BASIX Project Commitments

Proposed: Multi-dwelling houses
Address: 2 Caliope Street, Kiama NSW 2533
Lot No / DP: 17/1210621

Water (All dwellings)

Fixtures	Specification
Shower head rating	4 star (> 4.5 but <= 6 L/min)
Toilet rating	5 star
Kitchen taps rating	5 star
Bathroom taps rating	5 star

Alternative water details

Rainwater tank size for every single dwelling		3000L
Connected to:	Garden and lawn areas	Yes
	All toilets	Yes
	Laundry	Yes

Thermal Comfort

External walls		Requirements
Brick veneer	All houses	Medium colour, R1.5Bulk + Foil (reflective both sides)
Weatherboard	All houses	Medium colour, R2.1Bulk + Foil (reflective both sides)

Internal walls

Cavity wall, direct fix plasterboard	All houeses - exlucding below	No insulation
Cavity wall, direct fix plasterboard	All walls - houses 1 and 9 Garage walls only - houses 7 and 8	R1.0 bulk insulation
Cavity wall, direct fix plasterboard	All walls - houses 10 and 11	R1.5 bulk insulation

Ceiling

External ceiling - Plasterboard	All houses	R4.0 bulk insulation

Roof

Corrugated iron	All houses	Light Colour (solar absorptance <0.475) Anticon Blanket HP R1.8 (Bulk + Foil, Reflective Side Down, Anti-glare up)

Floors

Concrete slab on ground	All houses - excluding below	No insulation
Suspended concrete slab	Houses 5, 6, 7, and 8	R2.0 bulk insulation

Windows

Aluminium frame ALM-003-01	All houses; awning windows and hinge doors	Double glazed, Air Fill, Clear with U-value 4.8 and SHGC 0.51 for Group A windows (awning, bifold, casement and tilt 'n' turn type windows/doors)
Aluminium frame ALM-004-01	All houses; sliding windows/doors	Double glazed, Air Fill, Clear with U-value 4.8 and SHGC 0.59 for Group B windows (double

Downlights

Downlight Covers	Approved fireproof downlight covers must be installed to all downlights in ceilings where insulation is installed.
Lighting specification	As per BASIX protocol: 4 downlights per 10 square metres of ceiling area in each zone being considered by Accredited Assessors. For zones between 5 and 10 square metres allow 2 recessed downlights and 1 recessed downlight for zones less than 5 square metres.
Overshadowing details	Adjoining units calculated into model calculations

Site

Orientation of nominal north elevation	As shown on plans

* Approved fireproof downlight covers HAVE been specified, which can be fully covered by insulation. Ceiling penetrations for exhaust dampers have been allowed (to all bathrooms, ensuites and internal laundry's) at the rate of 0.04 meters squared per exhaust fan penetration.
If ADDITIONAL downlights are fitted or are not LED, this certification will be invalid unless insulation is added in compliance with NCC (BCA) Vol 2, 2014. Table 3.12.1.1 (b) and NatHERS protocols. Contact the assessor above if alterations are required.

Energy (All Dwellings)

Hot water	Specification	Rating
Individual system	Gas instantaneous	6 star

Ventilation

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	

Cooling

Individual systems - living areas	1-phase airconditioning	5 star
Individual systems - bedroom areas	1-phase airconditioning	5 star

Heating

Individual systems - living areas	1-phase airconditioning	5 star
Individual systems - bedroom areas	1-phase airconditioning	5 star

Appliances

Cooktop/oven	Gas cooktop & electric oven
Ventilated fridge space	Yes
Private outdoor clothes drying line	Yes

Nationwide House Energy Rating Scheme — Multiple Class1-dwelling summary NatHERS Certificate No. 0006794200

Generated on 28 Jan 2022 using BERS Pro v4.4.1.5 (3.21)

Property

Address 2 Caliope Street , Kiama , NSW , 2533

Lot/DP 17/1210621

NatHERS climate zone 18

Accredited assessor

Jamie Bonnefin

Certified Energy

jamie@certified.energy

1300 443 674

Accreditation No. 10056

Assessor Accrediting Organisation HERA

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=TlZUKttaQ . When using either link, ensure you are visiting hstar.com.au

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m^2/p.a.)	Cooling load (MJ/m^2/p.a.)	Total load (MJ/m^2/p.a.)	Star rating
0006770978-02	1	68.1	26.3	94.5	5.4
0006770986-02	2	47.5	13.9	61.4	6.9
0006770994-02	3	47.5	13.9	61.4	6.9
0006771000-02	4	39.3	16	55.3	7.2
0006771018-02	5	67.1	22.7	89.8	5.6

Continued Over

National Construction Code (NCC) requirements

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

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

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

Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (MJ/m^2/p.a.)	Cooling load (MJ/m^2/p.a.)	Total load (MJ/m^2/p.a.)	Star rating
0006771026-02	6	65.4	20.2	85.6	5.8
0006771034-02	7	68.5	14.9	83.4	5.9
0006771042-02	8	72.4	14.8	87.2	5.7
0006771059-02	9	68.1	26.3	94.5	5.4
0006771067-02	10	73.4	11.5	84.8	5.8
0006771075-02	11	73	11.2	84.2	5.9
0006771083-02	12	61.2	12.7	73.9	6.3

Explanatory Notes

About this report

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

Accredited Assessors

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

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

Disclaimer

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

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006770978-02

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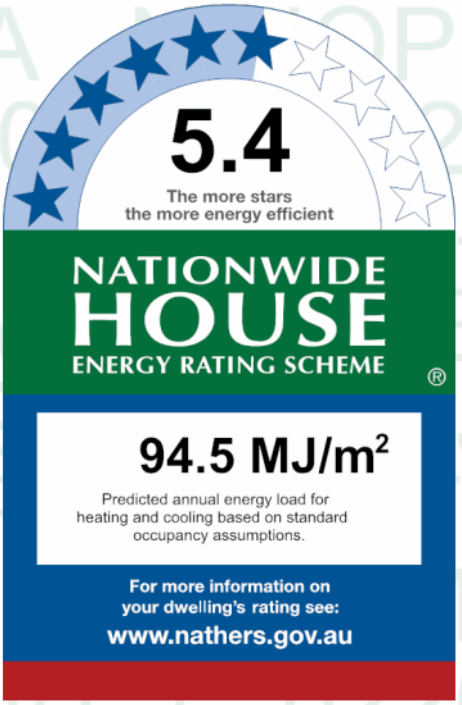

Property

Address	Unit 1, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	155.0	Suburban
Unconditioned*	52.0	**NatHERS climate zone**
Total	206.0	18
Garage	43.0	

Thermal performance

Heating	Cooling
68.1 MJ/m^2	**26.3** MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

Assessor Accrediting Organisation

HERA

Declaration of interest Declaration completed: no conflicts

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=AmcnBZGDN.
When using either link, ensure you are visiting hstar.com.au

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.

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

* Refer to glossary.

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

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

Ceiling Penetrations have been modelled using appropriate BASIX Protocol assumptions. However, to achieve

compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling

penetrations.

If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment

will be required.

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-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	1800	600	n/a	90	S	No
Kitchen/Living	ALM-003-01 A	n/a	2040	820	n/a	90	S	No
Kitchen/Living	ALM-003-01 A	n/a	1800	600	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2700	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	3600	n/a	30	E	No
Living	ALM-003-01 A	n/a	2500	1450	n/a	70	N	No
Living	ALM-003-01 A	n/a	1800	3600	n/a	30	N	No
Living	ALM-003-01 A	n/a	1800	3600	n/a	30	E	No
Living	ALM-004-01 A	n/a	2100	2700	n/a	45	S	No
Living	ALM-003-01 A	n/a	1800	600	n/a	90	S	No
Living	ALM-003-01 A	n/a	1800	3600	n/a	30	E	No
Living	ALM-003-01 A	n/a	900	1200	n/a	00	N	No Shading
Living	ALM-003-01 A	n/a	900	1200	n/a	00	N	No Shading
Laundry	ALM-003-01 A	n/a	900	1200	n/a	00	N	No Shading
Bedroom 1	ALM-004-01 A	n/a	1200	1800	n/a	45	S	No
Ens 1	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bath	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	600	1500	n/a	45	S	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								

* Refer to glossary.

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	5600	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

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	2550	7495	S	450	NO
Kitchen/Living	EW-1	3300	5100	N	9050	YES
Kitchen/Living	EW-1	3250	4100	E	400	NO
Living	EW-2	3350	1995	N	1550	YES
Living	EW-1	3250	1100	W	13450	YES
Living	EW-1	3350	4600	N	450	NO
Living	EW-1	3250	4600	E	450	NO
Living	EW-1	2550	5000	S	8550	YES
Living	EW-1	3250	3990	E	5475	YES
Garage	EW-2	2550	1400	W	450	YES
Garage	EW-2	2550	7300	N	450	NO
Garage	EW-2	3250	2500	E	7050	YES
Bedroom 1	EW-2	2550	3590	S	450	NO
Ens 1	EW-2	2550	2890	S	450	NO
Bedroom 2	EW-2	2550	3695	N	450	YES
Bedroom 2	EW-2	2550	3795	W	450	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bath	EW-2	2550	4790	W	450	NO
Bedroom 3	EW-2	2550	3695	S	450	NO
Bedroom 3	EW-2	2550	4095	W	450	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		187.00	Bulk Insulation, No Air Gap R1

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	30.50	None	No Insulation	Cork Tiles or Parquetry 8mm
Living	Concrete Slab on Ground 100mm	27.90	None	No Insulation	Cork Tiles or Parquetry 8mm
Living	Concrete Slab on Ground 100mm	23.70	None	No Insulation	Cork Tiles or Parquetry 8mm
Garage	Concrete Slab on Ground 100mm	43.10	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	6.00	None	No Insulation	Ceramic Tiles 8mm
Hallway	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Carpet 10mm
Bedroom 1	Concrete Slab on Ground 100mm	14.20	None	No Insulation	Carpet 10mm
Wir	Concrete Slab on Ground 100mm	4.00	None	No Insulation	Carpet 10mm
Ens 1	Concrete Slab on Ground 100mm	7.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	13.70	None	No Insulation	Carpet 10mm
Bath	Concrete Slab on Ground 100mm	8.40	None	No Insulation	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 100mm	14.80	None	No Insulation	Carpet 10mm

Ceiling *type*

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

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Living	10	Downlights - LED	150	Sealed
Living	9	Downlights - LED	150	Sealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Hallway	5	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Wir	1	Downlights - LED	150	Sealed
Ens 1	2	Downlights - LED	150	Sealed
Ens 1	1	Exhaust Fans	300	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bath	4	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

* Refer to glossary.

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

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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.

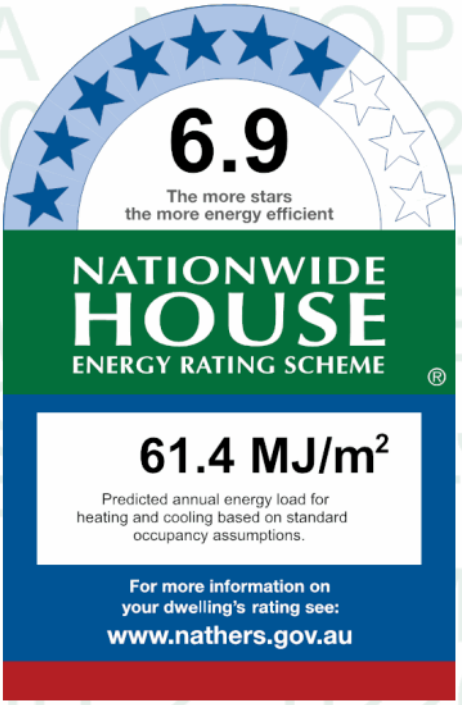
Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

* Refer to glossary.

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006770986-02

Generated on 28 Jan 2022 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 2, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	137.0	Suburban
Unconditioned*	61.0	**NatHERS climate zone**
Total	198.0	18
Garage	46.0	

Thermal performance

Heating	Cooling
47.5	**13.9**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	Declaration completed: no conflicts

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.

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

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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.

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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.

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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

Ceiling Penetrations have been modelled using appropriate BASIX Protocol assumptions. However, to achieve
compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling
penetrations.
If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment
will be required.
I have modeled the shading in accordance with NatHERS principles

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-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Laundry	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	S	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	60	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	1800	n/a	40	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	60	E	No
Kitchen/Living	ALM-003-01 A	n/a	2500	1450	n/a	70	E	No
Bedroom 1	ALM-004-01 A	n/a	1200	1800	n/a	45	S	No
Ensuite	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Bathroom	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	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
No Data Available	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	5600	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2550	7300	E	450	NO
Garage	EW-1	2550	6500	S	450	NO
Garage	EW-1	2550	2100	W	9150	YES
Garage	EW-1	2550	600	N	5550	YES
Laundry	EW-2	2550	2290	S	1650	YES
Kitchen/Living	EW-1	2550	12995	N	4200	YES
Kitchen/Living	EW-1	2550	3100	E	450	NO
Kitchen/Living	EW-1	2550	600	S	9750	YES
Kitchen/Living	EW-1	2550	1995	E	1050	YES
Bedroom 1	EW-1	2550	3595	S	450	NO
Bedroom 1	EW-1	2550	3100	W	450	YES
Ensuite	EW-1	2550	1200	E	9250	YES
Ensuite	EW-1	2550	2795	S	450	NO
Bathroom	EW-1	2550	3095	S	450	YES
Bathroom	EW-1	2550	2695	W	450	NO
Bedroom 3	EW-1	2550	3695	W	450	NO
Bedroom 3	EW-1	2550	1695	N	450	YES
Bedroom 2	EW-1	2550	3000	W	450	YES
Bedroom 2	EW-1	2550	3600	N	450	NO
Bedroom 2	EW-1	2550	1000	E	450	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		145.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	45.80	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	6.30	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	68.20	None	No Insulation	Cork Tiles or Parquetry 8mm
Hallway	Concrete Slab on Ground 100mm	19.10	None	No Insulation	60/40 Cork/Carpet 10mm
Bedroom 1	Concrete Slab on Ground 100mm	14.40	None	No Insulation	Carpet 10mm
WIR	Concrete Slab on Ground 100mm	4.40	None	No Insulation	Carpet 10mm
Ensuite	Concrete Slab on Ground 100mm	6.40	None	No Insulation	Ceramic Tiles 8mm
Bathroom	Concrete Slab on Ground 100mm	8.90	None	No Insulation	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 100mm	11.80	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.70	None	No Insulation	Carpet 10mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Hallway	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
WIR	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Unsealed
Kitchen/Living	26	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Hallway	8	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
WIR	1	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom	4	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

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.

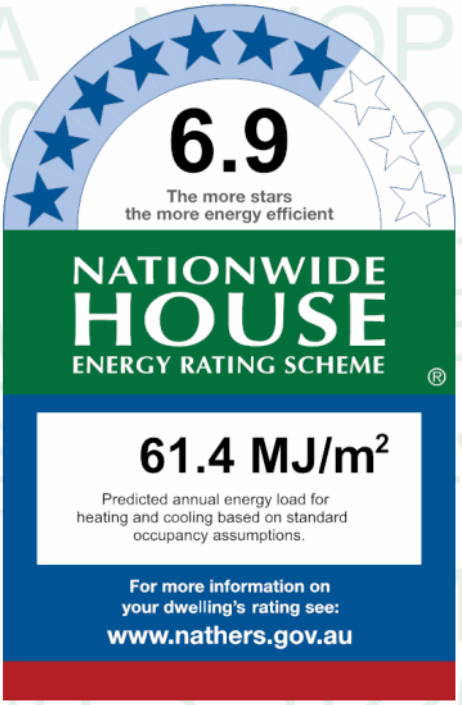
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006770994-02

Generated on 28 Jan 2022 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 3, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

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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
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ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Laundry	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	S	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	60	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	1800	n/a	40	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	60	E	No
Kitchen/Living	ALM-003-01 A	n/a	2500	1450	n/a	70	E	No
Bedroom 1	ALM-004-01 A	n/a	1200	1800	n/a	45	S	No
Ensuite	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Bathroom	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	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
No Data Available	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	5600	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2550	7300	E	450	NO
Garage	EW-1	2550	6500	S	450	NO
Garage	EW-1	2550	2100	W	9150	YES
Garage	EW-1	2550	600	N	5550	YES
Laundry	EW-2	2550	2290	S	1650	YES
Kitchen/Living	EW-1	2550	12995	N	4200	YES
Kitchen/Living	EW-1	2550	3100	E	450	NO
Kitchen/Living	EW-1	2550	600	S	9750	YES
Kitchen/Living	EW-1	2550	1995	E	1050	YES
Bedroom 1	EW-1	2550	3595	S	450	NO
Bedroom 1	EW-1	2550	3100	W	450	YES
Ensuite	EW-1	2550	1200	E	9250	YES
Ensuite	EW-1	2550	2795	S	450	NO
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Bedroom 3	EW-1	2550	3695	W	450	NO
Bedroom 3	EW-1	2550	1695	N	450	YES
Bedroom 2	EW-1	2550	3000	W	450	YES
Bedroom 2	EW-1	2550	3600	N	450	NO
Bedroom 2	EW-1	2550	1000	E	450	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		145.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	45.80	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	6.30	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	68.20	None	No Insulation	Cork Tiles or Parquetry 8mm
Hallway	Concrete Slab on Ground 100mm	19.10	None	No Insulation	60/40 Cork/Carpet 10mm
Bedroom 1	Concrete Slab on Ground 100mm	14.40	None	No Insulation	Carpet 10mm
WIR	Concrete Slab on Ground 100mm	4.40	None	No Insulation	Carpet 10mm
Ensuite	Concrete Slab on Ground 100mm	6.40	None	No Insulation	Ceramic Tiles 8mm
Bathroom	Concrete Slab on Ground 100mm	8.90	None	No Insulation	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 100mm	11.80	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.70	None	No Insulation	Carpet 10mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Hallway	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
WIR	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Unsealed
Kitchen/Living	26	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Hallway	8	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
WIR	1	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom	4	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

Explanatory notes

About this report

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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.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
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Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771000-02

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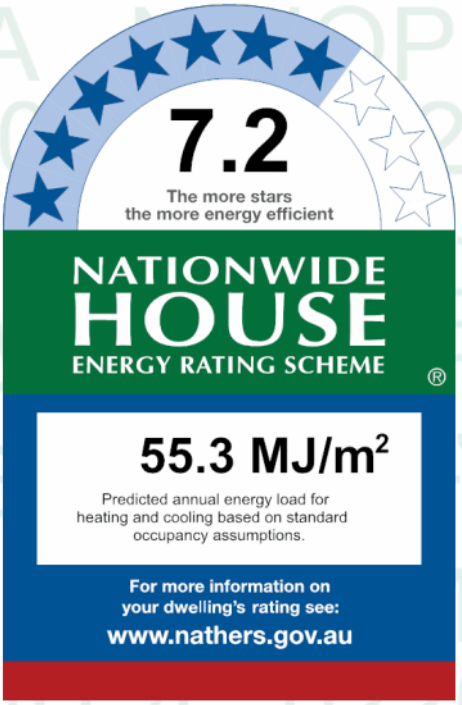

Property

Address	Unit 4, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	168.0	Suburban
Unconditioned*	15.0	**NatHERS climate zone**
Total	184.0	18
Garage	0.0	

Thermal performance

Heating	Cooling
39.3	**16.0**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	Declaration completed: no conflicts

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=dlBgTyXtN.
When using either link, ensure you are visiting hstar.com.au

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.

