

# Nationwide House Energy Rating Scheme — Class 1 summary

## NatHERS Certificate No. DMXSAI09OV

Generated on 27 May 2022 using FirstRate5 v5.3.2a

### Property

**Address** 14 Mitchell Street, Condell Park, NSW,  
2200

**Lot/DP**

**NatHERS climate zone**

### Accredited assessor



Millard Perez

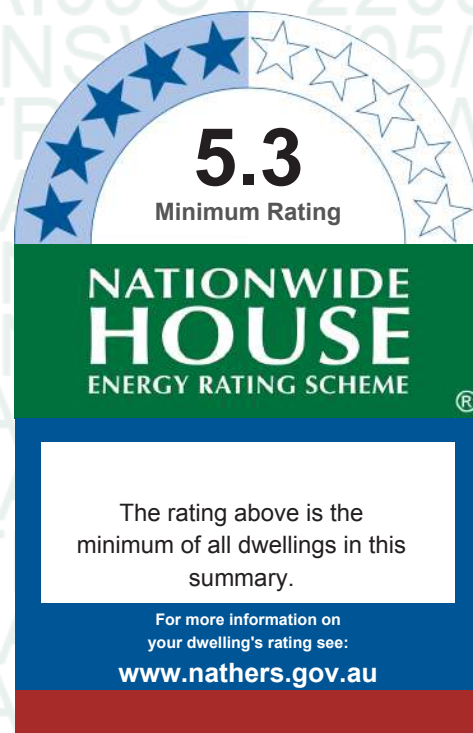
Thermperform

millard@thermperform.com.au

+61402366704

**Accreditation No.** 101510

**Assessor Accrediting Organisation** ABSA



### Verification

To verify this certificate, scan the QR code or visit

<https://www.fr5.com.au/QRCodeLanding?PublicId=DMXSAI09OV&GrpCert=1> When using either link, ensure you are visiting [www.fr5.com.au](http://www.fr5.com.au).

### Summary of all dwellings

Certificate number and link	Unit number	Heating load (MJ/m <sup>2</sup> /p.a.)	Cooling load (MJ/m <sup>2</sup> /p.a.)	Total load (MJ/m <sup>2</sup> /p.a.)	Star rating
JYQG2R6UHG-01	1	33.7	14	47.7	6.3
C5102529RZ	1A	30.3	15.3	45.6	6.4
8EP2O2Q306-01	2	39.4	21.6	61	5.3
WD3WX2CHAC	2A	37.8	17.5	55.3	5.7

### National Construction Code (NCC) requirements

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

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

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

## Explanatory notes

### About this report

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

### Accredited Assessors

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

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

### Disclaimer

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

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. JYQG2R6UHG-01

Generated on 26 May 2022 using FirstRate5: 5.3.2a (3.21)

### Property

**Address** 1, 14 Mitchell Street, Condell Park, NSW, 2200  
**Lot/DP** D/368772  
**NCC Class\*** Class 1a  
**Type** New Home

### Plans

**Main plan** 22-06/May 2022  
**Prepared by** Jay Design

### Construction and environment

<b>Assessed floor area (m<sup>2</sup>)*</b>		<b>Exposure type</b>
Conditioned*	143.8	suburban
Unconditioned*	42.8	<b>NatHERS climate zone</b>
Total	186.6	56 Mascot AMO
Garage	27.7	



### Accredited assessor

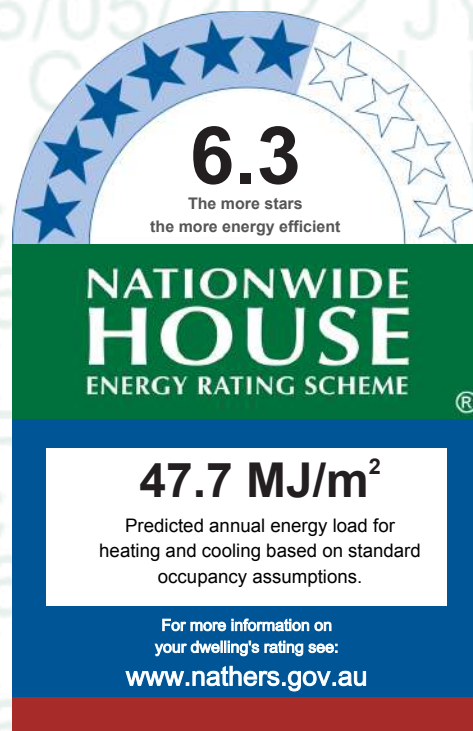
**Name** Millard Perez  
**Business name** Thermperform  
**Email** millard@thermperform.com.au  
**Phone** +61402366704  
**Accreditation No.** 101510  
**Assessor Accrediting Organisation** ABSA  
**Declaration of interest** Declaration completed: no conflicts

### National Construction Code (NCC) requirements

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

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

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### Thermal performance

<b>Heating</b>	<b>Cooling</b>
<b>33.7</b>	<b>14</b>
<b>MJ/m<sup>2</sup></b>	<b>MJ/m<sup>2</sup></b>

### About the rating

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

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## Certificate Check

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### Genuine certificate

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Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

### Ceiling penetrations\*

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

### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

### Exposure\*

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

### Provisional\* values

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

## Additional Notes

Number of ceiling penetrations have been confirmed.

