



Watershed Design Proposed Residential Development

To be built at 12 Peronne Avenue, Clontarf

Issue	File Ref	Description	Author	Date
A	20-0101	NatHERS Thermal Comfort and BASIX Assessment	MP	28/02/20

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Watershed Design. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.



Assessor: Manoela Place
Email: manoela@efficientliving.com.au

License Holder: Tracey Cools
Accreditation Number: HERA10033

BASIX Details:

NatHERS Certificate Number: 0004636247

BASIX adjusted conditioned area: 299 m²

BASIX adjusted un-conditioned area: 30m²

Area adjusted heating load: 40.3MJ/ m²/pa

Area adjusted cooling load: 19.9MJ/ m²/pa

Specification

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.3 thermal comfort simulation software, and assessed under the thermal simulation method of the BASIX Protocol.

The following specification was used to achieve the thermal performance values. Modelling proxies are used at times and if the buildings element details vary the thermal performance specification below shall take precedence.

If there is a change to this specification during design or construction phases, please contact Efficient Living for advice and if required an updated Certificate will be issued.

Floors

Concrete slab on ground with Kingspan K3 insulation or R1.9 equivalent.

Suspended concrete with R3.0 insulation (insulation only value) to open suspended areas

Concrete between levels, no insulation required where habitable rooms are above and below

Concrete between levels, R3.0 insulation between garage and floor above

External Walls

Cavity brick with Kingspan K8 cavity board or Rt3.1 (total system value) must be achieved

Metal wall cladding on framed walls with Kingspan K12 framing board or Rt3.0 (total system value) must be achieved

Note: No insulation is required to external Garage walls

External Colour: Default

Walls within dwellings

Plasterboard on studs with R2.5 insulation between Garage and habitable areas

Plasterboard on studs with R2.5 insulation between wet areas and habitable rooms

Plasterboard on studs, no insulation required to all remainder internal walls

Glazing Doors/Windows

High performance glazing with aluminum frame to all windows (excluding louvres)

U-value: 2.9 (equal to or lower than) SHGC: 0.51 (±10%)

Low-E glazing and aluminium frames to all louvre windows:

U-value: 4.30 (equal to or lower than) SHGC: 0.53 (±10%)

Given values are AFRC total window system values (glass and frame)

Skylights

Double glazing

Ceilings

Plasterboard ceiling with R5.0 insulation (insulation only value) where metal roof above

Plasterboard ceiling with R4.0 insulation (insulation only value) where concrete roof above

Ceiling Penetrations

Ceiling penetrations as per NatHERS certificate

Roof

Concrete with waterproof membrane

Metal roof with foil backed blanket ($R_{u1.3}$ and $R_{d1.3}$)

External Colour

Dark ($SA > 0.7$)

Floor coverings

Carpet to bedrooms, timber to hallways and family, tiles to bathroom and laundry, polished concrete to remainder areas.

External Shading

Eave lines as per stamped plans

Operable external shading screens to all west facing windows

Ventilation

All external doors have weather seals, all exhaust fans and chimneys have dampers, and down lights proposed will have capped fittings

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0004636247

Certificate Date: 28 Feb 2020

★ Star rating: 5.4



Assessor details

Accreditation number: **HERA10033**
Name: **Tracey Cools**
Organisation: **Efficient Living Pty Ltd**
Email: **admin@efficientliving.com.au**
Phone: **02 9970 6181**
Declaration of interest: **None**
Software: **BERS Pro v4.4.0.0 (3.21)**
AAO: **HERA**

Overview

Dwelling details

Street: **12 Peronne Avenue**
Suburb: **Clontarf**
State: **NSW** Postcode: **2093**
Type: **New Dwelling** NCC Class: **1A**
NatHERS climate zone: **56**
Lot/DP number: **A/344469** Exposure: **Open**

Key construction and insulation materials

(see following pages for details)

Construction: **Cavity Brick**
Waterproofing Membrane
Concrete Slab on Ground
Insulation: **R2.1 wall insulation**
R4.0 ceiling insulation
R3.0 floor insulation
Glazing: **ATB-006-03 B Al Thermally Broken B**
DG Argon Fill High Solar Gain low-E

Net floor area (m²)