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

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

Ceiling Penetrations have been modelled using appropriate BASIX Protocol assumptions. However, to achieve

compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling

penetrations.

If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment

will be required.

I have modeled the shading in accordance with NatHERS principles

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-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Bedroom 1	ALM-003-01 A	n/a	1500	2400	n/a	45	S	No
Ensuite 1	ALM-004-01 A	n/a	600	1800	n/a	45	S	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2700	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	2500	1400	n/a	50	E	No
Laundry	ALM-003-01 A	n/a	2100	920	n/a	90	S	No
Laundry	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bath	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 4	ALM-004-01 A	n/a	1200	1800	n/a	45	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
No Data Available	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2550	4095	E	2500	YES
Bedroom 1	EW-1	2550	4095	S	600	NO
Ensuite 1	EW-1	2550	2695	S	600	NO
Ensuite 1	EW-1	2550	1300	W	6900	YES
Kitchen/Living	EW-2	2550	12995	N	4000	YES
Kitchen/Living	EW-2	2550	5200	E	500	NO
Kitchen/Living	EW-2	2550	1800	S	7000	YES
Kitchen/Living	EW-2	2550	2300	E	2300	YES
Kitchen/Living	EW-2	2550	200	S	4700	YES
Laundry	EW-1	2550	2390	S	1900	YES
Bedroom 2	EW-2	2550	1400	E	11700	YES
Bedroom 2	EW-2	2550	4100	S	500	NO
Bedroom 2	EW-2	2550	3200	W	400	YES
Bath	EW-2	2550	3095	S	500	YES
Bath	EW-2	2550	2695	W	500	NO
Bedroom 3	EW-2	2550	3795	W	500	NO
Bedroom 3	EW-2	2550	1695	N	500	YES
Bedroom 4	EW-2	2550	3000	W	400	YES
Bedroom 4	EW-2	2550	3700	N	400	NO
Bedroom 4	EW-2	2550	1000	E	400	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		147.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Concrete Slab on Ground 100mm	20.50	None	No Insulation	Carpet 10mm
WIR 1	Concrete Slab on Ground 100mm	4.60	None	No Insulation	Carpet 10mm
Ensuite 1	Concrete Slab on Ground 100mm	6.50	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	77.20	None	No Insulation	Cork Tiles or Parquetry 8mm
Laundry	Concrete Slab on Ground 100mm	6.40	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	16.90	None	No Insulation	Carpet 10mm
Bath	Concrete Slab on Ground 100mm	9.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 100mm	12.20	None	No Insulation	Carpet 10mm
Bedroom 4	Concrete Slab on Ground 100mm	13.40	None	No Insulation	Carpet 10mm
Corridor	Concrete Slab on Ground 100mm	17.20	None	No Insulation	Carpet 10mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Plasterboard	Bulk Insulation R4	No
WIR 1	Plasterboard	Bulk Insulation R4	No
Ensuite 1	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bath	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 4	Plasterboard	Bulk Insulation R4	No
Corridor	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Bedroom 1	9	Downlights - LED	150	Sealed
WIR 1	1	Downlights - LED	150	Sealed
Ensuite 1	2	Downlights - LED	150	Sealed
Ensuite 1	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	30	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Laundry	2	Downlights - Halogen	450	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bedroom 2	6	Downlights - LED	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Bedroom 4	5	Downlights - LED	150	Sealed
Corridor	6	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771018-02

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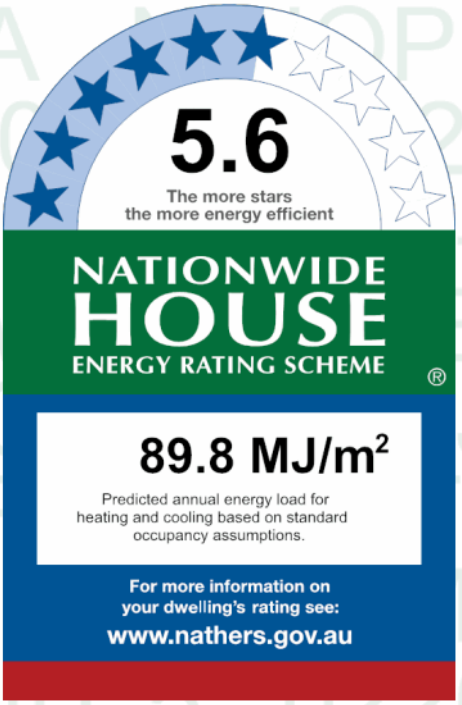

Property

Address	Unit 5, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	125.0	Suburban
Unconditioned*	16.0	**NatHERS climate zone**
Total	141.0	18
Garage	0.0	

Thermal performance

Heating	Cooling
67.1 MJ/m^2	22.7 MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

Assessor Accrediting Organisation

HERA

Declaration of interest Declaration completed: no conflicts

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.

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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.

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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.

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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.

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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".

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compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling
penetrations.
If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment
will be required.
I have modeled the shading in accordance with NatHERS principles

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-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bathroom	ALM-003-01 A	n/a	600	1800	n/a	30	W	No
Bathroom	ALM-003-01 A	n/a	600	1800	n/a	30	N	No
Kitchen/Living	ALM-004-01 A	n/a	1000	1500	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	1800	900	n/a	00	N	No
Kitchen/Living	ALM-004-01 A	n/a	1800	900	n/a	00	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	E	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	1800	900	n/a	00	S	No
Laundry	ALM-004-01 A	n/a	1200	600	n/a	00	S	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Entry	ALM-003-01 A	n/a	2500	1400	n/a	50	W	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
No Data Available	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-3	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bathroom	EW-1	3205	195	W	2700	YES
Bathroom	EW-1	3205	1600	S	9300	YES
Bathroom	EW-1	3205	3300	W	300	NO
Bathroom	EW-1	3205	3295	N	400	YES
Kitchen/Living	EW-2	3205	6700	N	425	NO
Kitchen/Living	EW-2	3205	5000	E	3600	YES
Kitchen/Living	EW-2	3205	2400	N	5475	YES
Kitchen/Living	EW-2	3205	4595	E	500	NO
Kitchen/Living	EW-2	3205	1500	W	500	YES
Bedroom 1	EW-2	3205	3695	E	500	NO
Bedroom 1	EW-2	3205	3795	S	500	NO
Wir	EW-2	3205	2290	S	500	YES
Laundry	EW-2	3205	300	E	6600	YES
Laundry	EW-1	3205	2395	S	500	NO
Bedroom 2	EW-1	3205	3095	W	800	YES
Bedroom 2	EW-1	3205	1200	N	5500	YES
Bedroom 3	EW-1	3205	3895	S	500	NO
Bedroom 3	EW-1	3205	3900	W	400	NO
Bedroom 3	EW-1	3205	400	N	8600	YES
Entry	EW-3	3205	1590	W	2700	YES

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		155.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	Concrete Slab on Ground 100mm	11.00	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 150mm	59.00	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Concrete Slab 150mm	18.50	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Ensuite	Suspended Concrete Slab 150mm	7.60	Totally Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Wir	Suspended Concrete Slab 150mm	4.10	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Laundry	Concrete Slab on Ground 100mm	5.00	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	11.40	None	No Insulation	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 100mm	14.90	None	No Insulation	Carpet 10mm
Hall	Concrete Slab on Ground 100mm	7.40	None	No Insulation	Cork Tiles or Parquetry 8mm
Entry	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bathroom	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Wir	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Hall	Plasterboard	Bulk Insulation R4	No
Entry	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Bathroom	5	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kitchen/Living	24	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Wir	1	Downlights - LED	150	Sealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bedroom 3	6	Downlights - LED	150	Sealed
Hall	5	Downlights - LED	150	Sealed
Entry	1	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

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.

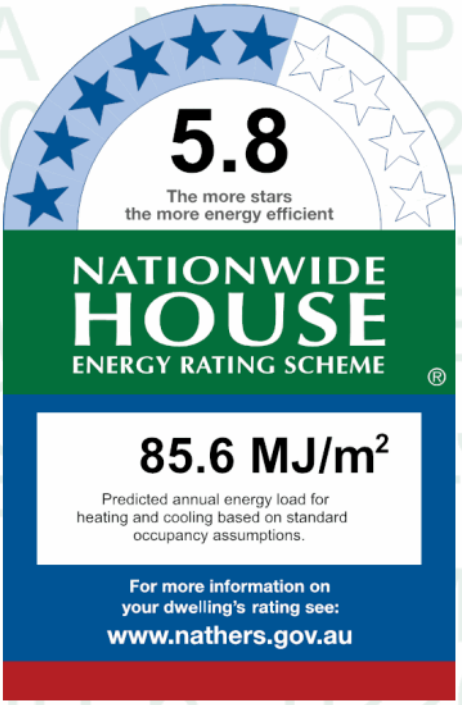
Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

* Refer to glossary.

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771026-02

Generated on 28 Jan 2022 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 6, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	128.0	Suburban
Unconditioned*	56.0	**NatHERS climate zone**
Total	184.0	18
Garage	41.0	

Thermal performance

Heating	Cooling
65.4	**20.2**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

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Window and glazed door *type and performance*

Default* windows

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				SHGC lower limit	SHGC upper limit
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ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	S	No
Kitchen/Living	ALM-003-01 A	n/a	1000	2400	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	45	N	No
Entry/Hall	ALM-003-01 A	n/a	2500	1400	n/a	50	W	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Laundry	ALM-004-01 A	n/a	1200	450	n/a	00	S	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	S	No
Double Garage	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bath	ALM-003-01 A	n/a	1200	600	n/a	90	W	No
Bath	ALM-004-01 A	n/a	1200	1500	n/a	45	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
No Data Available	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Double Garage	2350	5200	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

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	2550	4600	E	4200	NO
Kitchen/Living	EW-1	2550	600	S	4500	YES
Kitchen/Living	EW-1	2550	4000	E	500	YES
Kitchen/Living	EW-1	2550	2800	S	500	YES
Kitchen/Living	EW-1	2550	7995	N	500	NO
Entry/Hall	EW-2	2550	1690	W	2500	YES
Bedroom 1	EW-1	2550	3195	E	500	YES
Bedroom 1	EW-1	2550	4895	S	400	NO
Laundry	EW-1	2550	2190	S	1400	YES
Double Garage	EW-1	2550	900	E	2600	YES
Double Garage	EW-2	2550	6100	S	500	NO
Double Garage	EW-2	2550	6500	W	300	NO
Double Garage	EW-2	2550	400	N	5600	YES
Bedroom 2	EW-1	2550	3390	N	500	NO
Bedroom 3	EW-1	2550	1100	W	500	YES
Bedroom 3	EW-1	2550	3495	N	500	NO
Bath	EW-2	2550	1600	S	2100	YES
Bath	EW-2	2550	3400	W	300	NO
Bath	EW-2	2550	2895	N	500	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		153.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	55.30	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Entry/Hall	Concrete Slab on Ground 100mm	17.70	None	No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Concrete Slab 150mm	17.60	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Ensuite	Suspended Concrete Slab 150mm	7.50	Totally Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	5.00	None	No Insulation	Ceramic Tiles 8mm
Double Garage	Concrete Slab on Ground 100mm	41.00	None	No Insulation	Bare
Bedroom 2	Suspended Concrete Slab 150mm	14.70	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Bedroom 3	Suspended Concrete Slab 150mm	12.80	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Wir	Suspended Concrete Slab 150mm	2.40	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Bath	Concrete Slab on Ground 100mm	10.30	None	No Insulation	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Entry/Hall	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Double Garage	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Wir	Plasterboard	Bulk Insulation R4	No
Bath	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	22	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Entry/Hall	6	Downlights - LED	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bedroom 2	6	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Wir	1	Downlights - LED	150	Sealed
Bath	4	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

Explanatory notes

About this report

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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.

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Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
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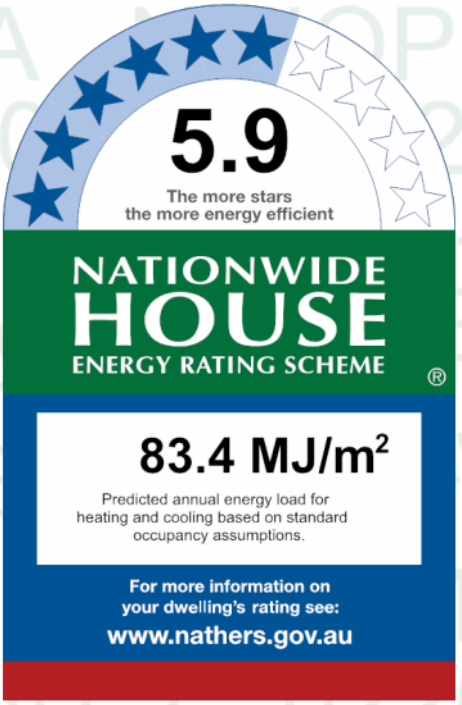
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

* Refer to glossary.

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771034-02

Generated on 28 Jan 2022 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 7, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	145.0	Suburban
Unconditioned*	56.0	**NatHERS climate zone**
Total	200.0	18
Garage	40.0	

Thermal performance

Heating	Cooling
68.5	**14.9**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	Declaration completed: no conflicts

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=OpDltTGZb.
When using either link, ensure you are visiting hstar.com.au

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.

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

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

Ceiling Penetrations have been modelled using appropriate BASIX Protocol assumptions. However, to achieve
compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling
penetrations.
If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment
will be required.
I have modeled the shading in accordance with NatHERS principles

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-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Laundry1	ALM-004-01 A	n/a	1200	450	n/a	00	S	No
Laundry1	ALM-003-01 A	n/a	2040	920	n/a	90	S	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	60	E	No
Bedroom 1	ALM-003-01 A	n/a	600	2400	n/a	60	S	No
Ensuite 1	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bathroom	ALM-004-01 A	n/a	1200	1500	n/a	45	N	No
Bathroom	ALM-003-01 A	n/a	1200	600	n/a	90	W	No
Kitchen/Living	ALM-003-01 A	n/a	1200	600	n/a	90	N	No
Kitchen/Living	ALM-003-01 A	n/a	1200	2400	n/a	40	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	1800	900	n/a	00	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Entry/Hallway	ALM-004-01 A	n/a	2040	400	n/a	00	W	No
Entry/Hallway	ALM-004-01 A	n/a	415	1320	n/a	00	W	No
Entry/Hallway	ALM-003-01 A	n/a	2040	920	n/a	90	W	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								

* Refer to glossary.

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	5200	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	4300	550	N	5450	YES
Garage	EW-1	4300	1400	E	10100	YES
Garage	EW-1	4300	6100	S	550	NO
Garage	EW-1	4300	6450	W	325	NO
Laundry1	EW-2	4300	2190	S	1950	YES
Bedroom 1	EW-1	4300	3095	E	500	YES
Bedroom 1	EW-1	4300	5045	S	500	NO
Ensuite 1	EW-1	4300	2345	S	500	NO
Ensuite 1	EW-1	4300	450	W	8625	YES
Bedroom 2	EW-1	4300	3440	N	600	NO
Bedroom 3	EW-1	4300	1050	W	300	YES
Bedroom 3	EW-1	4300	3495	N	600	NO
Bathroom	EW-1	4300	2795	N	200	YES
Bathroom	EW-1	4300	245	W	2650	YES
Bathroom	EW-1	4300	1650	S	8950	YES
Bathroom	EW-1	4300	3300	W	500	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	4300	8045	N	600	NO
Kitchen/Living	EW-1	4300	4600	E	4575	YES
Kitchen/Living	EW-1	4300	1500	N	5200	YES
Kitchen/Living	EW-1	4300	4100	E	525	NO
Kitchen/Living	EW-1	4300	2500	S	450	YES
Entry/Hallway	EW-1	4300	1690	W	2650	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		30.00	Bulk Insulation, No Air Gap R1
IW-2 - Cavity wall, direct fix plasterboard, single gap		127.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	40.40	None	No Insulation	Bare
Laundry1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 150mm	25.50	Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Ensuite 1	Suspended Concrete Slab 150mm	6.50	Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 150mm	14.90	None	No Insulation	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Carpet 10mm
WIR 3	Concrete Slab on Ground 100mm	2.20	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	10.10	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 100mm	65.40	Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Entry/Hallway	Concrete Slab on Ground 300mm	17.30	None	No Insulation	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R4	No
Laundry1	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Ensuite 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
WIR 3	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Entry/Hallway	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Laundry1	2	Downlights - LED	150	Sealed
Laundry1	1	Exhaust Fans	300	Sealed
Bedroom 1	10	Downlights - LED	150	Sealed
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Bedroom 2	6	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
WIR 3	1	Downlights - LED	150	Sealed
Bathroom	4	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kitchen/Living	26	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Entry/Hallway	6	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

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Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771042-02

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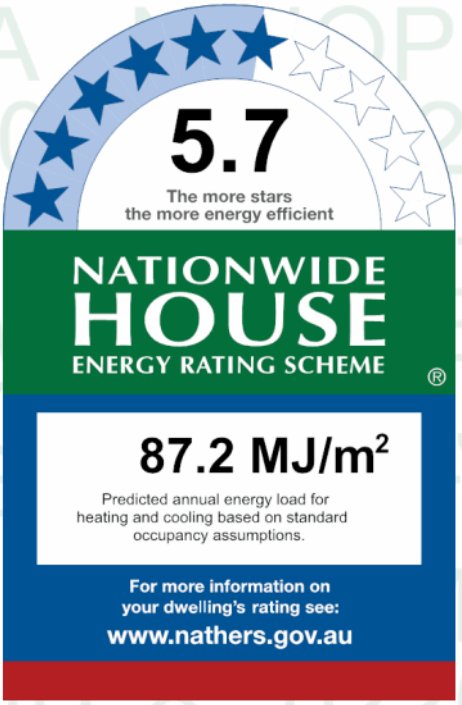

Property

Address	Unit 8, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	145.0	Suburban
Unconditioned*	56.0	**NatHERS climate zone**
Total	200.0	18
Garage	40.0	

Thermal performance

Heating	Cooling
72.4	**14.8**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

Assessor Accrediting Organisation

HERA

Declaration of interest Declaration completed: no conflicts

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.

