Nationwide House Energy Rating Scheme* — Multiple-dwelling summary

Certificate number: **0003754620** Certificate Date: **05 Apr 2019** ★Average Star rating: **6.4**

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**

Dwelling details

Street:	**1113 Oxford Falls Road**
Suburb:	**Frenchs Forest**
State:	**NSW**
Postcode:	**2086**

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

Summary of all dwellings

Certificate Details

Certificate number	Dwelling/Unit number	Heating load	Cooling load	Total load	Star Rating
0003751864	1.1.1	24.6	28.2	52.8	5.9
0003751872	1.1.2	37.7	18.3	56.0	5.7
0003752292	1.1.3	35.9	19.7	55.6	5.7
0003752284	1.1.4	31.8	21.4	53.2	5.9
0003751930	1.2.1	23.6	24.6	48.2	6.3
0003751922	1.2.2	26.2	23.9	50.2	6.1
0003751880	1.2.3	23.8	23.3	47.1	6.4
0003752276	1.2.4	42.4	28.3	70.7	4.8
0003751955	1.2.5	9.2	25.1	34.4	7.4
0003751948	1.2.6	10.0	21.5	31.5	7.6
0003752268	1.2.7	11.1	26.9	38.0	7.1
0003751989	2.1.1	5.6	28.6	34.2	7.4
0003751971	2.1.2	11.6	19.7	31.2	7.6
0003751997	2.2.1	17.1	25.3	42.5	6.8
0003752003	2.2.2	16.9	28.7	45.6	6.4

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

Summary of all dwellings continued

Certificate Details

Certificate number	Dwelling/Unit number	Heating load	Cooling load	Total load	Star Rating
0003752011	3.1.1	22.2	27.8	49.9	6.1
0003752029	3.2.1	20.7	29.5	50.2	6.1
0003752037	4.1.1	32.7	27.2	59.9	5.4
0003752300	4.1.2	22.5	17.1	39.6	6.9
0003752060	4.2.1	19.1	26.6	45.7	6.4
0003752326	4.2.2	9.2	25.7	34.9	7.3
0003752086	5.1.1	20.1	26.3	46.4	6.4
0003752094-03	5.1.2	16.9	22.6	39.6	6.9
0003752102	5.2.1	23.8	28.6	52.4	5.9
0003752110-03	5.2.2	2.5	26.5	29.0	7.8
0003752128	6.1.1	6.7	21.6	28.3	7.9
0003752367	6.1.2	24.9	18.4	43.3	6.7
0003752136	6.2.1	14.7	28.3	43.0	6.7
0003752359	6.2.2	21.6	29.5	51.1	5.9
0003752144	7.1.1	43.6	21.8	65.4	5.1
0003752151	7.1.2	33.4	28.8	62.1	5.3
0003752169	7.2.1	15.5	27.7	43.3	6.7
0003752177	7.2.2	17.9	27.3	45.2	6.4
0003752185	8.1.1	33.8	20.5	54.3	5.8
0003752193	8.1.2	43.6	18.4	62.0	5.3
0003752235	8.2.1	17.2	27.1	44.3	6.6
0003752201	8.2.2	25.4	24.4	49.8	6.1
0003752219	9.1.1	40.1	21.6	61.7	5.3
0003752227	9.1.2	42.3	20.8	63.1	5.2
0003752250-01	9.2.1	6.7	29.1	35.8	7.3
0003752243	9.2.2	16.8	20.0	36.8	7.2

Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751864** Certificate Date: **04 Apr 2019** ★Star rating: **5.9**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
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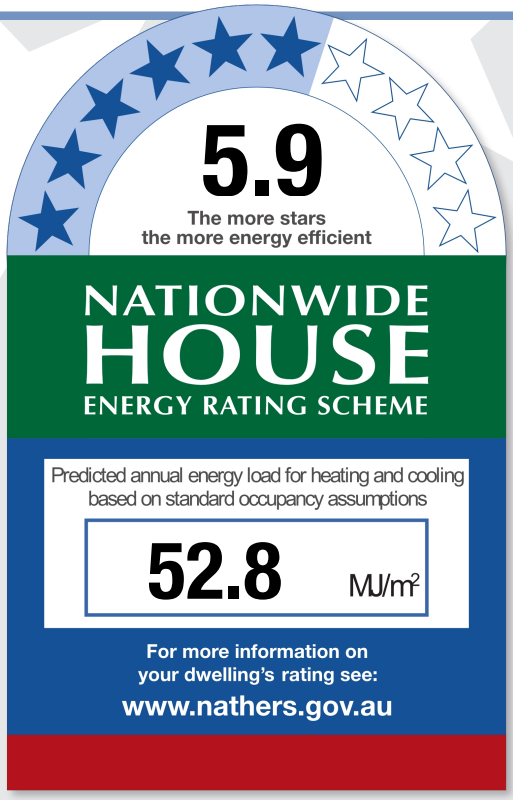

Overview

Dwelling details

Street:	**Unit 1.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **R0.5 floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**94.0**
Unconditioned:	**7.0**
Garage:	**0.0**
TOTAL:	**102.0**

Annual thermal performance loads (MJ/m²)

Heating:	**24.6**
Cooling:	**28.2**
TOTAL:	**52.8**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-004-03 A	n/a	3000	3800	SE	No Shading
Master_Bedroom/	ALM-004-03 A	n/a	3000	3100	SE	No Shading
Bedroom_2	ALM-004-03 A	n/a	3000	2600	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3200	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	5000	3000	NE	No	0
Kitchen/Living/	EW-1	3795	3000	SE	No	0
Master_Bedroom/	EW-1	3195	3000	SE	No	0
Bedroom_2	EW-1	2700	3000	NE	No	0
Bedroom_2	EW-1	3200	3000	SE	No	0
Bedroom_2	EW-1	650	3000	SW	No	0

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	63.0	No insulation	No
IW-2 - Cavity brick, plasterboard	74.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering

Building features continued

Kitchen/Living/	Suspended Concrete Slab 150mm	48.1	Open	Bulk Insulation in Contact with Floor R0.5	60/40 Carpet 10mm/Ceramic
Master_Bedroom/	Suspended Concrete Slab 150mm	34.0	Open	Bulk Insulation in Contact with Floor R0.5	60/40 Carpet 10mm/Ceramic
laundry	Suspended Concrete Slab 150mm	7.2	Open	Bulk Insulation in Contact with Floor R0.5	Ceramic Tiles 8mm
Bedroom_2	Suspended Concrete Slab 150mm	12.3	Open	Bulk Insulation in Contact with Floor R0.5	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Concrete, Plasterboard	No insulation	No
Master_Bedroom/	Concrete, Plasterboard	No insulation	No
laundry	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751864 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.9

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

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Contact

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

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751872** Certificate Date: **04 Apr 2019** ★Star rating: **5.7**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
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Software:	**BERS Pro v4.3.0.2d (3.13)**
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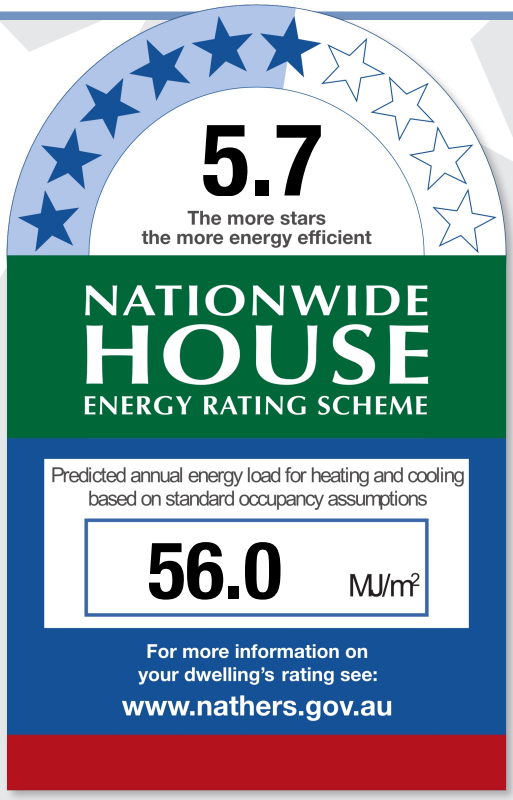

Overview

Dwelling details

Street:	**Unit 1.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **R0.5 floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**120.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**120.0**

Annual thermal performance loads (MJ/m²)

Heating:	**37.7**
Cooling:	**18.3**
TOTAL:	**56.0**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	4700	SW	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	2100	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	1400	W	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	2500	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4845	3000	SW	No	0
Bedroom_2	EW-1	2300	3000	SE	No	0
Bedroom_2	EW-1	3444	3000	W	No	0
Master_Bedroom/	EW-1	3899	3000	W	No	0

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Cavity brick, plasterboard	96.0	No Insulation	No
IW-2 - Single Skin Brick	85.0	No insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	55.6	Open	Bulk Insulation in Contact with Floor R0.5	60/40 Carpet 10mm/Ceramic

Building features continued

Bedroom_2	Suspended Concrete Slab 150mm	13.1	Open	Bulk Insulation in Contact with Floor R0.5 60/40 Carpet 10mm/Ceramic
Master_Bedroom/	Suspended Concrete Slab 150mm	33.0	Open	Bulk Insulation in Contact with Floor R0.5 80/20 Carpet 10mm/Ceramic
laundry/bathroo	Suspended Concrete Slab 150mm	18.0	Open	Bulk Insulation in Contact with Floor R0.5 80/20 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Master_Bedroom/	Concrete, Plasterboard	No insulation	No
laundry/bathroo	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751872 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.7

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752292** Certificate Date: **04 Apr 2019** ★Star rating: **5.7**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
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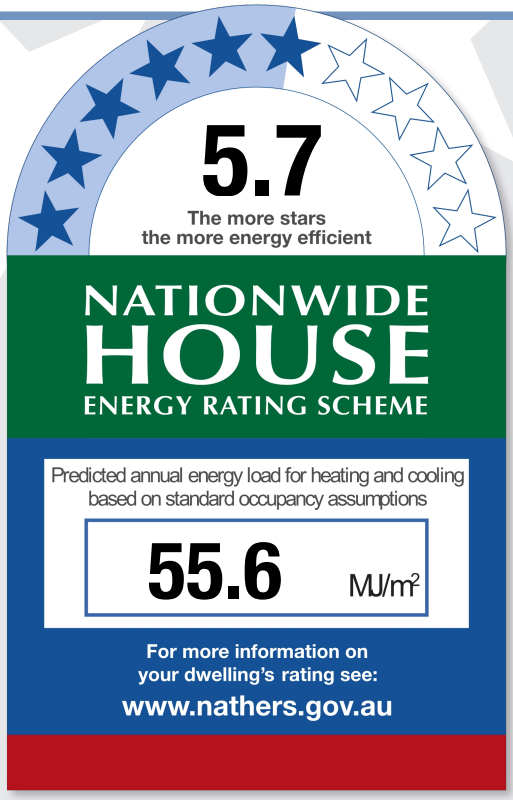