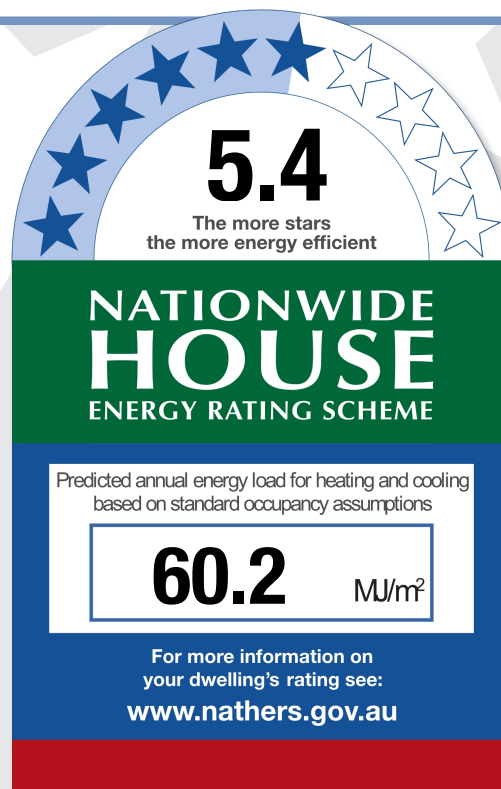
Conditioned: **299.0**
Unconditioned: **78.0**
Garage: **48.0**
TOTAL: **377.0**

Annual thermal performance loads (MJ/m²)

Heating: **40.3**
Cooling: **19.9**
TOTAL: **60.2**

Plan documents

Plan ref/date: **20-0101**
Prepared by: **Watershed Design**



Ceiling penetrations

(see following pages for details)

Sealed: **68**
Unsealed: **0**
TOTAL:** **68**

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.

Principle downlight type: **LED**

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 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.



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5.4



Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ATB-006-03 B	ATB-006-03 B Al Thermally Broken B DG Argon Fill High Solar Gain low-E -Clear	2.9	0.51
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
GF Lobby	ATB-006-03 B	n/a	2700	1200	W	Vertical Louvres, Vertical Blades
GF Lobby	ATB-006-03 B	n/a	950	2400	W	No Shading
GF Lobby	ATB-006-03 B	n/a	3600	850	N	No Shading
GF Lobby	ALM-004-03 A	n/a	3600	350	N	No Shading
GF Corridor	ATB-006-03 B	n/a	2400	850	N	No Shading
GF Corridor	ALM-004-03 A	n/a	2400	350	N	No Shading
GF Corridor	ATB-006-03 B	n/a	1500	2400	E	No Shading
GF Corridor	ATB-006-03 B	n/a	2400	2900	E	No Shading
Living GF	ALM-004-03 A	n/a	2600	520	S	No Shading
Living GF	ATB-006-03 B	n/a	2650	6100	W	Vertical Louvres, Horizontal Blades
Bedroom Guest	ATB-006-03 B	n/a	2400	1750	E	No Shading
Bedroom Guest	ALM-004-03 A	n/a	2400	900	E	No Shading
Ldy	ALM-004-03 A	n/a	2400	920	E	No Shading
WC	ALM-004-03 A	n/a	900	1200	E	No Shading
Kitchen/Living	ATB-006-03 B	n/a	2700	4000	W	Vertical Louvres, Horizontal Blades
Kitchen/Living	ATB-006-03 B	n/a	2700	7200	W	Vertical Louvres, Horizontal Blades
Kitchen/Living	ATB-006-03 B	n/a	2700	850	N	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2700	350	N	No Shading
Kitchen/Living	ATB-006-03 B	n/a	2700	3400	E	No Shading
Kitchen/Living	ATB-006-03 B	n/a	2700	3800	E	No Shading
WC	ALM-004-03 A	n/a	2700	350	N	No Shading
Stairs	ALM-004-03 A	n/a	2700	350	N	No Shading
Stairs	ATB-006-03 B	n/a	2700	850	N	No Shading
Stairs	ATB-006-03 B	n/a	2600	2400	E	No Shading
Pantry	ALM-004-03 A	n/a	2700	900	E	No Shading
Bedroom 4	ALM-004-03 A	n/a	2600	350	N	No Shading
Bedroom 4	ATB-006-03 B	n/a	2600	2300	W	Vertical Louvres, Horizontal Blades
Bedroom 4	ALM-004-03 A	n/a	2600	900	W	Vertical Louvres, Horizontal Blades
Bedroom 3	ATB-006-03 B	n/a	2600	2300	W	Vertical Louvres, Horizontal Blades
Bedroom 3	ALM-004-03 A	n/a	2600	900	W	Vertical Louvres, Horizontal Blades
Bedroom 2	ATB-006-03 B	n/a	2600	2300	W	Vertical Louvres, Horizontal Blades
Bedroom 2	ALM-004-03 A	n/a	2600	900	W	Vertical Louvres, Horizontal Blades
Bedroom 1	ALM-004-03 A	n/a	1700	850	E	No Shading
Bedroom 1	ATB-006-03 B	n/a	2600	3500	W	