Dark specified to roof and glazed unit frames to suit Dwelling 2.

## 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-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
TIM-002-01 W	Timber B SG Clear	5.4	0.63	0.6	0.66

### Custom\* windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	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*
Garage	ALM-002-01 A	06-21 ASW	600	2100	sliding	45.0	N	No
GF Bathroom	ALM-002-01 A	06-06 ASW	600	600	sliding	45.0	N	No

Laundry	ALM-002-01 A	06-09 ASW	600	900	sliding	45.0	N	No
Entry/Hall/Kitchen/Family	ALM-002-01 A	09-12 ASW	900	1200	sliding	45.0	N	No
Entry/Hall/Kitchen/Family	ALM-002-01 A	06-18 ASW	600	1800	sliding	45.0	N	No
Entry/Hall/Kitchen/Family	ALM-002-01 A	24-46 ASSD	2400	4600	sliding	72.0	W	No
Entry/Hall/Kitchen/Family	TIM-002-01 W	Entry Sidelight	2400	600	fixed	0.0	E	No
Bed 3	ALM-002-01 A	06-15 ASW	600	1500	sliding	45.0	N	No
FF Bathroom	ALM-002-01 A	06-09 ASW	600	900	sliding	45.0	N	No
Bed 2	ALM-002-01 A	06-15 ASW	600	1500	sliding	45.0	N	No
Master Bed/WIR	ALM-002-01 A	24-21 ASD	2400	2100	sliding	45.0	W	No
Master Ensuite	ALM-002-01 A	06-06 ASW	600	600	sliding	45.0	W	No
Lounge/Hall	ALM-002-01 A	15-08 ADH	1500	800	double_hung	45.0	N	No
Lounge/Hall	ALM-002-01 A	15-15 AFW	1500	1500	fixed	0.0	E	No
Lounge/Hall	ALM-002-01 A	15-18 AFW	1500	1800	fixed	0.0	E	No

## Roof window type and performance value

### Default\* roof windows

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

### Custom\* roof windows

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

## Roof window schedule

Location	Window ID	Window no.	Opening %	Area (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

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

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	2870	100.0	E
Entry/Hall/Kitch/Family	2400	1000	100.0	E

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	FR5 - Double Brick	0.5	Medium		No
2	TPM - Brick Cavity Lined	0.5	Medium		No
3	TPM - Parti Wall Brick Cavity	0.5	Medium	Polyurethane rigid foamed aged (k = 0.028) (R2.0)	No
4	TPM - Brick Veneer	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
5	TPM - Weatherboard	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

## External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	1	2700	3954	E	500	No
Garage	2	2700	7003	N	0	Yes
Garage	2	2700	804	W	2713	Yes
Garage	2	2700	2540	S	0	Yes
GF Bathroom	2	2700	1282	N	800	Yes
Laundry	2	2700	1572	N	800	Yes
Entry/Hall/Kitch/Family	2	2700	804	E	2687	Yes
Entry/Hall/Kitch/Family	2	2700	7501	N	0	Yes
Entry/Hall/Kitch/Family	2	2700	6257	W	3016	Yes
Entry/Hall/Kitch/Family	3	2700	15195	S	0	No
Entry/Hall/Kitch/Family	2	2700	2193	E	0	Yes
Bed 3	4	2600	3007	N	0	Yes
FF Bathroom	4	2600	1601	N	0	Yes
Bed 2	4	2600	3007	N	0	Yes
Master Bed/WIR	4	2600	2304	N	0	Yes
Master Bed/WIR	4	2600	4074	W	2690	Yes
Master Bed/WIR	3	2600	4607	S	0	No
Master Ensuite	4	2600	2202	N	0	Yes
Master Ensuite	4	2600	2100	W	2690	Yes
Stair Void	3	2600	8046	S	0	No
Lounge/Hall	5	2600	4709	N	0	Yes
Lounge/Hall	3	2600	1304	S	0	No
Lounge/Hall	4	2600	2295	E	3438	Yes
Lounge/Hall	5	2600	3176	S	2200	Yes
Lounge/Hall	5	2600	3981	E	360	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
1	TPM - Single Brick Lined	28.3	
2	FR5 - Internal Plasterboard Stud Wall	119.4	