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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.

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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.

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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".

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

Additional notes

Ceiling Penetrations have been modelled using appropriate BASIX Protocol assumptions. However, to achieve
compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling
penetrations.
If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment
will be required.
I have modeled the shading in accordance with NatHERS principles

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-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Laundry1	ALM-004-01 A	n/a	1200	450	n/a	00	S	No
Laundry1	ALM-003-01 A	n/a	2040	920	n/a	90	S	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	60	E	No
Bedroom 1	ALM-003-01 A	n/a	600	2400	n/a	60	S	No
Ensuite 1	ALM-004-01 A	n/a	600	1500	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bathroom	ALM-004-01 A	n/a	1200	1500	n/a	45	N	No
Bathroom	ALM-003-01 A	n/a	1200	600	n/a	90	W	No
Kitchen/Living	ALM-003-01 A	n/a	1200	600	n/a	90	N	No
Kitchen/Living	ALM-003-01 A	n/a	1200	2400	n/a	40	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	1800	900	n/a	00	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Entry/Hallway	ALM-004-01 A	n/a	2040	400	n/a	00	W	No
Entry/Hallway	ALM-004-01 A	n/a	415	1320	n/a	00	W	No
Entry/Hallway	ALM-003-01 A	n/a	2040	920	n/a	90	W	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								

* Refer to glossary.

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	5200	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	4300	550	N	5450	YES
Garage	EW-1	4300	1400	E	10100	YES
Garage	EW-1	4300	6100	S	550	NO
Garage	EW-1	4300	6450	W	325	NO
Laundry1	EW-2	4300	2190	S	1950	YES
Bedroom 1	EW-1	4300	3095	E	500	YES
Bedroom 1	EW-1	4300	5045	S	500	NO
Ensuite 1	EW-1	4300	2345	S	500	NO
Ensuite 1	EW-1	4300	450	W	8625	YES
Bedroom 2	EW-1	4300	3440	N	600	NO
Bedroom 3	EW-1	4300	1050	W	300	YES
Bedroom 3	EW-1	4300	3495	N	600	NO
Bathroom	EW-1	4300	2795	N	200	YES
Bathroom	EW-1	4300	245	W	2650	YES
Bathroom	EW-1	4300	1650	S	8950	YES
Bathroom	EW-1	4300	3300	W	500	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	4300	8045	N	600	NO
Kitchen/Living	EW-1	4300	4600	E	4575	YES
Kitchen/Living	EW-1	4300	1500	N	5200	YES
Kitchen/Living	EW-1	4300	4100	E	525	NO
Kitchen/Living	EW-1	4300	2500	S	450	YES
Entry/Hallway	EW-1	4300	1690	W	2650	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		30.00	Bulk Insulation, No Air Gap R1
IW-2 - Cavity wall, direct fix plasterboard, single gap		127.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	40.40	None	No Insulation	Bare
Laundry1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 150mm	25.50	Open	Bulk Insulation in Contact with Floor R2	Carpet 10mm
Ensuite 1	Suspended Concrete Slab 150mm	6.50	Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 150mm	14.90	None	No Insulation	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Carpet 10mm
WIR 3	Concrete Slab on Ground 100mm	2.20	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	10.10	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 100mm	65.40	Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Entry/Hallway	Concrete Slab on Ground 300mm	17.30	None	No Insulation	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R4	No
Laundry1	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Ensuite 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
WIR 3	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Entry/Hallway	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Laundry1	2	Downlights - LED	150	Sealed
Laundry1	1	Exhaust Fans	300	Sealed
Bedroom 1	10	Downlights - LED	150	Sealed
Ensuite 1	2	Downlights - LED	150	Sealed
Ensuite 1	1	Exhaust Fans	300	Sealed
Bedroom 2	6	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
WIR 3	1	Downlights - LED	150	Sealed
Bathroom	4	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kitchen/Living	26	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Entry/Hallway	6	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

* Refer to glossary.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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Nationwide House Energy Rating Scheme
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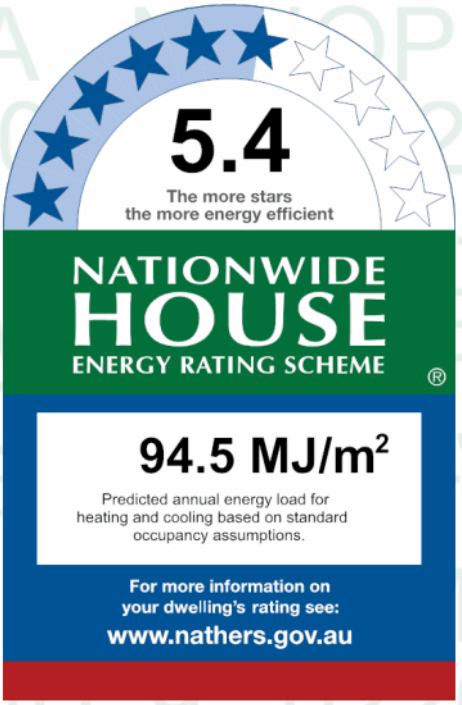

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Total	206.0	18
Garage	43.0	

Thermal performance

Heating	Cooling
68.1 MJ/m^2	**26.3** MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

Assessor Accrediting Organisation

HERA

Declaration of interest Declaration completed: no conflicts

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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".

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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-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	1800	600	n/a	90	S	No
Kitchen/Living	ALM-003-01 A	n/a	2040	820	n/a	90	S	No
Kitchen/Living	ALM-003-01 A	n/a	1800	600	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2700	n/a	45	N	No
Kitchen/Living	ALM-003-01 A	n/a	1800	3600	n/a	30	E	No
Living	ALM-003-01 A	n/a	2500	1450	n/a	70	N	No
Living	ALM-003-01 A	n/a	1800	3600	n/a	30	N	No
Living	ALM-003-01 A	n/a	1800	3600	n/a	30	E	No
Living	ALM-004-01 A	n/a	2100	2700	n/a	45	S	No
Living	ALM-003-01 A	n/a	1800	600	n/a	90	S	No
Living	ALM-003-01 A	n/a	1800	3600	n/a	30	E	No
Living	ALM-003-01 A	n/a	900	1200	n/a	00	N	No Shading
Living	ALM-003-01 A	n/a	900	1200	n/a	00	N	No Shading
Laundry	ALM-003-01 A	n/a	900	1200	n/a	00	N	No Shading
Bedroom 1	ALM-004-01 A	n/a	1200	1800	n/a	45	S	No
Ens 1	ALM-004-01 A	n/a	900	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Bath	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	600	1500	n/a	45	S	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								

* Refer to glossary.

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	5600	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

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	2550	7495	S	450	NO
Kitchen/Living	EW-1	3300	5100	N	9050	YES
Kitchen/Living	EW-1	3250	4100	E	400	NO
Living	EW-2	3350	1995	N	1550	YES
Living	EW-1	3250	1100	W	13450	YES
Living	EW-1	3350	4600	N	450	NO
Living	EW-1	3250	4600	E	450	NO
Living	EW-1	2550	5000	S	8550	YES
Living	EW-1	3250	3990	E	5475	YES
Garage	EW-2	2550	1400	W	450	YES
Garage	EW-2	2550	7300	N	450	NO
Garage	EW-2	3250	2500	E	7050	YES
Bedroom 1	EW-2	2550	3590	S	450	NO
Ens 1	EW-2	2550	2890	S	450	NO
Bedroom 2	EW-2	2550	3695	N	450	YES
Bedroom 2	EW-2	2550	3795	W	450	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bath	EW-2	2550	4790	W	450	NO
Bedroom 3	EW-2	2550	3695	S	450	NO
Bedroom 3	EW-2	2550	4095	W	450	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		187.00	Bulk Insulation, No Air Gap R1

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	30.50	None	No Insulation	Cork Tiles or Parquetry 8mm
Living	Concrete Slab on Ground 100mm	27.90	None	No Insulation	Cork Tiles or Parquetry 8mm
Living	Concrete Slab on Ground 100mm	23.70	None	No Insulation	Cork Tiles or Parquetry 8mm
Garage	Concrete Slab on Ground 100mm	43.10	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	6.00	None	No Insulation	Ceramic Tiles 8mm
Hallway	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Carpet 10mm
Bedroom 1	Concrete Slab on Ground 100mm	14.20	None	No Insulation	Carpet 10mm
Wir	Concrete Slab on Ground 100mm	4.00	None	No Insulation	Carpet 10mm
Ens 1	Concrete Slab on Ground 100mm	7.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	13.70	None	No Insulation	Carpet 10mm
Bath	Concrete Slab on Ground 100mm	8.40	None	No Insulation	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 100mm	14.80	None	No Insulation	Carpet 10mm

Ceiling *type*

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

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Living	10	Downlights - LED	150	Sealed
Living	9	Downlights - LED	150	Sealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Hallway	5	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Wir	1	Downlights - LED	150	Sealed
Ens 1	2	Downlights - LED	150	Sealed
Ens 1	1	Exhaust Fans	300	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bath	4	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

* Refer to glossary.

Explanatory notes

About this report

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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.

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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.

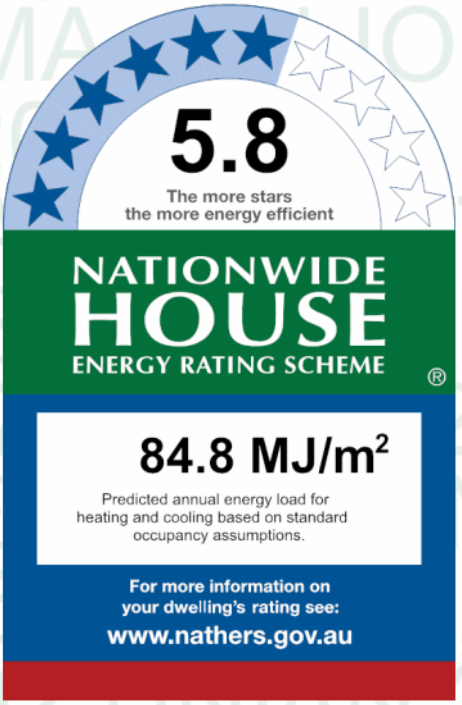
Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

* Refer to glossary.

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771067-02

Generated on 28 Jan 2022 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 10, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	153.0	Suburban
Unconditioned*	57.0	**NatHERS climate zone**
Total	210.0	18
Garage	43.0	

Thermal performance

Heating	Cooling
73.4 MJ/m^2	11.5 MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	Declaration completed: no conflicts

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=kaAKAAhdD.
When using either link, ensure you are visiting hstar.com.au

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.

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

* Refer to glossary.

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

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

Ceiling Penetrations have been modelled using appropriate BASIX Protocol assumptions. However, to achieve
compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling
penetrations.
If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment
will be required.
I have modeled the shading in accordance with NatHERS principles

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-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	1000	900	n/a	90	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2100	n/a	70	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2100	n/a	60	S	No
Kitchen/Living	ALM-003-01 A	n/a	1800	2100	n/a	70	E	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	S	No
Entry/Hall	ALM-003-01 A	n/a	2500	1400	n/a	50	N	No
Bath	ALM-003-01 A	n/a	1000	900	n/a	90	E	No
Bedroom 1	ALM-003-01 A	n/a	2100	1200	n/a	90	E	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Wir	ALM-003-01 A	n/a	1500	600	n/a	90	W	No
Ensuite	ALM-004-01 A	n/a	600	1500	n/a	45	W	No
Study	ALM-003-01 A	n/a	600	2400	n/a	45	W	No
Laundry	ALM-003-01 A	n/a	1500	600	n/a	90	W	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	W	No
Bedroom 2	ALM-004-01 A	n/a	1800	600	n/a	00	N	No
Bedroom 2	ALM-003-01 A	n/a	600	2400	n/a	45	E	No
Bedroom 3	ALM-003-01 A	n/a	600	2400	n/a	45	E	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
No Data Available	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2350	5200	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

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	2550	6695	E	500	NO
Kitchen/Living	EW-1	2550	2600	S	5200	YES
Kitchen/Living	EW-1	2550	2600	E	3100	YES
Kitchen/Living	EW-1	2550	4595	S	2600	YES
Garage	EW-2	2550	6495	W	500	NO
Garage	EW-2	2550	6200	N	400	NO
Garage	EW-2	2550	600	E	6600	YES
Garage	EW-2	2550	595	N	1800	YES
Entry/Hall	EW-2	2550	1790	N	1800	YES
Bath	EW-1	2550	2690	E	500	YES
Bedroom 1	EW-1	2550	3300	E	7700	YES
Bedroom 1	EW-1	2550	4100	S	400	NO
Bedroom 1	EW-1	2550	3495	W	500	NO
Wir	EW-1	2550	1790	W	500	NO
Ensuite	EW-1	2550	2890	W	500	NO
Study	EW-1	2550	3390	W	500	NO
Laundry	EW-1	2550	2890	W	500	NO
Bedroom 2	EW-1	2550	3700	N	500	NO
Bedroom 2	EW-1	2550	3695	E	500	NO
Bedroom 2	EW-1	2550	2000	W	2300	YES
Bedroom 3	EW-1	2550	3395	E	500	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 3	EW-1	2550	1000	S	500	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		173.00	Bulk Insulation, No Air Gap R1.5

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	59.50	None	No Insulation	Cork Tiles or Parquetry 8mm
Garage	Concrete Slab on Ground 100mm	43.30	None	No Insulation	Bare
Entry/Hall	Concrete Slab on Ground 100mm	25.70	None	No Insulation	Cork Tiles or Parquetry 8mm
Bath	Concrete Slab on Ground 100mm	7.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	20.30	None	No Insulation	Carpet 10mm
Wir	Concrete Slab on Ground 100mm	5.00	None	No Insulation	Carpet 10mm
Ensuite	Concrete Slab on Ground 100mm	6.90	None	No Insulation	Ceramic Tiles 8mm
Study	Concrete Slab on Ground 100mm	8.10	None	No Insulation	Cork Tiles or Parquetry 8mm
Laundry	Concrete Slab on Ground 100mm	6.90	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	13.40	None	No Insulation	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 100mm	13.80	None	No Insulation	Carpet 10mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Garage	Plasterboard	Bulk Insulation R4	No
Entry/Hall	Plasterboard	Bulk Insulation R4	No
Bath	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Wir	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Study	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	22	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Entry/Hall	10	Downlights - LED	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 1	9	Downlights - LED	150	Sealed
Wir	2	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Study	2	Downlights - LED	150	Sealed
Laundry	2	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

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Glossary

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Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771075-02

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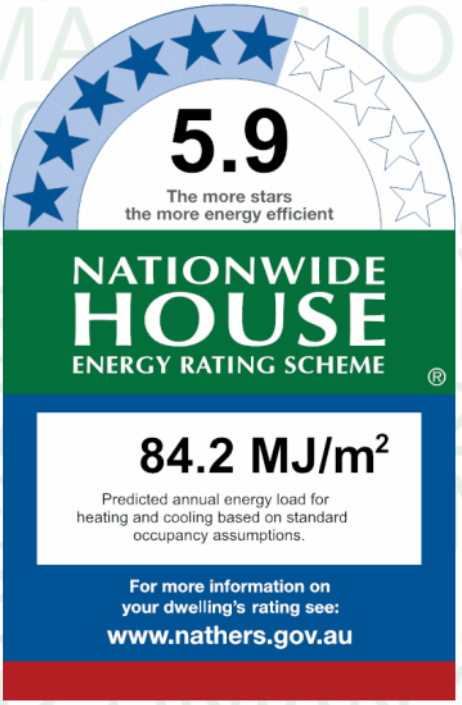

Property

Address	Unit 11, 2 Caliope Street , Kiama , NSW , 2533
Lot/DP	17/1210621
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev E - issue date 20/01/2022
Prepared by	Coble Stephens Architects

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	128.0	Suburban
Unconditioned*	53.0	**NatHERS climate zone**
Total	181.0	18
Garage	40.0	

Thermal performance

Heating	Cooling
73.0 MJ/m^2	11.2 MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

Assessor Accrediting Organisation

HERA

Declaration of interest Declaration completed: no conflicts

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.

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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.

