Nationwide House Energy Rating Scheme
NatHERS Certificate

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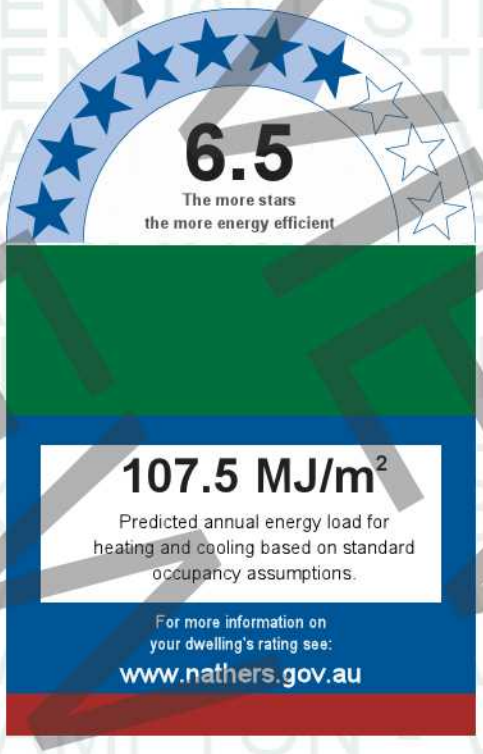

Property

Address	2, 32 Kendall Street, Hampton, -, VIC, 3188
Lot/DP	-
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	-
Prepared by	-

Construction and environment

Assessed floor area (m²)*		**Exposure type**
Conditioned*	170.7	suburban
Unconditioned*	31.3	**NatHERS climate zone**
Total	202	62 Moorabbin Airport
Garage	21.1	

Thermal performance

Heating	**Cooling**
90.2	**17.3**
MJ/m²	MJ/m²

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.

Accredited assessor

Name	Zdenka Roth
Business name	Zdenka Roth
Email	zr@efficientenergychoices.com.au
Phone	0415 990 809
Accreditation No.	DMN/21/2043
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.FR5.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 insulation R5.2 including sarking

Wall insulation R2.5 plus sarking

Slab insulation R1.2.

Level 1 floors R2.0

Seal gaps, cracks, downlights, and exhaust fans.

Weather-strip windows and entry doors.

Downlights to be IC rated type.

Window double glazed:

Window and glazed door *type and performance*

Default* windows

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

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-089-89 A	RES SERIES 704 FLUSH SLIDING DOOR DG 5mmSG_8Ar_5mmET	2.96	0.38	0.36	0.4

* Refer to glossary.

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AWS-035-119 B	726 Thermal Heart Awning Window DG 001_AGG PRIME Clr 4_12_4	2.87	0.36	0.34	0.38
AWS-069-29 A	RES SERIES 517 FIXED WINDOW DG FGIOptEmaGy_4mm_12Ar_4mm	2.53	0.39	0.37	0.41

Window and glazed door *Schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom G	AWS-089-89 A	Opening d3	2740	2400	sliding	45.0	S	No
Ens	AWS-035-119 B	Opening w6	2740	600	awning	45.0	S	No
Kitchen/Living	AWS-035-119 B	Opening w3	2740	2400	awning	30.0	S	No
Kitchen/Living	AWS-069-29 A	Opening w2	2740	2400	fixed	0.0	S	No
Kitchen/Living	AWS-089-89 A	Opening d2	2740	4200	sliding	70.0	E	No
Kitchen/Living	AWS-035-119 B	Opening w1	2740	830	awning	30.0	E	No
P'ty	AWS-035-119 B	Opening w4	2740	600	awning	30.0	E	No
Entry	AWS-069-29 A	Opening w8	2740	900	fixed	0.0	S	No
Entry	AWS-069-29 A	Opening w7	900	1000	fixed	0.0	W	No
Pdr	AWS-035-119 B	Opening w5	1500	600	awning	90.0	S	No
Bedroom M	AWS-035-119 B	Opening w10	1800	2400	awning	30.0	E	No
Ens	AWS-035-119 B	Opening w11	1200	600	awning	90.0	S	No
Bedroom 1	AWS-035-119 B	Opening w12	1800	2400	awning	30.0	S	No
Retreat	AWS-069-29 A	Opening w9	3095	1191	fixed	0.0	W	No
Retreat	AWS-069-29 A	Opening w7	3095	898	fixed	0.0	W	No
Retreat	AWS-069-29 A	Opening w15	600	2400	fixed	0.0	S	No
Bath	AWS-035-119 B	Opening w13	1500	1700	awning	45.0	S	No
Bedroom 2	AWS-035-119 B	Opening w14	1800	2400	awning	30.0	S	No

Roof window *type and performance value*

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
Velux:VEL-010-02 W	VELUX VS - Ventilating Skylight DG 3mm LoE 366 / 10.5mm Argon Gap / 3mm Clear	2.61	0.21	0.2	0.22

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Area (m²)	Orientation	Outdoor shade	Indoor shade

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Wir	Velux:VEL-010-02 W	Element 17	0.0	0.8	S	None	None
Retreat	Velux:VEL-010-02 W	Element 19	30.0	0.6	S	None	None
Retreat	Velux:VEL-010-02 W	Element 18	30.0	0.6	S	None	None
Retreat	Velux:VEL-010-02 W	Element 20	0.0	0.9	S	None	None