Overview

Dwelling details

Street:	**Unit 1.1.3, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**94.0**
Unconditioned:	**7.0**
Garage:	**0.0**
TOTAL:	**102.0**

Annual thermal performance loads (MJ/m²)

Heating:	**35.9**
Cooling:	**19.7**
TOTAL:	**55.6**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-002-03 A	n/a	3000	3800	NW	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	3100	NW	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	2600	SW	No Shading
Bedroom_2	ALM-002-03 A	n/a	2000	3200	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	3795	3000	NW	No	3000
Master_Bedroom/	EW-1	3195	3000	NW	No	950
Bedroom_2	EW-1	2700	3000	SW	No	3950
Bedroom_2	EW-1	3200	3000	NW	No	100
Bedroom_2	EW-1	650	3000	NE	No	3350

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	63.0	No insulation	No
IW-2 - Cavity brick, plasterboard	89.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living/	Suspended Concrete Slab 150mm	48.1	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom/		34.0	Open	No Insulation	

Building features continued

	Suspended Concrete Slab 150mm				60/40 Carpet 10mm/Ceramic
laundry	Suspended Concrete Slab 150mm	7.2	Open	No Insulation	Ceramic Tiles 8mm
Bedroom_2	Suspended Concrete Slab 150mm	12.3	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Concrete, Plasterboard	No insulation	No
Master_Bedroom/	Concrete, Plasterboard	No insulation	No
laundry	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752292 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.7

Additional information

Explanatory notes

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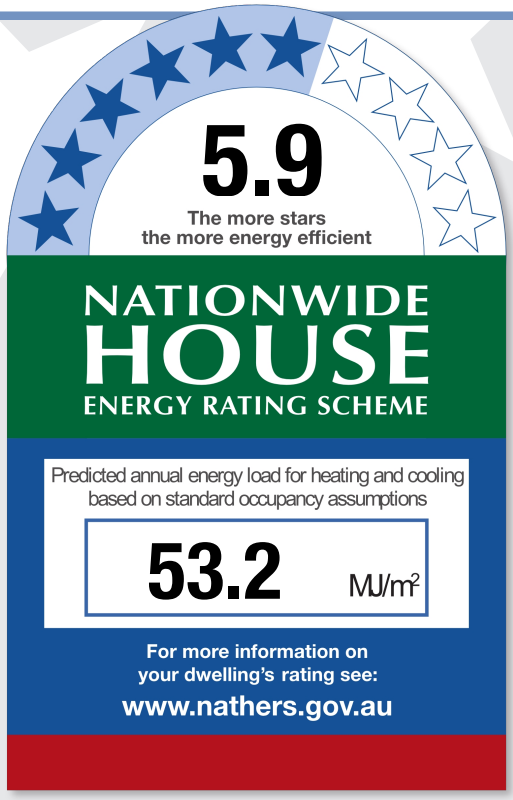
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752284** Certificate Date: **04 Apr 2019** ★Star rating: **5.9**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 1.1.4, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**109.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**109.0**

Annual thermal performance loads (MJ/m²)

Heating:	**31.8**
Cooling:	**21.4**
TOTAL:	**53.2**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	600	NW	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	6000	NW	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NW	No Shading
Master_Bedroom	ALM-001-03 A	n/a	3000	2000	NE	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	3000	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	3350	3000	NE	No	150
Kitchen/Living	EW-1	845	3000	NW	No	100
Kitchen/Living	EW-1	6145	3000	NW	No	2850
Master_Bedroom	EW-1	3250	3000	NW	No	700
Master_Bedroom	EW-1	2150	3000	NE	No	6350
Master_Bedroom	EW-1	3195	3000	SE	No	100
Bedroom_2	EW-1	3645	3000	NW	No	100

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	61.0	No insulation	No
IW-2 - Cavity brick, plasterboard	80.0	No Insulation	No

Floors

Building features continued

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	50.7	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	34.3	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	11.6	Open	No Insulation	Carpet 10mm
bathroom/laundr	Suspended Concrete Slab 150mm	12.8	Open	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
bathroom/laundr	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752284 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.9

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751930** Certificate Date: **04 Apr 2019** ★Star rating: **6.3**

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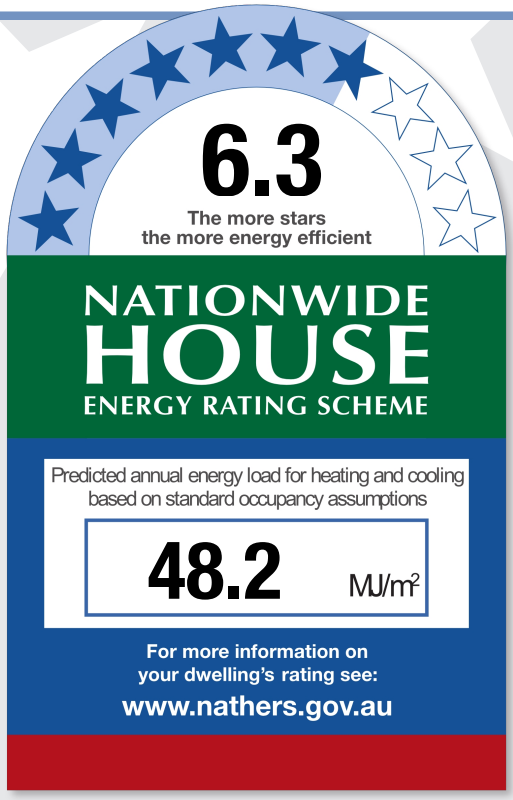
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 1.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

Net floor area (m²)

Conditioned:	**94.0**
Unconditioned:	**7.0**
Garage:	**0.0**
TOTAL:	**102.0**

Annual thermal performance loads (MJ/m²)

Heating:	**23.6**
Cooling:	**24.6**
TOTAL:	**48.2**

Window selection - default windows only

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Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-002-03 A	n/a	3000	3800	SE	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	3100	SE	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	2600	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3200	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	5000	3000	NE	No	100
Kitchen/Living/	EW-1	3795	3000	SE	No	3100
Master_Bedroom/	EW-1	3195	3000	SE	No	1050
Bedroom_2	EW-1	2700	3000	NE	No	3950
Bedroom_2	EW-1	3200	3000	SE	No	400
Bedroom_2	EW-1	650	3000	SW	No	3450

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	63.0	No insulation	No
IW-2 - Cavity brick, plasterboard	74.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering

Building features continued

Kitchen/Living/	Concrete Slab, Unit Below 150mm	48.1	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom/	Concrete Slab, Unit Below 150mm	34.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
laundry	Concrete Slab, Unit Below 150mm	7.2	None	No Insulation	Ceramic Tiles 8mm
Bedroom_2	Concrete Slab, Unit Below 150mm	12.3	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom/	Plasterboard	Bulk Insulation R3	Yes
laundry	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751930 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.3

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751922** Certificate Date: **04 Apr 2019** ★Star rating: **6.1**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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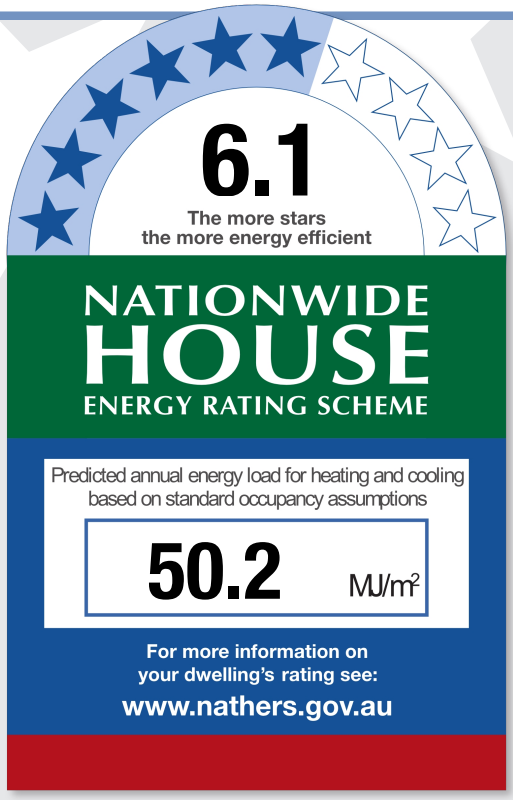

Overview

Dwelling details

Street:	**Unit 1.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**95.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**95.0**

Annual thermal performance loads (MJ/m²)

Heating:	**26.2**
Cooling:	**23.9**
TOTAL:	**50.2**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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

Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-002-03 A	n/a	3000	4000	SE	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	3200	SE	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	2000	SW	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	3000	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	3995	3000	SE	No	3000
Master_Bedroom/	EW-1	3250	3000	SE	No	900
Master_Bedroom/	EW-1	2100	3000	SW	No	7250
Bedroom_2	EW-1	2990	3000	SE	No	3000

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	46.0	No insulation	No
IW-2 - Cavity brick, plasterboard	89.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living/	Concrete Slab, Unit Below 150mm	49.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom/	Concrete Slab, Unit Below 150mm	34.3	None	No Insulation	60/40 Carpet 10mm/Ceramic

Building features continued

Bedroom_2	Concrete Slab, Unit Below 150mm	11.1	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom/	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751922 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.1

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751880** Certificate Date: **04 Apr 2019** ★Star rating: **6.4**

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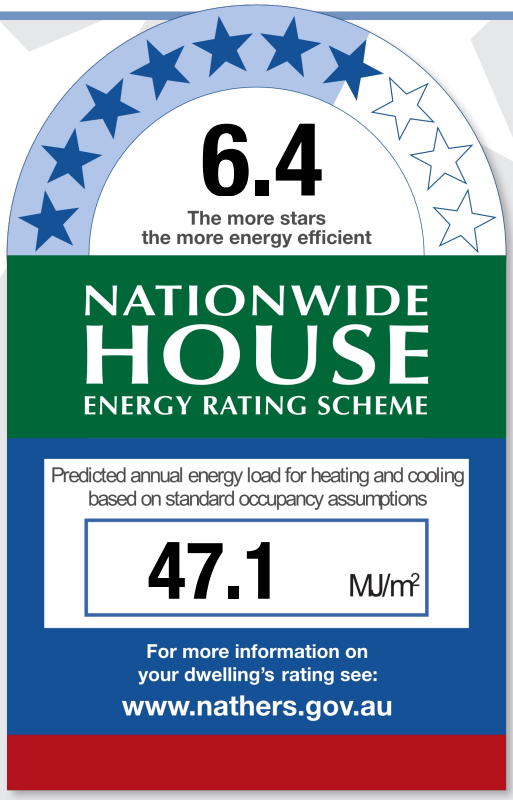
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 1.2.3, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**95.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**95.0**

