Nationwide House Energy Rating Scheme®
Class 2 Summary
NatHERS® Certificate No. 0012862940

Generated on 23 Mar 2026 using BERS Pro v5.2.6 (3.23)

Property

Address	Buchan Avenue, Edmondson Park , NSW , 2174
Lot/DP	Lot 40 DP 1286151
NatHERS Climate Zone	28 Richmond

Accredited assessor

Name	Amir Girgis
Business name	Northrop Consulting Engineers
Email	agirgis@northrop.com.au
Phone	(02)92414188
Accreditation No.	20579
Assessor Accrediting Organisation	ABSA

Verification

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

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating

NCC heating and cooling maximum loads (MJ/m²/p.a.)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled block average	31.4	18.8
Maximum block limit	N/A	N/A

Whole of Home performance rating

No Whole of Home performance rating conducted for this summary certificate or not completed for all dwellings

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m²/p.a.]	Cooling load (load limit) [MJ/m²/p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
0012860276	A101	22.3 (N/A)	16.7 (N/A)	39.0	8.1	0
0012860292	A102	31.2 (N/A)	14.1 (N/A)	45.3	7.8	0

Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m^2/p.a.]	Cooling load (load limit) [MJ/m^2/p.a.]	Total load [MJ/m^2/p.a.]	Star Rating	Whole of Home Rating
0012860284	A103	9.7 (N/A)	25.4 (N/A)	35.1	8.4	0
0012860300	A104	27.9 (N/A)	10.7 (N/A)	38.6	8.2	0
0012860334	A201	21.4 (N/A)	17.1 (N/A)	38.5	8.2	0
0012860342	A202	30.9 (N/A)	10.1 (N/A)	41.0	8	0
0012860367	A203	27.8 (N/A)	41.6 (N/A)	69.4	6.5	0
0012860326	A204	8.9 (N/A)	34.1 (N/A)	42.9	7.9	0
0012860359	A205	8.6 (N/A)	29.4 (N/A)	38.0	8.2	0
0012860375	A206	35.9 (N/A)	17.2 (N/A)	53.1	7.4	0
0012860318	A207	25.6 (N/A)	21.7 (N/A)	47.3	7.7	0
0012860409	A208	50.7 (N/A)	27.9 (N/A)	78.6	6	0
0012860417	A301	24.0 (N/A)	21.1 (N/A)	45.1	7.8	0
0012860441	A302	33.1 (N/A)	14.4 (N/A)	47.5	7.7	0
0012860466	A303	27.6 (N/A)	48.0 (N/A)	75.6	6.2	0
0012860391	A304	7.5 (N/A)	25.6 (N/A)	33.0	8.5	0
0012860433	A305	10.6 (N/A)	26.6 (N/A)	37.3	8.2	0
0012860458	A306	24.6 (N/A)	21.2 (N/A)	45.7	7.8	0
0012860474	A307	35.7 (N/A)	40.3 (N/A)	76.0	6.2	0
0012860383	A308	28.1 (N/A)	24.4 (N/A)	52.5	7.4	0
0012860425	A309	27.2 (N/A)	21.4 (N/A)	48.5	7.6	0
0012861092	A401	32.5 (N/A)	12.5 (N/A)	45.0	7.8	0
0012861100	A402	41.7 (N/A)	8.8 (N/A)	50.5	7.5	0
0012861134	A403	36.3 (N/A)	28.9 (N/A)	65.3	6.7	0
0012861167	A404	14.2 (N/A)	13.8 (N/A)	28.0	8.8	0
0012861118	A405	17.6 (N/A)	12.1 (N/A)	29.7	8.7	0
0012861142	A406	33.7 (N/A)	13.2 (N/A)	46.8	7.7	0
0012861175	A407	38.6 (N/A)	32.9 (N/A)	71.5	6.4	0
0012861126	A408	33.6 (N/A)	11.7 (N/A)	45.3	7.8	0
0012861159	A409	33.6 (N/A)	11.9 (N/A)	45.5	7.8	0
0012861191	A501	30.7 (N/A)	9.0 (N/A)	39.7	8.1	0
0012861225	A502	40.4 (N/A)	6.2 (N/A)	46.6	7.7	0
0012861258	A503	37.7 (N/A)	25.7 (N/A)	63.4	6.8	0
0012861282	A504	16.5 (N/A)	19.1 (N/A)	35.6	8.3	0
0012861316	A505	14.8 (N/A)	16.7 (N/A)	31.5	8.6	0
0012861340	A506	35.9 (N/A)	8.5 (N/A)	44.4	7.8	0

0012861183	A507	29.2 (N/A)	28.2 (N/A)	57.4	7.1	0
0012861217	A508	28.5 (N/A)	12.0 (N/A)	40.5	8	0
0012861241	A509	36.7 (N/A)	17.0 (N/A)	53.7	7.4	0
0012861274	A601	31.1 (N/A)	8.9 (N/A)	40.0	8.1	0
0012861308	A602	40.8 (N/A)	6.2 (N/A)	46.9	7.7	0
0012861332	A603	38.1 (N/A)	25.7 (N/A)	63.7	6.8	0
0012861209	A604	16.8 (N/A)	18.7 (N/A)	35.5	8.3	0
0012861233	A605	14.6 (N/A)	16.7 (N/A)	31.3	8.6	0
0012861266	A606	33.5 (N/A)	8.9 (N/A)	42.4	7.9	0
0012861290	A607	24.9 (N/A)	27.8 (N/A)	52.7	7.4	0
0012861324	A608	24.7 (N/A)	11.8 (N/A)	36.5	8.3	0
0012861357	A609	36.9 (N/A)	16.7 (N/A)	53.6	7.4	0
0012861399	A701	33.7 (N/A)	12.1 (N/A)	45.7	7.8	0
0012861423	A702	42.8 (N/A)	8.8 (N/A)	51.7	7.4	0
0012861456	A703	36.9 (N/A)	28.5 (N/A)	65.5	6.7	0
0012861480	A704	14.9 (N/A)	13.8 (N/A)	28.6	8.7	0
0012861514	A705	16.6 (N/A)	12.3 (N/A)	28.9	8.7	0
0012861548	A706	25.6 (N/A)	13.6 (N/A)	39.2	8.1	0
0012861571	A707	24.0 (N/A)	33.4 (N/A)	57.4	7.1	0
0012861605	A708	18.7 (N/A)	11.8 (N/A)	30.5	8.6	0
0012861621	A709	33.9 (N/A)	11.8 (N/A)	45.6	7.8	0
0012861647	A801	34.0 (N/A)	12.0 (N/A)	46.0	7.8	0
0012861373	A802	43.1 (N/A)	8.7 (N/A)	51.9	7.4	0
0012861407	A803	37.2 (N/A)	28.7 (N/A)	65.9	6.7	0
0012861431	A804	15.0 (N/A)	13.8 (N/A)	28.8	8.7	0
0012861464	A805	14.8 (N/A)	12.1 (N/A)	27.0	8.8	0
0012861498	A806	21.7 (N/A)	13.9 (N/A)	35.6	8.3	0
0012861522	A807	19.5 (N/A)	34.0 (N/A)	53.6	7.4	0
0012861555	A808	16.2 (N/A)	12.1 (N/A)	28.3	8.7	0
0012861589	A809	34.0 (N/A)	11.9 (N/A)	46.0	7.8	0
0012861613	A901	31.8 (N/A)	9.0 (N/A)	40.9	8	0
0012861639	A902	41.6 (N/A)	5.9 (N/A)	47.5	7.7	0
0012861654	A903	38.8 (N/A)	25.4 (N/A)	64.1	6.8	0
0012861365	A904	17.2 (N/A)	18.1 (N/A)	35.3	8.4	0
0012861381	A905	12.0 (N/A)	16.9 (N/A)	28.9	8.7	0
0012861415	A906	25.5 (N/A)	9.3 (N/A)	34.8	8.4	0
0012861449	A907	16.3 (N/A)	27.8 (N/A)	44.1	7.8	0
0012861472	A908	19.4 (N/A)	12.1 (N/A)	31.5	8.6	0

