

ENERGY EFFICIENCY REPORT

BASIX® Thermal Comfort Simulation Assessment

SITE ADDRESS

Lot 322 (#8) Randall Street GLENMORE PARK 2745

LOCAL GOVERNMENT AUTHORITY

Penrith City Council

REFERENCE NUMBER

220402

COMMISSIONED BY

G.J. Gardner Homes

DEPOSITED PLAN NUMBER

1243735

CLIENT

Kym Mowat & Tracey Baker

CERTIFICATION DATE

17/09/2019

DWELLING TYPE

Double Storey

Disclaimer and Condition of Use

While care has been taken to ensure that information contained in this report is true and correct at the time of publication, changes in circumstances after the time of publication may impact on the accuracy of this information. Energy Advance Australia Pty Ltd (A.C.N. 60 933 2014) gives no warranty or assurance, and make no representation as to the accuracy of any information or advice contained, or that it is suitable for your intended use.

Energy Advance and its employees and agents shall have no liability (including but not limited to liability by reason of negligence) to any person using this report, for any loss, damage, cost or expense whether direct, indirect consequential or special, incurred by, or arising by reason of, any person using or relying on the report and whether caused by reason of any error, omission or misrepresentation in the report or otherwise. This report is not to be distributed, copied or modified in any way with the intention to disclose to any other party other than those involved in the project's specific approval process.

energy
advance 

PROJECT CERTIFICATION SUMMARY

DESIGN AND APPROVED SOFTWARE INFORMATION

SIMULATION ENGINE	Chenath Engine 3.13 (FirstRate5)	INTERNAL AREAS (m ²)	191.77
EXPOSURE	Suburban	OUTDOOR AREAS (m ²)	19.82
ORIENTATION:	99	GARAGE/CARPORT (m ²)	46.58
NatHERS CLIMATE ZONE:	28		
BCA (NCC) CLIMATE ZONE:	6		



108 Mains²
www.nathers.gov.au

Certificate Number: PWBXOVN6EH
Assessor Name: Claude-Francois Sookloll
Accreditation number: VIC/BDAV/14/1662
Certificate date: 17 Sep 2019
Dwelling address:
Lot 322 (#8) Randall Street GLENMORE PARK Penrith City Council NSW 2745
www.nathers.gov.au