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Additional notes

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compliance, the ceiling penetrations have also beem modelled as sealed. Client must install SEALED ceiling
penetrations.
If client installs greater number of ceiling penetrations than speecified on the NatHERS Certificate, a reassessment
will be required.
I have modeled the shading in accordance with NatHERS principles

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-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62

Custom* windows

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	1000	900	n/a	90	E	No
Kitchen/Living	ALM-003-01 A	n/a	1000	1800	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	3600	n/a	35	S	No
Kitchen/Living	ALM-003-01 A	n/a	2500	1400	n/a	50	N	No
Bath	ALM-003-01 A	n/a	1000	900	n/a	90	E	No
Bedroom 1	ALM-003-01 A	n/a	1500	600	n/a	90	E	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Ensuite	ALM-004-01 A	n/a	600	1500	n/a	45	W	No
Laundry	ALM-003-01 A	n/a	1500	600	n/a	90	W	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	W	No
Bedroom 2	ALM-004-01 A	n/a	1800	600	n/a	00	N	No
Bedroom 2	ALM-003-01 A	n/a	600	2400	n/a	45	E	No
Bedroom 3	ALM-003-01 A	n/a	600	2400	n/a	45	E	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
No Data Available	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2350	5200	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes

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	2990	3800	E	475	NO
Kitchen/Living	EW-1	2990	2900	S	5700	YES
Kitchen/Living	EW-1	2990	5200	E	3325	YES
Kitchen/Living	EW-1	2990	4695	S	500	YES
Kitchen/Living	EW-1	2990	1000	N	10300	YES
Garage	EW-2	2990	6595	W	400	NO
Garage	EW-2	2990	6195	N	500	YES
Kitchen/Living	EW-2	2990	1000	W	500	YES
Kitchen/Living	EW-2	2990	1895	N	1800	YES
Bath	EW-1	2990	2690	E	1500	YES
Bedroom 1	EW-1	2990	1200	E	400	YES
Bedroom 1	EW-1	2990	4200	S	400	NO
Bedroom 1	EW-1	2990	3495	W	400	NO
Wir	EW-1	2990	1690	W	400	NO
Ensuite	EW-1	2990	2890	W	400	NO
Laundry	EW-1	2990	2290	W	400	NO
Bedroom 2	EW-1	2990	3700	N	500	NO
Bedroom 2	EW-1	2990	3695	E	500	NO
Bedroom 2	EW-1	2990	2000	W	2400	YES
Bedroom 3	EW-1	2990	3395	E	500	NO
Bedroom 3	EW-1	2990	1000	S	12200	YES

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		177.00	Bulk Insulation, No Air Gap R1.5

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	53.30	None	No Insulation	Cork Tiles or Parquetry 8mm
Garage	Concrete Slab on Ground 100mm	40.30	None	No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	11.80	None	No Insulation	Cork Tiles or Parquetry 8mm
Bath	Concrete Slab on Ground 100mm	7.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	20.90	None	No Insulation	Carpet 10mm
Wir	Concrete Slab on Ground 100mm	4.80	None	No Insulation	Carpet 10mm
Ensuite	Concrete Slab on Ground 100mm	6.90	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	5.40	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	13.40	None	No Insulation	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 100mm	13.80	None	No Insulation	Carpet 10mm
Corridor	Concrete Slab on Ground 100mm	3.60	None	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 R4	No
Garage	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bath	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Wir	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Corridor	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	21	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	5	Downlights - LED	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 1	9	Downlights - LED	150	Sealed
Wir	2	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Laundry	2	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Corridor	1	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

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.

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006771083-02

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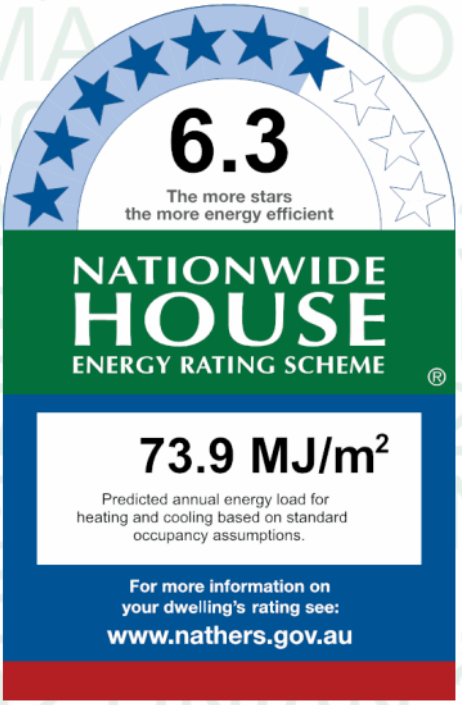

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Prepared by	Coble Stephens Architects

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Assessed floor area (m^2)*		**Exposure Type**
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Total	192.0	18
Garage	46.0	

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Heating	Cooling
61.2 MJ/m^2	12.7 MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jamie@certified.energy
Phone	1300 443 674
Accreditation No.	10056

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will be required.
I have not modeled the shading, no shading is applicable

Window and glazed door *type and performance*

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Custom* windows

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No Data Available					

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	1000	2400	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3600	n/a	45	E	No
Kitchen/Living	ALM-003-01 A	n/a	1800	3600	n/a	40	S	No
Kitchen/Living	ALM-004-01 A	n/a	1000	600	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	1000	600	n/a	45	N	No
Bedroom 1	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Ensuite	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Bedroom 2	ALM-003-01 A	n/a	1800	2400	n/a	60	S	No
Bedroom 3	ALM-003-01 A	n/a	1800	2400	n/a	45	N	No
Laundry	ALM-003-01 A	n/a	2040	920	n/a	90	W	No
Laundry	ALM-003-01 A	n/a	1000	600	n/a	90	W	No
Entry	ALM-003-01 A	n/a	2040	1400	n/a	60	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
No Data Available	

Skylight *schedule*

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

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Double Garage	2350	5600	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-3	Brick Veneer	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes

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	2550	4800	E	4500	NO
Kitchen/Living	EW-2	2550	500	S	6900	YES
Kitchen/Living	EW-2	2550	6400	E	1300	YES
Kitchen/Living	EW-2	2550	5095	S	500	NO
Kitchen/Living	EW-1	2550	800	W	6100	YES
Kitchen/Living	EW-1	2550	800	N	1700	YES
Kitchen/Living	EW-1	2550	600	W	6900	YES
Kitchen/Living	EW-1	2550	2500	N	500	NO
Kitchen/Living	EW-1	2550	600	E	1700	YES
Kitchen/Living	EW-1	2550	700	N	1075	YES
Bedroom 1	EW-2	2550	295	S	1500	YES
Bedroom 1	EW-2	2550	1000	E	500	YES
Bedroom 1	EW-2	2550	3900	S	500	NO
Bedroom 1	EW-2	2550	3595	W	500	NO
Ensuite	EW-2	2550	1600	E	400	YES
Ensuite	EW-2	2550	2895	S	400	NO
Bedroom 2	EW-2	2550	4390	S	500	YES
Bedroom 3	EW-1	2550	1600	W	400	YES
Bedroom 3	EW-1	2550	3100	N	500	NO
Bedroom 3	EW-1	2550	600	E	7575	YES
Bedroom 3	EW-1	2550	800	N	1100	YES
Bedroom 3	EW-1	2550	800	E	8000	YES
Double Garage	EW-1	2550	6095	W	500	NO
Double Garage	EW-1	2550	7395	N	300	YES
Laundry	EW-2	2550	3090	W	500	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Entry	EW-3	2550	1790	N	2500	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		163.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	55.10	None	No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.80	None	No Insulation	Carpet 10mm
Ensuite	Concrete Slab on Ground 100mm	6.70	None	No Insulation	Ceramic Tiles 8mm
Wir	Concrete Slab on Ground 100mm	5.60	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.30	None	No Insulation	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 100mm	15.10	None	No Insulation	Carpet 10mm
Double Garage	Concrete Slab on Ground 100mm	45.90	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	7.40	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	6.20	None	No Insulation	Ceramic Tiles 8mm
Hallway	Concrete Slab on Ground 100mm	17.60	None	No Insulation	Cork Tiles or Parquetry 8mm
Entry	Concrete Slab on Ground 100mm	4.50	None	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 R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Wir	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Double Garage	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
Bath	Plasterboard	Bulk Insulation R4	No
Hallway	Plasterboard	Bulk Insulation R4	No
Entry	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	22	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Wir	2	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Hallway	6	Downlights - LED	150	Sealed
Entry	1	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	0.30	Light

* Refer to glossary.

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.

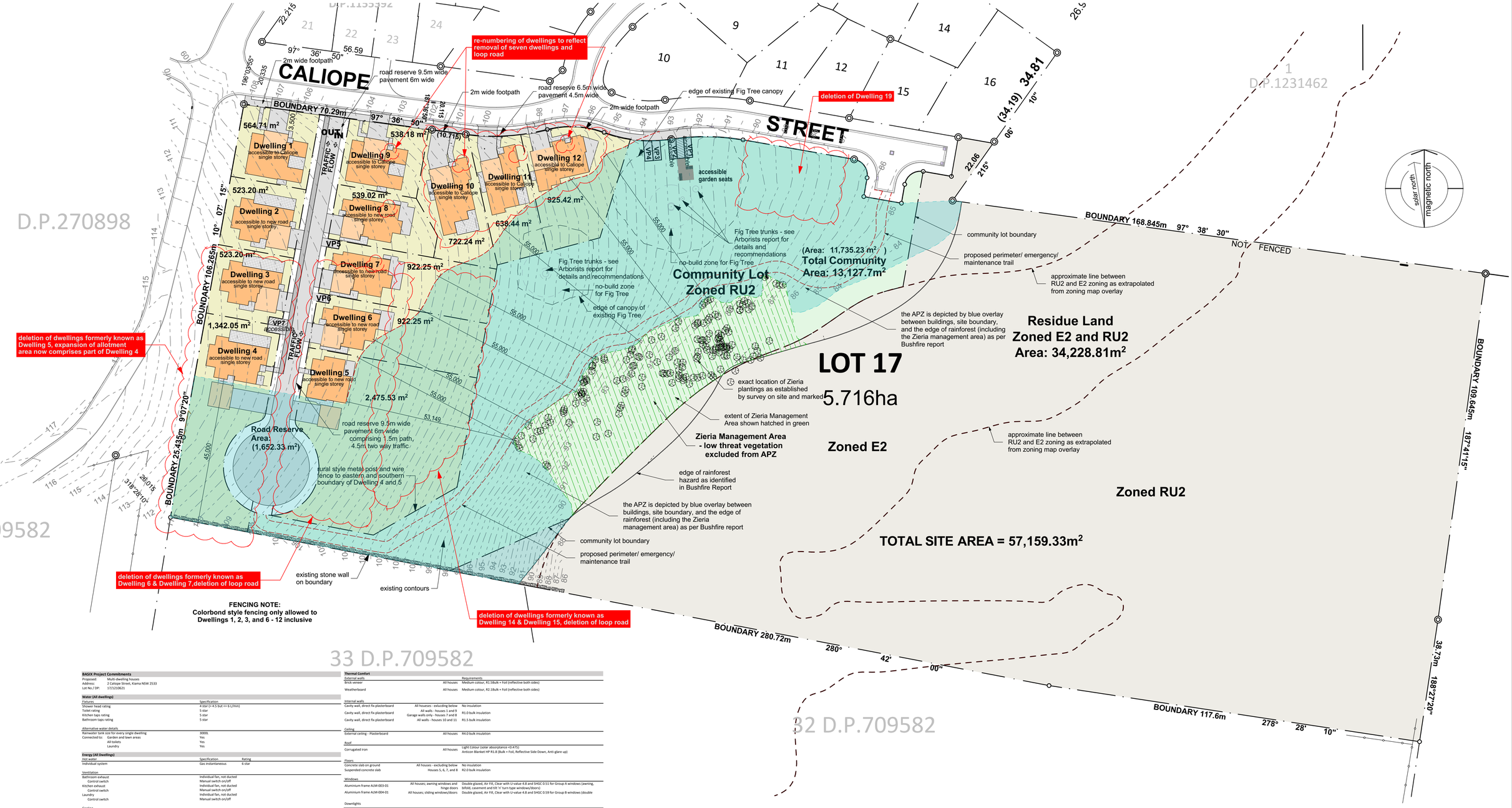
Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

* Refer to glossary.



FENCING NOTE:
Colorbond style fencing only allowed to Dwellings 1, 2, 3, and 6 - 12 inclusive

SITE LAYOUT PLAN
1:600

BASIX Project Commitments

Proposed:	Multi-dwelling houses
Address:	2 Caliope Street, Kiama NSW 2533
Lot No / DP:	17/1210621

Water (All dwellings)

Fixtures	Specification
Shower head rating	4 star (> 4.5 but <= 6 L/min)
Toilet rating	5 star
Kitchen taps rating	5 star
Bathroom taps rating	5 star
Alternative water details	
Rainwater tank size for every single dwelling	3000L
Connected to: Garden and lawn areas	Yes
All toilets	Yes
Laundry	Yes

Energy (All Dwellings)

Hot water	Specification	Rating
Individual system	Gas instantaneous	6 star
Ventilation		
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	
Cooling		
Individual systems - living areas	1-phase airconditioning	5 star
Individual systems - bedroom areas	1-phase airconditioning	5 star
Heating		
Individual systems - living areas	1-phase airconditioning	5 star
Individual systems - bedroom areas	1-phase airconditioning	5 star
Appliances		
Cooktop/oven	Gas cooktop & electric oven	
Ventilated fridge space	Yes	
Private outdoor clothes drying line	Yes	

Thermal Comfort

External walls		Requirements
Brick veneer	All houses	Medium colour, R1.5Bulk + Foil (reflective both sides)
Weatherboard	All houses	Medium colour, R2.1Bulk + Foil (reflective both sides)
Internal walls		
Cavity wall, direct fix plasterboard	All houses - exluding below	No insulation
	All walls - houses 1 and 9	
Cavity wall, direct fix plasterboard	Garage walls only - houses 7 and 8	R1.0 bulk insulation
Cavity wall, direct fix plasterboard	All walls - houses 10 and 11	R1.5 bulk insulation
Ceiling		
External ceiling - Plasterboard	All houses	R4.0 bulk insulation
Roof		
Corrugated iron	All houses	Light Colour (solar absorptance <0.475) Anticon Blanket HP R1.8 (Bulk + Foil, Reflective Side Down, Anti-glare up)
Floors		
Concrete slab on ground	All houses - excluding below	No insulation
Suspended concrete slab	Houses 5, 6, 7, and 8	R2.0 bulk insulation
Windows		
Aluminium frame ALM-003-01	All houses; awning windows and hinge doors	Double glazed, Air Fill, Clear with U-value 4.8 and SHGC 0.51 for Group A windows (awning, bifold, casement and tilt 'n' turn type windows/doors)
Aluminium frame ALM-004-01	All houses; sliding windows/doors	Double glazed, Air Fill, Clear with U-value 4.8 and SHGC 0.59 for Group B windows (double
Downlights		
Downlight Covers	Approved firepoof downlight covers must be installed to all downlights in ceilings where insulation is installed.	
Lighting specification	As per BASIX protocol: 4 downlights per 10 square metres of ceiling area in each zone being considered by Accredited Assessors. For zones between 5 and 10 square metres allow 2 recessed downlights and 1 recessed downlight for zones less than 5 square metres.	
Overshadowing details	Adjoining units calculated into model calculations	
Site		
Orientation of nominal north elevation	As shown on plans	

* Approved firepoof downlight covers HAVE been specified, which can be fully covered by insulation. Ceiling penetrations for exhaust dampers have been allowed (to all bathrooms, ensuites and internal laundry's) at the rate of 0.04 meters squared per exhaust fan penetration.
If ADDITIONAL downlights are fitted or are not LED, this certification will be invalid unless insulation is added in compliance with NCC (BCA) Vol 2, 2014. Table 3.12.1.1 (b) and NatHERS protocols. Contact the assessor above if alterations are required.

0006794200 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address 2 Caliope Street , Kiama , NSW , 2533
hstar.com.au

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Issued for DA	02-02-21	AMS
C	Additional notes regards Zieria and APZ	08-04-21	AMS
D	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
E	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : SITE LAYOUT PLAN

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 1 of 17
DATE 20-01-22
SHEET NUMBER DA01E
DRAWN BY AMS
Print date 24/01/2022

coble stephens architects
1 EAST STREET ■ MOSS VALE ■ NSW 2577
PO BOX 2072 ■ BOWRAL ■ NSW 2576
Ph 02 4869 5395 ■ Fax 02 4869 5495 ■ cs.arch@bigpond.net.au
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0
THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 300mm ON ORIGINAL
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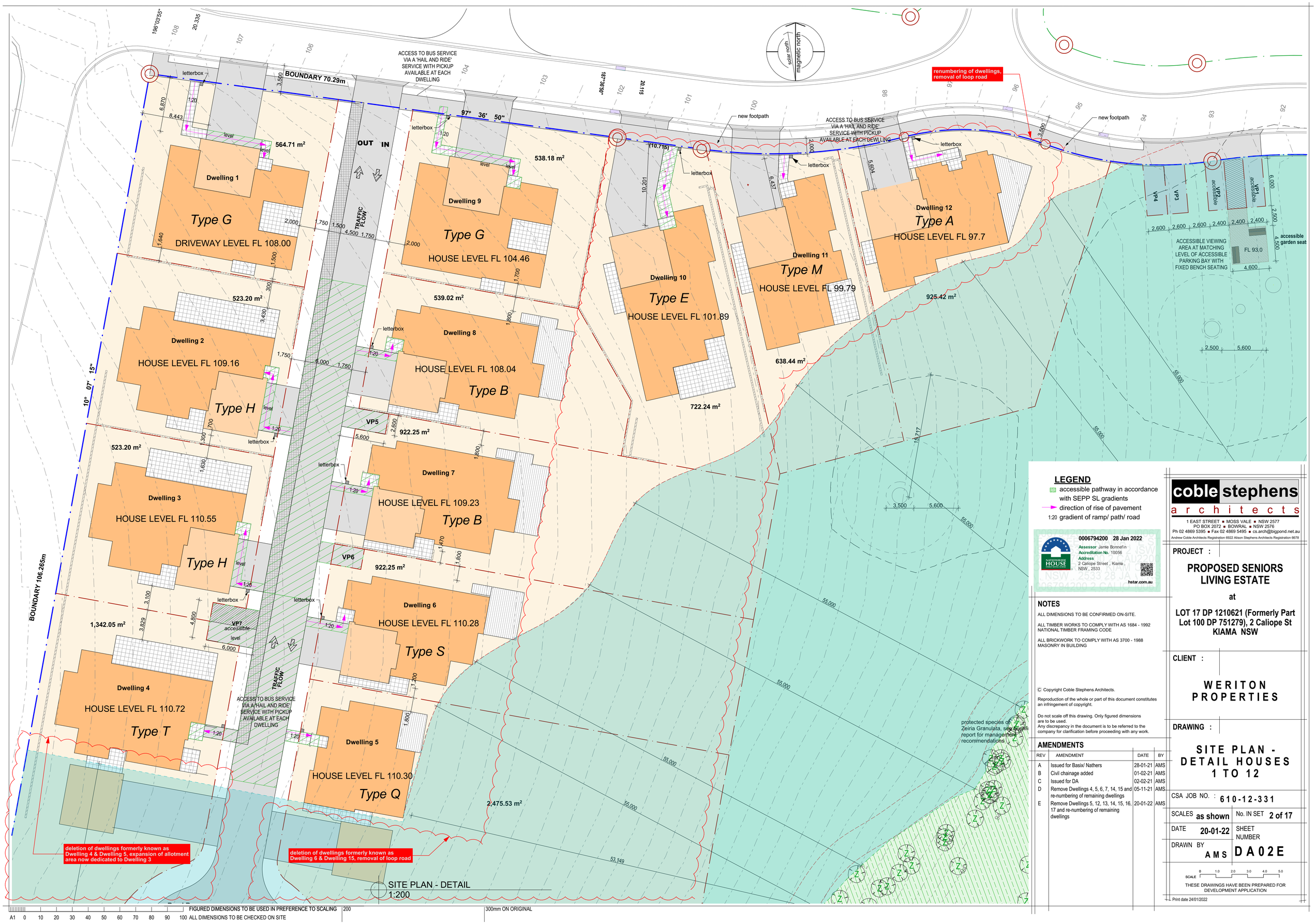