Annual thermal performance loads (MJ/m²)

Heating:	**23.8**
Cooling:	**23.3**
TOTAL:	**47.1**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-002-03 A	n/a	3000	4000	SE	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	2000	NE	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	3200	SE	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	3000	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	3995	3000	SE	No	3000
Master_Bedroom/	EW-1	2100	3000	NE	No	7250
Master_Bedroom/	EW-1	3250	3000	SE	No	900
Bedroom_2	EW-1	2990	3000	SE	No	3000

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	46.0	No insulation	No
IW-2 - Cavity brick, plasterboard	89.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living/	Concrete Slab, Unit Below 150mm	49.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom/	Concrete Slab, Unit Below 150mm	34.3	None	No Insulation	60/40 Carpet 10mm/Ceramic

Building features continued

Bedroom_2	Concrete Slab, Unit Below 150mm	11.1	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom/	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751880 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.4

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752276** Certificate Date: **04 Apr 2019** ★Star rating: **4.8**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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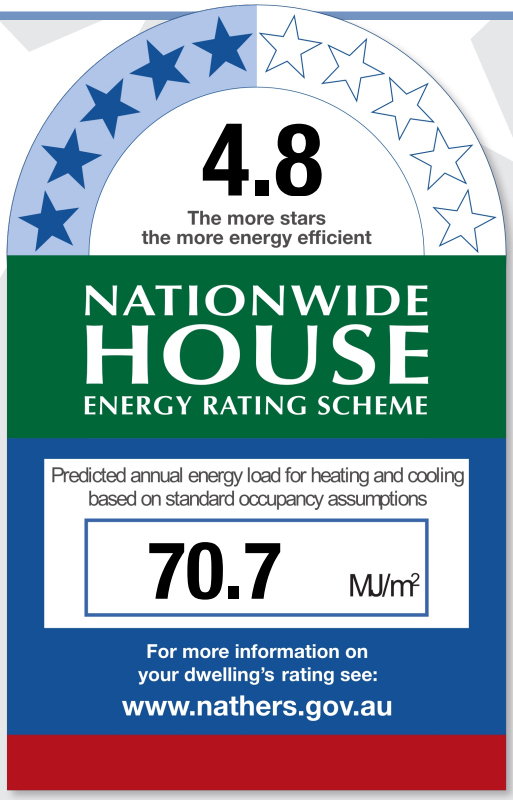

Overview

Dwelling details

Street:	**Unit 1.2.4, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**141.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**141.0**

Annual thermal performance loads (MJ/m²)

Heating:	**42.4**
Cooling:	**28.3**
TOTAL:	**70.7**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	2000	3400	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1800	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	5400	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	4400	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	3200	SW	No Shading
Bedroom_2	ALM-004-03 A	n/a	2000	2500	W	No Shading
Bedroom_2	ALM-004-03 A	n/a	3000	3000	SE	No Shading
Bedroom_3	ALM-001-03 A	n/a	2000	1400	NE	No Shading
Bedroom_3	ALM-001-03 A	n/a	2000	1500	SE	No Shading
Master_Bedroom/	ALM-004-03 A	n/a	3000	3200	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes
EW-2	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	11045	3000	SE	No	250
Kitchen/Living	EW-2	5454	3000	W	No	763
Kitchen/Living	EW-2	4500	3000	NW	No	5150
Kitchen/Living	EW-2	3295	3000	SW	No	4375
Bedroom_2	EW-2	3869	3000	W	No	180
Bedroom_2	EW-2	3200	3000	SE	No	8250
Bedroom_3	EW-2	1500	3000	NE	No	3500
Bedroom_3	EW-2	3095	3000	SE	No	250
Master_Bedroom/	EW-2	3245	3000	SE	No	1750

Building features continued

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	90.0	No insulation	No
IW-2 - Cavity brick, plasterboard	63.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	65.8	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	13.2	None	No Insulation	Carpet 10mm
laundry/entry	Concrete Slab, Unit Below 150mm	19.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_3	Concrete Slab, Unit Below 150mm	11.2	None	No Insulation	Carpet 10mm
Master_Bedroom/	Concrete Slab, Unit Below 150mm	31.6	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
laundry/entry	Plasterboard	Bulk Insulation R3	Yes
Bedroom_3	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom/	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added	Roof colour

Building features continued

	insulation	
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752276 **Certificate Date:** 04 Apr 2019 ★Star rating: 4.8

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751955** Certificate Date: **04 Apr 2019** ★Star rating: **7.4**

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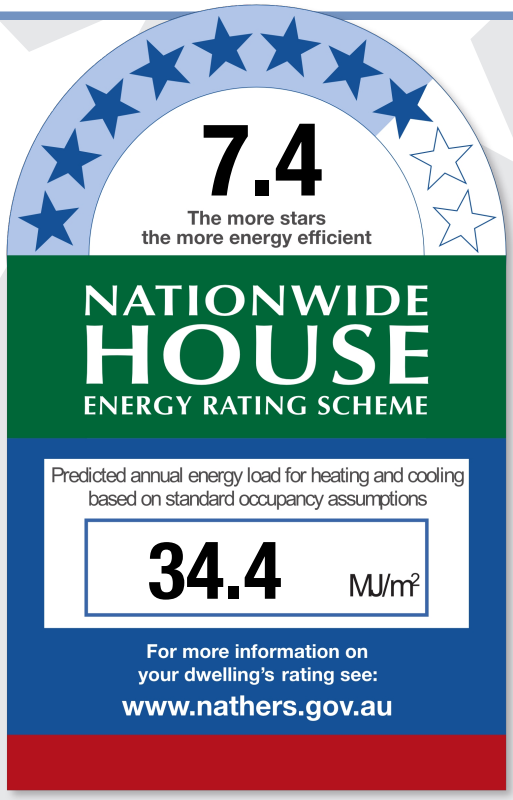
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 1.2.5, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**94.0**
Unconditioned:	**7.0**
Garage:	**0.0**
TOTAL:	**102.0**

Annual thermal performance loads (MJ/m²)

Heating:	**9.2**
Cooling:	**25.1**
TOTAL:	**34.4**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-002-03 A	n/a	3000	3800	NW	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	3100	NW	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	2600	SW	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3200	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	3795	3000	NW	No	3100
Master_Bedroom/	EW-1	3195	3000	NW	No	1050
Bedroom_2	EW-1	2700	3000	SW	No	5075
Bedroom_2	EW-1	3200	3000	NW	No	400
Bedroom_2	EW-1	650	3000	NE	No	11450

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	63.0	No insulation	No
IW-2 - Cavity brick, plasterboard	89.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living/	Concrete Slab, Unit Below 150mm	48.1	None	No Insulation	60/40 Carpet 10mm/Ceramic

Building features continued

Master_Bedroom/	Concrete Slab, Unit Below 150mm	34.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
laundry	Concrete Slab, Unit Below 150mm	7.2	None	No Insulation	Ceramic Tiles 8mm
Bedroom_2	Concrete Slab, Unit Below 150mm	12.3	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom/	Plasterboard	Bulk Insulation R3	Yes
laundry	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751955 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.4

Additional information

Explanatory notes

About this report

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Accredited Assessors

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Contact

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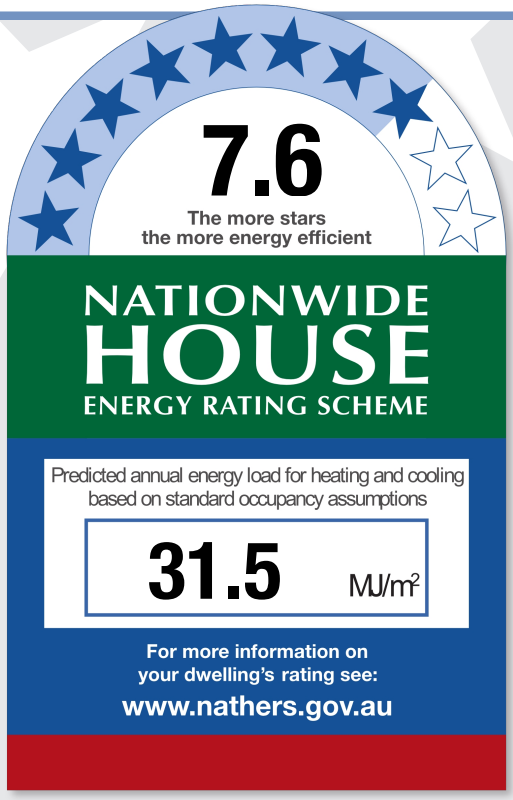
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751948** Certificate Date: **04 Apr 2019** ★Star rating: **7.6**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 1.2.6, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**96.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**96.0**

Annual thermal performance loads (MJ/m²)

Heating:	**10.0**
Cooling:	**21.5**
TOTAL:	**31.5**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living/	ALM-002-03 A	n/a	3000	4000	NW	No Shading
Master_Bedroom/	ALM-002-03 A	n/a	3000	2600	NW	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2300	NW	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	1400	NE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living/	EW-1	3995	3000	NW	No	3050
Master_Bedroom/	EW-1	3195	3000	NW	No	1500
Bedroom_2	EW-1	3045	3000	NW	No	1500
Bedroom_2	EW-1	1550	3000	NE	No	8950

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	70.0	No insulation	No
IW-2 - Cavity brick, plasterboard	87.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living/	Concrete Slab, Unit Below 150mm	34.4	None	No Insulation	Carpet 10mm
Master_Bedroom/		32.3	None	No Insulation	

Building features continued

	Concrete Slab, Unit Below 150mm				60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	12.1	None	No Insulation	Carpet 10mm
laundry/entry/b	Concrete Slab, Unit Below 150mm	17.4	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living/	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom/	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
laundry/entry/b	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751948 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.6

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752268** Certificate Date: **04 Apr 2019** ★Star rating: **7.1**

