAR.
06	BAY-1518	1500	1927	Ground Floor	Bay Window	ALUMIN.	CLEAR.
07	SW-1821	1800	2110	Ground Floor	Sliding Window - XO-OO	ALUMIN.	CLEAR.
08	SW-0618	600	1810	Ground Floor	Sliding Window - XO	ALUMIN.	CLEAR.
09	SW-1821	1800	2110	Ground Floor	Sliding Window - XO-OO	ALUMIN.	CLEAR.
10	FG-1803	1800	300	First Floor	Fixed Glass - O	ALUMIN.	CLEAR.
11	FG-1803	1800	300	First Floor	Fixed Glass - O	ALUMIN.	CLEAR.
12	SW-1224	1200	2410	First Floor	Sliding Window - XOX	ALUMIN.	CLEAR.
13	SW-1224	1200	2410	First Floor	Sliding Window - XOX	ALUMIN.	CLEAR.
14	SW-0606	600	610	First Floor	Sliding Window - XO	ALUMIN.	CLEAR.
15	SW-2109	2100	910	First Floor	Sliding Window - XO-O	ALUMIN.	CLEAR.
16	SW-2118	2100	1810	First Floor	Sliding Window - XO-OO	ALUMIN.	CLEAR.



**Window & Door Schedule**

DESIGN: <b>PROPOSED RESIDENCE</b>	JOB ADDRESS: <b>LOT 14, 155 SUZANNE RD TALLAWANG, NSW 2852</b>	S.P. DP253275	ISSUE: <b>C</b>	REV	DATE	DESCRIPTION	DRAWN	CHECKED
STAGED PLAN: <b>WORKING DRAWINGS</b>		SCALE: 1 : 50 @ A2		1	22.07.22	WORKING DRAWINGS	AM	AM
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORKS TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 700	LAND AREA:	2	13.04.22	REVISION	AM	AM
				3	05.10.22	REV. LEADERSHIP AMEND TO BUSHFIRE REPORT	AM	AM



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# BASIX Certificate

Building Sustainability Index www.basix.nsw.gov.au

## Single Dwelling

Certificate number: 12730808\_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability. 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

Secretary  
Date of issue: Tuesday, 15 February 2022  
To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	155 Suzanne Road Tallawang_02	
Street address	155 Suzanne Road Tallawang 2852	
Local Government Area	Mt Western Regional Council	
Plan type and plan number	deposited 253275	
Lot no.	14	
Section no.	n/a	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✓ 40	Target 30
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 95	Target 45

Certificate Prepared by	
Name / Company Name:	Certified Energy 1
ABN (if applicable):	95164564210

## Description of project

Project address		Assessor details and thermal loads	
Project name	155 Suzanne Road Tallawang_02	Assessor number	10056
Street address	155 Suzanne Road Tallawang 2852	Certificate number	0006977938-02
Local Government Area	Mt-Western Regional Council	Climatic zone	48
Plan type and plan number	Deposited Plan 253275	Area adjusted cooling load (MJ/m <sup>2</sup> /year)	50
Lot no.	14	Area adjusted heating load (MJ/m <sup>2</sup> /year)	87
Section no.	n/a	Ceiling fan in at least one bedroom	Yes
Project type	separate dwelling house	Ceiling fan in at least one living room or other conditioned area	Yes
No. of bedrooms	4	Project score	
Site details		Water	✓ 40 Target 30
Site area (m <sup>2</sup> )	265000	Thermal Comfort	✓ Pass Target Pass
Floor area (m <sup>2</sup> )	181	Energy	✓ 95 Target 45
Conditioned floor area (m <sup>2</sup> )	165.2		
Unconditioned floor area (m <sup>2</sup> )	6.2		
Total area of garden and lawn (m <sup>2</sup> )	300		

## 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/CDDC 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 3 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	✓
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.		✓	✓
<b>Alternative water</b>			
<b>Rainwater tanks</b>			
The applicant must install a rainwater tank of at least 10000 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 by collect rain runoff from at least 100 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to:			
• all basins in the development		✓	✓
• the cold water tap that supplies each clothes washer in the development		✓	✓
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)		✓	✓
• all hot water systems in the development		✓	✓
• all indoor cold water taps (not including taps that supply clothes washers) in the development		✓	✓



Thermal Comfort Commitments	Show on DA plans	Show on CC/CDDC 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 the 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 continue the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓
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 - suspended floorjoist subfloor	All or part of floor area square metres

Energy Commitments	Show on DA plans	Show on CC/CDDC 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 (booster)).	✓	✓	✓
<b>Cooling system</b>			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase air conditioning. Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase air conditioning. Energy rating: EER 3.1 - 3.5		✓	✓
<b>Heating system</b>			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: wood heater. Energy rating: n/a		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
The wood heater must have a compliance plate confirming that it complies with the relevant Australian standards, and must be installed in accordance with the requirements of all applicable regulatory authorities.		✓	✓
<b>Ventilation</b>			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, not ducted. Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, not ducted. Operation control: manual switch on/off		✓	✓
Laundry: individual fan, not ducted. Operation control: manual switch on/off		✓	✓
<b>Artificial lighting</b>			
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:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 4 of the living / dining rooms; dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDDC plans & specs	Certifier check
<b>Other</b>			
• the kitchen; dedicated		✓	✓
• all bathroom/staircases; dedicated		✓	✓
• the laundry; dedicated		✓	✓
• all hallways; dedicated		✓	✓
<b>Natural lighting</b>			
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
<b>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 10 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.		✓	✓
<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.		✓	✓

## BASIX Requirements

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STAGED PLAN: <b>WORKING DRAWINGS</b>	SCALE: <b>@ A2</b>	DWG No: 800	LAND AREA:	8	12/02/22	01/PROJ	MB	MB
CLIENT: <b>KIRSTEN &amp; DECLAN BOYCE</b>	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRIES TO BUILDING CONTRACTOR. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORKS TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.			9	05/03/22	02/PROJ (SHOWING AMEND TO SLATE BAL. REPEAT)	MB	MB

**imagine**  
by design

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