LEGEND

- accessible pathway in accordance with SEPP SL gradients
- direction of rise of pavement
- 1:20 gradient of ramp/ path/ road

0006794200 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address 2 Caliope Street , Kiama , NSW , 2533
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NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684 - 1992 NATIONAL TIMBER FRAMING CODE

ALL BRICKWORK TO COMPLY WITH AS 3700 - 1988 MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Civil chainage added	01-02-21	AMS
C	Issued for DA	02-02-21	AMS
D	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
E	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

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PROJECT :

PROPOSED SENIORS LIVING ESTATE

at

LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT :

WERITON PROPERTIES

DRAWING :

SITE PLAN - DETAIL HOUSES 1 TO 12

CSA JOB NO. : 610-12-331

SCALES as shown | No. IN SET 2 of 17

DATE 20-01-22 | SHEET NUMBER DA02E

DRAWN BY AMS

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

Print date 24/01/2022

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE

renumbering of dwellings, removal of loop road

STREET

removal of Dwelling 19

new footpath

ACCESS TO BUS SERVICE VIA A 'HAIL AND RIDE' SERVICE WITH PICKUP AVAILABLE AT EACH DWELLING

letterbox

Dwelling 12
Type A
HOUSE LEVEL FL 97.7

Dwelling 11
Type M
HOUSE LEVEL FL 99.79

925.42 m²

638.44 m²

101.89

VP4 | VP3 | VP2 accessible | VP1 accessible

2,600 | 2,600 | 2,600 | 2,400 | 2,400 | 2,400

6,000 | 2,500 | 4,500

ACCESSIBLE VIEWING AREA AT MATCHING LEVEL OF ACCESSIBLE PARKING BAY WITH FIXED BENCH SEATING

FL 93.0

accessible garden seats

4,600

2,500 | 5,600

3,500 | 5,600

55.000

13.717

(Area: 1,735.28 m²)
Total Community Area: 13,127.7m²

Community Lot

Zoned RU2

protected species of Zieria Granulata, see Bushfire report for management recommendations

the APZ is depicted by blue overlay between buildings, site boundary, and the edge of rainforest (including the Zieria management area) as per Bushfire report

LOT 17

SITE PLAN - DETAIL
1:200

deletion of dwellings formerly known as Dwelling 14 & Dwelling 15, expansion of allotment area now comprises part of Dwelling 9

0006794200 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address 2 Caliope Street , Kiama , NSW , 2533
hstar.com.au

LEGEND
- accessible pathway in accordance with SEPP SL gradients
- direction of rise of pavement
- 1:20 gradient of ramp/ path/ road

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684 NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700 MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Civil chainage added	01-02-21	AMS
C	Issued for DA	02-02-21	AMS
D	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
E	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : **WERITON PROPERTIES**

DRAWING :
SITE PLAN - DETAIL HOUSES 11 & 12

CSA JOB NO. : 610-12-331
SCALES as shown | No. IN SET 3 of 17
DATE 20-01-22 | SHEET NUMBER DA03E
DRAWN BY AMS

Print date 24/01/2022

coble stephens architects
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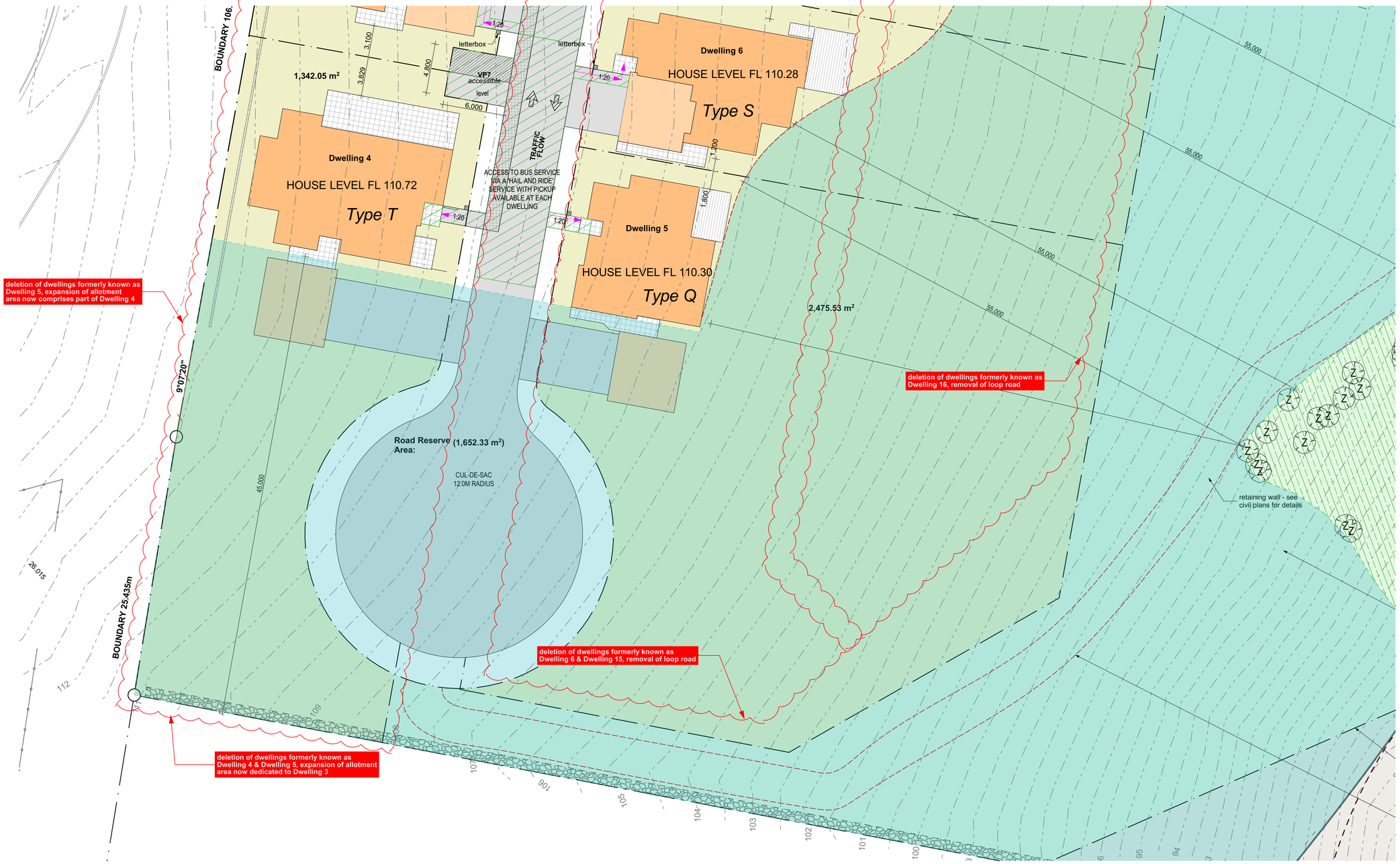
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



SITE PLAN - DETAIL
1:200

0006794200 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address 2 Caliope Street , Kiama , NSW , 2533
hstar.com.au

LEGEND
- accessible pathway in accordance with SEPP SL gradients
- direction of rise of pavement
- 1:20 gradient of ramp/ path/ road

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Civil chainage added	01-02-21	AMS
C	Issued for DA	02-02-21	AMS
D	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
E	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : SITE PLAN - DETAIL HOUSES 4, 5 & 6,

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 4 of 17
DATE 20-01-22
SHEET NUMBER DA04E
DRAWN BY AMS
Print date 24/01/2022

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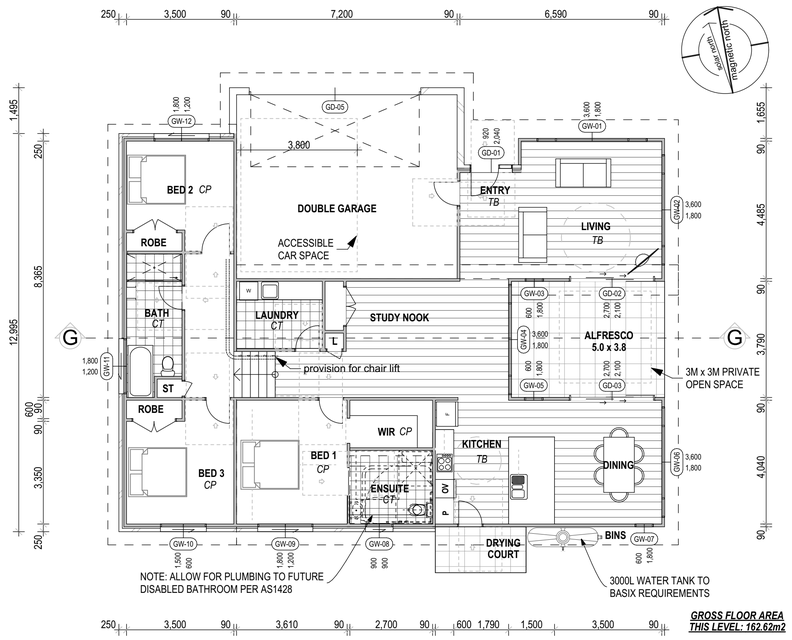
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0
THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL
A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



TYPE G - HOUSE 1 & 9 - FLOOR PLAN
1:100

re-numbering of dwellings to reflect removal of seven dwellings, previously Dwellings 1 & 10

BUSHFIRE NOTE: All houses to reach BAL 29 bushfire construction level - see notes for compliance and construction measures required

DOOR SCHEDULE TYPE G HOUSE 1, 6					
ID	GD-01	GD-02	GD-03	GD-04	GD-05
Height	2,040	2,100	2,100	2,040	2,350
Width	920	2,700	2,700	820	5,600
3D Front View					

DOOR SCHEDULE TYPE G HOUSE 1 & 9

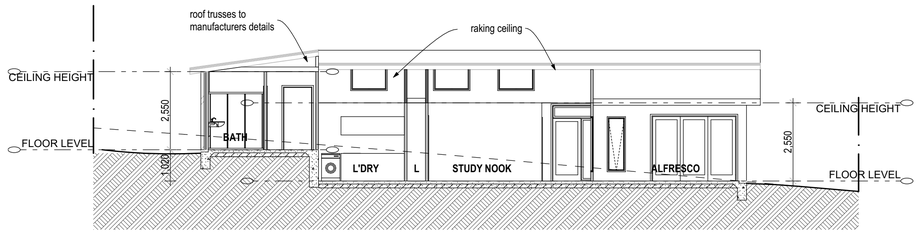
previously labelled House 1 & 10

WINDOW SCHEDULE TYPE G HOUSE 1, 6								
ID	GW-01	GW-02	GW-03	GW-04	GW-05	GW-06	GW-07	GW-08
Height	1,800	1,800	1,800	1,800	1,800	1,800	1,800	900
Width	3,600	3,600	600	3,600	600	3,600	600	900
3D Front View								

GW-09	GW-10	GW-11	GW-12	GW-13	GW-14	GW-15
1,200	600	1,200	1,200	900	900	900
1,800	1,500	1,800	1,800	1,200	1,200	1,200

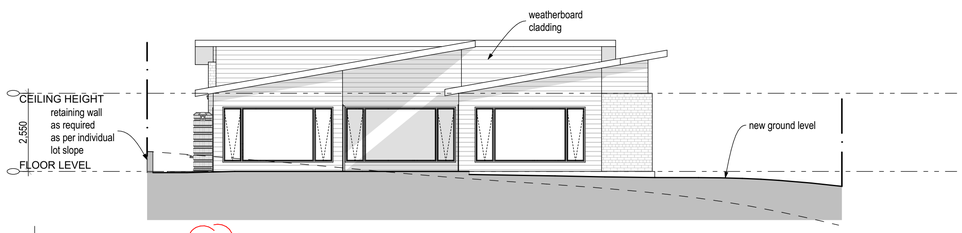
WINDOW SCHEDULE TYPE G HOUSE 1 & 9

previously labelled House 1 & 10



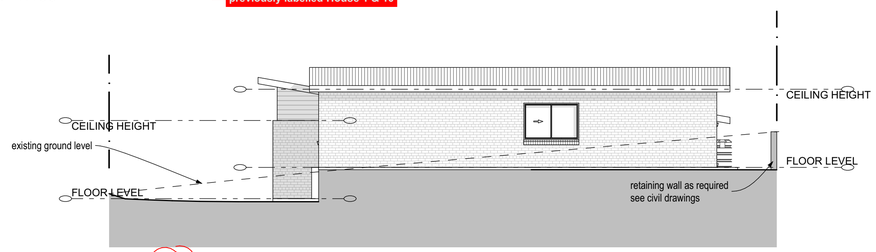
TYPE G - HOUSE 1 & 9 - SECTION GG
1:100

previously labelled House 1 & 10



TYPE G - HOUSE 1 & 9 EAST ELEVATION
1:100

previously labelled House 1 & 10



TYPE G - HOUSE 1 & 9 WEST ELEVATION
1:100

previously labelled House 1 & 10

TYPE G - HOUSE 1 & 9 NORTH ELEVATION
1:100

previously labelled House 1 & 10

TYPE G - HOUSE 1 & 9 SOUTH ELEVATION
1:100

previously labelled House 1 & 10

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

WALL LEGEND

- 90mm timber stud
- 250mm brick veneer with wall insulation
- 230mm double brick

ELECTRICAL LEGEND

- double fluorescent light
- LED recessed downlight
- LED pendant or ceiling mounted
- combined heat lamp/ exhaust fan
- LED wall mounted light

SEPP REQUIREMENTS

Note: This building is to comply with the provisions of SEPP (Housing for Seniors or People with a Disability) 2004. This encompasses access requirements which refer to AS1428 Design for Access and Mobility. The Builder must familiarise himself with both documents, and the conditions which relate to construction, and implement such access requirements therein, whether expressly detailed in these plans or not. Any amendments to the plans require adherence to the same guidelines.

- Circulation space required around doorways
- Circulation space required for showers
- Circulation space required around toilets
- Circulation space required around handbasins

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Issued for DA	02-02-21	AMS
C	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
D	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :

PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : TYPE G - HOUSE 1 & 9 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 5 of 17
DATE 20-01-22
SHEET NUMBER DA05D
DRAWN BY AMS
Print date 24/01/2022

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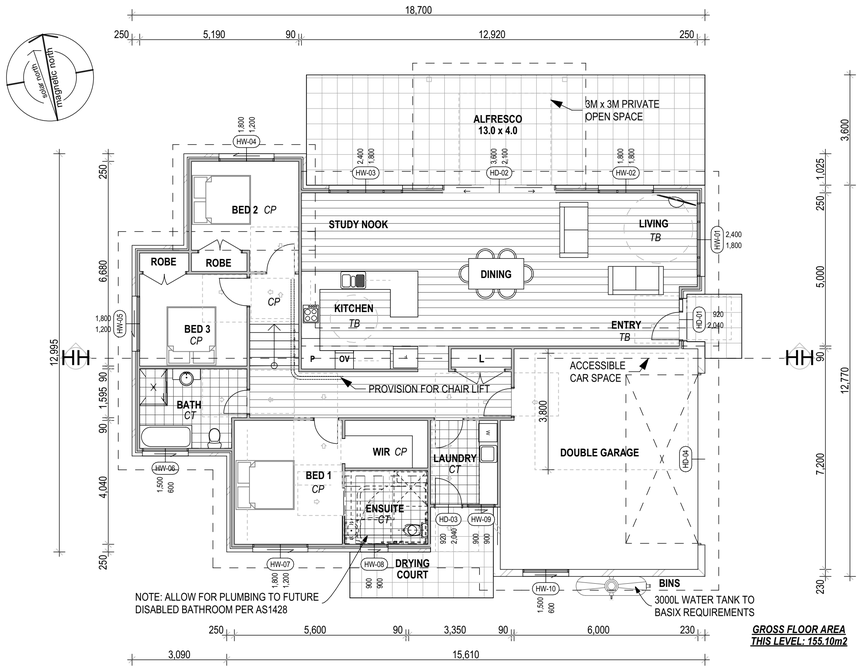
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



TYPE H - HOUSES 2, 3 PLAN
1:100

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14

BUSHFIRE NOTE: All houses to reach
BAL 29 bushfire construction level - see notes
for compliance and construction measures required

DOOR SCHEDULE TYPE H HOUSE 2, 3				
ID	HD-01	HD-02	HD-03	HD-04
Height	2,040	2,100	2,040	2,350
Width	920	3,600	920	5,600
3D Front View				

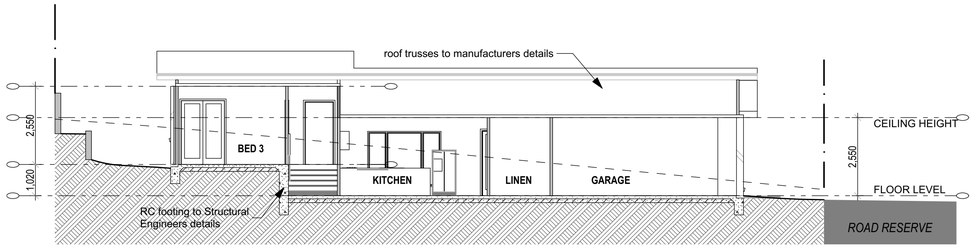
DOOR SCHEDULE TYPE H HOUSE 2, 3

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14

WINDOW SCHEDULE TYPE H HOUSE 2, 3										
ID	HW-01	HW-02	HW-03	HW-04	HW-05	HW-06	HW-07	HW-08	HW-09	HW-10
Height	1,800	1,800	1,800	1,200	1,200	600	1,200	900	900	600
Width	2,400	1,800	2,400	1,800	1,800	1,500	1,800	900	900	1,500
3D Front View										