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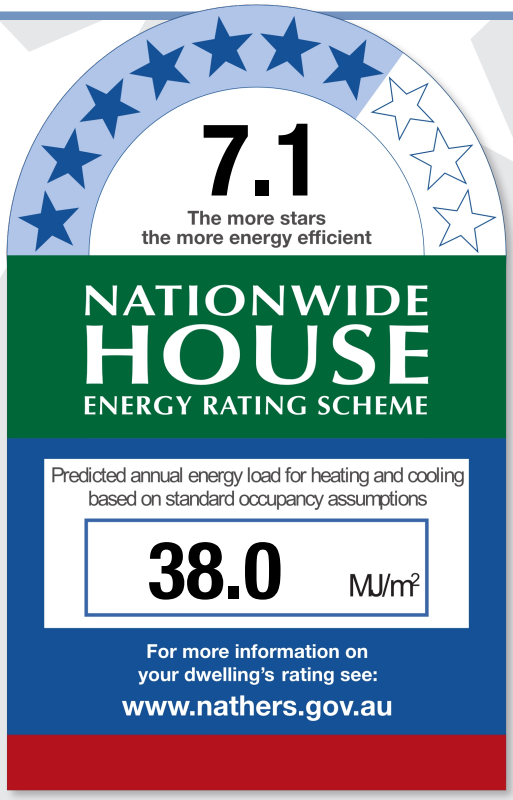
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 1.2.7, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**109.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**109.0**

Annual thermal performance loads (MJ/m²)

Heating:	**11.1**
Cooling:	**26.9**
TOTAL:	**38.0**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	2000	600	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	6000	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2000	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3000	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	3350	3000	NE	No	1450
Kitchen/Living	EW-1	845	3000	NW	No	6250
Kitchen/Living	EW-1	6145	3000	NW	No	2900
Master_Bedroom	EW-1	3250	3000	NW	No	750
Master_Bedroom	EW-1	2150	3000	NE	No	7650
Master_Bedroom	EW-1	3195	3000	SE	No	150
Bedroom_2	EW-2	3195	3000	NE	No	100
Bedroom_2	EW-1	3645	3000	NW	No	250
bathroom/laundr	EW-2	1895	3000	NE	No	100

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	61.0	No insulation	No
IW-2 - Cavity brick, plasterboard	65.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	50.7	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	34.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	11.6	None	No Insulation	Carpet 10mm
bathroom/laundr	Concrete Slab, Unit Below 150mm	12.8	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
bathroom/laundr	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752268 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.1

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751989** Certificate Date: **04 Apr 2019** ★Star rating: **7.4**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
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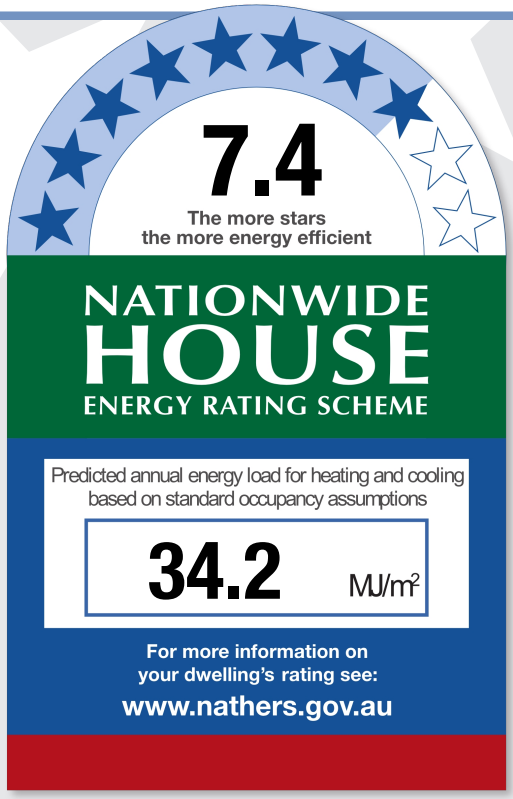

Overview

Dwelling details

Street:	**Unit 2.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Concrete Slab on Ground**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**5.6**
Cooling:	**28.6**
TOTAL:	**34.2**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49
ALM-003-03 A	ALM-003-03 A Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.3	0.47

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	4300	N	No Shading
Kitchen/Living	ALM-001-03 A	n/a	2000	3800	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	950	W	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2200	W	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-003-03 A	n/a	2000	3100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4295	3000	N	No	3100
Kitchen/Living	EW-1	8595	3000	W	No	175
Master_Bedroom	EW-1	2350	3000	W	No	4500
Master_Bedroom	EW-1	3250	3000	N	No	750
Bedroom_2	EW-1	2995	3000	S	No	250
Bedroom_2	EW-1	3645	3000	W	No	200
entry/bathroom/	EW-1	1595	3000	S	No	250

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	53.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab on Ground 100mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab on Ground 100mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab on Ground 100mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751989 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.4

Additional information

Explanatory notes

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Contact

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751971** Certificate Date: **04 Apr 2019** ★Star rating: **7.6**

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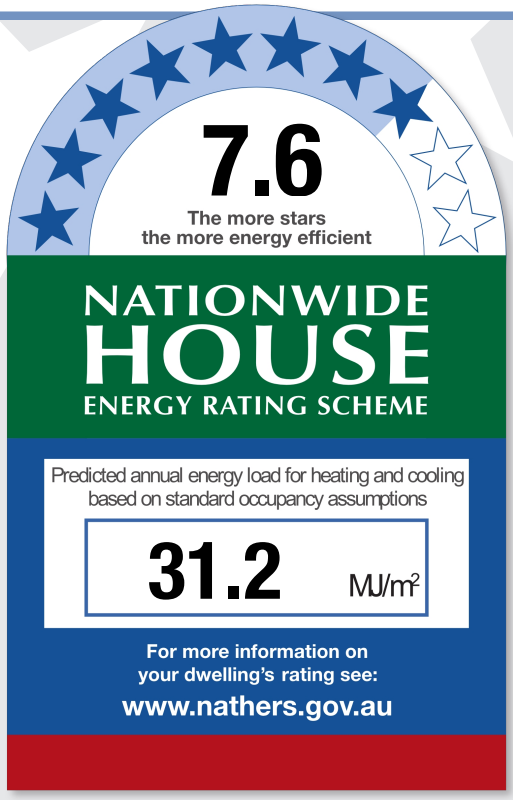
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 2.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Concrete Slab on Ground**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**11.6**
Cooling:	**19.7**
TOTAL:	**31.2**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	3800	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	950	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8595	3000	E	No	175
Kitchen/Living	EW-1	4295	3000	N	No	3100
Master_Bedroom	EW-1	3250	3000	N	No	750
Master_Bedroom	EW-1	2350	3000	E	No	4500
Bedroom_2	EW-1	3645	3000	E	No	200
Bedroom_2	EW-1	2995	3000	S	No	250
entry/bathroom/	EW-1	1595	3000	S	No	250

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	53.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab on Ground 100mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab on Ground 100mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab on Ground 100mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751971 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.6

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003751997** Certificate Date: **04 Apr 2019** ★Star rating: **6.8**

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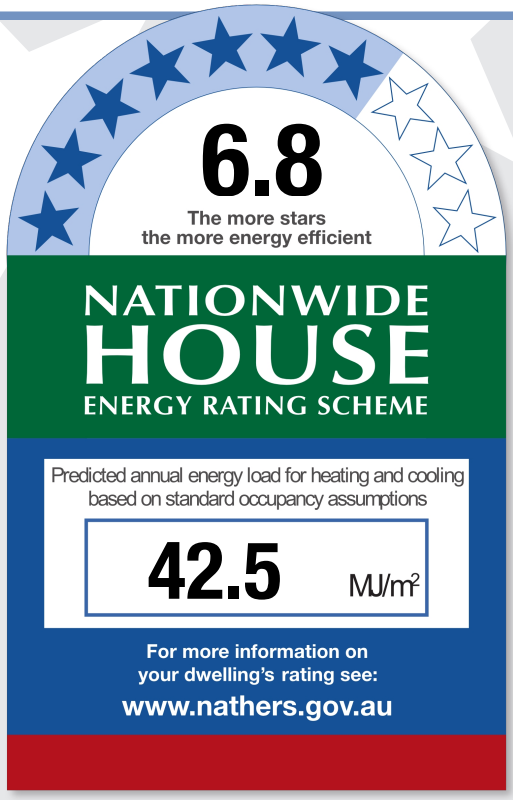
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 2.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Ceiling penetrations

(see following pages for details)

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

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: **Unknown**

Net floor area (m²)

Conditioned:	**113.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**113.0**

Annual thermal performance loads (MJ/m²)

Heating:	**17.1**
Cooling:	**25.3**
TOTAL:	**42.5**

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.

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Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1300	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1500	W	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	W	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2300	W	No Shading
storage	ALM-002-03 A	n/a	2000	1100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4295	3000	N	No	2900
Kitchen/Living	EW-1	8595	3000	W	No	600
Master_Bedroom	EW-1	2300	3000	W	No	4950
Master_Bedroom	EW-1	3250	3000	N	No	600
Bedroom_2	EW-1	3740	3000	W	No	600
storage	EW-1	1695	3000	W	No	600

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	70.0	No insulation	No
IW-2 - Cavity brick, plasterboard	72.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.7	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	11.4	None	No Insulation	Carpet 10mm
storage	Concrete Slab, Unit Below 150mm	34.1	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
storage	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003751997 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.8

Additional information

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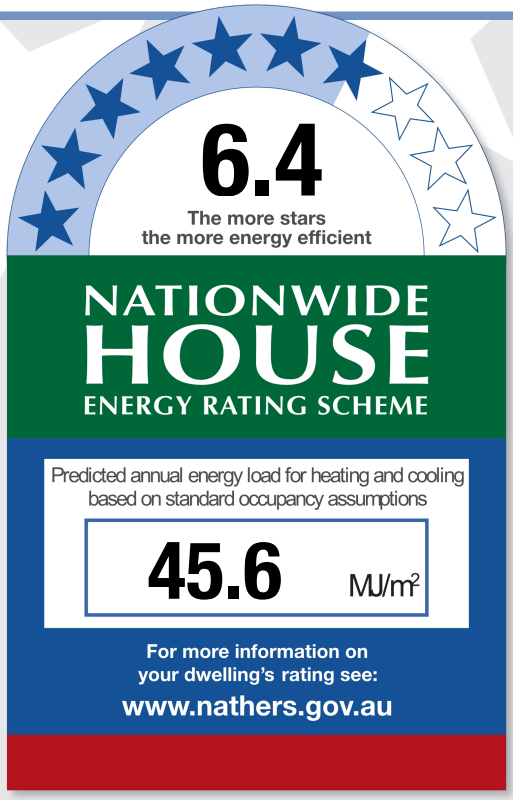
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752003** Certificate Date: **04 Apr 2019** ★Star rating: **6.4**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 2.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**16.9**
Cooling:	**28.7**
TOTAL:	**45.6**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-001-03 A	n/a	2000	3800	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	950	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8595	3000	E	No	600
Kitchen/Living	EW-1	4295	3000	N	No	2950
Master_Bedroom	EW-1	3250	3000	N	No	600
Master_Bedroom	EW-1	2350	3000	E	No	4950
Bedroom_2	EW-1	3645	3000	E	No	600
entry/bathroom/	EW-1	1595	3000	S	No	375

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	62.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab, Unit Below 150mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
entry/bathroom/	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752003 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.4

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

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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.