0012861506	A909	37.4 (N/A)	16.7 (N/A)	54.1	7.3	0
0012861530	A1001	32.1 (N/A)	9.0 (N/A)	41.1	7.9	0
0012861563	A1002	41.9 (N/A)	6.0 (N/A)	47.8	7.7	0
0012861597	A1003	39.1 (N/A)	25.6 (N/A)	64.7	6.8	0
0012861688	A1004	17.3 (N/A)	18.1 (N/A)	35.4	8.4	0
0012861704	A1005	12.3 (N/A)	16.8 (N/A)	29.0	8.7	0
0012861720	A1006	25.8 (N/A)	9.5 (N/A)	35.3	8.4	0
0012861753	A1007	12.8 (N/A)	31.7 (N/A)	44.5	7.8	0
0012861787	A1008	19.6 (N/A)	12.1 (N/A)	31.8	8.6	0
0012861811	A1009	37.7 (N/A)	16.5 (N/A)	54.1	7.3	0
0012861845	A1101	34.7 (N/A)	11.8 (N/A)	46.5	7.7	0
0012861878	A1102	44.0 (N/A)	8.3 (N/A)	52.3	7.4	0
0012861902	A1103	37.7 (N/A)	28.3 (N/A)	66.0	6.7	0
0012861936	A1104	15.6 (N/A)	13.4 (N/A)	29.0	8.7	0
0012861969	A1105	15.2 (N/A)	12.3 (N/A)	27.4	8.8	0
0012861993	A1106	21.9 (N/A)	14.0 (N/A)	35.9	8.3	0
0012862025	A1107	16.4 (N/A)	37.0 (N/A)	53.3	7.4	0
0012862041	A1108	16.2 (N/A)	12.3 (N/A)	28.4	8.7	0
0012861670	A1109	34.7 (N/A)	11.7 (N/A)	46.4	7.7	0
0012861696	A1201	34.9 (N/A)	11.9 (N/A)	46.8	7.7	0
0012861738	A1202	44.1 (N/A)	8.1 (N/A)	52.3	7.4	0
0012861761	A1203	37.8 (N/A)	28.8 (N/A)	66.6	6.7	0
0012861795	A1204	15.8 (N/A)	13.4 (N/A)	29.2	8.7	0
0012861829	A1205	15.3 (N/A)	12.1 (N/A)	27.4	8.8	0
0012861852	A1206	22.1 (N/A)	14.1 (N/A)	36.2	8.3	0
0012861886	A1207	16.6 (N/A)	36.5 (N/A)	53.1	7.4	0
0012861910	A1208	16.3 (N/A)	12.0 (N/A)	28.2	8.7	0
0012861944	A1209	34.8 (N/A)	11.6 (N/A)	46.3	7.7	0
0012861977	A1301	32.8 (N/A)	8.7 (N/A)	41.5	7.9	0
0012862009	A1302	42.5 (N/A)	5.7 (N/A)	48.2	7.6	0
0012862033	A1303	39.8 (N/A)	25.2 (N/A)	65.1	6.7	0
0012862058	A1304	17.8 (N/A)	18.4 (N/A)	36.2	8.3	0
0012861662	A1305	12.9 (N/A)	16.7 (N/A)	29.6	8.7	0
0012861712	A1306	26.5 (N/A)	9.3 (N/A)	35.8	8.3	0
0012861746	A1307	13.3 (N/A)	31.8 (N/A)	45.1	7.8	0
0012861779	A1308	20.2 (N/A)	11.9 (N/A)	32.1	8.5	0
0012861803	A1309	38.3 (N/A)	16.4 (N/A)	54.7	7.3	0
0012861837	A1401	44.1 (N/A)	6.5 (N/A)	50.6	7.5	0

0012861860	A1402	54.0 (N/A)	4.4 (N/A)	58.4	7.1	0
0012861894	A1403	47.0 (N/A)	20.3 (N/A)	67.3	6.6	0
0012861928	A1404	22.2 (N/A)	15.1 (N/A)	37.3	8.2	0
0012861951	A1405	21.2 (N/A)	13.0 (N/A)	34.2	8.4	0
0012861985	A1406	36.9 (N/A)	7.1 (N/A)	44.1	7.8	0
0012862017	A1407	19.0 (N/A)	26.1 (N/A)	45.1	7.8	0
0012862074	A1408	28.8 (N/A)	8.9 (N/A)	37.7	8.2	0
0012862090	A1409	47.3 (N/A)	12.5 (N/A)	59.7	7	0
0012862082	AG01	40.5 (N/A)	16.2 (N/A)	56.7	7.2	0
0012862108	AG02	44.2 (N/A)	11.3 (N/A)	55.5	7.3	0
0012862066	AG03	12.6 (N/A)	12.9 (N/A)	25.6	8.9	0
0012862173	B101	18.3 (N/A)	37.2 (N/A)	55.5	7.3	0
0012862207	B102	41.5 (N/A)	32.4 (N/A)	73.9	6.3	0
0012862231	B103	13.6 (N/A)	33.9 (N/A)	47.5	7.7	0
0012862264	B104	13.3 (N/A)	28.6 (N/A)	41.9	7.9	0
0012862298	B105	40.6 (N/A)	24.1 (N/A)	64.6	6.8	0
0012862322	B106	31.1 (N/A)	9.7 (N/A)	40.8	8	0
0012862355	B201	26.4 (N/A)	41.3 (N/A)	67.8	6.6	0
0012862868	B202	47.5 (N/A)	25.4 (N/A)	72.9	6.3	0
0012862371	B203	35.1 (N/A)	37.3 (N/A)	72.5	6.4	0
0012862181	B204	29.9 (N/A)	28.6 (N/A)	58.5	7.1	0
0012862215	B205	47.7 (N/A)	12.6 (N/A)	60.3	6.9	0
0012862249	B301	25.6 (N/A)	41.2 (N/A)	66.8	6.7	0
0012862926	B302	46.3 (N/A)	26.0 (N/A)	72.3	6.4	0
0012862272	B303	34.9 (N/A)	36.6 (N/A)	71.4	6.4	0
0012862306	B304	29.5 (N/A)	27.7 (N/A)	57.2	7.2	0
0012862330	B305	44.4 (N/A)	12.5 (N/A)	56.8	7.2	0
0012862363	B401	36.3 (N/A)	25.7 (N/A)	62.1	6.9	0
0012862900	B402	55.6 (N/A)	20.4 (N/A)	76.0	6.2	0
0012862397	B403	45.3 (N/A)	28.4 (N/A)	73.7	6.3	0
0012862199	B404	39.9 (N/A)	20.3 (N/A)	60.2	6.9	0
0012862223	B405	54.1 (N/A)	8.5 (N/A)	62.7	6.9	0
0012862256	B501	36.8 (N/A)	25.5 (N/A)	62.3	6.9	0
0012862884	B502	55.6 (N/A)	20.7 (N/A)	76.3	6.2	0
0012862280	B503	45.5 (N/A)	28.5 (N/A)	73.9	6.3	0
0012862314	B504	39.8 (N/A)	20.8 (N/A)	60.7	6.9	0
0012862348	B505	54.2 (N/A)	8.7 (N/A)	62.8	6.9	0
0012862389	B601	37.3 (N/A)	25.4 (N/A)	62.7	6.9	0