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	TPM - CSOG: Slab on Ground	27.7	Enclosed	R0.0	Tiles
GF Bathroom	TPM - CSOG: Slab on Ground	4	Enclosed	R0.0	Tiles
Laundry	TPM - CSOG: Slab on Ground	5	Enclosed	R0.0	Tiles
Entry/Hall/Kitch-/Family	TPM - CSOG: Slab on Ground	5.4	Enclosed	R0.0	Tiles
Entry/Hall/Kitch-/Family	TPM - CSOG: Slab on Ground	58.4	Enclosed	R0.0	Tiles
Bed 3	FR5 - 300mm concrete slab Lined	12	Enclosed	R0.0	Tiles
FF Bathroom	FR5 - 300mm concrete slab Lined	5.2	Enclosed	R0.0	Tiles
FF Bathroom	FR5 - 300mm concrete slab Lined	0.9	Elevated	R0.0	Tiles
Bed 2	FR5 - 300mm concrete slab Lined	11.4	Enclosed	R0.0	Tiles
Bed 2	FR5 - 300mm concrete slab Lined	0.6	Elevated	R0.0	Tiles
Master Bed/WIR	FR5 - 300mm concrete slab Lined	23.8	Enclosed	R0.0	Tiles
Master Ensuite	FR5 - 300mm concrete slab Lined	4.6	Enclosed	R0.0	Tiles
Stair Void	No Floor	8.4	Enclosed	R0.0	No Floor
Lounge/Hall	FR5 - 300mm concrete slab Lined	28.6	Enclosed	R0.0	Tiles
Lounge/Hall	FR5 - 300mm concrete slab Lined	1.7	Elevated	R0.0	Tiles

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	FR5 - 300mm concrete slab Lined	R0.0	No
GF Bathroom	FR5 - 300mm concrete slab Lined	R0.0	No
Laundry	FR5 - 300mm concrete slab Lined	R0.0	No
Entry/Hall/Kitch-/Family	Plasterboard	R0.0	No
Entry/Hall/Kitch-/Family	FR5 - 300mm concrete slab Lined	R0.0	No
Bed 3	Plasterboard	R3.0	Yes
FF Bathroom	Plasterboard	R3.0	Yes
FF Bathroom	Plasterboard	R3.0	Yes
Bed 2	Plasterboard	R3.0	Yes
Bed 2	Plasterboard	R3.0	Yes
Master Bed/WIR	Plasterboard	R3.0	Yes
Master Ensuite	Plasterboard	R3.0	Yes

Stair Void	Plasterboard	R3.0	Yes
Lounge/Hall	Plasterboard	R3.0	Yes
Lounge/Hall	Plasterboard	R3.0	Yes

### Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Entry/Hall/Kitch/Family	1	Exhaust Fans	160	Sealed
Bed 3	4	Downlights	120	Sealed
FF Bathroom	2	Downlights	120	Sealed
Bed 2	4	Downlights	120	Sealed
Master Bed/WIR	10	Downlights	120	Sealed
Master Ensuite	2	Downlights	120	Sealed
Stair Void	3	Downlights	120	Sealed
Lounge/Hall	12	Downlights	120	Sealed

### Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

### Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 300mm: 300mm Suspended Slab	0.0	0.5	Medium
Cont:Attic-Continuous	1.3	0.7	Dark



## Explanatory Notes

### About this report

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

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

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

### Accredited assessors

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

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

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

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The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way. Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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

## Glossary

<b>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<b>Assessed floor area</b>	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
<b>Ceiling penetrations</b>	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
<b>Conditioned</b>	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
<b>Custom windows</b>	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
<b>Default windows</b>	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
<b>Entrance door</b>	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
<b>Exposure category - exposed</b>	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
<b>Exposure category - open</b>	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
<b>Exposure category - suburban</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category - protected</b>	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
<b>Horizontal shading feature</b>	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.

<b>National Construction Code (NCC) Class</b>	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> .
<b>Opening Percentage</b>	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
<b>Provisional value</b>	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at <a href="http://www.nathers.gov.au">www.nathers.gov.au</a>
<b>Reflective wrap</b> (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
<b>Roof window</b>	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
<b>Shading device</b>	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
<b>Shading features</b>	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
<b>Solar heat gain coefficient (SHGC)</b>	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
<b>Skylight</b> (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b>	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
<b>Vertical shading features</b>	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. C5102529RZ

Generated on 17 May 2022 using FirstRate5: 5.3.2a (3.21)

### Property

**Address** 1A, 14 Mitchell Street, Condell Park, NSW, 2200  
**Lot/DP** D/368772  
**NCC Class\*** Class 1a  
**Type** New Home

### Plans

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**Prepared by** Jay Design

### Construction and environment

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Conditioned*	48.7	suburban
Unconditioned*	7.4	<b>NatHERS climate zone</b>
Total	56.1	56 Mascot AMO
Garage	-	