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752011** Certificate Date: **04 Apr 2019** ★Star rating: **6.1**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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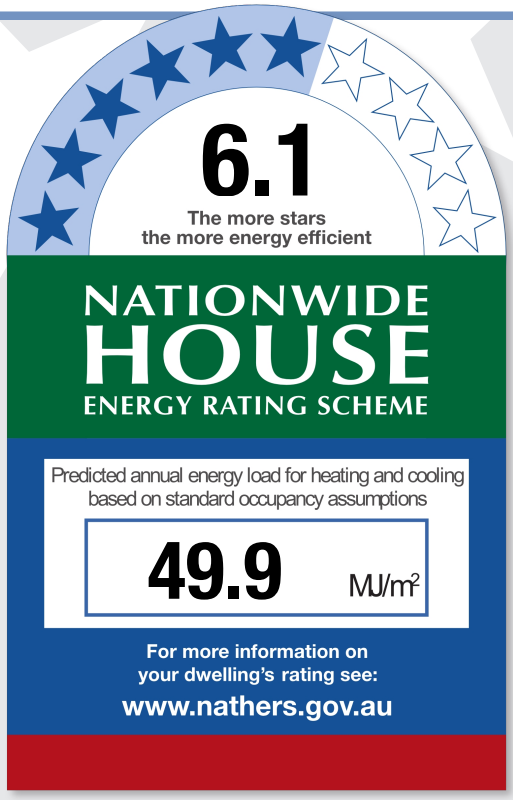

Overview

Dwelling details

Street:	**Unit 3.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Concrete Slab on Ground**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**103.0**
Unconditioned:	**11.0**
Garage:	**0.0**
TOTAL:	**115.0**

Annual thermal performance loads (MJ/m²)

Heating:	**22.2**
Cooling:	**27.8**
TOTAL:	**49.9**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	4200	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1800	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	5900	NE	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NE	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2100	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2800	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8895	3000	SE	No	100
Kitchen/Living	EW-1	5895	3000	NE	No	3050
Master_Bedroom	EW-2	10095	3000	NW	No	150
Master_Bedroom	EW-1	3250	3000	NE	No	850
Master_Bedroom	EW-1	2200	3000	SE	No	6050
Bedroom_2	EW-1	2995	3000	SE	No	100
Bedroom_2	EW-1	3645	3000	SW	No	150
Laundry/bathroo	EW-2	2395	3000	NW	No	150
storage	EW-2	1490	3000	NW	No	150

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	82.0	No insulation	No
IW-2 - Cavity brick, plasterboard	17.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	51.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab on Ground 100mm	32.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab on Ground 100mm	10.9	None	No Insulation	Carpet 10mm
Laundry/bathroo	Concrete Slab on Ground 100mm	11.4	None	No Insulation	Ceramic Tiles 8mm
storage	Concrete Slab on Ground 100mm	8.5	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Laundry/bathroo	Concrete, Plasterboard	No insulation	No
storage	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752011 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.1

Additional information

Explanatory notes

About this report

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752029** Certificate Date: **04 Apr 2019** ★Star rating: **6.1**

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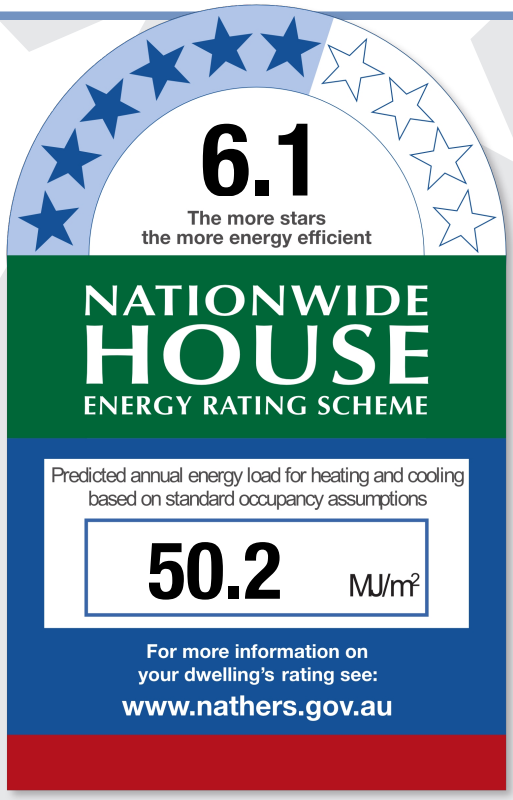
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 3.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**103.0**
Unconditioned:	**11.0**
Garage:	**0.0**
TOTAL:	**115.0**

Annual thermal performance loads (MJ/m²)

Heating:	**20.7**
Cooling:	**29.5**
TOTAL:	**50.2**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49
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
Kitchen/Living	ALM-001-03 A	n/a	2000	4200	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1800	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	5900	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2100	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2800	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8895	3000	SE	No	600
Kitchen/Living	EW-1	5895	3000	NE	No	2800
Master_Bedroom	EW-2	10095	3000	NW	No	550
Master_Bedroom	EW-1	3250	3000	NE	No	600
Master_Bedroom	EW-1	2200	3000	SE	No	6550
Bedroom_2	EW-1	2995	3000	SE	No	600
Bedroom_2	EW-1	3645	3000	SW	No	1600
Laundry/bathroo	EW-2	2395	3000	NW	No	550
storage	EW-2	1490	3000	NW	No	550

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	82.0	No insulation	No

Building features continued

IW-2 - Cavity brick, plasterboard	17.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	51.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	32.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Laundry/bathroo	Concrete Slab, Unit Below 150mm	11.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
storage	Concrete Slab, Unit Below 150mm	8.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
Laundry/bathroo	Plasterboard	Bulk Insulation R3	Yes
storage	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752029 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.1

Additional information

Explanatory notes

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General Information

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752037** Certificate Date: **04 Apr 2019** ★Star rating: **5.4**

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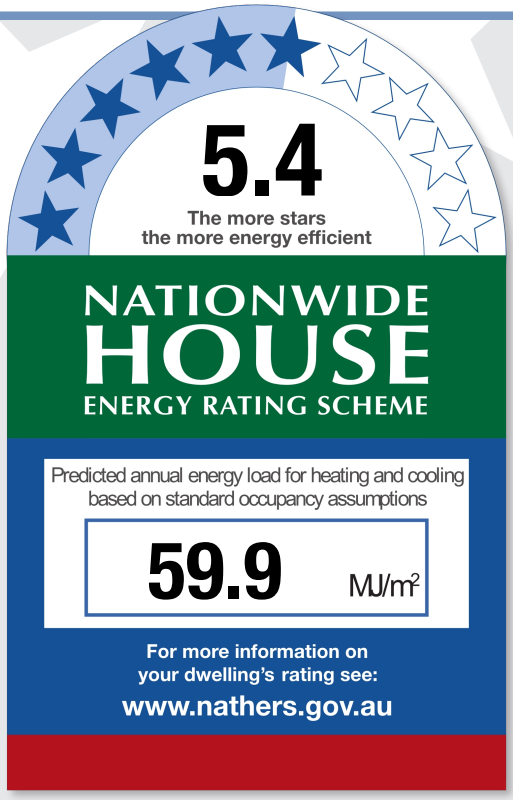
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 4.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**161.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**161.0**

Annual thermal performance loads (MJ/m²)

Heating:	**32.7**
Cooling:	**27.2**
TOTAL:	**59.9**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	6750	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	700	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1700	S	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	1000	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	800	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	3500	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	2000	W	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	2200	W	No Shading
Bedroom_2	ALM-002-03 A	n/a	3000	2400	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	6850	3000	N	No	1000
Kitchen/Living	EW-1	850	3000	E	No	1750
Kitchen/Living	EW-1	2100	3000	S	No	4475
Kitchen/Living	EW-1	5450	3000	W	No	150
Kitchen/Living	EW-1	3500	3000	N	No	3150
Kitchen/Living	EW-1	2150	3000	W	No	5175
Master_Bedroom	EW-1	3195	3000	N	No	1850
Bedroom_2	EW-1	4495	3000	S	No	1800
Bedroom_2	EW-1	2995	3000	W	No	975
Study/bathroom/	EW-1	6895	3000	S	No	1800
Bedroom_2	EW-1	3040	3000	W	No	2025

Building features continued

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	100.0	No insulation	No
IW-2 - Cavity brick, plasterboard	39.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	73.5	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	33.2	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	13.5	Open	No Insulation	Carpet 10mm
Study/bathroom/	Suspended Concrete Slab 150mm	29.9	Open	No Insulation	80/20 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.6	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Study/bathroom/	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752037 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.4

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752300** Certificate Date: **04 Apr 2019** ★Star rating: **6.9**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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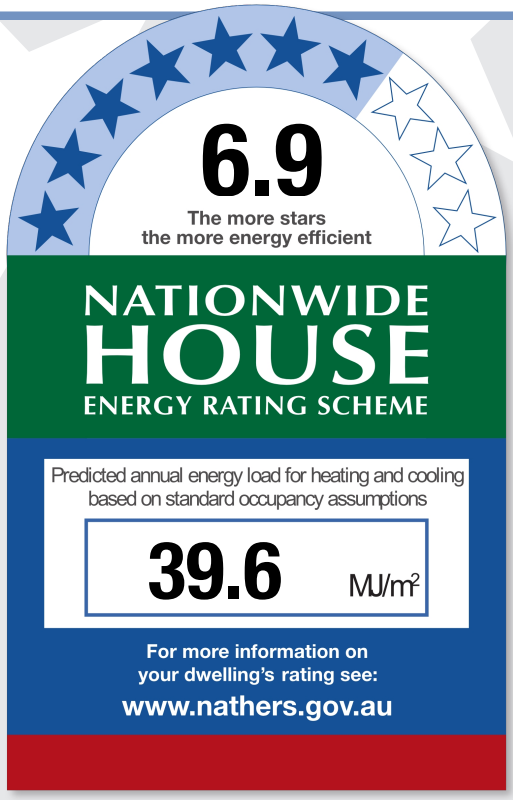