* 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: **0004636247**

Certificate Date:

28 Feb 2020

★ Star rating:

5.4



Building features continued

Bedroom 1	ALM-004-03 A	n/a	2600	900	W	Vertical Louvres, Horizontal Blades
Ensuite	ALM-004-03 A	n/a	1700	850	E	Vertical Louvres, Horizontal Blades
Ensuite	ALM-004-03 A	n/a	2400	423	SW	No Shading
Ensuite	ALM-004-03 A	n/a	2400	640	SW	No Shading
Second Floor	ALM-004-03 A	n/a	2600	350	N	No Shading
Second Floor	ATB-006-03 B	n/a	2600	850	N	No Shading
Second Floor	ATB-006-03 B	n/a	2600	2400	E	No Shading
Second Floor	ATB-006-03 B	n/a	1700	2550	E	No Shading
Second Floor	ALM-004-03 A	n/a	1700	850	E	No Shading
Bathroom	ALM-004-03 A	n/a	1700	1800	E	No Shading
lounge	ATB-006-03 B	n/a	2700	3200	S	No Shading
lounge	ATB-006-03 B	n/a	1650	2600	W	Vertical Louvres, Horizontal Blades

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame	0.0	0.00

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
Ensuite	GEN-04-008a	1	0.5	E	None	No
Bathroom	GEN-04-008a	1	0.5	E	None	No

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil reflective both sides of the Bulk Insulation R2.1	Yes
EW-2	Weatherboard Cavity Panel Direct Fix	Foil reflective both sides of the Bulk Insulation R2.5	Yes
EW-3	Metal Clad Cavity Panel Direct Fix	Foil reflective both sides of the Bulk Insulation R2.5	Yes
EW-4	Metal Clad Cavity Panel Direct Fix	Foil reflective both sides of the Bulk Insulation R2.3	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Garage	EW-1	5890	3600	W	No	3100
GF Lobby	EW-1	2745	3600	W	No	1400
GF Lobby	EW-1	6925	3600	N	No	0
GF Corridor	EW-1	4225	2400	N	No	0
GF Corridor	EW-1	2595	2400	E	No	0
GF Corridor	EW-1	2995	2400	E	No	4575

Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0004636247**

Certificate Date:

28 Feb 2020

★ Star rating:

5.4



Building features continued

Living GF	EW-1	3095	3600	S	No	0
Living GF	EW-1	2625	3600	S	No	0
Living GF	EW-1	6345	3600	W	No	3100
Bedroom Guest	EW-1	4195	2400	E	No	0
Bedroom Guest	EW-1	4095	2400	S	No	0
Ldy	EW-1	2590	2400	E	No	0
WC	EW-1	1995	2400	E	No	0
WC	EW-1	2995	2400	S	No	2900
Kitchen/Living	EW-1	6800	2700	S	No	0
Kitchen/Living	EW-2	11800	2700	W	No	1200
Kitchen/Living	EW-1	1190	2700	N	No	0
Kitchen/Living	EW-3	700	2700	E	No	2400
Kitchen/Living	EW-3	600	2700	S	No	7800
Kitchen/Living	EW-3	7900	2700	E	No	800
WC	EW-1	2820	2700	N	No	0
Stairs	EW-1	4225	2700	N	No	0
Stairs	EW-3	2495	2700	E	No	0
Pantry	EW-3	3295	2700	E	No	0
Pantry	EW-3	2395	2700	S	No	1200
Bedroom 4	EW-4	4025	2600	N	No	0
Bedroom 4	EW-4	800	2600	S	No	11075
Bedroom 4	EW-4	3200	2600	W	No	1125
Bedroom 3	EW-4	3290	2600	W	No	1975
Bedroom 2	EW-4	3290	2600	W	No	2025
Bedroom 1	EW-4	2290	2600	E	No	1700
Bedroom 1	EW-4	3395	2600	S	No	375
Bedroom 1	EW-4	1965	2600	S	No	364
Bedroom 1	EW-4	4600	2600	W	No	600
Bedroom 1	EW-4	3500	2600	N	No	9800
Ensuite	EW-4	1795	2600	E	No	1700
Ensuite	EW-4	1100	2600	S	No	400
Ensuite	EW-4	424	2600	SE	No	354
Ensuite	EW-4	424	2600	SW	No	354
Ensuite	EW-4	1700	2600	S	No	400
Ensuite	EW-4	500	2600	SE	No	340
Ensuite	EW-4	635	2600	SW	No	250
Second Floor	EW-4	4225	2600	N	No	0
Second Floor	EW-4	2495	2600	E	No	0
Second Floor	EW-4	3595	2600	E	No	1700
Bathroom	EW-4	3695	2600	E	No	0
Bathroom	EW-4	2995	2600	S	No	7275
lounge	EW-2	4195	2700	S	No	800
lounge	EW-2	2600	2700	W	No	1700
lounge	EW-1	4195	2700	N	No	0
Lift 02	EW-1	1250	2700	N	No	0
Lift 01	EW-1	1250	3600	N	No	0
Lift 03	EW-4	1250	2600	N	No	0

Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0004636247**

Certificate Date:

28 Feb 2020

★ Star rating:

5.4



Building features continued

Internal wall type

Wall type	Area (m ²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	72.0	Bulk Insulation, No Air Gap R2.5	No
IW-2 - Single Skin Brick	37.0	No insulation	No
IW-3 - Cavity wall, direct fix plasterboard, single gap	153.0	No insulation	No
IW-4 - Cavity wall, direct fix plasterboard, single gap	60.0	Bulk Insulation, No Air Gap R2.5	No

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Garage	Concrete Slab on Ground 200mm	48.0	None	Bulk Insulation in Contact with Floor R1.9	Bare
GF Lobby	Concrete Slab on Ground 200mm	19.0	None	Bulk Insulation in Contact with Floor R1.9	Ceramic Tiles 8mm
GF Corridor	Concrete Slab on Ground 200mm	23.3	None	Bulk Insulation in Contact with Floor R1.9	Cork Tiles or Parquetry 8mm
Living GF	Concrete Slab on Ground 200mm	35.2	None	Bulk Insulation in Contact with Floor R1.9	Cork Tiles or Parquetry 8mm
Bedroom Guest	Concrete Slab on Ground 200mm	16.8	None	Bulk Insulation in Contact with Floor R1.9	Carpet 10mm
Ldy	Concrete Slab on Ground 200mm	7.4	None	Bulk Insulation in Contact with Floor R1.9	Ceramic Tiles 8mm
WC	Concrete Slab on Ground 200mm	5.8	None	Bulk Insulation in Contact with Floor R1.9	Ceramic Tiles 8mm
Kitchen/Living /Garage	Concrete Above Plasterboard 200mm	31.5		Bulk Insulation R3	Bare
Kitchen/Living /GF Lobby	Concrete Above Plasterboard 200mm	5.9		No Insulation	Bare
Kitchen/Living /GF Corridor	Concrete Above Plasterboard 200mm	13.3		No Insulation	Bare
Kitchen/Living /Living GF	Concrete Above Plasterboard 200mm	18.6		No Insulation	Bare
Kitchen/Living /Bedroom Guest	Concrete Above Plasterboard 200mm	17.1		No Insulation	Bare
Kitchen/Living /Ldy	Concrete Above Plasterboard 200mm	0.5		No Insulation	Bare
Kitchen/Living /WC	Concrete Above Plasterboard 200mm	0.8		No Insulation	Bare
WC/GF Lobby	Concrete Above Plasterboard 150mm	5.2		No Insulation	Ceramic Tiles 8mm
Stairs/GF Corridor	Concrete Above Plasterboard 200mm	10.4		No Insulation	Bare
Pantry/Ldy	Concrete Above Plasterboard 200mm	7.0		No Insulation	Ceramic Tiles 8mm
Pantry/WC	Concrete Above Plasterboard	1.4		No Insulation	Ceramic Tiles

Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0004636247**

Certificate Date:

28 Feb 2020

★ Star rating:

5.4



Building features continued

	200mm			8mm
Bedroom 4/Kitchen/Living	Concrete Above Plasterboard 200mm	7.4	No Insulation	Carpet 10mm
Bedroom 4/WC	Concrete Above Plasterboard 200mm	5.4	No Insulation	Carpet 10mm
Bedroom 3/Kitchen/Living	Concrete Above Plasterboard 200mm	14.6	No Insulation	Carpet 10mm
Bedroom 2/Kitchen/Living	Concrete Above Plasterboard 200mm	14.6	No Insulation	Carpet 10mm
Bedroom 1/Kitchen/Living	Concrete Above Plasterboard 200mm	20.0	No Insulation	Carpet 10mm
Bedroom 1	Suspended Concrete Slab 200mm	11.3	Totally Open	Bulk Insulation in Contact with Floor R3 Carpet 10mm
Ensuite/Kitchen/Living	Concrete Above Plasterboard 150mm	7.6	No Insulation	Ceramic Tiles 8mm
Second Floor/Kitchen/Living	Concrete Above Plasterboard 200mm	12.1	No Insulation	Carpet 10mm
Second Floor/Stairs	Concrete Above Plasterboard 200mm	10.3	No Insulation	Carpet 10mm
Bathroom/Kitchen/Living	Concrete Above Plasterboard 150mm	1.1	No Insulation	Ceramic Tiles 8mm
Bathroom/Pantry	Concrete Above Plasterboard 150mm	8.8	No Insulation	Ceramic Tiles 8mm
Bathroom	Suspended Concrete Slab 150mm	0.9	Totally Open	Bulk Insulation in Contact with Floor R3 Ceramic Tiles 8mm
lounge/GF Lobby	Concrete Above Plasterboard 150mm	7.5	No Insulation	Ceramic Tiles 8mm
lounge	Suspended Concrete Slab 150mm	3.3	Totally Open	Bulk Insulation in Contact with Floor R3 Ceramic Tiles 8mm
Lift 02/Lift 01	Concrete Above Plasterboard 200mm	1.7	No Insulation	Carpet 10mm
Lift 01	Concrete Slab on Ground 200mm	1.7	None	Bulk Insulation in Contact with Floor R1.9 Ceramic Tiles 8mm
Lift 03/Lift 02	Concrete Above Plasterboard 200mm	1.7	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Garage	Concrete, Plasterboard	Bulk Insulation R4	No
Garage	Concrete Above Plasterboard	Bulk Insulation R3	No
GF Lobby	Concrete, Plasterboard	Bulk Insulation R4	No
GF Lobby	Concrete Above Plasterboard	No Insulation	No
GF Corridor	Concrete, Plasterboard	Bulk Insulation R4	No
GF Corridor	Concrete Above Plasterboard	No Insulation	No
Living GF	Concrete, Plasterboard	Bulk Insulation	No

Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0004636247**

Certificate Date:

28 Feb 2020

★ Star rating:

5.4



Building features continued

		R4	
Living GF	Concrete Above Plasterboard	No Insulation	No
Bedroom Guest	Concrete, Plasterboard	Bulk Insulation R4	No
Bedroom Guest	Concrete Above Plasterboard	No Insulation	No
Ldy	Concrete, Plasterboard	Bulk Insulation R4	No
Ldy	Concrete Above Plasterboard	No Insulation	No
WC	Concrete, Plasterboard	Bulk Insulation R4	No
WC	Concrete Above Plasterboard	No Insulation	No
Kitchen/Living	Concrete, Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Concrete Above Plasterboard	No Insulation	No
WC	Concrete, Plasterboard	Bulk Insulation R4	No
WC	Concrete Above Plasterboard	No Insulation	No
Stairs	Concrete, Plasterboard	Bulk Insulation R4	No
Stairs	Concrete Above Plasterboard	No Insulation	No
Pantry	Concrete, Plasterboard	Bulk Insulation R4	No
Pantry	Concrete Above Plasterboard	No Insulation	No
Bedroom 4	Plasterboard	Bulk Insulation R5	Yes
Bedroom 3	Plasterboard	Bulk Insulation R5	Yes
Bedroom 2	Plasterboard	Bulk Insulation R5	Yes
Bedroom 1	Plasterboard	Bulk Insulation R5	Yes
Ensuite	Plasterboard	Bulk Insulation R5	Yes
Second Floor	Plasterboard	Bulk Insulation R5	Yes
Bathroom	Plasterboard	Bulk Insulation R5	Yes
lounge	Concrete, Plasterboard	Bulk Insulation R4	No
Lift 02	Concrete, Plasterboard	Bulk Insulation R4	No
Lift 02	Concrete Above Plasterboard	No Insulation	No
Lift 01	Concrete, Plasterboard	Bulk Insulation R4	No
Lift 01	Concrete Above Plasterboard	No Insulation	No
Lift 03	Plasterboard	Bulk Insulation R5	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
GF Lobby	3	Downlights - LED	150	Sealed

Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0004636247**

Certificate Date:

28 Feb 2020

★ Star rating:

5.4



Building features continued

GF Corridor	4	Downlights - LED	150	Sealed
Living GF	7	Downlights - LED	150	Sealed
Bedroom Guest	3	Downlights - LED	150	Sealed
Ldy	1	Downlights - LED	150	Sealed
Ldy	1	Exhaust Fans	300	Sealed
WC	1	Downlights - LED	150	Sealed
WC	1	Exhaust Fans	300	Sealed
Kitchen/Living	17	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
WC	1	Downlights - LED	150	Sealed
WC	1	Exhaust Fans	300	Sealed
Stairs	1	Downlights - LED	150	Sealed
Pantry	1	Downlights - LED	150	Sealed
Bedroom 4	2	Downlights - LED	150	Sealed
Bedroom 3	3	Downlights - LED	150	Sealed
Bedroom 2	3	Downlights - LED	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Second Floor	4	Downlights - LED	150	Sealed
Bathroom	2	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
lounge	2	Downlights - LED	150	Sealed

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Waterproofing Membrane	No Added Insulation, No air Gap	Medium
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.5	Dark

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Additional information

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 the 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 the 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

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1080860S_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Friday, 28 February 2020

To be valid, this certificate must be lodged within 3 months of the date of issue.



Planning,
Industry &
Environment

Project summary

Project name	12 Peronne Avenue, Clontarf_02
Street address	12 Peronne Avenue Clontarf 2093
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 344469
Lot no.	A
Section no.	-
Project type	separate dwelling house
No. of bedrooms	5

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

Description of project

Project address

Project name	12 Peronne Avenue, Clontarf_02
Street address	12 Peronne Avenue Clontarf 2093
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan 344469
Lot no.	A
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	5

Site details

Site area (m ²)	911
Roof area (m ²)	180
Conditioned floor area (m2)	295.0
Unconditioned floor area (m2)	28.0
Total area of garden and lawn (m2)	250

Assessor details and thermal loads

Assessor number	HERA10033
Certificate number	0004636247
Climate zone	56
Area adjusted cooling load (MJ/m ² .year)	20
Area adjusted heating load (MJ/m ² .year)	40

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.
























Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Landscape			
The applicant must plant indigenous or low water use species of vegetation throughout 160 square metres of the site.	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but ≤ 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 3000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 140 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) a tap that is located within 10 metres of the swimming pool in the development 		✓ ✓ ✓	✓ ✓ ✓
Swimming pool			

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must not have a volume greater than 26 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓


Floor and wall construction	Area
floor - concrete slab on ground	114.0 square metres
floor - suspended floor/open subfloor	12.0 square metres
floor - suspended floor above garage	All or part of floor area

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 5 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans + 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓ ✓ ✓	✓ ✓ ✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps: • at least 5 of the bedrooms / study; dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> at least 3 of the living / dining rooms; dedicated the kitchen; dedicated all bathrooms/toilets; dedicated the laundry; dedicated all hallways; dedicated 		    	    
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.			
The applicant must install a window and/or skylight in 4 bathroom(s)/toilet(s) in the development for natural lighting.			
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): solar (electric boosted)			
The applicant must install a timer for the swimming pool pump in the development.			
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 1 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.			
Other			
The applicant must install an induction cooktop & electric oven in the kitchen of the dwelling.			
The applicant must install a fixed outdoor clothes drying line as part of the development.			

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.