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2100	820	100.0	E
Garage	2100	2949	100.0	W
Entry	2740	1220	100.0	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	FR5 - Concrete Block 190mm Core Filled	0.5	Medium		No
2	FR5 - AAC 75mm Panel Stud Wall	0.45	Medium		No
3	FR5 - Weatherboard	0.93	Dark		No
4	FR5 - AAC 75mm Panel Stud Wall	0.45	Medium	Glass fibre batt: R2.5 (R2.5)	Yes
5	AFS - AAC50	0.45	Medium	Glass fibre batt: R2.5 (R2.5)	No
6	FR5 - Concrete Block 190mm Core Filled	0.45	Medium	Glass fibre batt: R2.5 (R2.5)	Yes
7	AFS - TW	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	Yes
8	AFS - AAC50	0.45	Medium	Glass fibre batt: R2.5 (R2.5)	Yes
9	AFS - TW	0.45	Medium	Glass fibre batt: R2.5 (R2.5)	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	1	2740	6016	S	0	No
Garage	2	2740	1929	E	0	Yes
Garage	3	2740	1174	N	0	No
Garage	3	2740	3477	W	0	No
Bedroom G	4	2740	3062	S	0	Yes
Ens	4	2740	1346	S	0	Yes
Kitchen/Living	4	2740	9139	S	0	Yes

* Refer to glossary.

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Kitchen/Living	4	2740	5176	E	528	Yes
Kitchen/Living	5	2740	11048	N	0	No
P'ty	4	2740	1719	E	0	Yes
P'ty	4	2740	1728	W	0	Yes
P'ty	6	2740	1880	S	0	No
Entry	5	2740	11731	N	0	No
Entry	7	2740	1380	W	563	Yes
Entry	7	2740	1255	S	0	Yes
Entry	7	2740	2023	W	0	Yes
Pdr	4	2740	1048	S	0	Yes
Bedroom M	8	3095	3968	E	0	Yes
Bedroom M	5	3095	6026	N	0	No
Bedroom M	8	3095	3715	S	0	No
Wir	8	3095	1483	S	0	No
Ens	8	3095	1762	S	0	No
Bedroom 1	8	3095	3698	S	0	Yes
Retreat	5	3095	16701	N	0	No
Retreat	9	3095	1400	W	544	Yes
Retreat	9	3095	1192	S	0	Yes
Retreat	9	3095	1963	W	0	Yes
Retreat	9	3095	4257	S	0	Yes
Bath	8	3095	2392	S	0	No
Bedroom 2	8	3095	534	W	0	No
Bedroom 2	8	3095	3701	S	0	Yes

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	17.1	Glass fibre batt: R2.5 (R2.5)
2	FR5 - Internal Plasterboard Stud Wall	162.9	

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	FR5 - CSOG: Slab on Ground	21.1	Enclosed	R1.2	none
L'dry	FR5 - CSOG: Slab on Ground	3	Enclosed	R1.2	Tiles
Bedroom G	FR5 - CSOG: Slab on Ground	7.7	Enclosed	R1.2	Carpet
Bedroom G	FR5 - CSOG: Slab on Ground	3.4	Enclosed	R1.2	Carpet
Ens	FR5 - CSOG: Slab on Ground	1.5	Enclosed	R1.2	Tiles
Ens	FR5 - CSOG: Slab on Ground	2.5	Enclosed	R1.2	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	44.5	Enclosed	R1.2	Timber
Kitchen/Living	FR5 - CSOG: Slab on Ground	12.3	Enclosed	R1.2	Timber
P'ty	FR5 - CSOG: Slab on Ground	3.2	Enclosed	R1.2	Timber

* Refer to glossary.

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Entry	FR5 - CSOG: Slab on Ground	24.2	Enclosed	R1.2	Timber
Pdr	FR5 - CSOG: Slab on Ground	1.1	Enclosed	R1.2	Tiles
Pdr	FR5 - CSOG: Slab on Ground	1.9	Enclosed	R1.2	Tiles
Bedroom M	FR5 - Timber	16.7	Enclosed	R2.0	Carpet
Wir	FR5 - Timber	4.5	Enclosed	R2.0	Carpet
Ens	FR5 - Timber	5.3	Enclosed	R2.0	Tiles
Bedroom 1	FR5 - Timber	11	Enclosed	R2.0	Carpet
Retreat	FR5 - Timber	26	Enclosed	R2.0	Carpet
Bath	FR5 - Timber	7.2	Enclosed	R2.0	Tiles
Bedroom 2	FR5 - Timber	11	Enclosed	R2.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	FR5 - Timber	R2.0	No
Garage	Plasterboard	R5.2	Yes
L'dry	FR5 - Timber	R2.0	No
Bedroom G	FR5 - Timber	R2.0	No
Bedroom G	Plasterboard	R5.2	Yes
Ens	Plasterboard	R5.2	Yes
Ens	FR5 - Timber	R2.0	No
Kitchen/Living	FR5 - Timber	R2.0	No
Kitchen/Living	Plasterboard	R5.2	Yes
P'ty	Plasterboard	R5.2	Yes
Entry	FR5 - Timber	R2.0	No
Pdr	Plasterboard	R5.2	Yes
Pdr	FR5 - Timber	R2.0	No
Bedroom M	Plasterboard	R5.2	Yes
Wir	Plasterboard	R5.2	Yes
Ens	Plasterboard	R5.2	Yes
Bedroom 1	Plasterboard	R5.2	Yes
Retreat	Plasterboard	R5.2	Yes
Bath	Plasterboard	R5.2	Yes
Bedroom 2	Plasterboard	R5.2	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
L'dry	1	Exhaust Fans	200	Sealed
Ens	1	Exhaust Fans	200	Sealed
Kitchen/Living	1	Exhaust Fans	200	Sealed
Ens	1	Exhaust Fans	200	Sealed
Bath	1	Exhaust Fans	200	Sealed

* Refer to glossary.

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Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.93	Dark

PREVIEW

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 NatHERSAdministrator. 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.

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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).

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