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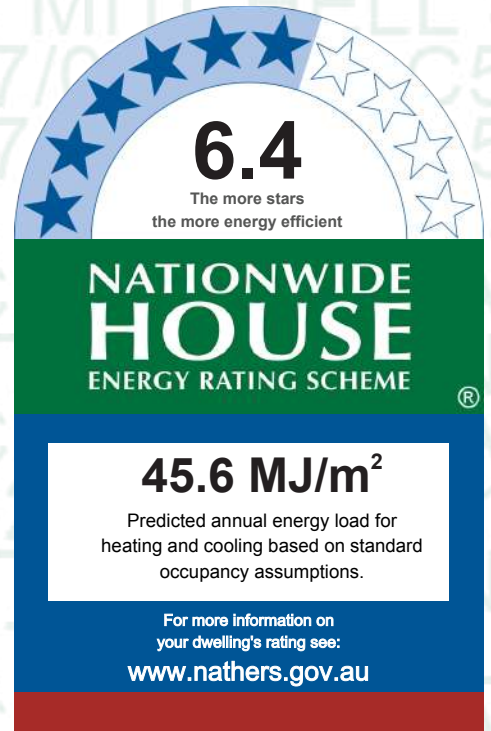
**Name** Millard Perez  
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<b>Heating</b>	<b>Cooling</b>
<b>30.3</b>	<b>15.3</b>
<b>MJ/m<sup>2</sup></b>	<b>MJ/m<sup>2</sup></b>

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Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

### Exposure\*

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

### Provisional\* values

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

## Additional Notes

Number of ceiling penetrations have been confirmed.

Dark specified to roof as 'default' only to suit 'warm climate zone 5' per NatHERS tech note.

## 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-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74

### Custom\* windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	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*
G-Laundry	ALM-002-01 A	09-09 ASW	900	900	sliding	45.0	W	No
G-Bath	ALM-002-01 A	09-06 ASW	900	600	sliding	45.0	S	No
G-Bed 2	ALM-002-01 A	09-15 ASW	900	1500	sliding	45.0	E	No



G-Bed 1	ALM-002-01 A	09-15 ASW	900	1500	sliding	45.0	N	No
G-Kitch/Entry/Lounge	ALM-002-01 A	09-15 ASW	900	1500	sliding	45.0	N	No
G-Kitch/Entry/Lounge	ALM-002-01 A	21-18 ASD	2100	1800	sliding	45.0	W	No
G-Kitch/Entry/Lounge	ALM-002-01 A	09-12 ASW	900	1200	sliding	45.0	S	No

## Roof window type and performance value

Default\* roof windows

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

Custom\* roof windows

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

## Roof window schedule

Location	Window ID	Window no.	Opening %	Area (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

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

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
G-Kitch/Entry/Lounge	2100	820	100.0	N

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	TPM - Weatherboard	0.5	Medium	Glass fibre batt: R1.0 (R1.0)	No

## External wall schedule



Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
G-Laundry	1	2600	1804	N	4087	Yes
G-Laundry	1	2600	1804	W	444	Yes
G-Laundry	1	2600	1804	S	344	Yes
G-Bath	1	2600	2600	S	344	Yes
G-Bed 2	1	2400	3506	S	344	Yes
G-Bed 2	1	2400	2744	E	344	Yes
G-Bed 1	1	2600	2701	E	344	Yes
G-Bed 1	1	2600	3506	N	344	Yes
G-Bed 1	1	2600	601	W	8743	Yes
G-Kitch/Entry/Lounge	1	2600	1203	N	980	Yes
G-Kitch/Entry/Lounge	1	2600	606	E	5146	Yes
G-Kitch/Entry/Lounge	1	2600	5098	N	344	Yes
G-Kitch/Entry/Lounge	1	2600	3743	W	2349	Yes
G-Kitch/Entry/Lounge	1	2600	3599	S	344	Yes

### Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	37.2	

### Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
G-Laundry	TPM - CSOG: Slab on Ground	3.3	Enclosed	R0.0	Tiles
G-Bath	TPM - CSOG: Slab on Ground	4.2	Enclosed	R0.0	Tiles
G-Bed 2	TPM - CSOG: Slab on Ground	9.6	Enclosed	R0.0	Tiles
G-Bed 1	TPM - CSOG: Slab on Ground	9.5	Enclosed	R0.0	Tiles
G-Kitch/Entry/Lounge	TPM - CSOG: Slab on Ground	29.6	Enclosed	R0.0	Tiles

### Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
G-Laundry	Plasterboard	R3.3	No
G-Bath	Plasterboard	R3.3	No
G-Bed 2	Plasterboard	R3.3	No
G-Bed 1	Plasterboard	R3.3	No
G-Kitch/Entry/Lounge	Plasterboard	R3.3	No

### Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
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G-Laundry	1	Downlights	120	Sealed
G-Bath	2	Downlights	120	Sealed
G-Bed 2	4	Downlights	120	Sealed
G-Bed 1	4	Downlights	120	Sealed
G-Kitch/Entry/Lounge	12	Downlights	120	Sealed
G-Kitch/Entry/Lounge	1	Exhaust Fans	160	Sealed

## Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.7	Dark
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.5	Medium

## Explanatory Notes

### About this report

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

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

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

### Accredited assessors

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

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

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

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

### Disclaimer

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

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way. Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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

## Glossary

<b>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<b>Assessed floor area</b>	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
<b>Ceiling penetrations</b>	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
<b>Conditioned</b>	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
<b>Custom windows</b>	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
<b>Default windows</b>	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
<b>Entrance door</b>	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
<b>Exposure category - exposed</b>	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
<b>Exposure category - open</b>	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
<b>Exposure category - suburban</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category - protected</b>	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
<b>Horizontal shading feature</b>	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.

<b>National Construction Code (NCC) Class</b>	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> .
<b>Opening Percentage</b>	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
<b>Provisional value</b>	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at <a href="http://www.nathers.gov.au">www.nathers.gov.au</a>
<b>Reflective wrap</b> (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
<b>Roof window</b>	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
<b>Shading device</b>	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
<b>Shading features</b>	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
<b>Solar heat gain coefficient (SHGC)</b>	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
<b>Skylight</b> (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b>	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
<b>Vertical shading features</b>	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. 8EP2O2Q306-01

Generated on 26 May 2022 using FirstRate5: 5.3.2a (3.21)

### Property

**Address** 2, 14 Mitchell Street, Condell Park, NSW, 2200  
**Lot/DP** D/368772  
**NCC Class\*** Class 1a  
**Type** New Home

### Plans

**Main plan** 22-06/May 2022  
**Prepared by** Jay Design

### Construction and environment

<b>Assessed floor area (m<sup>2</sup>)*</b>		<b>Exposure type</b>
Conditioned*	144	suburban
Unconditioned*	42.9	<b>NatHERS climate zone</b>
Total	186.9	56 Mascot AMO
Garage	27.7	



### Accredited assessor

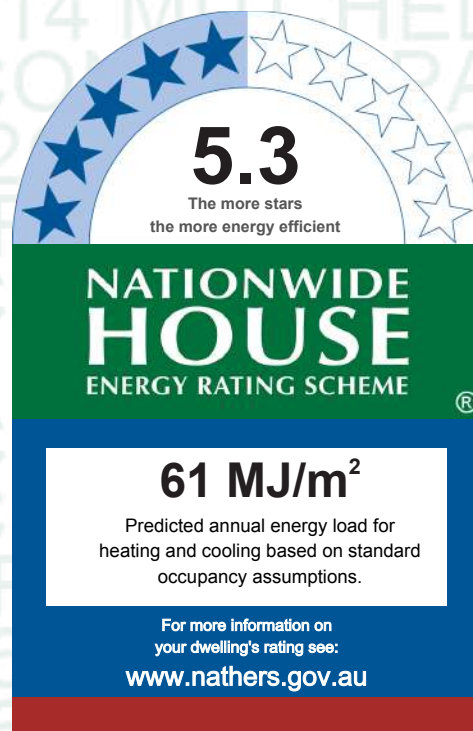
**Name** Millard Perez  
**Business name** Thermperform  
**Email** millard@thermperform.com.au  
**Phone** +61402366704  
**Accreditation No.** 101510  
**Assessor Accrediting Organisation** ABSA  
**Declaration of interest** Declaration completed: no conflicts

### National Construction Code (NCC) requirements

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

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

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



### Thermal performance

<b>Heating</b>	<b>Cooling</b>
<b>39.4</b>	<b>21.6</b>
<b>MJ/m<sup>2</sup></b>	<b>MJ/m<sup>2</sup></b>

### About the rating

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

### Verification

To verify this certificate, scan the QR code or visit <https://www.fr5.com.au/QRCodeLanding?PublicId=8EP2O2Q306-01> When using either link, ensure you are visiting [www.FR5.com.au](http://www.FR5.com.au).





## Certificate Check

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

### Genuine certificate

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

### Ceiling penetrations\*

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

### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

### Exposure\*

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

### Provisional\* values

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

## Additional Notes

Number of ceiling penetrations have been confirmed.

Dark specified to roof and glazed unit frames to meet Basix caps and advised.

## 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-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
TIM-002-01 W	Timber B SG Clear	5.4	0.63	0.6	0.66

### Custom\* windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	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*
Garage	ALM-002-01 A	06-21 ASW	600	2100	sliding	45.0	S	No
GF Bathroom	ALM-002-01 A	06-06 ASW	600	600	sliding	45.0	S	No

\* Refer to glossary.