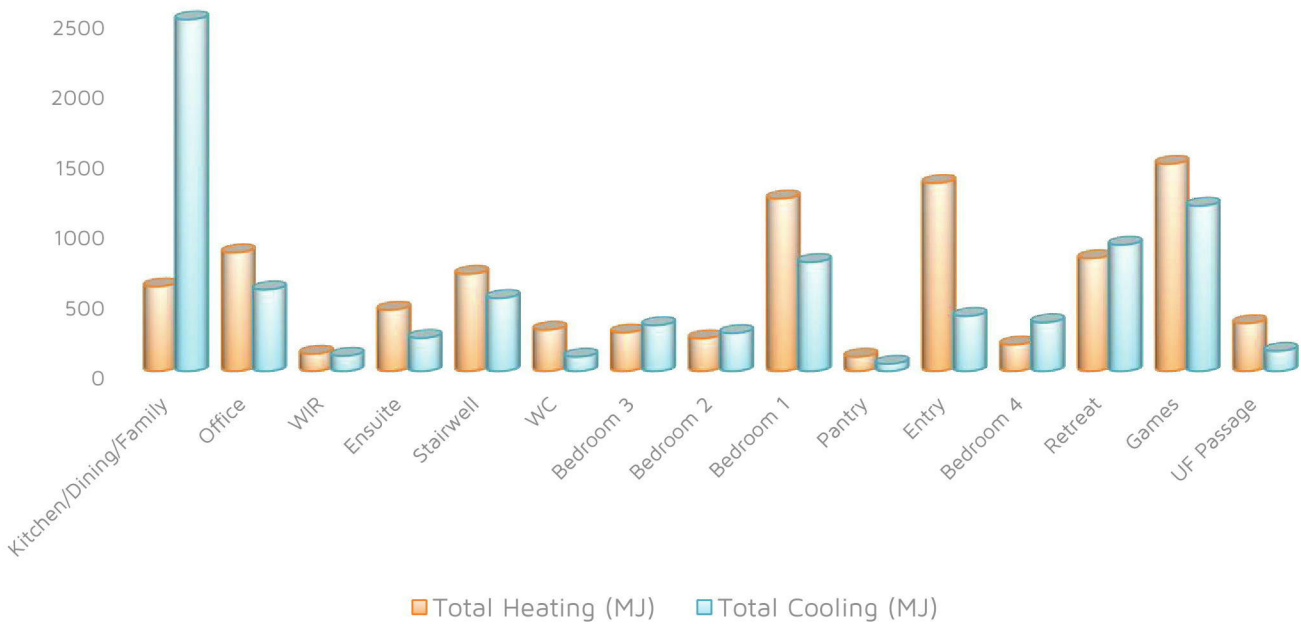
VIC/14/1662/16621

ASSESSMENT CALCULATIONS & SOFTWARE RESULTS

TARGET	(MJ/m ² .pa)	PROPOSED	(MJ/m ² .pa)	BUILD EFFICIENCY BENCHMARK
Heating:	55.7	Heating:	55.7	PASS: 0.0%
Cooling:	56.2	Cooling:	52.3	PASS: 7.2%
Total:	111.9	Total:	108.0	

ZONED ENERGY LOAD DISTRIBUTION TOTALS (MJ)

The heating and cooling loads indicated are the simulated annual energy usages (MJ) for this home. The higher the load, the more energy needed to achieve thermal comfort.



STATEMENT OF COMPLIANCE

I / We certify that we are specialists in the relevant discipline and the following design documents comply with the relevant requirements of the National Construction Code (NCC Volume One/Two as applicable) in relation to thermal performance and the relevant Australian Standards specified in this report.

ASSESSOR NAME:
SIGNATURE:

C. Sookloll
C. Sookloll

RELEVANT QUALIFICATION STATEMENT

Certificate IV in NatHERS Assessment (Credential Number: TRF0002560)
Residential Building Thermal Performance Assessment (91318NSW) Course
Assessor Accrediting Organisation (AAO) Accreditation Number: **VIC/BDAV/14/1662 | ABSA/61846**



BUILDING SPECIFICATION SUMMARY



EXTERNAL WALLS

	CONSTRUCTION TYPE	INSULATION	NOTES
EXTERNAL WALLS	Brick Masonry	None	Double Brick to Southern Elevation of Garage
	Brick Veneer	None	External Garage walls
	Framed	R1.5 Batts	Specified walls
	Brick Veneer	R1.5 Batts	Remainder of the external walls
<i>ADDITIONAL NOTES</i>	Location of Construction Material as per Drawings No insulation to external Garage walls Austral Everyday Light 'Unwind' Taubmans 'Ashen Mist'		

INTERNAL WALLS

	CONSTRUCTION TYPE	INSULATION	NOTES
INTERNAL WALLS	Framed	R2.0 Batts	Insulation to internal Garage & Laundry walls only
	Framed	None	No insulation to remainder of the internal walls
<i>ADDITIONAL NOTES</i>	None		

ROOF AND CEILING

	CONSTRUCTION TYPE	INSULATION	NOTES
ROOF	Colorbond (un-ventilated)	R1.3 Anticon	Approx. 22"5' Roof Pitch
CEILING	Plasterboard	R2.5 Batts	To House Area
	Plasterboard	None	To Garage Area
<i>ADDITIONAL NOTES</i>	Location of Roof Pitch/Type as per plans Roof Solar Absorptance: Dark No insulation to the Garage ceiling Colorbond Custom Orb 'Monument'		

FLOOR

	CONSTRUCTION TYPE	INSULATION	NOTES
FLOOR	300mm Waffle 85mm Slab	None	Ground Floor
	Timber Suspended	R4.0 Batts	GF Ceiling/UF Floor
<i>ADDITIONAL NOTES</i>	Floor Coverings modelled as per Drawings & NATHERS Protocols		