0012862918	B602	55.8 (N/A)	20.6 (N/A)	76.4	6.1	0
0012862405	B603	45.6 (N/A)	29.5 (N/A)	75.1	6.2	0
0012862421	B604	38.4 (N/A)	22.0 (N/A)	60.4	6.9	0
0012862454	B605	54.0 (N/A)	9.4 (N/A)	63.4	6.8	0
0012862488	B701	37.5 (N/A)	25.4 (N/A)	62.9	6.9	0
0012862892	B702	56.0 (N/A)	20.5 (N/A)	76.5	6.1	0
0012862512	B703	45.8 (N/A)	30.4 (N/A)	76.2	6.2	0
0012862546	B704	38.3 (N/A)	22.8 (N/A)	61.1	6.9	0
0012862439	B705	53.9 (N/A)	9.5 (N/A)	63.5	6.8	0
0012862447	B801	41.2 (N/A)	20.1 (N/A)	61.2	6.9	0
0012862876	B802	56.0 (N/A)	20.6 (N/A)	76.6	6.1	0
0012862470	B803	48.9 (N/A)	25.5 (N/A)	74.4	6.3	0
0012862504	B804	42.4 (N/A)	19.0 (N/A)	61.4	6.9	0
0012862538	B805	61.9 (N/A)	7.6 (N/A)	69.5	6.5	0
0012862413	BG01	53.6 (N/A)	22.3 (N/A)	75.9	6.2	0
0012862462	BG02	19.0 (N/A)	25.1 (N/A)	44.2	7.8	0
0012862496	BG03	18.4 (N/A)	22.0 (N/A)	40.4	8	0
0012862520	BG04	53.9 (N/A)	9.9 (N/A)	63.8	6.8	0

Explanatory notes

About this ratings

The thermal performance star rating in this Certificate is the average rating of all NCC Class 2 dwellings in an apartment block. Individual unit ratings are listed in the ‘Summary of all dwellings’ section of this Certificate.
NatHERS ratings use computer modelling to evaluate a home’s energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home’s building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads.
For more details about an individual dwelling’s assessment, refer to the individual dwelling’s NatHERS Certificate (accessible via link).

Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.
Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.
Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.
Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor’s responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.
The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on

an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.
Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.
Not all assumptions made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 0012862579

Generated on 22 Mar 2026 using BERS Pro v5.2.6 (3.23)

Property

Address	Unit TH01, Buchan Avenue, Edmondson Park , NSW , 2174
Lot/DP	Lot 40 DP 1286151
NCC class*	1a
Floor/all Floors	G of 2 floors
Type	New Home

Plans

Main plan	2518
Prepared by	Fuse Architects

Construction and environment

Assessed floor area [m²]*	
Conditioned*	112.4
Unconditioned*	0.0
Total	112.4
Garage	0.0

Exposure type
Protected

NatHERS climate zone
28 Richmond

Accredited assessor

Name	Amir Girgis
Business name	Northrop Consulting Engineers
Email	agirgis@northrop.com.au
Phone	(02)92414188
Accreditation No.	20579
Assessor Accrediting Organisation	ABSA
Declaration of interest	Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

National Construction Code (NCC) requirements

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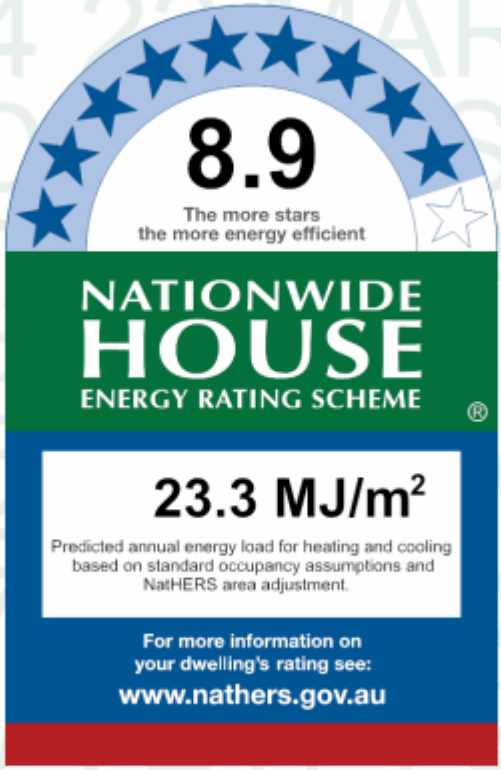
Thermal performance star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022
Area adjustment included

	Heating	Cooling
Modelled	10.8	12.5
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump, cooking, plug-in loads and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2025: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC Climate Zone 1 or 2:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area Ceiling Fan:

- Yes
- No
- NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown	☐	☐	☐	☐	☐

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Room *schedule*

Room	Zone Type	Area [m^2]
Stairs	Daytime	4.59
Glazed Common 1	Glazed Common Area	30.1
Kitchen/Living	Kitchen/Living	34.21
Day Time	Daytime	2.03
Bedroom 4	Bedroom	11.27
Bedroom 5	Bedroom	11.19
Living	Living	21.06
Bath	Daytime	4.24
Bedroom 3	Bedroom	18.57
Ensuite	Nighttime	4.02
Entry	Daytime	6.65

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-006-03 A	Aluminium B DG Argon Fill High Solar Gain low-E	4.1	0.52	0.49	0.55
ALM-005-01 A	Aluminium A DG Argon Fill Clear-Clear	4.5	0.50	0.48	0.53