WINDOW SCHEDULE TYPE H HOUSE 2, 3

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14

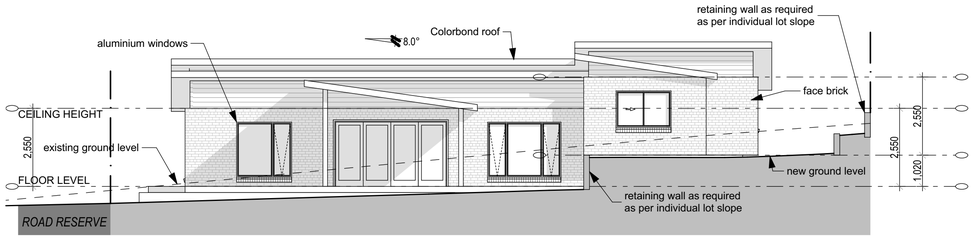


TYPE H - HOUSE 2, 3 - SECTION HH
1:100

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14

TYPE H - HOUSES 2, 3 EAST ELEVATION
1:100

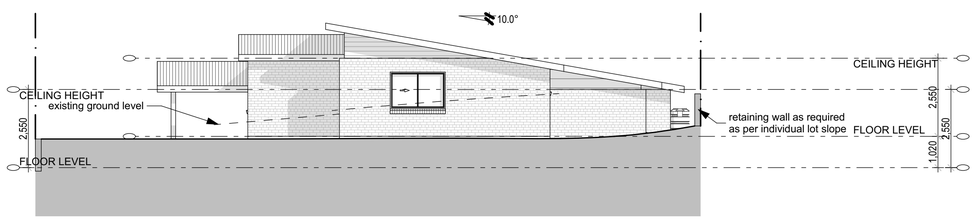
previously labelled House 2, 3, 4, 5, 11, 12, 13, 14



LEVELS FOR ELEVATIONS MODELLED FROM HOUSE 2 - ALL LOTS WILL VARY

TYPE H - HOUSES 2, 3 NORTH ELEVATION
1:100

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14



TYPE H - HOUSES 2, 3 WEST ELEVATION
1:100

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14

TYPE H - HOUSES 2, 3 SOUTH ELEVATION
1:100

previously labelled House 2, 3, 4, 5, 11, 12, 13, 14

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

WALL LEGEND

- 90mm timber stud
- 250mm brick veneer with wall insulation
- 230mm double brick

ELECTRICAL LEGEND

- double fluorescent light
- LED recessed downlight
- LED pendant or ceiling mounted
- combined heat lamp/ exhaust fan
- LED wall mounted light

SEPP REQUIREMENTS

Note: This building is to comply with the provisions of SEPP (Housing for Seniors or People with a Disability) 2004. This encompasses access requirements which refer to AS1428 Design for Access and Mobility. The Builder must familiarise himself with both documents, and the conditions which relate to construction, and implement such access requirements therein, whether expressly detailed in these plans or not. Any amendments to the plans require adherance to the same guidelines.

- Circulation space required around doorways
- Circulation space required for showers
- Circulation space required around toilets
- Circulation space required around handbasins

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Issued for DA	02-02-21	AMS
C	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
D	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :

PROPOSED SENIORS LIVING ESTATE

at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : TYPE H - HOUSE 2 & 3 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331

SCALES as shown | No. IN SET 6 of 17

DATE 20-01-22 | SHEET NUMBER DA06D

DRAWN BY AMS

Print date 24/01/2022

coble stephens architects
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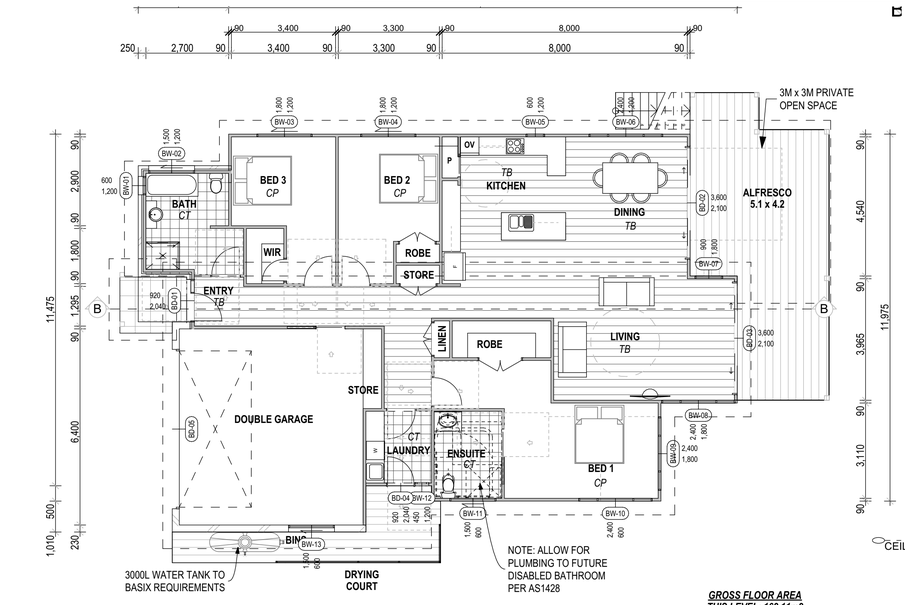
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



TYPE B - HOUSE 4, 5 PLAN
1:100

previously labelled House 6, 7, 8, 9

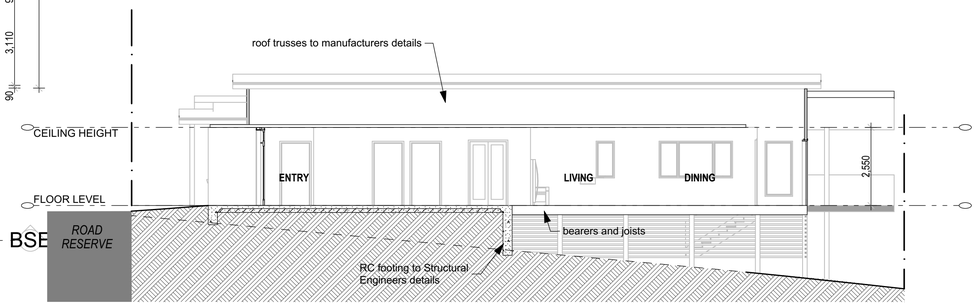
BUSHFIRE NOTE: All houses to reach BAL 29 bushfire construction level - see notes for compliance and construction measures required

GROSS FLOOR AREA THIS LEVEL: 162.11m2

DOOR SCHEDULE TYPE B HOUSE 7, 8					
ID	BD-01	BD-02	BD-03	BD-04	BD-05
Height	2,040	2,100	2,100	2,040	2,350
Width	920	3,600	3,600	920	5,200
3D Front View					

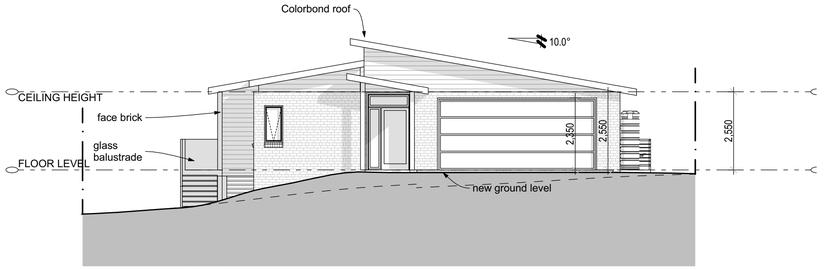
DOOR SCHEDULE TYPE B HOUSE 4, 5

previously labelled House 6, 7, 8, 9



TYPE B - HOUSE 4, 5 - SECTION BB
1:100

previously labelled House 6, 7, 8, 9



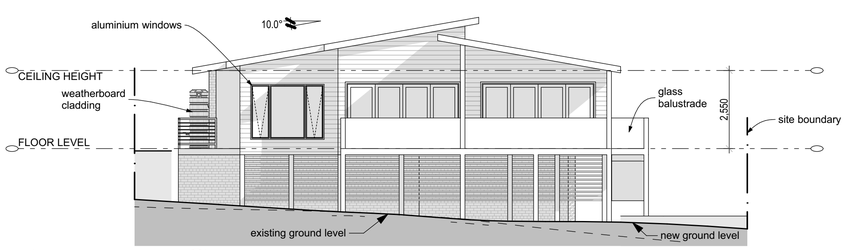
TYPE B - HOUSE 4, 5 - WEST ELEVATION
1:100

previously labelled House 6, 7, 8, 9

TYPE B - HOUSE 4, 5 - NORTH ELEVATION
1:100

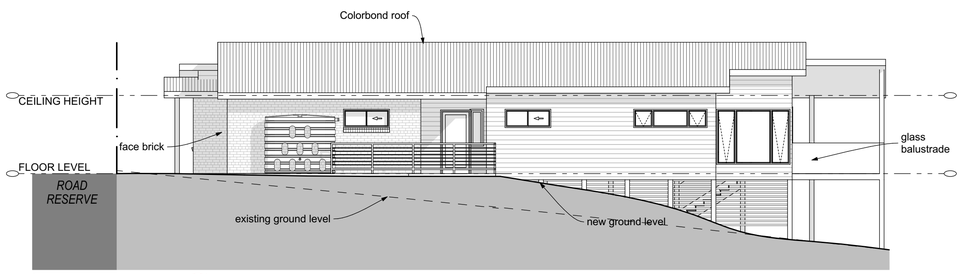
previously labelled House 6, 7, 8, 9

LEVELS FOR ELEVATIONS MODELLED FROM HOUSE 7 - ALL LOTS WILL VARY



TYPE B - HOUSE 4, 5 - EAST ELEVATION
1:100

previously labelled House 6, 7, 8, 9



TYPE B - HOUSE 4, 5 - SOUTH ELEVATION
1:100

previously labelled House 6, 7, 8, 9

WINDOW SCHEDULE TYPE B HOUSE 7, 8						
ID	BW-01	BW-02	BW-03	BW-04	BW-05	BW-06
Height	1,200	1,200	1,200	1,200	1,200	1,200
Width	600	1,500	1,800	1,800	600	2,400
3D Front View						

BW-07	BW-08	BW-09	BW-10	BW-11	BW-12	BW-13
1,800	1,800	1,800	600	600	1,200	600
900	2,400	2,400	2,400	1,500	450	1,500

WINDOW SCHEDULE TYPE B HOUSE 4, 5

previously labelled House 6, 7, 8, 9

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684 NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700 MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

WALL LEGEND
- 90mm timber stud
- 250mm brick veneer with wall insulation
- 230mm double brick

ELECTRICAL LEGEND
- double fluorescent light
- LED recessed downlight
- LED pendant or ceiling mounted
- combined heat lamp/ exhaust fan
- LED wall mounted light

SEPP REQUIREMENTS

Note: This building is to comply with the provisions of SEPP (Housing for Seniors or People with a Disability) 2004. This encompasses access requirements which refer to AS1428 Design for Access and Mobility. The Builder must familiarise himself with both documents, and the conditions which relate to construction, and implement such access requirements therein, whether expressly detailed in these plans or not. Any amendments to the plans require adherance to the same guidelines.

- Circulation space required around doorways
- Circulation space required for showers
- Circulation space required around toilets
- Circulation space required around handbasins

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Issued for DA	02-02-21	AMS
C	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
D	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : TYPE B - HOUSE 7 & 8 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 7 of 17
DATE 20-01-22
SHEET NUMBER DA07D
DRAWN BY AMS
Print date 24/01/2022

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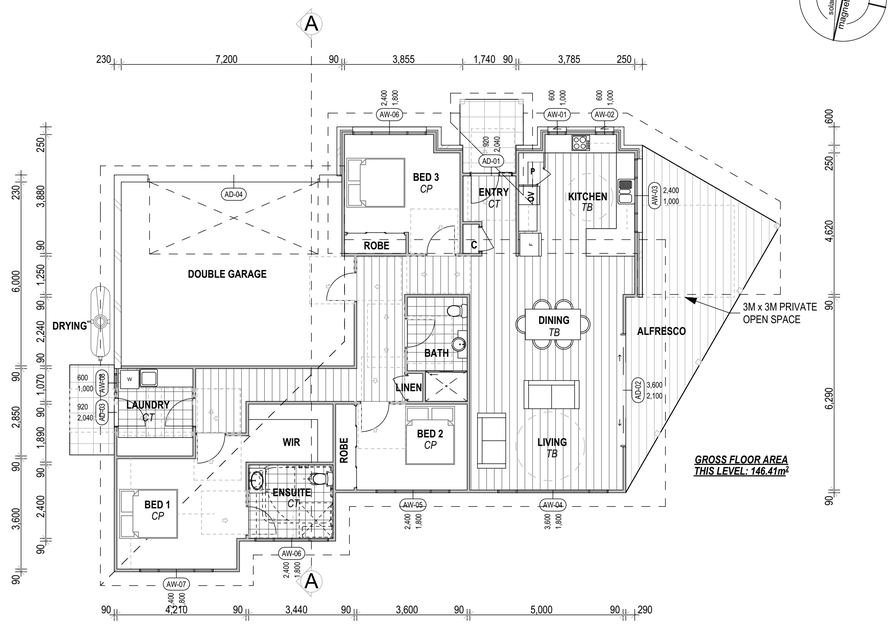
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



TYPE A - HOUSE 12 PLAN
1:100

previously labelled House 19

BUSHFIRE NOTE: All houses to reach BAL 29 bushfire construction level - see notes for compliance and construction measures required

WINDOW SCHEDULE TYPE A HOUSE 12								
ID	AW-01	AW-02	AW-03	AW-04	AW-05	AW-06	AW-07	AW-08
Height	1,000	1,000	1,000	1,800	1,800	1,800	1,800	1,000
Width	600	600	2,400	3,600	2,400	2,400	2,400	600
3D Front View								

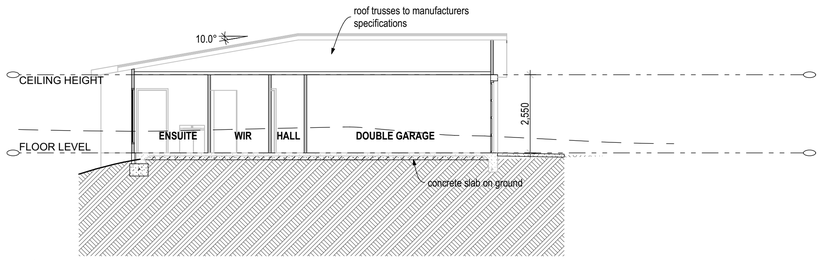
WINDOW SCHEDULE TYPE A HOUSE 12

previously labelled House 19

DOOR SCHEDULE TYPE A HOUSE 13				
ID	AD-01	AD-02	AD-03	AD-04
Height	2,040	2,100	2,040	2,350
Width	920	3,600	920	5,600
3D Front View				

DOOR SCHEDULE TYPE A HOUSE 12

previously labelled House 19

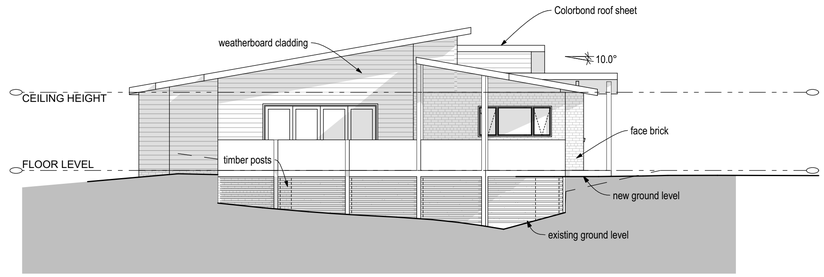


TYPE A - HOUSE 12 SECTION AA
1:100

previously labelled House 19

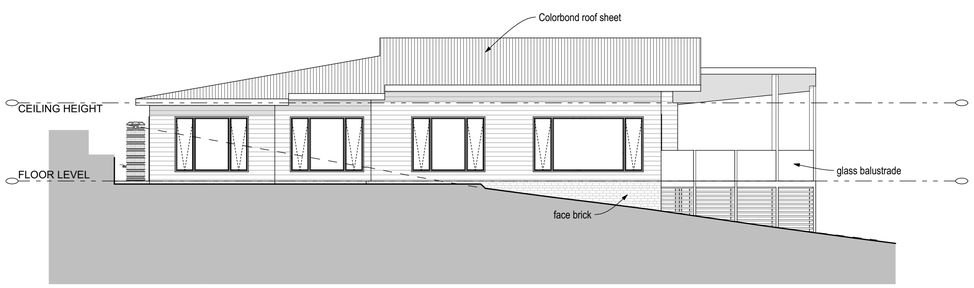
TYPE A - HOUSE 12 - NORTH ELEVATION
1:100

previously labelled House 19



TYPE A - HOUSE 12 - EAST ELEVATION
1:100

previously labelled House 19



TYPE A - HOUSE 12 - SOUTH ELEVATION
1:100

previously labelled House 19

TYPE A - HOUSE 12 - WEST ELEVATION
1:100

previously labelled House 19

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

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Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

WALL LEGEND

- 90mm timber stud
- 250mm brick veneer with wall insulation
- 230mm double brick

ELECTRICAL LEGEND

- double fluorescent light
- LED recessed downlight
- LED pendant or ceiling mounted
- combined heat lamp/ exhaust fan
- LED wall mounted light

SEPP REQUIREMENTS

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- Circulation space required around doorways
- Circulation space required for showers
- Circulation space required around toilets
- Circulation space required around handbasins

AMENDMENTS

REV	AMENDMENT	DATE	BY
A	Issued for Basix/ Nathers	28-01-21	AMS
B	Issued for DA	02-02-21	AMS
C	Remove Dwellings 4, 5, 6, 7, 14, 15 and re-numbering of remaining dwellings	05-11-21	AMS
D	Remove Dwellings 5, 12, 13, 14, 15, 16, 17 and re-numbering of remaining dwellings	20-01-22	AMS

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : TYPE A - HOUSE 12 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 12 of 17
DATE 20-01-22
SHEET NUMBER DA12D
DRAWN BY AMS
Print date 24/01/2022