EXTERNAL GLAZING

GLASS TYPE	COLOUR	FRAME	U _w VALUE	SHGC	NOTES
Standard	Clear	Aluminium	6.34	0.75	Sliding Doors
Standard	Clear	Aluminium	6.43	0.76	Sliding Windows
Standard	Clear	Aluminium	6.85	0.64	Awning Windows
Standard	Clear	Aluminium	6.15	0.74	Fixed Windows
Standard	Clear	Timber	4.94	0.60	Casement Doors

Note: Only a +/-5% SHGC tolerance is allowed with this rating. NB: This tolerance ONLY applies to SHGC, the U-value can always be lower but not higher than the values stated in the report. If any of the windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be re-rated to confirm compliance.

ROOM AREAS

THERMAL MODELLING SOFTWARE AREA CALCULATIONS



Certificate Number: PWBX0VNGEH
 Assessor Name: Claude-Francois Sockkoll
 Accreditation number: VIC:BD/AV/14/1662
 Certificate date: 17 Sep 2019
 Dwelling address: Lot 322 (#8) Randall Street GLENMORE PARK Penrith City Council NSW 2745
 www.nathers.gov.au



108 MJ/m²
 www.nathers.gov.au



All areas are calculated by the modelling software and do not take into account internal wall area displacements. The areas above are a representation of room proportions only in relation to total areas

LIGHTING/PENETRATION CALCULATIONS

ARTIFICIAL LIGHTING CALCULATION ALLOWANCES

AREA WITHIN THE CLASS 1 BUILDING	191.77 m²		
Development Maximum	959 Watts	Area Wattage Allowance	5.0 W/m ²
AREA WITHIN THE CLASS 10 BUILDING	46.58 m²		
Development Maximum	186 Watts	Area Wattage Allowance	4.0 W/m ²
AREA WITHIN THE OUTDOOR AREAS	19.82 m²		
Development Maximum	59 Watts	Area Wattage Allowance	3.0 W/m ²

CEILING INULATION PENETRATION ALLOWANCE

CLASS 1 MAXIMUM PENETRATION ALLOWANCE	CLASS 1 MAXIMUM PENETRATION AREA (m ²)
0.5% TOTAL INSULATED CEILING AREA	0.96

The clearance required around downlights by "Australian Standard AS/NZS 3000 – 2007 Electrical Installations" (AS/NZS 3000), introduces a significant area of uninsulated ceiling and therefore increases heat loss and gain through the ceiling.

If approved fireproof downlight covers, which can be fully covered by insulation, are specified and noted on the electrical plan by the building designer or architect, then there is no need to allow for the ceiling penetration



NSW ADDITIONS: BUILDING FABRIC THERMAL INSULATION

NSW 3.12.1 APPLICATION OF NSW PART 3.12.1

- (a) Compliance with NSW 3.12.1.1 satisfies NSW P2.6.1(a) for thermal insulation and thermal breaks.
- (b) NSW PART 3.12.1 only applies to thermal insulation in a Class 1 or 10 building where a development consent specifies that the insulation is to be provided as part of the development.
- (c) In (b), the term development consent has the meaning given by the Environmental Planning and Assessment Act 1979.
- (d) The Deemed-to-Satisfy Provisions of this Part for thermal breaks apply to all Class 1 buildings and Class 10a buildings with a conditioned space.

NSW 3.12.1.1 COMPLIANCE WITH BCA PROVISIONS

- (a) Thermal insulation in a building must comply with the national BCA provisions of 3.12.1.1.
- (b) A thermal break must be provided between the external cladding and framing in accordance with national BCA provisions of—
 - (i) 3.12.1.2(c) for a metal framed roof; and
 - (ii) 3.12.1.4(b) for a metal framed wall.
- (c) Compensation for reduction in ceiling insulation must comply with the national BCA provisions of 3.12.1.2(e).
- (d) A floor with an in-slab or in-screed heating or cooling system must comply with the national BCA provisions of—
 - (i) 3.12.1.5(a)(ii), (iii) and (e) for a suspended floor; or
 - (ii) 3.12.1.5(c), (d) and (e) for a concrete slab-on-ground.