Custom windows*

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Glazed Common 1	ALM-001-01 A	W29	3000	1500	Awning	10	NW	No
Kitchen/Living	ALM-006-03 A	W26	4000	4400	Sliding	45	NW	No
Kitchen/Living	ALM-005-01 A	W28	2450	910	Casement	90	NW	No
Kitchen/Living	ALM-005-01 A	W27	2450	560	Awning	59	NW	No

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 4	ALM-005-01 A	W18	3000	1000	Awning	07	NW	No
Bedroom 5	ALM-005-01 A	W20	3000	800	Awning	59	NW	No
Bedroom 5	ALM-006-03 A	W19	3000	2230	Sliding	45	NW	No
Bedroom 3	ALM-005-01 A	W25	3000	1060	Awning	07	NW	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
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	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser
Bedroom 4	GEN-04-006a	S2	50	1.24	N	None	No
Bedroom 5	GEN-04-006a	S1	50	2.59	N	None	No

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	Fibro Steel Stud Frame Panel Direct Fix	0.50		No insulation	No
EW-2	Concrete Block, Lined Steel Stud Frame	0.50		Bulk Insulation R2.5	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Glazed Common 1	EW-1	3000	1565	NW	2739	No
Kitchen/Living	EW-2	4150	4700	NW	2400	Yes
Kitchen/Living	EW-2	4150	1100	SW	5000	No
Kitchen/Living	EW-2	4150	1500	NW	100	Yes
Bedroom 4	EW-2	3000	3095	NW	1300	Yes
Bedroom 5	EW-2	3000	1100	SW	200	No
Bedroom 5	EW-2	3000	3095	NW	1300	Yes
Bedroom 3	EW-2	3000	2295	NW	250	Yes

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation [R-value]
IW-001	Steel Stud Frame, Direct Fix Plasterboard	116.49	No insulation
IW-002	Concrete Panel/Blocks filled, plasterboard	241.72	No Insulation
IW-003	Concrete Panel/Blocks filled, plasterboard	19.47	No insulation one side, Bulk Insulation the other R2.5

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Stairs	Suspended Concrete Slab 200mm	4.59	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Glazed Common 1	Concrete Slab, Unit Below 200mm	30.10	None	No Insulation		Bare
Kitchen/Living	Suspended Concrete Slab 200mm	34.21	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Day Time	Suspended Concrete Slab 200mm	2.03	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Bedroom 4 / Kitchen/Living	Concrete Steel Framed Above Plasterboard 200mm	9.50		No Insulation		Carpet 10mm
Bedroom 4	Suspended Concrete Slab 200mm	1.56	Totally Open	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Bedroom 5 / Kitchen/Living	Concrete Steel Framed Above Plasterboard 200mm	7.78		No Insulation		Carpet 10mm
Bedroom 5	Suspended Concrete Slab 200mm	3.13	Totally Open	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Living / Stairs	Concrete Steel Framed Above Plasterboard 200mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Living / Kitchen/Living	Concrete Steel Framed Above Plasterboard 200mm	8.42		No Insulation		Cork Tiles or Parquetry 8mm
Living / Day Time	Concrete Steel Framed Above Plasterboard 200mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Living	Concrete Slab, Unit Below 200mm	1.92	None	No Insulation		Cork Tiles or Parquetry 8mm
Bath / Stairs	Concrete Steel Framed Above Plasterboard 200mm	1.26		No Insulation		Ceramic Tiles 8mm
Bath / Kitchen/Living	Concrete Steel Framed Above Plasterboard 200mm	2.20		No Insulation		Ceramic Tiles 8mm
Bath / Day Time	Concrete Steel Framed Above Plasterboard 200mm	0.42		No Insulation		Ceramic Tiles 8mm
Bedroom 3	Concrete Slab, Unit Below 200mm	18.56	None	No Insulation		Carpet 10mm
Ensuite	Concrete Slab, Unit Below 200mm	4.02	None	No Insulation		Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	6.65	None	No Insulation		20/80 Ceramic/Cork

Ceiling *type*

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Stairs	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Stairs	Concrete Steel Framed Above Plasterboard	No Insulation
Glazed Common 1	Concrete, Plasterboard with Steel Frame	No insulation
Kitchen/Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Kitchen/Living	Concrete Steel Framed Above Plasterboard	No Insulation
Day Time	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Day Time	Concrete Steel Framed Above Plasterboard	No Insulation
Bedroom 4	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 5	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bath	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 3	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Ensuite	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Entry	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Stairs	1	Downlights - LED	150	Sealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Day Time	1	Downlights - LED	150	Sealed
Bedroom 4	5	Downlights - LED	150	Sealed
Bedroom 5	5	Downlights - LED	150	Sealed
Living	9	Downlights - LED	150	Sealed
Bath	1	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 3	8	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Entry	2	Downlights - LED	150	Sealed
Entry	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 4	1	900

Location	Quantity	Diameter [mm]
Bedroom 5	1	900
Bedroom 3	1	900

Roof *type*

Construction	Insulation [R-value]	Reflective wrap* [yes/no]	Solar absorptance	Roof shade [colour]
Waterproofing Membrane	No Added Insulation, No air Gap		0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
Ceiling	90.00mm x 40.00mm	900	0.75	None
Internal Wall	90.00mm x 40.00mm	600	0.75	None
External Wall	90.00mm x 40.00mm	600	0.75	None

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Heating system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Performance	Hot water CER* zone
No Data Available			

Lighting

Lighting power density [W/m^2] (default assumption 5W/m^2)
No Data Available

Cooking

Cooktop type	Oven type
No Data Available	

Pool/spa equipment

Appliance/ system type	Volume [Litres]	Star rating	Recommended pump capacity [W]
No Data Available			

Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

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

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
CER	Clean Energy Regulator
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Modelled airtightness	the air permeability rate determined by software inputs when generating this rating. This is for informational purposes only and not suitable for assessing compliance.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER). NatHERS uses a 10-year STC.
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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 attached to the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 0012862587

Generated on 22 Mar 2026 using BERS Pro v5.2.6 (3.23)

Property

Address	Unit TH02, Buchan Avenue, Edmondson Park , NSW , 2174
Lot/DP	Lot 40 DP 1286151
NCC class*	1a
Floor/all Floors	G of 2 floors
Type	New Home

Plans

Main plan	2518
Prepared by	Fuse Architects

Construction and environment

Assessed floor area [m²]*

Conditioned*	101.2
Unconditioned*	0.0
Total	101.2
Garage	0.0

Exposure type
Protected

NatHERS climate zone
28 Richmond

Accredited assessor

Name	Amir Girgis
Business name	Northrop Consulting Engineers
Email	agirgis@northrop.com.au
Phone	(02)92414188
Accreditation No.	20579
Assessor Accrediting Organisation	ABSA
Declaration of interest	Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