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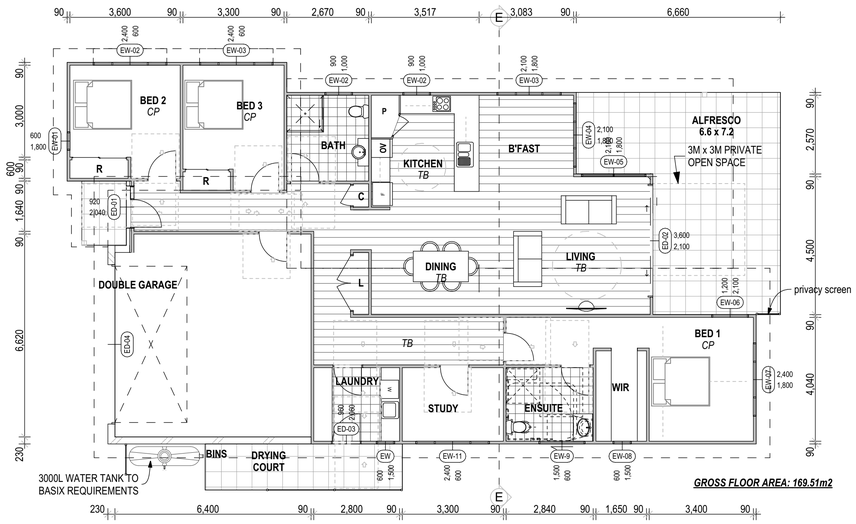
1 EAST STREET ■ MOSS VALE ■ NSW 2577
PO BOX 2072 ■ BOWRAL ■ NSW 2576
Ph 02 4869 5395 ■ Fax 02 4869 5495 ■ cs.arch@bigpond.net.au
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

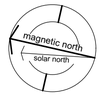
A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



TYPE E - HOUSE 10 - FLOOR PLAN
1:100

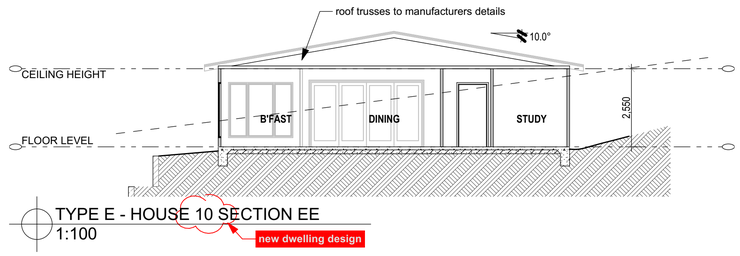
BUSHFIRE NOTE: All houses to reach
BAL 29 bushfire construction level - see notes
for compliance and construction measures required

new dwelling design to reflect
removal of seven dwellings



WINDOW SCHEDULE TYPE E HOUSE 10														
ID	EW-01	EW-02	EW-03	EW-04	EW-05	EW-05	EW-06	EW-06	EW-07	EW-07	EW-08	EW-09	EW-10	EW-11
Height	1,800	600	600	1,000	1,000	1,800	1,800	2,100	1,800	1,800	1,500	600	600	1,500
Width	600	2,400	2,400	900	900	2,100	2,100	1,200	2,100	2,400	600	1,500	2,400	600
3D Front View														

DOOR SCHEDULE TYPE E HOUSE 10				
ID	ED-01	ED-02	ED-03	ED-04
Height	2,040	2,100	2,040	2,350
Width	920	3,600	920	5,200
3D Front View				

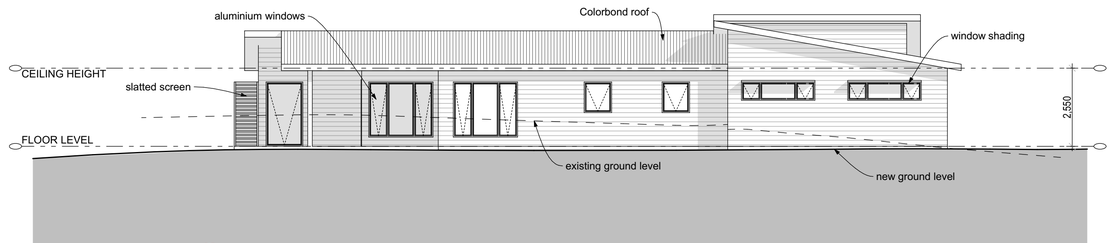


TYPE E - HOUSE 10 SECTION EE
1:100

new dwelling design

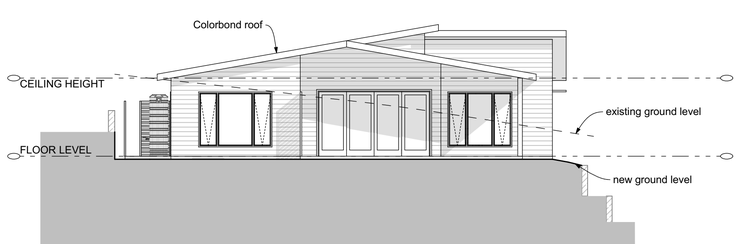
TYPE E - HOUSE 10 NORTH ELEVATION
1:100

new dwelling design



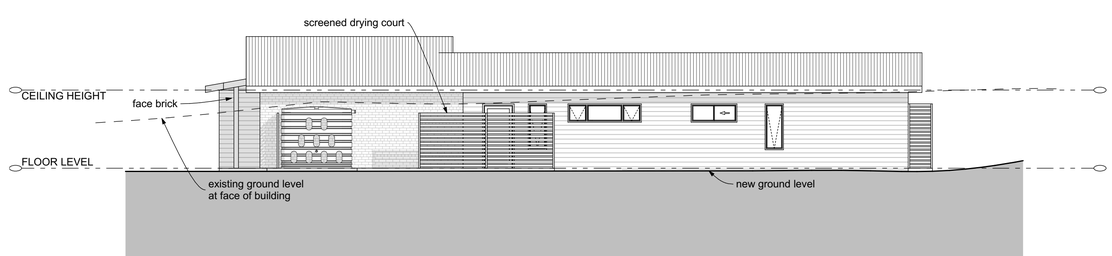
TYPE E - HOUSE 10 EAST ELEVATION
1:100

new dwelling design



TYPE E - HOUSE 10 SOUTH ELEVATION
1:100

new dwelling design



TYPE E - HOUSE 10 WEST ELEVATION
1:100

new dwelling design

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Assessor Jamie Bonnefin
Accreditation No. 10056
Address
2 Caliope Street , Kiama , NSW, 2533
hstar.com.au

0006771067-02 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address
Unit 10, 2 Caliope Street , Kiama , NSW, 2533
5.8 NATIONWIDE HOUSE ENERGY RATING
84.8 MJ/m²
www.nathers.gov.au
hstar.com.au

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE

ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

AMENDMENTS

REV	AMENDMENT	DATE	BY

coble stephens
architects
1 EAST STREET ■ MOSS VALE ■ NSW 2577
PO BOX 2072 ■ BOWRAL ■ NSW 2576
Ph 02 4869 5395 ■ Fax 02 4869 5495 ■ cs.arch@bigpond.net.au
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

PROJECT :

PROPOSED SENIORS LIVING ESTATE

at

LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT :

WERITON PROPERTIES

DRAWING :

TYPE E - HOUSE 10 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331

SCALES as shown | No. IN SET 17 of 21

DATE 20-01-22 | SHEET NUMBER

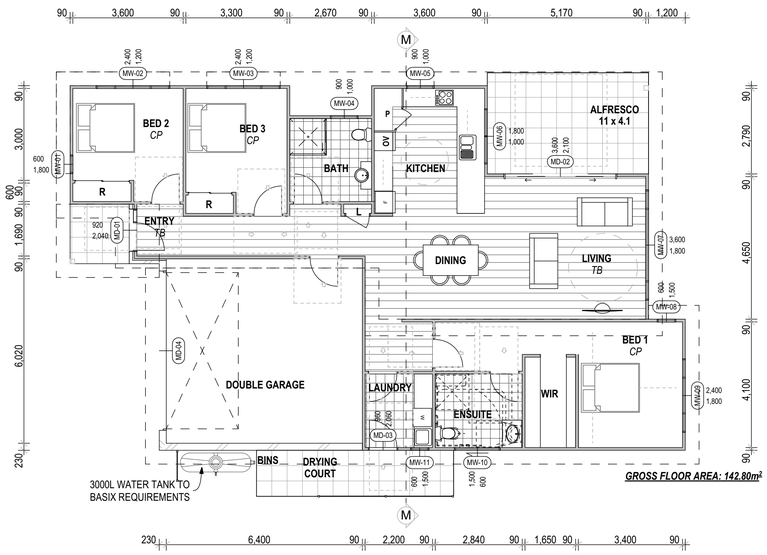
DRAWN BY AMS | DA17

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

Print date 24/01/2022

A1 0 10 20 30 40 50 60 70 80 90 100 FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | ALL DIMENSIONS TO BE CHECKED ON SITE | 200 | 300mm ON ORIGINAL



TYPE M HOUSE 11 - FLOOR PLAN
1:100

new dwelling design to reflect removal of seven dwellings

BUSHFIRE NOTE: All houses to reach
BAL 29 bushfire construction level - see notes
for compliance and construction measures required

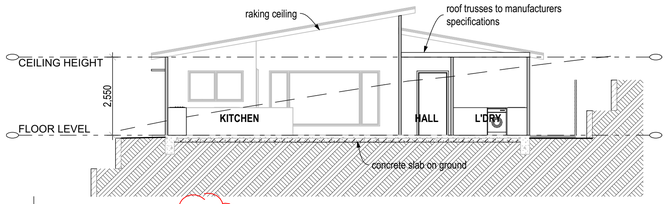
magnetic north
solar north

WINDOW SCHEDULE TYPE M HOUSE 10

ID	MW-01	MW-02	MW-03	MW-04	MW-05	MW-06	MW-07	MW-08	MW-09	MW-10	MW-11
Height	1,800	1,200	1,200	1,000	1,000	1,000	1,800	1,500	1,800	600	1,500
Width	600	2,400	2,400	900	900	1,800	3,600	600	2,400	1,500	600
3D Front View											

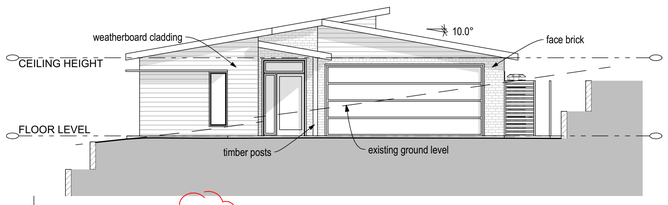
DOOR SCHEDULE TYPE M HOUSE 10

ID	MD-01	MD-02	MD-03	MD-04
Height	2,040	2,100	2,040	2,350
Width	920	3,600	920	5,200
3D Front View				



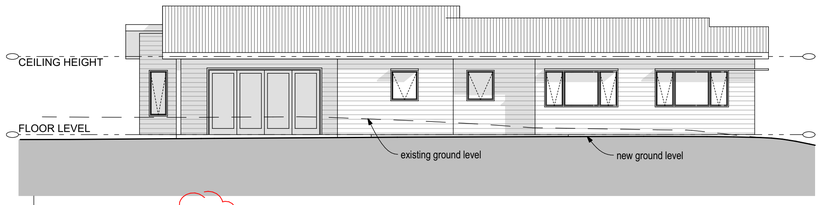
TYPE M - HOUSE 11 - SECTION MM
1:100

new dwelling design to reflect removal of seven dwellings



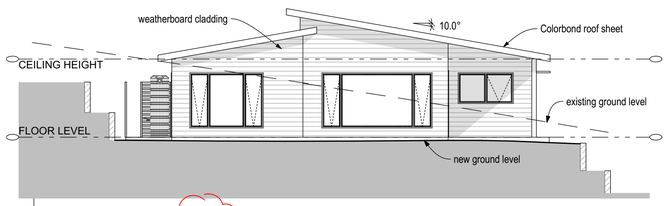
TYPE M - HOUSE 11 - NORTH ELEVATION
1:100

new dwelling design to reflect removal of seven dwellings



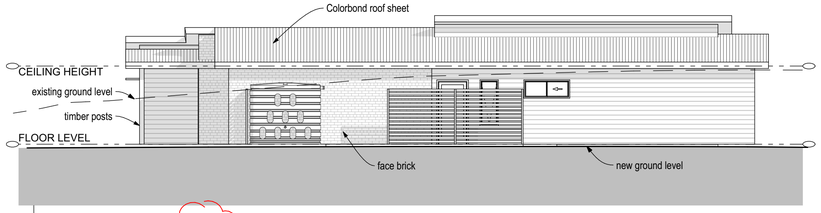
TYPE M - HOUSE 11 - EAST ELEVATION
1:100

new dwelling design to reflect removal of seven dwellings



TYPE M - HOUSE 11 - SOUTH ELEVATION
1:100

new dwelling design to reflect removal of seven dwellings



TYPE M - HOUSE 11 - WEST ELEVATION
1:100

new dwelling design to reflect removal of seven dwellings

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Assessor Jamie Bonnefin
Accreditation No. 10056
Address
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hstar.com.au

0006771075-02 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address
Unit 11, 2 Caliope Street , Kiama , NSW, 2533
5.9 Stars
84.2 MJ/m²
www.nathers.gov.au
hstar.com.au

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684 NATIONAL TIMBER FRAMING CODE

ALL BRICKWORK TO COMPLY WITH AS 3700 MASONRY IN BUILDING

AMENDMENTS

REV	AMENDMENT	DATE	BY

coble stephens
architects
1 EAST STREET ■ MOSS VALE ■ NSW 2577
PO BOX 2072 ■ BOWRAL ■ NSW 2576
Ph 02 4869 5395 ■ Fax 02 4869 5495 ■ cs.arch@bigpond.net.au
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

PROJECT :

PROPOSED SENIORS LIVING ESTATE

at

LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT :

WERITON PROPERTIES

DRAWING :

TYPE M - HOUSE 11 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331

SCALES as shown | No. IN SET 18 of 21

DATE 20-01-22 | SHEET NUMBER DA18

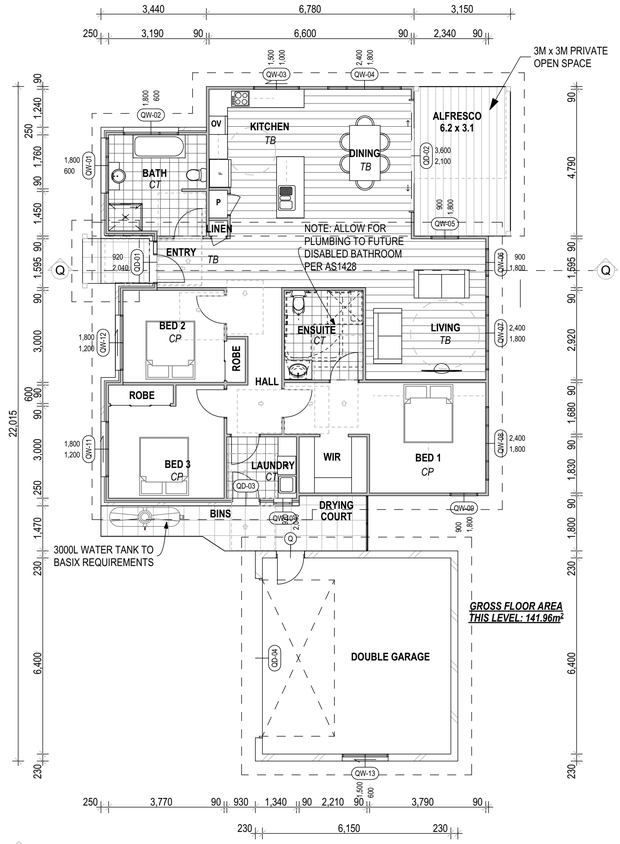
DRAWN BY AMS

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

Print date 24/01/2022

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING
A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE
200 300mm ON ORIGINAL



QSE

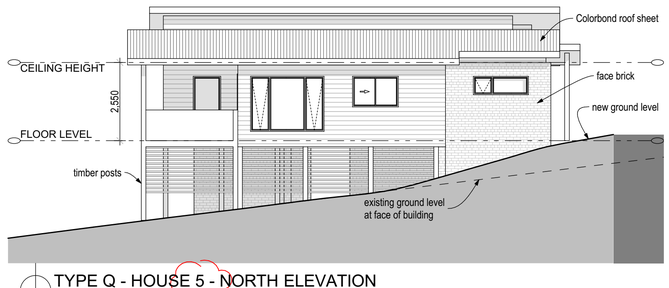
TYPE Q - HOUSE 5 - FLOOR PLAN
1:100

BUSHFIRE NOTE: All houses to reach BAL 29 bushfire construction level - see notes for compliance and construction measures required

new House type for House 5, previously position of House 6 Type B

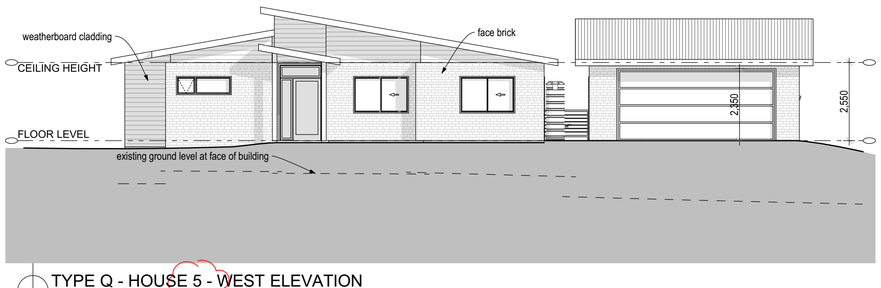
WINDOW SCHEDULE TYPE Q HOUSE 5													
ID	QW-01	QW-02	QW-03	QW-04	QW-05	QW-06	QW-07	QW-08	QW-09	QW-10	QW-11	QW-12	QW-13
Height	600	600	1,000	1,800	1,800	1,800	1,800	1,800	1,800	1,200	1,200	1,200	600
Width	1,800	1,800	1,500	2,400	900	900	2,400	2,400	900	600	1,800	1,800	1,500
3D Front View													

DOOR SCHEDULE TYPE Q HOUSE 5				
ID	QD-01	QD-02	QD-03	QD-04
Height	2,040	2,100	2,040	2,350
Width	920	3,600	920	5,200
3D Front View				