BUILDING SEALING & SERVICES

NSW 3.12.3 APPLICATION OF NSW PART 3.12.3

- (a) Compliance with NSW 3.12.3.1 satisfies NSW P2.6.1(b) for building sealing.
- (b) NSW Part 3.12.3 is not applicable to—
 - (i) existing buildings being relocated; or
 - (ii) Class 10a buildings—
 - (A) without a conditioned space; or
 - (B) for the accommodation of vehicles; or
 - (iii) parts of buildings that cannot be fully enclosed; or
 - (iv) a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or
 - (v) a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler.

NSW 3.12.3.1 COMPLIANCE WITH BCA PROVISIONS

The sealing of a building must comply with the national BCA provisions 3.12.3.1 to 3.12.3.6.

NSW 3.12.5 SERVICES: APPLICATION OF NSW PART 3.12.5

- (a) Compliance with NSW 3.12.5.1 satisfies NSW P2.6.2 for services.
- (b) NSW Part 3.12.5 is not applicable to existing services associated with existing buildings being relocated.

NSW 3.12.5.1 COMPLIANCE WITH BCA PROVISIONS

Services must comply with the national BCA provisions 3.12.5.0 to 3.12.5.3.



Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Assessor details

Accreditation number: **VIC/BDAV/14/1662**
Name: **Claude-Francois Sookloll**
Organisation: **Energy Advance**
Email: **energy@energyadvance.com.au**
Phone: **1300 850 228**
Declaration of interest: **No potential conflicts of interest to declare**
Software: **FirstRate5: 5.2.10b (3.13)**
AAO: **BDAV**

Overview

Dwelling details

Address: **Lot 322 (#8) Randall Street GLENMORE PARK**
Suburb: **Penrith City Council**
State: **NSW** Postcode: **2745**
Type: **New Home** NCC Class: **Class 1a**
Lot/DP number: **322|1243735** NatHERS climate zone: **28**
Exposure: **suburban**

Key construction and insulation materials

(see following pages for details)

Construction: Wall: **Brick Veneer & Framed**
Roof: **Colorbond**
Insulation: Floor: **Waffle Pod 300-85**
Wall: **R1.5 Batts (excl. Garage)**
Roof: **R2.5 Batts (excl. Garage)**
Floor: **Waffle Pod 300-85**
Glazing: **Aluminium & Timber**
Single Glazed

Net floor area (m²)

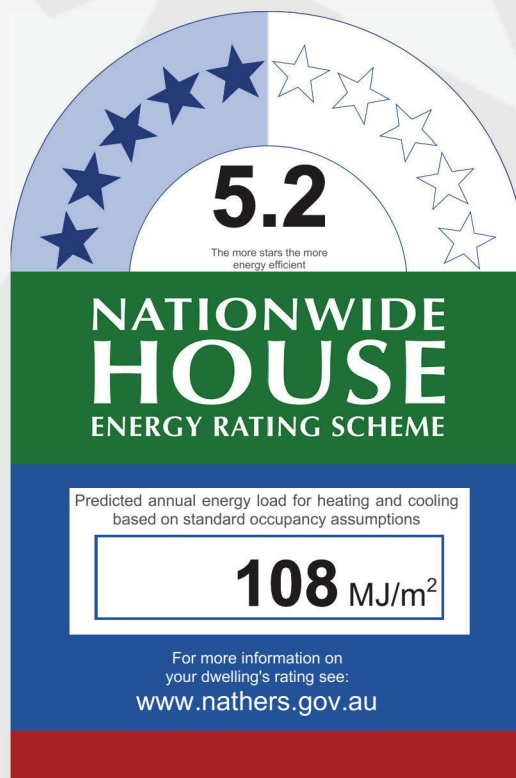
Conditioned: **149.5**
Unconditioned: **10.9**
Garage: **42.8**
TOTAL: **203.2**

Annual thermal performance loads (MJ/m²)

Heating: **55.7**
Cooling: **52.3**
TOTAL: **108**

Plan documents

Plan ref/date: **220402 | 17/09/2019**
Prepared by: **G. J. Gardner Homes**



Ceiling penetrations

(see following pages for details)

Sealed: **1**
Unsealed: **0**
TOTAL:** **1**

Principal downlight type:

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceeded in construction then this certificate IS NOT VALID and a new certificate is required. Loss of ceiling insulation for the penetrations listed has been taken into account with the rating.