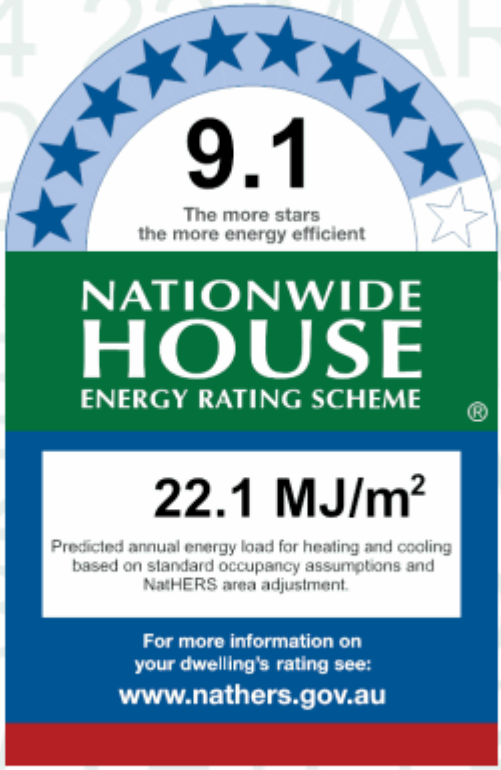
National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022
Area adjustment included

	Heating	Cooling
Modelled	12.1	10.0
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump, cooking, plug-in loads and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2025: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC Climate Zone 1 or 2:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area Ceiling Fan:

- Yes
- No
- NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown	☐	☐	☐	☐	☐

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Room *schedule*

Room	Zone Type	Area [m^2]
Kitchen/Living1	Kitchen/Living	33.33
Day Time 1	Daytime	4.44
Store	Daytime	2.41
Bedroom 2	Bedroom	11.27
Bedroom 3	Bedroom	10.79
Bath	Daytime	4.24
Ldry	Daytime	1.53
Living	Living	15.34
Glazed Common 1	Glazed Common Area	86.41
Entry	Daytime	17.15
Bedroom 3	Bedroom	20.1
Night Time 1	Nighttime	4.07

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-005-01 A	Aluminium A DG Argon Fill Clear-Clear	4.5	0.50	0.48	0.53
ALM-006-03 A	Aluminium B DG Argon Fill High Solar Gain low-E	4.1	0.52	0.49	0.55

Custom windows*

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living1	ALM-005-01 A	W2	2450	900	Casement	90	NW	No
Kitchen/Living1	ALM-005-01 A	W3	2450	560	Awning	59	NW	No
Kitchen/Living1	ALM-006-03 A	W4	4000	4400	Sliding	45	NW	No

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	ALM-005-01 A	W6	3000	1000	Awning	07	NW	No
Bedroom 3	ALM-006-03 A	W7	3000	2230	Sliding	45	NW	No
Bedroom 3	ALM-005-01 A	W8	3000	800	Awning	59	NW	No
Glazed Common 1	ALM-001-01 A	n/a	3000	1500	Awning	10	S	No
Bedroom 3	ALM-005-01 A	W11	3000	1000	Awning	07	NW	No
Bedroom 3	ALM-005-01 A	W12	3000	1000	Awning	07	NW	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
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	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser
Bedroom 2	GEN-04-006a	S1	50	1.27	N	None	No
Bedroom 3	GEN-04-006a	S2	50	2.65	N	None	No

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	Concrete Block, Lined Steel Stud Frame	0.50		Bulk Insulation R2.5	No
EW-2	Fibro Steel Stud Frame Panel Direct Fix	0.50		No insulation	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living1	EW-1	4150	1500	NW	25	Yes
Kitchen/Living1	EW-1	4150	1100	NE	0	No
Kitchen/Living1	EW-1	4150	4600	NW	2400	Yes
Bedroom 2	EW-1	4150	3095	NW	1300	Yes
Bedroom 3	EW-1	4150	2990	NW	1300	Yes
Glazed Common 1	EW-2	3000	2154	S	0	No
Bedroom 3	EW-1	3000	3295	NW	175	Yes

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation [R-value]
IW-001	Concrete Panel/Blocks filled, plasterboard	340.93	No Insulation
IW-002	Concrete Panel/Blocks filled, plasterboard	36.45	No insulation one side, Bulk Insulation the other R2.5
IW-003	Steel Stud Frame, Direct Fix Plasterboard	122.85	No insulation

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Kitchen/Living1	Suspended Concrete Slab 300mm	33.33	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Day Time 1	Suspended Concrete Slab 300mm	4.44	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Store	Suspended Concrete Slab 300mm	2.41	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Bedroom 2 / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 200mm	9.51		No Insulation		Carpet 10mm
Bedroom 2	Suspended Concrete Slab 200mm	1.55	Basement Carpark	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Bedroom 3 / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 200mm	7.49		No Insulation		Carpet 10mm
Bedroom 3	Suspended Concrete Slab 200mm	2.99	Basement Carpark	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Bath / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 100mm	2.20		No Insulation		Ceramic Tiles 8mm
Bath / Day Time 1	Concrete Steel Framed Above Plasterboard 100mm	1.02		No Insulation		Ceramic Tiles 8mm
Bath / Store	Concrete Steel Framed Above Plasterboard 100mm	0.66		No Insulation		Ceramic Tiles 8mm
Ldry / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 100mm	1.53		No Insulation		Ceramic Tiles 8mm
Living / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 200mm	6.78		No Insulation		Cork Tiles or Parquetry 8mm
Living / Day Time 1	Concrete Steel Framed Above Plasterboard 200mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Living / Store	Concrete Steel Framed Above Plasterboard 200mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Glazed Common 1	Concrete Slab, Unit Below 200mm	86.41	None	No Insulation		Bare
Entry	Suspended Concrete Slab 200mm	17.15	Enclosed	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Bedroom 3	Suspended Concrete Slab 200mm	20.10	Basement Carpark	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Night Time 1	Suspended Concrete Slab 200mm	4.07	Basement Carpark	Bulk Insulation in Contact with Floor R2		Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Kitchen/Living1	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Kitchen/Living1	Concrete Steel Framed Above Plasterboard	No Insulation
Day Time 1	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Day Time 1	Concrete Steel Framed Above Plasterboard	No Insulation
Store	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Store	Concrete Steel Framed Above Plasterboard	No Insulation
Bedroom 2	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 3	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bath	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Ldry	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Glazed Common 1	Concrete, Plasterboard with Steel Frame	No insulation
Entry	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 3	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Night Time 1	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Kitchen/Living1	13	Downlights - LED	150	Sealed
Kitchen/Living1	1	Exhaust Fans	300	Sealed
Day Time 1	1	Downlights - LED	150	Sealed
Store	1	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bath	1	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Ldry	1	Downlights - LED	150	Sealed
Ldry	1	Exhaust Fans	300	Sealed
Living	7	Downlights - LED	150	Sealed
Entry	8	Downlights - LED	150	Sealed
Bedroom 3	8	Downlights - LED	150	Sealed
Night Time 1	1	Downlights - LED	150	Sealed
Night Time 1	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Kitchen/Living1	1	900
Bedroom 2	1	900
Bedroom 3	1	900
Bedroom 3	1	900