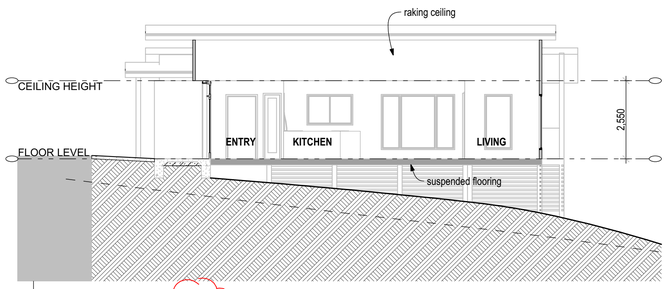
TYPE Q - HOUSE 5 - NORTH ELEVATION
1:100

new dwelling design



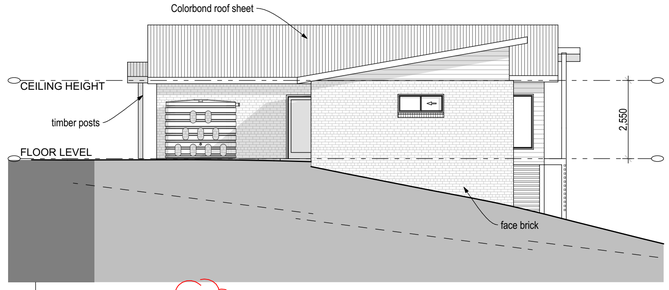
TYPE Q - HOUSE 5 - WEST ELEVATION
1:100

new dwelling design



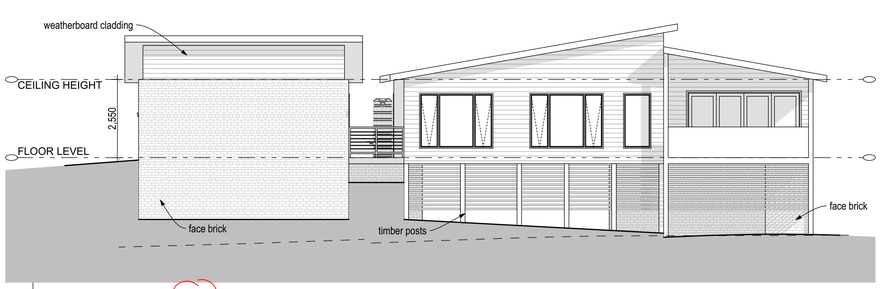
TYPE Q - HOUSE 5 - SECTION QQ
1:100

new dwelling design



TYPE Q - HOUSE 5 - SOUTH ELEVATION
1:100

new dwelling design



TYPE Q - HOUSE 5 - EAST ELEVATION
1:100

new dwelling design

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

AMENDMENTS

REV	AMENDMENT	DATE	BY

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING : TYPE Q - HOUSE 5 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 19 of 21
DATE 20-01-22
SHEET NUMBER DA19
DRAWN BY AMS
Print date 24/01/2022

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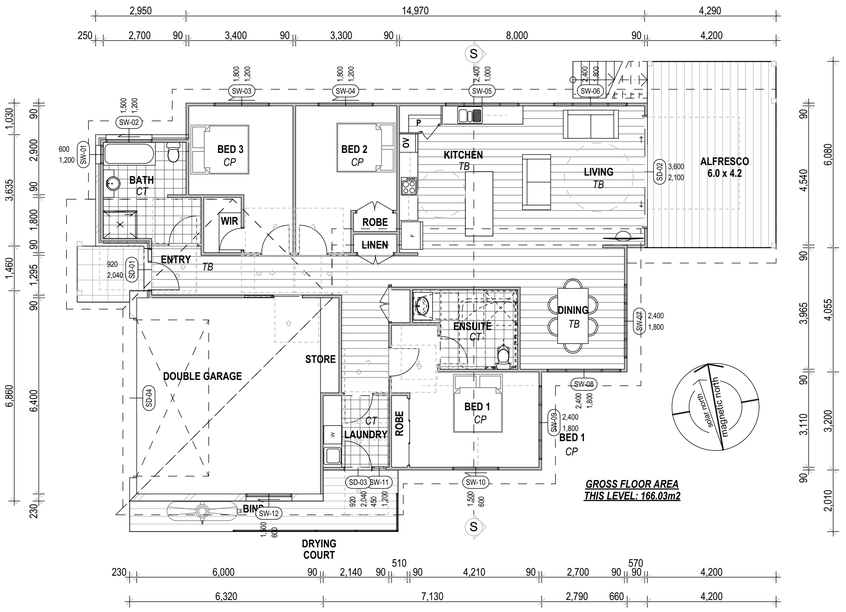
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE



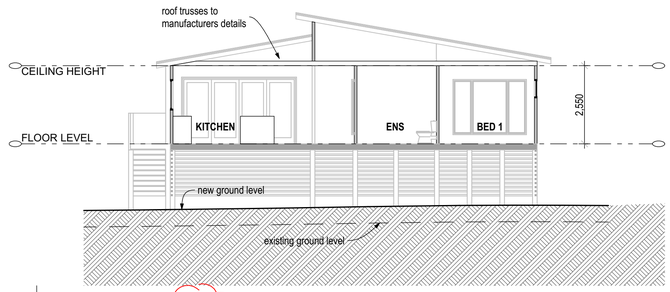
TYPE S - HOUSE 6 - FLOOR PLAN
1:100

BUSHFIRE NOTE: All houses to reach BAL 29 bushfire construction level - see notes for compliance and construction measures required

new House type for House 6, previously position of House 7 Type B

WINDOW SCHEDULE TYPE S HOUSE 6												
ID	SW-01	SW-02	SW-03	SW-04	SW-05	SW-06	SW-07	SW-08	SW-09	SW-10	SW-11	SW-12
Height	1,200	1,200	1,200	1,200	1,000	1,800	1,800	1,800	1,800	600	1,200	600
Width	600	1,500	1,800	1,800	2,400	2,400	2,400	2,400	2,400	1,500	450	1,500
3D Front View												

DOOR SCHEDULE TYPE S HOUSE 6				
ID	SD-01	SD-02	SD-03	SD-04
Height	2,040	2,100	2,040	2,350
Width	920	3,600	920	5,200
3D Front View				

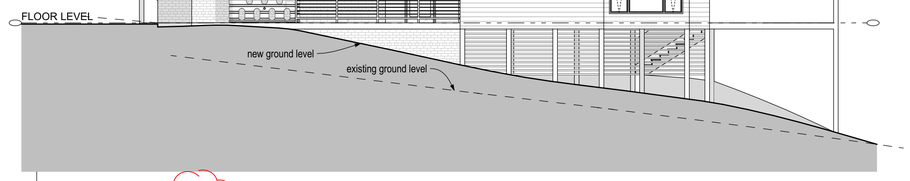


TYPE S - HOUSE 6 - SECTION SS
1:100

new dwelling design

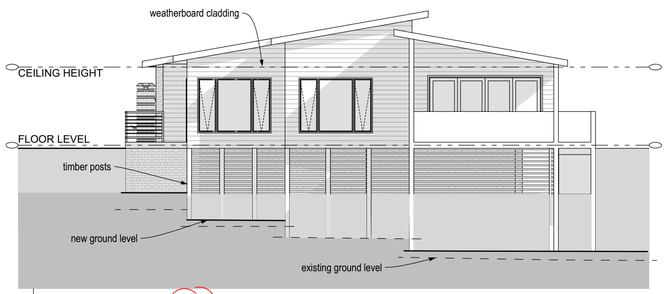
TYPE S - HOUSE 6 - WEST ELEVATION
1:100

new dwelling design



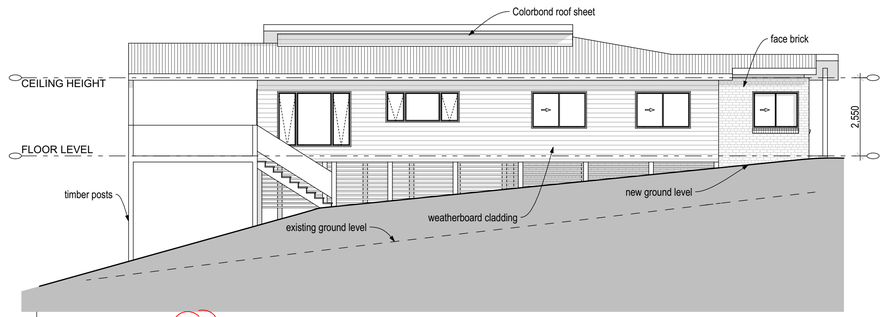
TYPE S - HOUSE 6 - SOUTH ELEVATION
1:100

new dwelling design



TYPE S - HOUSE 6 - EAST ELEVATION
1:100

new dwelling design



TYPE S - HOUSE 6 - NORTH ELEVATION
1:100

new dwelling design

0006794200 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address
2 Caliope Street , Kiama , NSW , 2533
hstar.com.au

0006771026-02 28 Jan 2022
Assessor Jamie Bonnefin
Accreditation No. 10056
Address
Unit 6, 2 Caliope Street , Kiama , NSW , 2533
5.8 Stars
85.6 MJ/m²
www.nathers.gov.au
hstar.com.au

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684
NATIONAL TIMBER FRAMING CODE
ALL BRICKWORK TO COMPLY WITH AS 3700
MASONRY IN BUILDING

Do not scale off this drawing. Only figured dimensions are to be used.
Any discrepancy in the document is to be referred to the company for clarification before proceeding with any work.

FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | 200 | 300mm ON ORIGINAL

A1 0 10 20 30 40 50 60 70 80 90 100 ALL DIMENSIONS TO BE CHECKED ON SITE

AMENDMENTS

REV	AMENDMENT	DATE	BY

PROJECT :
PROPOSED SENIORS LIVING ESTATE
at LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT : WERITON PROPERTIES

DRAWING :
TYPE S - HOUSE 6 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331
SCALES as shown
No. IN SET 20 of 21
DATE 20-01-22
SHEET NUMBER DA20
DRAWN BY AMS
Print date 24/01/2022

coble stephens architects
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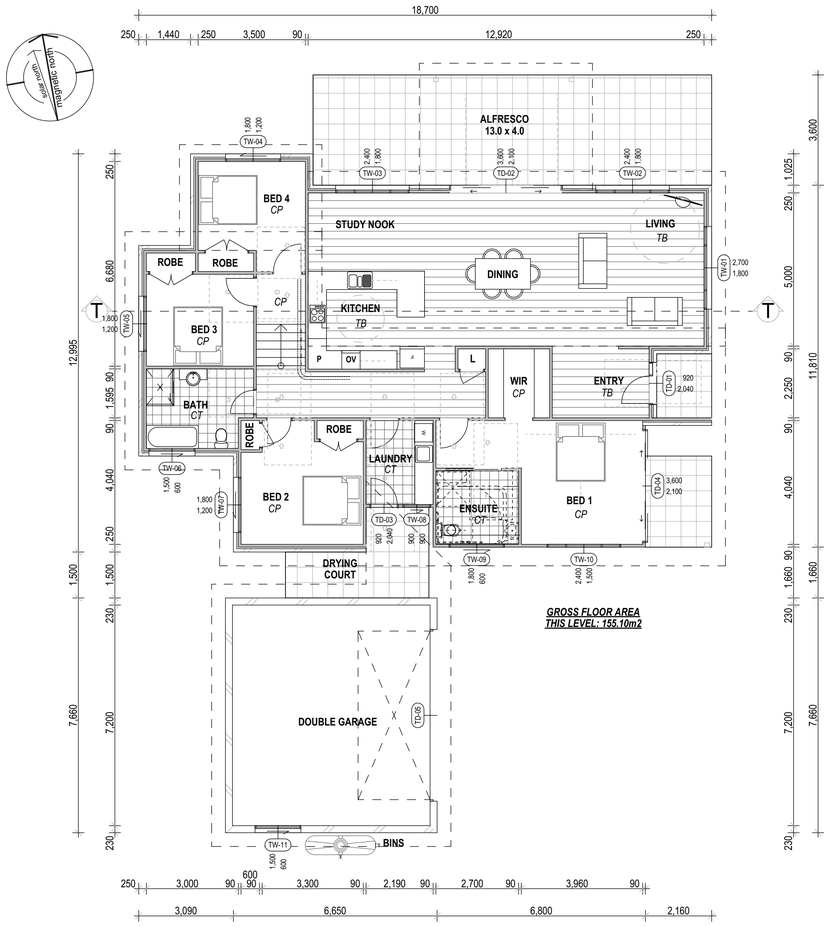
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6078

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION



TYPE T - HOUSE 4 - FLOOR PLAN
1:100

BUSHFIRE NOTE: All houses to reach BAL 29 bushfire construction level - see notes for compliance and construction measures required

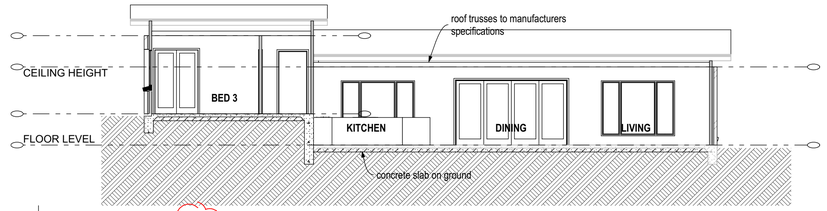
new House type for House 4, previously Type H

GROSS FLOOR AREA THIS LEVEL: 155.10m2

WINDOW SCHEDULE TYPE T HOUSE 4												
ID	TW-01	TW-01	TW-02	TW-02	TW-03	TW-04	TW-05	TW-06	TW-07	TW-08	TW-09	TW-09
Height	1,800	1,800	1,800	1,800	1,800	1,200	1,200	600	1,200	900	600	1,200
Width	2,400	2,700	1,800	2,400	2,400	1,800	1,800	1,500	1,800	900	1,800	1,800
3D Front View												

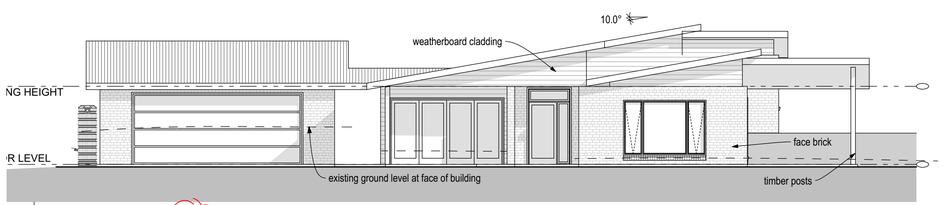
TW-10	TW-10	TW-11
1,500	1,800	600
2,400	2,400	1,500

DOOR SCHEDULE TYPE T HOUSE 4					
ID	TD-01	TD-02	TD-03	TD-04	TD-05
Height	2,040	2,100	2,040	2,100	2,350
Width	920	3,600	920	3,600	5,600
3D Front View					



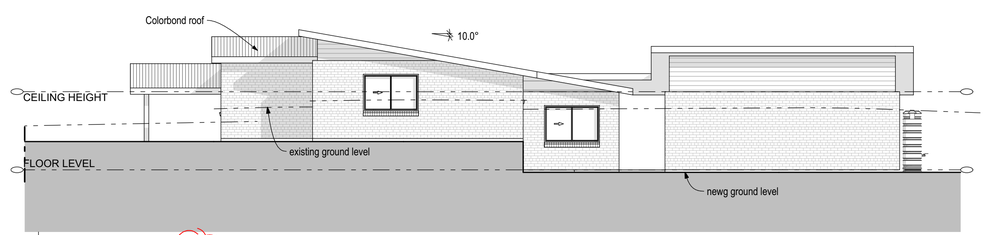
TYPE T - HOUSE 4 - SECTION TT
1:100

new House type for House 4, previously Type H



TYPE T - HOUSE 4 - EAST ELEVATION
1:100

new House type for House 4, previously Type H

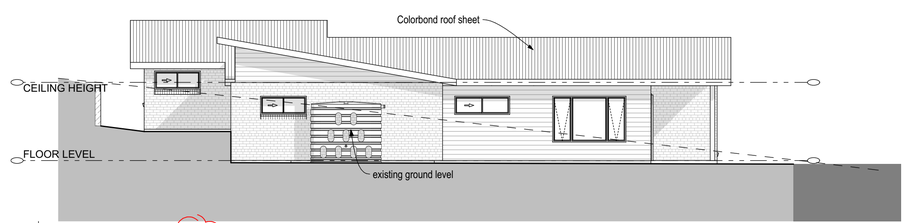


TYPE T - HOUSE 4 - WEST ELEVATION
1:100

new House type for House 4, previously Type H

TYPE T - HOUSE 4 - NORTH ELEVATION
1:100

new House type for House 4, previously Type H



TYPE T - HOUSE 4 - SOUTH ELEVATION
1:100

new House type for House 4, previously Type H

NOTES

ALL DIMENSIONS TO BE CONFIRMED ON-SITE.

ALL TIMBER WORKS TO COMPLY WITH AS 1684 NATIONAL TIMBER FRAMING CODE

ALL BRICKWORK TO COMPLY WITH AS 3700 MASONRY IN BUILDING

AMENDMENTS

REV	AMENDMENT	DATE	BY

coble stephens architects
1 EAST STREET ■ MOSS VALE ■ NSW 2577
PO BOX 2072 ■ BOWRAL ■ NSW 2576
Ph 02 4869 5395 ■ Fax 02 4869 5495 ■ cs.arch@bigpond.net.au
Andrew Coble Architects Registration 6922 Alison Stephens Architects Registration 6678

PROJECT :

PROPOSED SENIORS LIVING ESTATE

at

LOT 17 DP 1210621 (Formerly Part Lot 100 DP 751279), 2 Caliope St KIAMA NSW

CLIENT :

WERITON PROPERTIES

DRAWING :

TYPE T - HOUSE 4 - PLANS, ELEVATIONS, SECTION

CSA JOB NO. : 610-12-331

SCALES as shown | No. IN SET 21 of 21

DATE 20-01-22 | SHEET NUMBER DA21

DRAWN BY AMS

SCALE 0 1.0 2.0 3.0 4.0 5.0

THESE DRAWINGS HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION

Print date 24/01/2022

A1 0 10 20 30 40 50 60 70 80 90 100 FIGURED DIMENSIONS TO BE USED IN PREFERENCE TO SCALING | ALL DIMENSIONS TO BE CHECKED ON SITE | 200 | 300mm ON ORIGINAL