Laundry	ALM-002-01 A	06-09 ASW	600	900	sliding	45.0	S	No
Entry/Hall/Kitchen/Family	TIM-002-01 W	Entry Sidelight	2400	600	fixed	0.0	E	No
Entry/Hall/Kitchen/Family	ALM-002-01 A	24-46 ASSD	2400	4600	sliding	72.0	W	No
Entry/Hall/Kitchen/Family	ALM-002-01 A	09-12 ASW	900	1200	sliding	45.0	S	No
Entry/Hall/Kitchen/Family	ALM-002-01 A	06-18 ASW	600	1800	sliding	45.0	S	No
Bed 3	ALM-002-01 A	06-15 ASW	600	1500	sliding	45.0	S	No
FF Bathroom	ALM-002-01 A	06-09 ASW	600	900	sliding	45.0	S	No
Bed 2	ALM-002-01 A	06-15 ASW	600	1500	sliding	45.0	S	No
Master Bed/WIR	ALM-002-01 A	24-21 ASD	2400	2100	sliding	45.0	W	No
Master Ensuite	ALM-002-01 A	06-06 ASW	600	600	sliding	45.0	W	No
Lounge/Hall	ALM-002-01 A	15-15 AFW	1500	1500	fixed	0.0	E	No
Lounge/Hall	ALM-002-01 A	06-40 AFW (Highlight)	600	3980	fixed	0.0	E	No
Lounge/Hall	ALM-002-01 A	15-08 ADH	1500	800	double_hung	45.0	E	No
Lounge/Hall	ALM-002-01 A	15-15 AFW	1500	1500	fixed	0.0	E	No
Lounge/Hall	ALM-002-01 A	15-18 AFW	1500	1800	fixed	0.0	S	No

## Roof window type and performance value

### Default\* roof windows

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

### Custom\* roof windows

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

## Roof window schedule

Location	Window ID	Window no.	Opening %	Area (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

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

## External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	2870	100.0	E
Entry/Hall/Kitch/Family	2400	1000	100.0	E

## External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	TPM - Brick Cavity Lined	0.5	Medium		No
2	FR5 - Double Brick	0.5	Medium		No
3	TPM - Brick Cavity Lined	0.5	Medium	Polyurethane rigid foamed aged (k = 0.028) (R1.8)	No
4	TPM - Parti Wall Brick Cavity	0.5	Medium	Polyurethane rigid foamed aged (k = 0.028) (R2.0)	No
5	TPM - Brick Veneer	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
6	TPM - Weatherboard	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

## External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	1	2700	2540	N	0	Yes
Garage	1	2700	804	W	2673	Yes
Garage	1	2700	7011	S	0	Yes
Garage	2	2700	3954	E	500	No
GF Bathroom	3	2700	1289	S	791	Yes
Laundry	3	2700	1608	S	791	Yes
Entry/Hall/Kitch/Family	3	2700	2193	E	0	Yes
Entry/Hall/Kitch/Family	4	2700	15217	N	0	No
Entry/Hall/Kitch/Family	3	2700	6257	W	2979	Yes
Entry/Hall/Kitch/Family	3	2700	7519	S	0	Yes
Entry/Hall/Kitch/Family	3	2700	804	E	2679	Yes
Bed 3	5	2600	3007	S	0	No
FF Bathroom	5	2600	1601	S	0	No
Bed 2	5	2600	3007	S	0	No
Master Bed/WIR	4	2600	4607	N	0	No
Master Bed/WIR	5	2600	4074	W	2690	Yes
Master Bed/WIR	5	2600	2304	S	0	No
Master Ensuite	5	2600	2100	W	2690	Yes
Master Ensuite	5	2600	2202	S	0	No
Stair Void	4	2600	8046	N	0	No
Lounge/Hall	6	3430	3981	E	360	No

\* Refer to glossary.

Lounge/Hall	6	3345	3176	N	313	Yes
Lounge/Hall	5	2600	2295	E	0	Yes
Lounge/Hall	4	2600	1304	N	0	No
Lounge/Hall	6	3388	4709	S	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
1	TPM - Single Brick Lined	33.3	
2	TPM - Insulated Single Brick Lined	12.1	Polyurethane rigid foamed aged (k = 0.028) (R1.8)
3	FR5 - Internal Plasterboard Stud Wall	103.3	