Roof *type*

Construction	Insulation [R-value]	Reflective wrap* [yes/no]	Solar absorptance	Roof shade [colour]
Waterproofing Membrane	No Added Insulation, No air Gap		0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
External Wall	90.00mm x 40.00mm	600	0.75	None
Ceiling	90.00mm x 40.00mm	900	0.75	None
Internal Wall	90.00mm x 40.00mm	600	0.75	None

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Heating system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Performance	Hot water CER* zone
No Data Available			

Lighting

Lighting power density [W/m^2] (default assumption 5W/m^2)
No Data Available

Cooking

Cooktop type	Oven type
No Data Available	

Pool/spa equipment

Appliance/ system type	Volume [Litres]	Star rating	Recommended pump capacity [W]
No Data Available			

Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

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

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
CER	Clean Energy Regulator
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Modelled airtightness	the air permeability rate determined by software inputs when generating this rating. This is for informational purposes only and not suitable for assessing compliance.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER). NatHERS uses a 10-year STC.
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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 attached to the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 0012862595

Generated on 22 Mar 2026 using BERS Pro v5.2.6 (3.23)

Property

Address	Unit TH04, Buchan Avenue, Edmondson Park , NSW , 2174
Lot/DP	Lot 40 DP 1286151
NCC class*	1a
Floor/all Floors	G of 2 floors
Type	New Home

Plans

Main plan	2518
Prepared by	Fuse Architects

Construction and environment

Assessed floor area [m²]*

Conditioned*	103.5
Unconditioned*	0.0
Total	103.5
Garage	0.0

Exposure type
Protected

NatHERS climate zone
28 Richmond

Accredited assessor

Name	Amir Girgis
Business name	Northrop Consulting Engineers
Email	agirgis@northrop.com.au
Phone	(02)92414188
Accreditation No.	20579
Assessor Accrediting Organisation	ABSA
Declaration of interest	Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

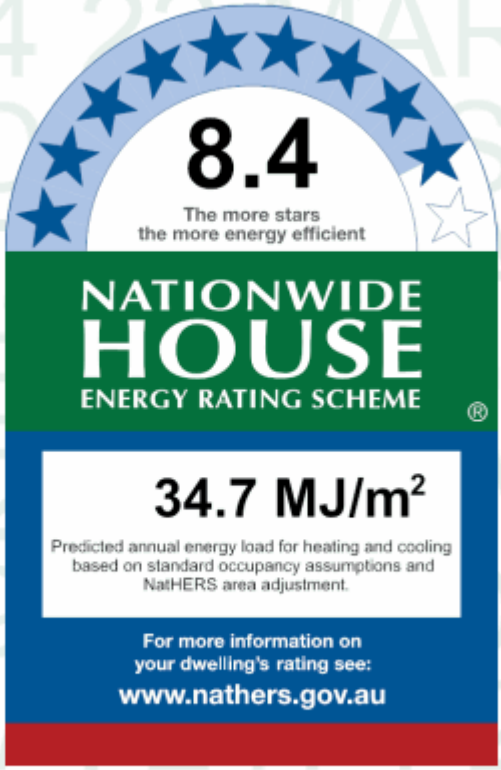
National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022
Area adjustment included

	Heating	Cooling
Modelled	10.7	24.1
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump, cooking, plug-in loads and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2025: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC Climate Zone 1 or 2:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area Ceiling Fan:

- Yes
- No
- NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown	☐	☐	☐	☐	☐

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Room *schedule*

Room	Zone Type	Area [m^2]
Kitchen/Living1	Kitchen/Living	32.22
Bedroom 1	Bedroom	15.19
Day Time 1	Daytime	4.44
Ensuite	Nighttime	4.07
Store	Daytime	2.41
Bedroom 2	Bedroom	11.27
Bedroom 3	Bedroom	10.82
Living	Living	17.31
Bath	Daytime	4.24
Ldry	Daytime	1.53
Living	Living	15.34
Glazed Common 1	Glazed Common Area	67.06

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-005-01 A	Aluminium A DG Argon Fill Clear-Clear	4.5	0.50	0.48	0.53
ALM-006-03 A	Aluminium B DG Argon Fill High Solar Gain low-E	4.1	0.52	0.49	0.55

Custom windows*

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living1	ALM-005-01 A	W2	2450	900	Casement	90	NW	No
Kitchen/Living1	ALM-005-01 A	W3	2450	560	Awning	59	NW	No
Kitchen/Living1	ALM-006-03 A	W4	4000	4400	Sliding	45	NW	No

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-005-01 A	W5	2450	1000	Awning	07	NW	No
Bedroom 1	ALM-005-01 A	W11	2450	1000	Awning	07	NW	No
Bedroom 2	ALM-005-01 A	W6	3000	1000	Awning	07	NW	No
Bedroom 3	ALM-006-03 A	W7	3000	2230	Sliding	45	NW	No
Bedroom 3	ALM-005-01 A	W8	3000	800	Awning	59	NW	No
Living	ALM-005-01 A	W9	3000	1000	Awning	07	NW	No
Living	ALM-005-01 A	W12	3000	1000	Awning	07	NW	No
Glazed Common 1	ALM-001-01 A	n/a	3000	1500	Awning	10	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
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	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser
Bedroom 2	GEN-04-006a	S1	50	1.23	N	None	No
Bedroom 3	GEN-04-006a	S2	50	2.82	N	None	No

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser

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	Concrete Block, Lined Steel Stud Frame	0.50		Bulk Insulation R2.5	No
EW-2	AAC Steel Stud Frame Panel Direct Fix	0.50		Bulk Insulation R2	No
EW-3	Fibro Timber Stud Frame Panel Direct Fix	0.50		No insulation	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living1	EW-1	4150	1500	NW	100	Yes
Kitchen/Living1	EW-1	4150	1100	NE	4900	No
Kitchen/Living1	EW-1	4150	4595	NW	2400	Yes
Bedroom 1	EW-1	4150	3895	NW	100	Yes
Bedroom 1	EW-1	4150	671	N	5702	No
Bedroom 1	EW-1	4150	632	W	767	No
Bedroom 2	EW-1	3000	3095	NW	1400	Yes
Bedroom 3	EW-1	3000	2995	NW	1400	Yes
Bedroom 3	EW-1	3000	1100	NE	200	No
Living	EW-1	3000	4195	NW	100	Yes
Glazed Common 1	EW-3	3000	1523	S	0	No

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation [R-value]
IW-001	Steel Stud Frame, Direct Fix Plasterboard	114.04	No insulation
IW-002	Concrete Panel/Blocks filled, plasterboard	86.99	No insulation one side, Bulk Insulation the other R2.5

Wall ID	Wall type	Area [m^2]	Bulk insulation [R-value]
IW-003	Concrete Panel/Blocks filled, plasterboard	274.43	No Insulation