No downlights modelled

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

NB: This tolerance ONLY applies to SHGC, the U-value can always be lower but not higher than the values stated on page 2.

If any of the windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be rerated to confirm compliance.

Scan to access this certificate online and confirm this is valid.



<https://www.fr5.com.au/QRCodeLanding?PublicId=PWBX0VN6EH>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
CAS-034-06 A	Urban Plus 597 Hinged Door Open In SG 638DLam	5.48	0.57
BRD-041-01 A	SIG Fixed Lite Externally Glazed (125mm) SG 4Clr	6.15	0.74
BRD-001-01 A	ESS Sliding Window (52mm) SG 3Clr	6.43	0.76
BRD-081-16 A	Signature Awning Window 100 SG 4Clr	6.85	0.64
BRD-020-01 A	Al Sliding Door SG 4Clr	6.34	0.75

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
CAS-034-06 A	D1	2040	820	S	Entry	No
BRD-041-01 A	W18	940	720	W	Entry	No
BRD-001-01 A	W3	600	1210	W	Office	No
BRD-081-16 A	W2	1460	850	S	Office	No
BRD-081-16 A	W1	1460	850	S	Office	No
BRD-020-01 A	D11	2100	2410	W	Games	No
BRD-001-01 A	W6	600	2650	E	Games	No
BRD-020-01 A	D10	2100	1810	N	Kitchen/Dining/Family	No
BRD-081-16 A	W7	720	2650	W	Kitchen/Dining/Family	No
BRD-001-01 A	W5	1460	2650	E	Kitchen/Dining/Family	No
BRD-020-01 A	D9	2100	1450	W	Laundry	No
BRD-001-01 A	W4	860	610	W	Powder	No
BRD-041-01 A	W18	1100	720	W	Stairwell	No
BRD-001-01 A	W10	600	2170	W	Bedroom 1	No
BRD-081-16 A	W9	1460	850	S	Bedroom 1	No
BRD-081-16 A	W8	1460	2170	S	Bedroom 1	No
BRD-081-16 A	W17	1460	850	S	Bedroom 1	No
BRD-001-01 A	W12	860	1810	N	Bedroom 2	No
BRD-001-01 A	W13	860	1810	N	Bedroom 3	No
BRD-001-01 A	W15	860	2170	E	Bedroom 4	No
BRD-001-01 A	W11	860	2650	W	Retreat	No
BRD-081-16 A	W16	1460	850	S	Ensuite	No
BRD-001-01 A	W14	860	1210	E	Bathroom	No

Roof windows and skylight type and performance value

* Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Building Features

ID	Window type	U-value	SHGC
----	-------------	---------	------

Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
----	---------------------------	------------------------	-------------	-----------	---------------	-----------------------

External wall type

Type	Insulation	Wall wrap
1 : GJG - Double Brick		No
2 : GJG - Brick Veneer -Uninsulated		No
3 : GJG - Brick Veneer -R1.5 Batts	Glass fibre batt: R1.5 (R1.5)	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	Glass fibre batt: R1.5 (R1.5)	Yes