Overview

Dwelling details

Street:	**Unit 4.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**147.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**147.0**

Annual thermal performance loads (MJ/m²)

Heating:	**22.5**
Cooling:	**17.1**
TOTAL:	**39.6**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

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Principle downlight type: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	2000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	3800	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	1000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	700	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	1200	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2200	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	2150	3000	E	No	4075
Kitchen/Living	EW-1	3950	3000	N	No	3200
Kitchen/Living	EW-1	5395	3000	E	No	150
Kitchen/Living	EW-1	850	3000	W	No	1750
Kitchen/Living	EW-1	4300	3000	N	No	1050
Master_Bedroom	EW-1	3195	3000	N	No	1900
Bedroom_2	EW-1	3226	3000	E	No	182
Bedroom_2	EW-1	1550	3000	N	No	175
Study/bathroom/	EW-1	4150	3000	S	No	100
Bedroom_2	EW-1	3040	3000	E	No	200

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	100.0	No insulation	No
IW-2 - Cavity brick, plasterboard	62.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	56.6	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	33.2	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	16.6	Open	No Insulation	Carpet 10mm
Study/bathroom/	Suspended Concrete Slab 150mm	30.0	Open	No Insulation	80/20 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.6	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Study/bathroom/	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752300 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.9

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752060** Certificate Date: **04 Apr 2019** ★Star rating: **6.4**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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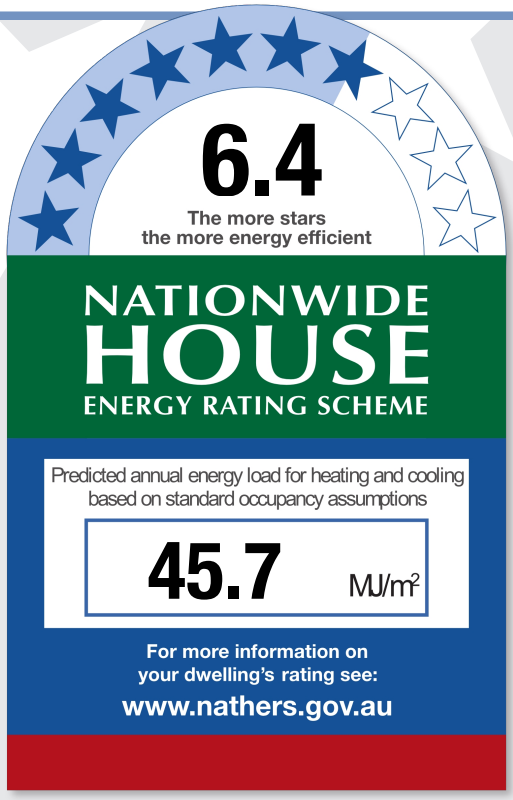

Overview

Dwelling details

Street:	**Unit 4.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**182.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**182.0**

Annual thermal performance loads (MJ/m²)

Heating:	**19.1**
Cooling:	**26.6**
TOTAL:	**45.7**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

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Principle downlight type: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	6900	N	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	800	E	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	1300	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	800	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	3400	N	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	2000	W	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	N	No Shading
Bedroom_2/bathr	ALM-001-03 A	n/a	2000	1200	W	No Shading
Study/laundry/b	ALM-004-03 A	n/a	2000	1300	W	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	6900	3000	N	No	600
Kitchen/Living	EW-1	850	3000	E	No	8550
Kitchen/Living	EW-1	2150	3000	S	No	100
Kitchen/Living	EW-1	5450	3000	W	No	100
Kitchen/Living	EW-1	3550	3000	N	No	2750
Kitchen/Living	EW-1	2150	3000	W	No	2000
Master_Bedroom	EW-1	3195	3000	N	No	1450
Bedroom_2/bathr	EW-2	4645	3000	S	No	650
Bedroom_2/bathr	EW-1	2995	3000	W	No	600
Study/laundry/b	EW-2	6795	3000	S	No	650
Study/laundry/b	EW-1	1740	3000	W	No	600

Building features continued

Study/laundry/b	EW-2	1750	3000	E	No	5300
Bedroom_2	EW-1	3040	3000	W	No	600

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	119.0	No insulation	No
IW-2 - Cavity brick, plasterboard	39.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	74.8	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	33.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2/bathr	Concrete Slab, Unit Below 150mm	13.9	None	No Insulation	Carpet 10mm
Study/laundry/b	Concrete Slab, Unit Below 150mm	43.1	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	17.2	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2/bathr	Plasterboard	Bulk Insulation R3	Yes
Study/laundry/b	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Building features continued

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752060 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.4

Additional information

Explanatory notes

About this report

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752326** Certificate Date: **04 Apr 2019** ★Star rating: **7.3**

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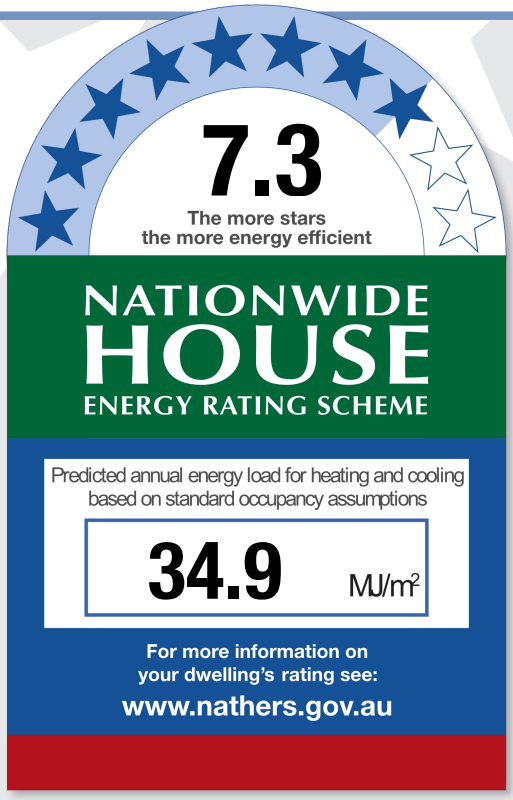
Assessor details

Accreditation number:	20570
Name:	John Caley
Organisation:	Ecological Design Pty Ltd
Email:	john@ecologicaldesign.com.au
Phone:	0418 262 706
Declaration of interest:	The Assessor has provided design advice to the Applicant
Software:	BERS Pro v4.3.0.2d (3.13)
AAO:	ABSA



Overview

Dwelling details

Street:	Unit 4.2.2, 1113 Oxford Falls Road		
Suburb:	Frenchs Forest		
State:	NSW	Postcode:	2086
Type:	New Dwelling	NCC Class:	1A
		NatHERS climate zone:	56
Lot/DP number:	752038	Exposure:	Suburban

Key construction and insulation materials

(see following pages for details)

Construction:	Cavity Brick Corrugated Iron Concrete Slab, Unit Below
Insulation:	Reflective wall insulation R3.0 ceiling insulation No floor insulation
Glazing:	ALM-002-03 A Aluminium B SG High Solar Gain Low-E

Net floor area (m²)

Conditioned:	144.0
Unconditioned:	0.0
Garage:	0.0
TOTAL:	144.0

Annual thermal performance loads (MJ/m²)

Heating:	9.2
Cooling:	25.7
TOTAL:	34.9

Plan documents

Plan ref/date:	Revision L
Prepared by:	marchesepartners

Ceiling penetrations

(see following pages for details)

Sealed:	0
Unsealed:	0
TOTAL:**	0

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	2000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	3800	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	1300	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	700	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2400	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2200	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	2150	3000	E	No	4550
Kitchen/Living	EW-1	3950	3000	N	No	2850
Kitchen/Living	EW-1	5395	3000	E	No	600
Kitchen/Living	EW-1	850	3000	W	No	5200
Kitchen/Living	EW-1	4300	3000	N	No	700
Master_Bedroom	EW-1	3195	3000	N	No	1550
Bedroom_2	EW-1	2995	3000	E	No	600
Study/bathroom/	EW-2	6895	3000	S	No	1150
Bedroom_2	EW-1	3040	3000	E	No	600

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	100.0	No insulation	No
IW-2 - Cavity brick, plasterboard	53.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	56.6	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	33.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	13.5	None	No Insulation	Carpet 10mm
Study/bathroom/	Concrete Slab, Unit Below 150mm	30.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.6	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
Study/bathroom/	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective	Dark

Building features continued

	Side Down, Anti-glare Up R1

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752326 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.3

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752086** Certificate Date: **04 Apr 2019** ★Star rating: **6.4**

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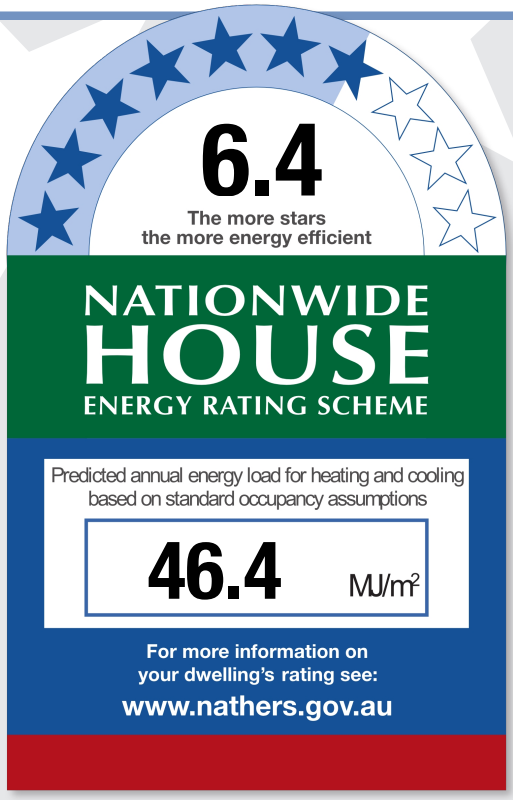
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 5.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**161.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**161.0**

Annual thermal performance loads (MJ/m²)