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	TPM - CSOG: Slab on Ground	27.7	Enclosed	R0.0	Tiles
GF Bathroom	TPM - CSOG: Slab on Ground	4.1	Enclosed	R0.0	Tiles
Laundry	TPM - CSOG: Slab on Ground	5.1	Enclosed	R0.0	Tiles
Entry/Hall/Kitch-/Family	TPM - CSOG: Slab on Ground	5.5	Enclosed	R0.0	Tiles
Entry/Hall/Kitch-/Family	TPM - CSOG: Slab on Ground	58.3	Enclosed	R0.0	Tiles
Bed 3	FR5 - 300mm concrete slab Lined	12	Enclosed	R1.8	Tiles
FF Bathroom	FR5 - 300mm concrete slab Lined	5.2	Enclosed	R1.8	Tiles
FF Bathroom	FR5 - 300mm concrete slab Lined	0.9	Elevated	R1.8	Tiles
Bed 2	FR5 - 300mm concrete slab Lined	11.4	Enclosed	R1.8	Tiles
Bed 2	FR5 - 300mm concrete slab Lined	0.6	Elevated	R1.8	Tiles
Master Bed/WIR	FR5 - 300mm concrete slab Lined	23.9	Enclosed	R1.8	Tiles
Master Ensuite	FR5 - 300mm concrete slab Lined	4.6	Enclosed	R1.8	Tiles
Stair Void	No Floor	8.4	Enclosed	R1.8	No Floor
Lounge/Hall	FR5 - 300mm concrete slab Lined	11.5	Enclosed	R1.8	Tiles
Lounge/Hall	FR5 - 300mm concrete slab Lined	17.1	Enclosed	R1.8	Tiles
Lounge/Hall	FR5 - 300mm concrete slab Lined	1.7	Elevated	R1.8	Tiles

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	FR5 - 300mm concrete slab Lined	R1.8	No
GF Bathroom	FR5 - 300mm concrete slab Lined	R1.8	No
Laundry	FR5 - 300mm concrete slab Lined	R1.8	No
Entry/Hall/Kitch-/Family	Plasterboard	R1.8	No
Entry/Hall/Kitch-/Family	FR5 - 300mm concrete slab Lined	R1.8	No
Bed 3	Plasterboard	R3.0	Yes

FF Bathroom	Plasterboard	R3.0	Yes
FF Bathroom	Plasterboard	R3.0	Yes
Bed 2	Plasterboard	R3.0	Yes
Bed 2	Plasterboard	R3.0	Yes
Master Bed/WIR	Plasterboard	R3.0	Yes
Master Ensuite	Plasterboard	R3.0	Yes
Stair Void	Plasterboard	R3.0	Yes
Lounge/Hall	Plasterboard	R3.0	Yes
Lounge/Hall	Plasterboard	R3.0	Yes
Lounge/Hall	Plasterboard	R3.0	Yes

### Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Entry/Hall/Kitch/Family	1	Exhaust Fans	160	Sealed
Bed 3	4	Downlights	120	Sealed
FF Bathroom	2	Downlights	120	Sealed
Bed 2	4	Downlights	120	Sealed
Master Bed/WIR	10	Downlights	120	Sealed
Master Ensuite	2	Downlights	120	Sealed
Stair Void	3	Downlights	120	Sealed
Lounge/Hall	12	Downlights	120	Sealed

### Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

### Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 300mm: 300mm Suspended Slab	0.0	0.5	Medium
Cont:Attic-Continuous	1.3	0.7	Dark



## Explanatory Notes

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<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
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# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. WD3WX2CHAC

Generated on 17 May 2022 using FirstRate5: 5.3.2a (3.21)

### Property

**Address** 2A, 14 Mitchell Street, Condell Park, NSW, 2200  
**Lot/DP** D/368772  
**NCC Class\*** Class 1a  
**Type** New Home

### Plans

**Main plan** 22-06/May 2022  
**Prepared by** Jay Design

### Construction and environment

<b>Assessed floor area (m<sup>2</sup>)*</b>		<b>Exposure type</b>
Conditioned*	48.7	suburban
Unconditioned*	7.4	<b>NatHERS climate zone</b>
Total	56.1	56 Mascot AMO
Garage	-	



### Accredited assessor

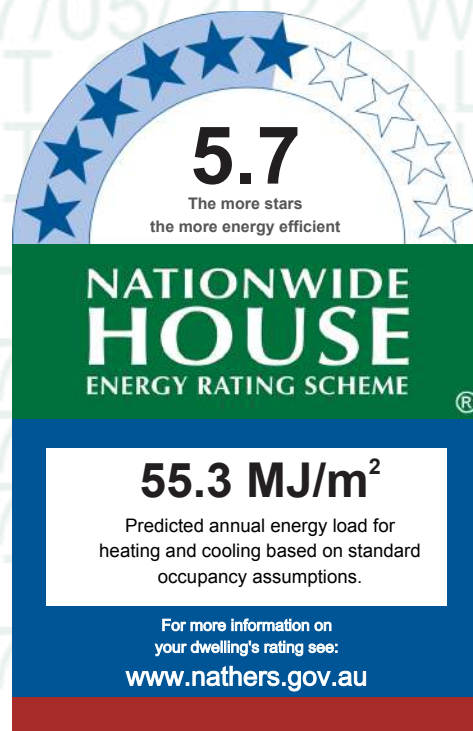
**Name** Millard Perez  
**Business name** Thermperform  
**Email** millard@thermperform.com.au  
**Phone** +61402366704  
**Accreditation No.** 101510  
**Assessor Accrediting Organisation** ABSA  
**Declaration of interest** Declaration completed: no conflicts