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Kitchen/Living1	Suspended Concrete Slab 300mm	32.22	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Concrete Slab 300mm	15.19	Basement Carpark	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Day Time 1	Suspended Concrete Slab 300mm	4.44	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Ensuite	Suspended Concrete Slab 300mm	4.07	Basement Carpark	Bulk Insulation in Contact with Floor R2		Ceramic Tiles 8mm
Store	Suspended Concrete Slab 300mm	2.41	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Bedroom 2 / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 200mm	9.51		No Insulation		Carpet 10mm
Bedroom 2	Suspended Concrete Slab 200mm	1.55	Totally Open	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Bedroom 3 / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 200mm	7.53		No Insulation		Carpet 10mm
Bedroom 3	Suspended Concrete Slab 200mm	3.02	Totally Open	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Living / Bedroom 1	Concrete Steel Framed Above Plasterboard 200mm	9.21		No Insulation		Carpet 10mm
Living	Concrete Slab, Unit Below 200mm	6.90	None	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Bath / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 100mm	2.20		No Insulation		Ceramic Tiles 8mm
Bath / Day Time 1	Concrete Steel Framed Above Plasterboard 100mm	1.02		No Insulation		Ceramic Tiles 8mm
Bath / Store	Concrete Steel Framed Above Plasterboard 100mm	0.66		No Insulation		Ceramic Tiles 8mm

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Ldry / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 100mm	1.53		No Insulation		Ceramic Tiles 8mm
Living / Kitchen/Living1	Concrete Steel Framed Above Plasterboard 200mm	5.82		No Insulation		Cork Tiles or Parquetry 8mm
Living / Day Time 1	Concrete Steel Framed Above Plasterboard 200mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Living / Store	Concrete Steel Framed Above Plasterboard 200mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Living	Concrete Slab, Unit Below 200mm	0.00	None	No Insulation		Cork Tiles or Parquetry 8mm
Glazed Common 1	Concrete Slab, Unit Below 200mm	67.06	None	No Insulation		Bare

Ceiling *type*

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Kitchen/Living1	Concrete, Plasterboard with Steel Frame	No insulation
Kitchen/Living1	Concrete Steel Framed Above Plasterboard	No Insulation
Bedroom 1	Concrete, Plasterboard with Steel Frame	No insulation
Bedroom 1	Concrete Steel Framed Above Plasterboard	No Insulation
Day Time 1	Concrete, Plasterboard with Steel Frame	No insulation
Day Time 1	Concrete Steel Framed Above Plasterboard	No Insulation
Ensuite	Concrete, Plasterboard with Steel Frame	No insulation
Store	Concrete, Plasterboard with Steel Frame	No insulation
Store	Concrete Steel Framed Above Plasterboard	No Insulation
Bedroom 2	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 3	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bath	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Ldry	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Glazed Common 1	Concrete, Plasterboard with Steel Frame	No insulation

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Kitchen/Living1	13	Downlights - LED	150	Sealed
Kitchen/Living1	1	Exhaust Fans	300	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Day Time 1	1	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Store	1	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bedroom 3	5	Downlights - LED	150	Sealed
Living	7	Downlights - LED	150	Sealed
Bath	1	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Ldry	1	Downlights - LED	150	Sealed
Ldry	1	Exhaust Fans	300	Sealed
Living	7	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Kitchen/Living1	1	900
Bedroom 1	1	900
Bedroom 2	1	900
Bedroom 3	1	900

Roof *type*

Construction	Insulation [R-value]	Reflective wrap* [yes/no]	Solar absorptance	Roof shade [colour]
Waterproofing Membrane	No Added Insulation, No air Gap		0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
External Wall	90.00mm x 40.00mm	600	0.75	None
Ceiling	90.00mm x 40.00mm	900	0.75	None
Internal Wall	90.00mm x 40.00mm	600	0.75	None

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Heating system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Performance	Hot water CER* zone
No Data Available			

Lighting

Lighting power density [W/m^2] (default assumption 5W/m^2)
No Data Available

Cooking

Cooktop type	Oven type
No Data Available	

Pool/spa equipment

Appliance/ system type	Volume [Litres]	Star rating	Recommended pump capacity [W]
No Data Available			

Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

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

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
CER	Clean Energy Regulator
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Modelled airtightness	the air permeability rate determined by software inputs when generating this rating. This is for informational purposes only and not suitable for assessing compliance.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER). NatHERS uses a 10-year STC.
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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 attached to the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 0012862603

Generated on 22 Mar 2026 using BERS Pro v5.2.6 (3.23)

Property

Address	Unit TH03, Buchan Avenue, Edmondson Park , NSW , 2174
Lot/DP	Lot 40 DP 1286151
NCC class*	1a
Floor/all Floors	G of 2 floors
Type	New Home

Plans

Main plan	2518
Prepared by	Fuse Architects

Construction and environment

Assessed floor area [m²]*

Conditioned*	103.2
Unconditioned*	0.0
Total	103.2
Garage	0.0

Exposure type
Protected

NatHERS climate zone
28 Richmond

Accredited assessor

Name	Amir Girgis
Business name	Northrop Consulting Engineers
Email	agirgis@northrop.com.au
Phone	(02)92414188
Accreditation No.	20579
Assessor Accrediting Organisation	ABSA
Declaration of interest	Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

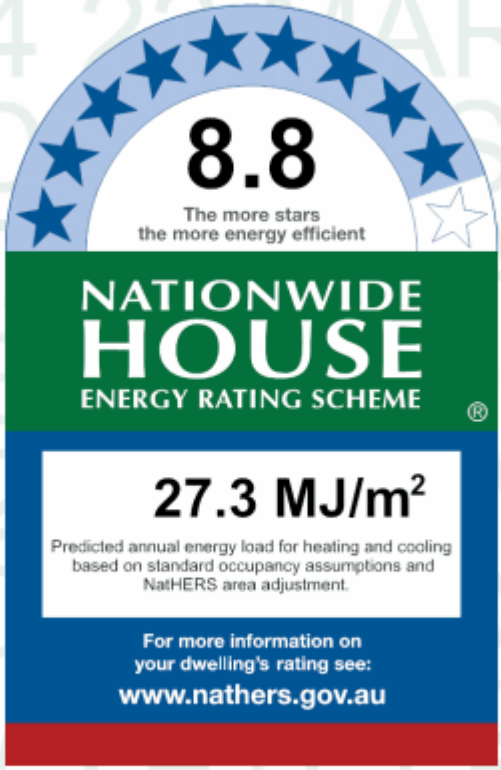
National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022
Area adjustment included

	Heating	Cooling
Modelled	10.9	16.5
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump, cooking, plug-in loads and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2025: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC Climate Zone 1 or 2:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area:

- Yes
- No
- NA – Not Applicable

Outdoor Living Area Ceiling Fan:

- Yes
- No
- NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown	☐	☐	☐	☐	☐

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Room *schedule*

Room	Zone Type	Area [m^2]
Day Time 1	Daytime	4.59
Glazed Common 1	Glazed Common Area	68.23
Kitchen/Living	Kitchen/Living	34.02
Day Time	Daytime	2.03
Bedroom	Bedroom	16.42
Night Time 1	Nighttime	7.2
Bedroom 4	Bedroom	11.27
Bedroom 5	Bedroom	11.27
Living	Living	15.75
Laundry	Daytime	1.57
Bath	Daytime	4.24