Heating:	**20.1**
Cooling:	**26.3**
TOTAL:	**46.4**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
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
Kitchen/Living	ALM-004-03 A	n/a	3000	2000	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	3400	NE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	1300	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	800	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1700	SW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	800	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	6900	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2/bathr	ALM-004-03 A	n/a	2000	2400	SE	No Shading
Bedroom_2	ALM-004-03 A	n/a	2000	2200	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	2150	3000	SE	No	5050
Kitchen/Living	EW-1	3550	3000	NE	No	3050
Kitchen/Living	EW-1	5450	3000	SE	No	100
Kitchen/Living	EW-1	2200	3000	SW	No	3525
Kitchen/Living	EW-1	850	3000	NW	No	1750
Kitchen/Living	EW-1	6900	3000	NE	No	900
Master_Bedroom	EW-1	3195	3000	NE	No	1750
Bedroom_2/bathr	EW-1	2995	3000	SE	No	700
Bedroom_2/bathr	EW-1	6745	3000	SW	No	200
Study/laundry/b	EW-2	4645	3000	SW	No	200
Bedroom_2	EW-1	3040	3000	SE	No	1775

Building features continued

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	107.0	No insulation	No
IW-2 - Cavity brick, plasterboard	39.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	74.1	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	33.2	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2/bathr	Suspended Concrete Slab 150mm	20.2	Open	No Insulation	Carpet 10mm
Study/laundry/b	Suspended Concrete Slab 150mm	23.0	Open	No Insulation	80/20 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.6	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2/bathr	Concrete, Plasterboard	No insulation	No
Study/laundry/b	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752086 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.4

Additional information

Explanatory notes

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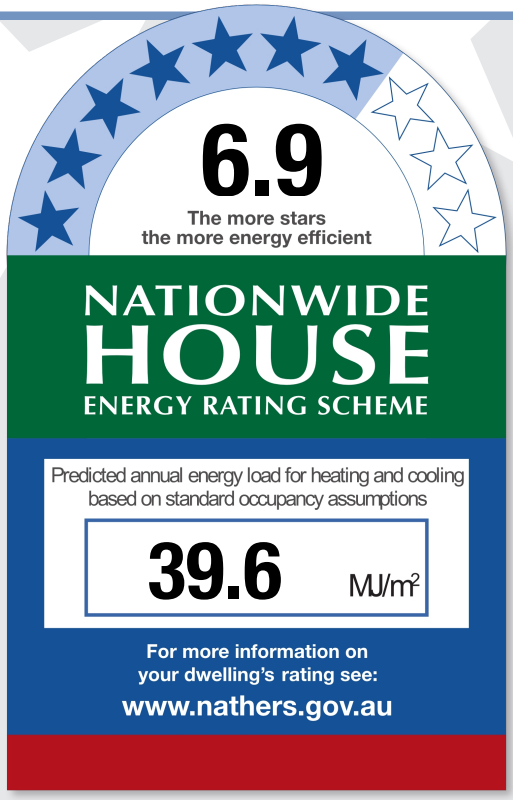
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752094-03** Certificate Date: **04 Apr 2019** ★Star rating: **6.9**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 5.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**145.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**145.0**

Annual thermal performance loads (MJ/m²)

Heating:	**16.9**
Cooling:	**22.6**
TOTAL:	**39.6**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	4200	NE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	700	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	1000	NW	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	3800	NE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	2000	NW	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	500	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2200	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4300	3000	NE	No	1000
Kitchen/Living	EW-1	850	3000	SE	No	1750
Kitchen/Living	EW-1	5395	3000	NW	No	100
Kitchen/Living	EW-1	3950	3000	NE	No	3150
Kitchen/Living	EW-1	2150	3000	NW	No	4050
Master_Bedroom	EW-1	3195	3000	NE	No	1850
Bedroom_2	EW-1	700	3000	NE	No	0
Study/bathroom/	EW-2	4700	3000	SW	No	150
Bedroom_2	EW-1	3040	3000	NW	No	100

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	100.0	No insulation	No
IW-2 - Cavity brick, plasterboard	69.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	56.6	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	33.2	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	14.5	Open	No Insulation	Carpet 10mm
Study/bathroom/	Suspended Concrete Slab 150mm	29.9	Open	No Insulation	80/20 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.6	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Study/bathroom/	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752094-03 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.9

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

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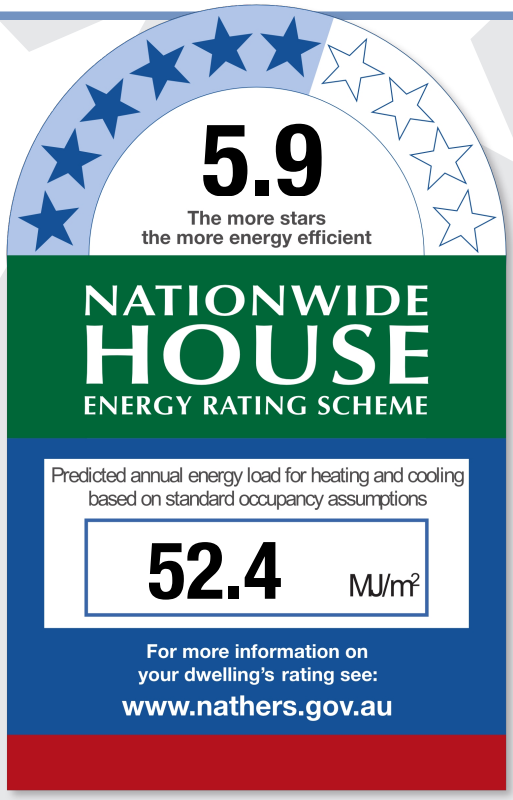
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752102** Certificate Date: **04 Apr 2019** ★Star rating: **5.9**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 5.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**182.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**182.0**

Annual thermal performance loads (MJ/m²)

Heating:	**23.8**
Cooling:	**28.6**
TOTAL:	**52.4**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	2000	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	3400	NE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	1300	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	800	SE	No Shading
Kitchen/Living	ALM-001-03 A	n/a	2000	1700	SW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	800	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	6900	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2/bathr	ALM-001-03 A	n/a	2000	2800	SE	No Shading
Study/laundry/b	ALM-004-03 A	n/a	2000	1300	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2100	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	2150	3000	SE	No	2000
Kitchen/Living	EW-1	3550	3000	NE	No	2750
Kitchen/Living	EW-1	5450	3000	SE	No	100
Kitchen/Living	EW-1	2150	3000	SW	No	100
Kitchen/Living	EW-1	850	3000	NW	No	8550
Kitchen/Living	EW-1	6900	3000	NE	No	600
Master_Bedroom	EW-1	3195	3000	NE	No	1450
Bedroom_2/bathr	EW-1	2995	3000	SE	No	600
Bedroom_2/bathr	EW-2	4645	3000	SW	No	650

Building features continued

Study/laundry/b	EW-2	1750	3000	NW	No	5300
Study/laundry/b	EW-1	1740	3000	SE	No	600
Study/laundry/b	EW-2	6795	3000	SW	No	650
Bedroom_2	EW-1	3040	3000	SE	No	600

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	119.0	No insulation	No
IW-2 - Cavity brick, plasterboard	39.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	74.8	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	33.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2/bathr	Concrete Slab, Unit Below 150mm	13.9	None	No Insulation	Carpet 10mm
Study/laundry/b	Concrete Slab, Unit Below 150mm	43.1	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	17.2	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2/bathr	Plasterboard	Bulk Insulation R3	Yes
Study/laundry/b	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Building features continued

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752102 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.9

Additional information

Explanatory notes

About this report

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752110-03** Certificate Date: **04 Apr 2019** ★Star rating: **7.8**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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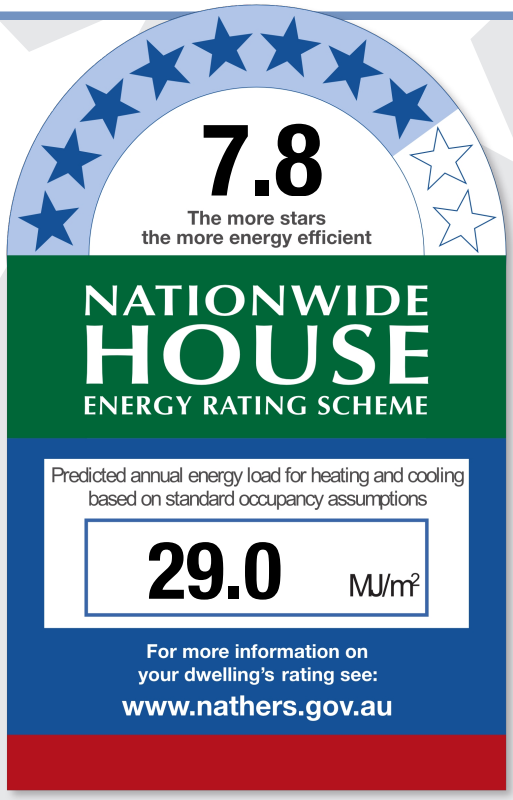

Overview

Dwelling details

Street:	**Unit 5.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**144.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**144.0**

Annual thermal performance loads (MJ/m²)

Heating:	**2.5**
Cooling:	**26.5**
TOTAL:	**29.0**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	4200	NE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	700	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	1000	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	3800	NE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	2000	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2200	NW	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2200	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4300	3000	NE	No	600
Kitchen/Living	EW-1	850	3000	SE	No	14650
Kitchen/Living	EW-1	5395	3000	NW	No	600
Kitchen/Living	EW-1	3950	3000	NE	No	2750
Kitchen/Living	EW-1	2150	3000	NW	No	4550
Master_Bedroom	EW-1	3195	3000	NE	No	1450
Bedroom_2	EW-1	2995	3000	NW	No	600
Study/bathroom/	EW-2	4700	3000	SW	No	650
Bedroom_2	EW-1	3040	3000	NW	No	600

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	107.0	No insulation	No
IW-2 - Cavity brick, plasterboard	59.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	56.6	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	33.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	20.2	None	No Insulation	60/40 Carpet 10mm/Ceramic
Study/bathroom/	Concrete Slab, Unit Below 150mm	22.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.6	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
Study/bathroom/	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective	Dark

Building features continued

	Side Down, Anti-glare Up R1

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752110-03 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.8

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752128** Certificate Date: **04 Apr 2019** ★Star rating: **7.9**