### National Construction Code (NCC) requirements

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

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

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



### Thermal performance

#### Heating Cooling

**37.8 17.5**  
**MJ/m<sup>2</sup> MJ/m<sup>2</sup>**

#### About the rating

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

### Verification

To verify this certificate, scan the QR code or visit <https://www.fr5.com.au/QRCodeLanding?PublicId=WD3WX2CHAC> When using either link, ensure you are visiting [www.FR5.com.au](http://www.FR5.com.au).



## Certificate Check

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

### Genuine certificate

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

### Ceiling penetrations\*

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

### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

### Exposure\*

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

### Provisional\* values

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

## Additional Notes

Number of ceiling penetrations have been confirmed.

Dark specified to roof as 'default' only to suit 'warm climate zone 5' per NatHERS tech note.

## 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-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74

### Custom\* windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	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*
G-Laundry	ALM-002-01 A	09-09 ASW	900	900	sliding	45.0	W	No
G-Bath	ALM-002-01 A	09-06 ASW	900	600	sliding	45.0	N	No
G-Bed 2	ALM-002-01 A	09-15 ASW	900	1500	sliding	45.0	E	No

\* Refer to glossary.



G-Bed 1	ALM-002-01 A	09-15 ASW	900	1500	sliding	45.0	S	No
G-Kitch/Entry/Lounge	ALM-002-01 A	09-12 ASW	900	1200	sliding	45.0	N	No
G-Kitch/Entry/Lounge	ALM-002-01 A	21-18 ASD	2100	1800	sliding	45.0	W	No
G-Kitch/Entry/Lounge	ALM-002-01 A	09-15 ASW	900	1500	sliding	45.0	S	No

## Roof window type and performance value

Default\* roof windows

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

Custom\* roof windows

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

## Roof window schedule

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

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

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

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
G-Kitch/Entry/Lounge	2100	820	100.0	S

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	TPM - Weatherboard	0.5	Medium	Glass fibre batt: R1.0 (R1.0)	No

## External wall schedule



Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
G-Laundry	1	2600	1804	N	344	Yes
G-Laundry	1	2600	1804	W	444	Yes
G-Laundry	1	2600	1804	S	4087	Yes
G-Bath	1	2600	2600	N	344	Yes
G-Bed 2	1	2400	2744	E	344	Yes
G-Bed 2	1	2400	3506	N	344	Yes
G-Bed 1	1	2600	601	W	8743	Yes
G-Bed 1	1	2600	3506	S	344	Yes
G-Bed 1	1	2600	2701	E	344	Yes
G-Kitch/Entry/Lounge	1	2600	3599	N	344	Yes
G-Kitch/Entry/Lounge	1	2600	3743	W	2349	Yes
G-Kitch/Entry/Lounge	1	2600	5098	S	344	Yes
G-Kitch/Entry/Lounge	1	2600	606	E	5146	Yes
G-Kitch/Entry/Lounge	1	2600	1203	S	980	Yes

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	37.2	

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
G-Laundry	TPM - CSOG: Slab on Ground	3.3	Enclosed	R0.0	Tiles
G-Bath	TPM - CSOG: Slab on Ground	4.2	Enclosed	R0.0	Tiles
G-Bed 2	TPM - CSOG: Slab on Ground	9.6	Enclosed	R0.0	Tiles
G-Bed 1	TPM - CSOG: Slab on Ground	9.5	Enclosed	R0.0	Tiles
G-Kitch/Entry/Lounge	TPM - CSOG: Slab on Ground	29.6	Enclosed	R0.0	Tiles

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
G-Laundry	Plasterboard	R3.3	No
G-Bath	Plasterboard	R3.3	No
G-Bed 2	Plasterboard	R3.3	No
G-Bed 1	Plasterboard	R3.3	No
G-Kitch/Entry/Lounge	Plasterboard	R3.3	No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
----------	----------	------	---------------	-----------------

G-Laundry	1	Downlights	120	Sealed
G-Bath	2	Downlights	120	Sealed
G-Bed 2	4	Downlights	120	Sealed
G-Bed 1	4	Downlights	120	Sealed
G-Kitch/Entry/Lounge	12	Downlights	120	Sealed
G-Kitch/Entry/Lounge	1	Exhaust Fans	160	Sealed

## Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

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Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.7	Dark
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