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-006-03 A	Aluminium B DG Argon Fill High Solar Gain low-E	4.1	0.52	0.49	0.55
ALM-005-01 A	Aluminium A DG Argon Fill Clear-Clear	4.5	0.50	0.48	0.53

Custom windows*

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Glazed Common 1	ALM-001-01 A	W10	3000	1500	Awning	10	S	No
Kitchen/Living	ALM-006-03 A	W12	4000	4400	Sliding	45	NW	No
Kitchen/Living	ALM-005-01 A	W23	2450	900	Casement	90	NW	No
Kitchen/Living	ALM-005-01 A	W22	2450	560	Awning	59	NW	No

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom	ALM-006-03 A	W21	2450	2960	Sliding	45	NW	No
Bedroom 4	ALM-005-01 A	W18	3000	1000	Awning	07	NW	No
Bedroom 5	ALM-005-01 A	W20	3000	800	Awning	59	NW	No
Bedroom 5	ALM-006-03 A	W19	3000	2230	Sliding	45	NW	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
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	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser
Bedroom 4	GEN-04-006a	S2	50	1.21	N	None	No
Bedroom 5	GEN-04-006a	S1	50	2.59	N	None	No

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	Fibro Steel Stud Frame Panel Direct Fix	0.50		No insulation	No
EW-2	Concrete Block, Lined Steel Stud Frame	0.50		Bulk Insulation R2.5	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Glazed Common 1	EW-1	3000	1523	S	0	No
Kitchen/Living	EW-2	4150	4695	NW	2400	Yes
Kitchen/Living	EW-2	4150	1100	SW	0	No
Kitchen/Living	EW-2	4150	1500	NW	100	Yes
Bedroom	EW-2	4150	1000	SW	13400	No
Bedroom	EW-2	4150	3200	NW	100	Yes
Bedroom	EW-2	4150	1100	NE	12800	No
Bedroom 4	EW-2	3000	3095	NW	225	Yes
Bedroom 5	EW-2	3000	3095	NW	250	Yes

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation [R-value]
IW-001	Steel Stud Frame, Direct Fix Plasterboard	119.29	No insulation
IW-002	Concrete Panel/Blocks filled, plasterboard	312.91	No Insulation
IW-003	Concrete Panel/Blocks filled, plasterboard	45.58	No insulation one side, Bulk Insulation the other R2.5

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Day Time 1	Suspended Concrete Slab 300mm	4.59	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Glazed Common 1	Concrete Slab, Unit Below 200mm	67.58	None	No Insulation		Bare

Location	Construction	Area [m^2]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 300mm	34.02	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Day Time	Suspended Concrete Slab 300mm	2.03	Basement Carpark	Bulk Insulation in Contact with Floor R2		Cork Tiles or Parquetry 8mm
Bedroom	Suspended Concrete Slab 300mm	16.42	Basement Carpark	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Night Time 1	Suspended Concrete Slab 300mm	7.20	Basement Carpark	Bulk Insulation in Contact with Floor R2		Ceramic Tiles 8mm
Bedroom 4 / Kitchen/Living	Concrete Steel Framed Above Plasterboard 200mm	9.19		No Insulation		Carpet 10mm
Bedroom 4	Suspended Concrete Slab 200mm	1.87	Totally Open	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Bedroom 5 / Kitchen/Living	Concrete Steel Framed Above Plasterboard 200mm	7.55		No Insulation		Carpet 10mm
Bedroom 5	Suspended Concrete Slab 200mm	3.51	Totally Open	Bulk Insulation in Contact with Floor R2		Carpet 10mm
Living / Day Time 1	Concrete Steel Framed Above Plasterboard 100mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Living / Kitchen/Living	Concrete Steel Framed Above Plasterboard 100mm	5.80		No Insulation		Cork Tiles or Parquetry 8mm
Living / Day Time	Concrete Steel Framed Above Plasterboard 100mm	0.00		No Insulation		Cork Tiles or Parquetry 8mm
Laundry / Kitchen/Living	Concrete Steel Framed Above Plasterboard 100mm	1.57		No Insulation		Ceramic Tiles 8mm
Bath / Day Time 1	Concrete Steel Framed Above Plasterboard 100mm	1.14		No Insulation		Ceramic Tiles 8mm
Bath / Kitchen/Living	Concrete Steel Framed Above Plasterboard 100mm	2.37		No Insulation		Ceramic Tiles 8mm
Bath / Day Time	Concrete Steel Framed Above Plasterboard 100mm	0.37		No Insulation		Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Day Time 1	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Day Time 1	Concrete Steel Framed Above Plasterboard	No Insulation
Glazed Common 1	Concrete, Plasterboard with Steel Frame	No insulation
Kitchen/Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Kitchen/Living	Concrete Steel Framed Above Plasterboard	No Insulation
Day Time	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Day Time	Concrete Steel Framed Above Plasterboard	No Insulation
Bedroom	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Night Time 1	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 4	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bedroom 5	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Living	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Laundry	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4
Bath	Concrete, Plasterboard with Steel Frame	Bulk Insulation R4

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Day Time 1	1	Downlights - LED	150	Sealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Day Time	1	Downlights - LED	150	Sealed
Bedroom	7	Downlights - LED	150	Sealed
Night Time 1	2	Downlights - LED	150	Sealed
Night Time 1	1	Exhaust Fans	300	Sealed
Bedroom 4	5	Downlights - LED	150	Sealed
Bedroom 5	5	Downlights - LED	150	Sealed
Living	7	Downlights - LED	150	Sealed
Laundry	1	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bath	1	Downlights - LED	150	Sealed

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom	1	900
Bedroom 4	1	900
Bedroom 5	1	900

Roof *type*

Construction	Insulation [R-value]	Reflective wrap* [yes/no]	Solar absorptance	Roof shade [colour]
Waterproofing Membrane	No Added Insulation, No air Gap		0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
Ceiling	90.00mm x 40.00mm	900	0.75	None
Internal Wall	90.00mm x 40.00mm	600	0.75	None
External Wall	90.00mm x 40.00mm	600	0.75	None

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Heating system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Performance	Hot water CER* zone

Hot water system

Appliance/ system type	Fuel type	Performance	Hot water CER* zone
No Data Available			

Lighting

Lighting power density [W/m^2] (default assumption 5W/m^2)
No Data Available

Cooking

Cooktop type	Oven type
No Data Available	

Pool/spa equipment

Appliance/ system type	Volume [Litres]	Star rating	Recommended pump capacity [W]
No Data Available			

Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

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

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
CER	Clean Energy Regulator
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Modelled airtightness	the air permeability rate determined by software inputs when generating this rating. This is for informational purposes only and not suitable for assessing compliance.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER). NatHERS uses a 10-year STC.
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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 attached to the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)