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : GJG - Double Brick	14.8	S	Garage	Yes	Yes
2 : GJG - Brick Veneer -Uninsulated	20	E	Garage	No	No
2 : GJG - Brick Veneer -Uninsulated	5.3	N	Garage	Yes	Yes
3 : GJG - Brick Veneer -R1.5 Batts	3.5	S	Entry	Yes	Yes
3 : GJG - Brick Veneer -R1.5 Batts	1.9	N	Entry	Yes	No
3 : GJG - Brick Veneer -R1.5 Batts	5.5	W	Entry	No	No
3 : GJG - Brick Veneer -R1.5 Batts	6.8	W	Office	No	No
3 : GJG - Brick Veneer -R1.5 Batts	2.8	S	Office	No	No
3 : GJG - Brick Veneer -R1.5 Batts	4	S	Office	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	3.5	E	Office	Yes	Yes
3 : GJG - Brick Veneer -R1.5 Batts	10.9	W	Games	Yes	Yes
3 : GJG - Brick Veneer -R1.5 Batts	10.9	E	Games	Yes	Yes
3 : GJG - Brick Veneer -R1.5 Batts	9	N	Games	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	9.3	N	Kitchen/Dining/Family	Yes	Yes
3 : GJG - Brick Veneer -R1.5 Batts	10.6	W	Kitchen/Dining/Family	Yes	No
3 : GJG - Brick Veneer -R1.5 Batts	11.3	E	Kitchen/Dining/Family	Yes	No
3 : GJG - Brick Veneer -R1.5 Batts	2.7	W	Pantry	Yes	No
3 : GJG - Brick Veneer -R1.5 Batts	4.3	W	Laundry	Yes	No
3 : GJG - Brick Veneer -R1.5 Batts	4	W	Powder	No	No
3 : GJG - Brick Veneer -R1.5 Batts	1.7	N	Stairwell	Yes	Yes

* Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Building Features

3 : GJG - Brick Veneer -R1.5 Batts	5.2	W	Stairwell	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	10.3	W	Bedroom 1	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	3	S	Bedroom 1	No	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	6.9	S	Bedroom 1	No	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	3.3	E	Bedroom 1	Yes	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	4.9	S	Bedroom 1	Yes	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	7.7	N	Bedroom 2	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	0.8	N	Bedroom 2	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	7.6	W	Bedroom 2	Yes	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	8.5	N	Bedroom 3	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	7.6	E	Bedroom 3	No	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	7.5	E	Bedroom 4	No	Yes
3 : GJG - Brick Veneer -R1.5 Batts	9.1	W	Retreat	Yes	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	4	S	Ensuite	Yes	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	7.1	E	Ensuite	No	Yes
4 : GJG - Framed -R1.5 Batts Wall Wrap	6.9	E	Bathroom	No	Yes

Internal wall type

Type	Area (m ²)	Insulation
1 : GJG - Internal Stud Walls -R2.0 Batts	43.7	Glass fibre batt: R2.0 (R2.0)
2 : GJG - Internal Stud Walls	144.5	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Garage	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	14.6	Enclosed	R0.0	none
Garage	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	28.1	Enclosed	R0.0	none
Entry	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	18.4	Enclosed	R0.0	Tiles
Office	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	6.8	Enclosed	R0.0	Carpet
Games	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	14.4	Enclosed	R0.0	Tiles
Kitchen/Dining/Family	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	30.2	Enclosed	R0.0	Tiles
Pantry	FR5 - 300mm waffle pod, 85mm	1.9	Enclosed	R0.0	Tiles

* Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Building Features

	concrete (R0.8)				
Laundry	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	3.1	Enclosed	R0.0	Tiles
Powder	FR5 - 300mm waffle pod, 85mm concrete (R0.8)	2.5	Enclosed	R0.0	Tiles
Stairwell	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	8.5	Enclosed	R4.0	Carpet
UF Passage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	3.9	Enclosed	R4.0	Carpet
Bedroom 1	FLOOR - Framed External Suspended Floor (R4.0 Insulation)	1.3	Elevated	R4.0	Carpet
Bedroom 1	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	17.5	Enclosed	R4.0	Carpet
Bedroom 2	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	10.1	Enclosed	R4.0	Carpet
Bedroom 3	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	10.1	Enclosed	R4.0	Carpet
Bedroom 4	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	11.2	Enclosed	R4.0	Carpet
WIR	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	3.6	Enclosed	R4.0	Carpet
Retreat	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	13.1	Enclosed	R4.0	Carpet
Ensuite	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	4.8	Enclosed	R4.0	Tiles
Bathroom	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	5.2	Enclosed	R4.0	Tiles
WC	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	1.3	Enclosed	R4.0	Tiles

Ceiling type

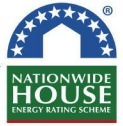
Location	Material	Added insulation	Roof space above
Garage	Plasterboard	R0.0	Yes
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Building Features

Entry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Entry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Entry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Office	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Games	Plasterboard	R4.0	No
Kitchen/Dining/Family	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Kitchen/Dining/Family	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Kitchen/Dining/Family	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Kitchen/Dining/Family	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Kitchen/Dining/Family	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Pantry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Laundry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Powder	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Stairwell	Plasterboard	R2.5	Yes
UF Passage	Plasterboard	R2.5	Yes
Bedroom 1	Plasterboard	R2.5	Yes
Bedroom 1	Plasterboard	R2.5	Yes
Bedroom 2	Plasterboard	R2.5	Yes
Bedroom 3	Plasterboard	R2.5	Yes
Bedroom 4	Plasterboard	R2.5	Yes
WIR	Plasterboard	R2.5	Yes
Retreat	Plasterboard	R2.5	Yes
Ensuite	Plasterboard	R2.5	Yes
Bathroom	Plasterboard	R2.5	Yes
WC	Plasterboard	R2.5	Yes

Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
WC	1	Exhaust Fans	250	250	Sealed

Ceiling fans

Location	Number	Diameter (mm)
----------	--------	---------------

Roof type

Material	Added insulation	Roof colour
----------	------------------	-------------

* Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Building Features

Cont:Attic-Continuous	1.3	dark
Ceil: Ceiling	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **PWBX0VN6EH**

Date of Certificate: **17 Sep 2019**

★ Star rating: **5.2**



Additional information

BCA Climate Zone: 6

Explanatory notes

About this report

Residential energy ratings address the quality of the building fabric i.e. walls, windows, floors and roof/ceilings. Ratings do not cover the energy or water efficiency of appliances including heating and cooling, hot water, dishwashers, ovens, fridges, TVs etc. or solar panel or water tank requirements. The efficiency or specification of these items is generally covered by other regulations, standards or guidelines.

General Information

A NatHERS House Energy Rating is a comprehensive, dynamic computer modelling evaluation of the floorplans, elevations and specifications to predict an energy load of a home. Not all of us use our homes in the same way, so ratings are generated using standard assumptions. This means homes can be compared across the country.

The actual energy consumption of your home may vary significantly from the predicted energy load figures in this report depending on issues such as the size of your household and your personal preferences, e.g. in terms of heating or cooling.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparative purposes between different house designs and for demonstrating that the design meets the required regulatory compliance.

Homes that are energy efficient use less energy, are warmer in winter, cooler in summer and cost less to run. The higher the star rating the more energy efficient.

This NatHERS House Energy Rating report was carefully prepared by your assessor on the basis of comprehensive modelling using standard procedures to rate your home using an underlying engine developed by the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO).

All information relating to energy loads presented in this report is based on a range of standard assumptions in order to allow for comparisons with reports prepared for other homes and to demonstrate minimum regulatory compliance. The standard assumptions include figures for occupancy, indoor air temperature and are based on a unique climate file for your region.

Accredited Assessors

To ensure you get a high-quality, professional NatHERS House Energy Rating report, you should always use an accredited assessor, 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. Non-accredited assessors do not have this level of quality assurance or any on-going training requirements.

If you have any questions or concerns about this report, please direct them to your assessor in the first instance.

If your assessor is unable to address your questions or concerns, please contact their AAO listed under 'assessor details'. You can also find a range of information about accredited assessors on the AAO websites.

Disclaimer

The energy values quoted are for comparison purposes only; they are not a prediction of actual energy use. This rating only applies to the floor plan, construction details, orientation and climate as submitted and included in the attached drawing set that bears a stamp with the same number as this certificate. Changes to any of these details could affect the rating.

Contact

For more information on the Nationwide House Energy Rating Scheme (NatHERS), visit www.nathers.gov.au

For more information on energy efficient design and insulation visit www.yourhome.gov.au