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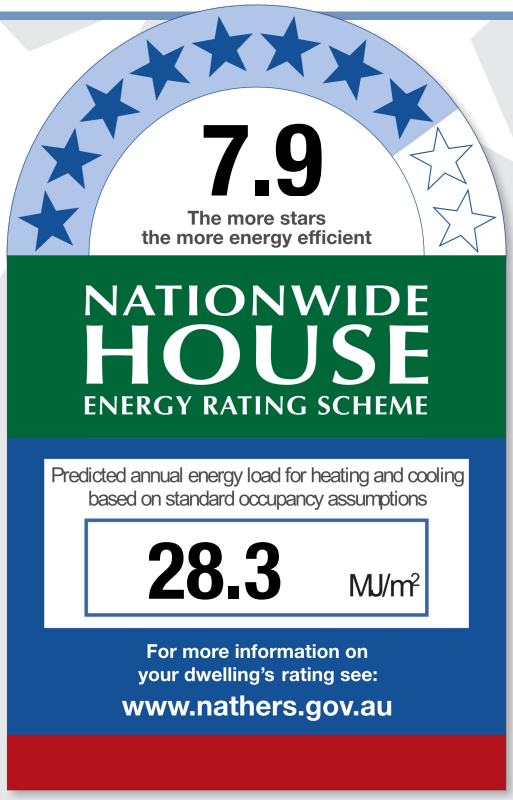
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 6.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Concrete Slab on Ground**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**137.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**137.0**

Annual thermal performance loads (MJ/m²)

Heating:	**6.7**
Cooling:	**21.6**
TOTAL:	**28.3**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	5800	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1800	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2250	W	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3100	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	1700	W	No Shading
Bedroom_3	ALM-001-03 A	n/a	2000	2100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	5895	3000	N	No	3150
Kitchen/Living	EW-1	8495	3000	W	No	150
Master_Bedroom	EW-1	1450	3000	W	No	6100
Master_Bedroom	EW-1	3250	3000	N	No	1700
Bedroom_2	EW-1	2990	3000	W	No	150
Bedroom_3	EW-1	2995	3000	W	No	150

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	86.0	No insulation	No
IW-2 - Cavity brick, plasterboard	76.0	No Insulation	No

Floors

Building features continued

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	50.1	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab on Ground 100mm	32.5	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab on Ground 100mm	13.4	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab on Ground 100mm	27.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_3	Concrete Slab on Ground 100mm	13.5	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No
Bedroom_3	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752128 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.9

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752367** Certificate Date: **04 Apr 2019** ★Star rating: **6.7**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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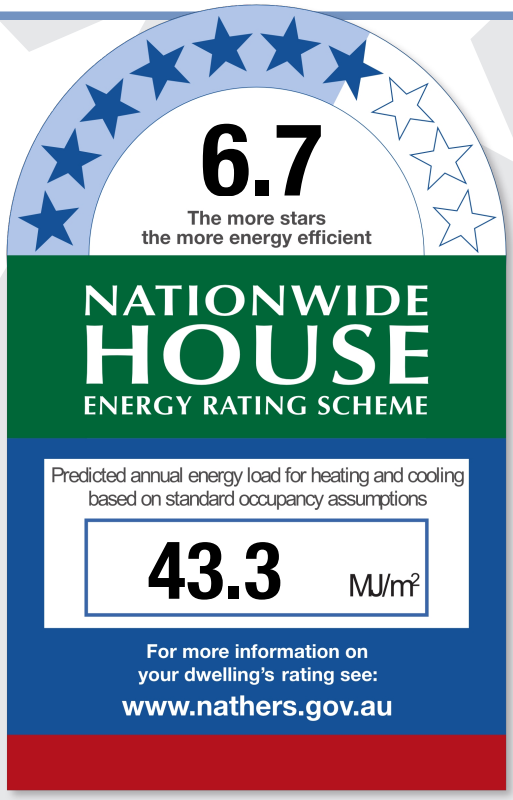

Overview

Dwelling details

Street:	**Unit 6.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Concrete Slab on Ground**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Ceiling penetrations

(see following pages for details)

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

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: **Unknown**

Net floor area (m²)

Conditioned:	**103.0**
Unconditioned:	**11.0**
Garage:	**0.0**
TOTAL:	**115.0**

Annual thermal performance loads (MJ/m²)

Heating:	**24.9**
Cooling:	**18.4**
TOTAL:	**43.3**

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.

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Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	4200	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1157	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	5900	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2100	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2800	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8895	3000	E	No	125
Kitchen/Living	EW-1	5895	3000	N	No	3000
Master_Bedroom	EW-2	10095	3000	W	No	100
Master_Bedroom	EW-1	3250	3000	N	No	800
Master_Bedroom	EW-1	2200	3000	E	No	6050
Bedroom_2	EW-1	2995	3000	E	No	150
Bedroom_2	EW-1	3645	3000	S	No	200
Laundry/bathroo	EW-2	2395	3000	W	No	100
Laundry/bathroo	EW-1	5445	3000	S	No	200
storage	EW-2	1490	3000	W	No	100

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	82.0	No insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	51.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab on Ground 100mm	32.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab on Ground 100mm	10.9	None	No Insulation	Carpet 10mm
Laundry/bathroo	Concrete Slab on Ground 100mm	11.4	None	No Insulation	Ceramic Tiles 8mm
storage	Concrete Slab on Ground 100mm	8.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Laundry/bathroo	Concrete, Plasterboard	No insulation	No
storage	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752367 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.7

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752136** Certificate Date: **04 Apr 2019** ★Star rating: **6.7**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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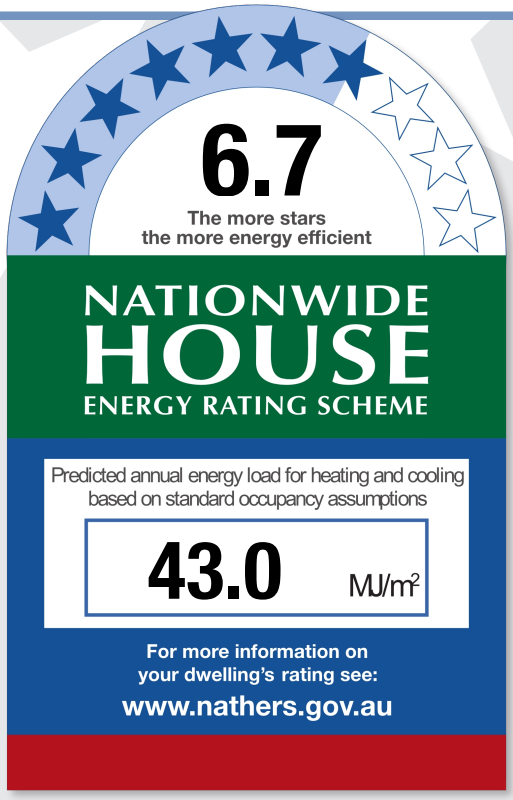

Overview

Dwelling details

Street:	**Unit 6.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**137.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**137.0**

Annual thermal performance loads (MJ/m²)

Heating:	**14.7**
Cooling:	**28.3**
TOTAL:	**43.0**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	5800	N	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1800	W	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3100	N	No Shading
Bedroom_2	ALM-004-03 A	n/a	2000	1700	W	No Shading
Bedroom_2	ALM-004-03 A	n/a	2000	1700	W	No Shading
entry/bathroom/	ALM-004-03 A	n/a	2000	1300	S	No Shading
Bedroom_3	ALM-001-03 A	n/a	2000	2100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	5895	3000	N	No	2050
Kitchen/Living	EW-1	8495	3000	W	No	600
Master_Bedroom	EW-1	1450	3000	W	No	6550
Master_Bedroom	EW-1	3250	3000	N	No	600
Bedroom_2	EW-1	2990	3000	W	No	600
entry/bathroom/	EW-2	4595	3000	S	No	850
Bedroom_3	EW-2	4495	3000	S	No	850
Bedroom_3	EW-1	2995	3000	W	No	600

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	86.0	No insulation	No
IW-2 - Cavity brick, plasterboard	48.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	50.1	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	32.5	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	13.4	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab, Unit Below 150mm	27.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_3	Concrete Slab, Unit Below 150mm	13.5	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
entry/bathroom/	Plasterboard	Bulk Insulation R3	Yes
Bedroom_3	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752136 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.7

Additional information

Explanatory notes

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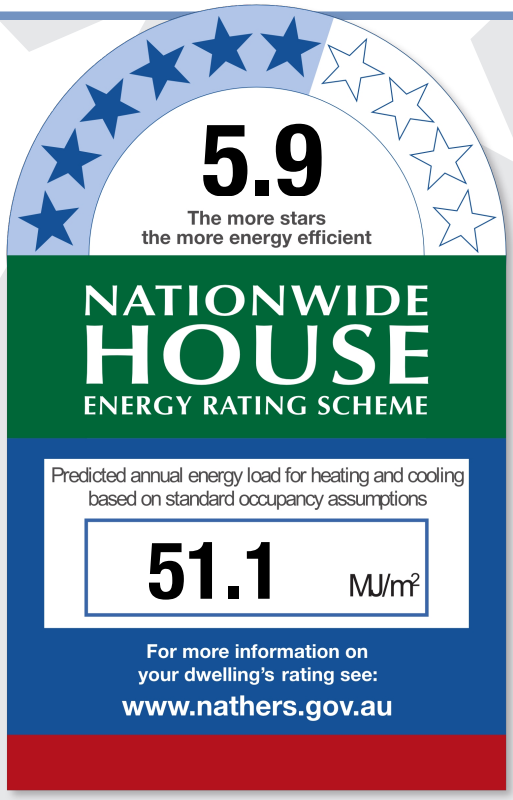
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752359** Certificate Date: **04 Apr 2019** ★Star rating: **5.9**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 6.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**103.0**
Unconditioned:	**11.0**
Garage:	**0.0**
TOTAL:	**115.0**

Annual thermal performance loads (MJ/m²)

Heating:	**21.6**
Cooling:	**29.5**
TOTAL:	**51.1**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49
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
Kitchen/Living	ALM-001-03 A	n/a	2000	4200	E	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	E	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	2250	E	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	5900	N	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	N	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2100	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2800	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8895	3000	E	No	600
Kitchen/Living	EW-1	5895	3000	N	No	2800
Master_Bedroom	EW-2	10095	3000	W	No	5650
Master_Bedroom	EW-1	3250	3000	N	No	600
Master_Bedroom	EW-1	2200	3000	E	No	6550
Bedroom_2	EW-1	2995	3000	E	No	600
Bedroom_2	EW-1	3645	3000	S	No	600
Laundry/bathroo	EW-2	2395	3000	W	No	5650
Laundry/bathroo	EW-1	5445	3000	S	No	600
storage	EW-2	1490	3000	W	No	5650

Internal wall type

Building features continued

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	82.0	No insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	51.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	32.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Laundry/bathroo	Concrete Slab, Unit Below 150mm	11.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
storage	Concrete Slab, Unit Below 150mm	8.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
Laundry/bathroo	Plasterboard	Bulk Insulation R3	Yes
storage	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752359 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.9

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752144** Certificate Date: **04 Apr 2019** ★Star rating: **5.1**

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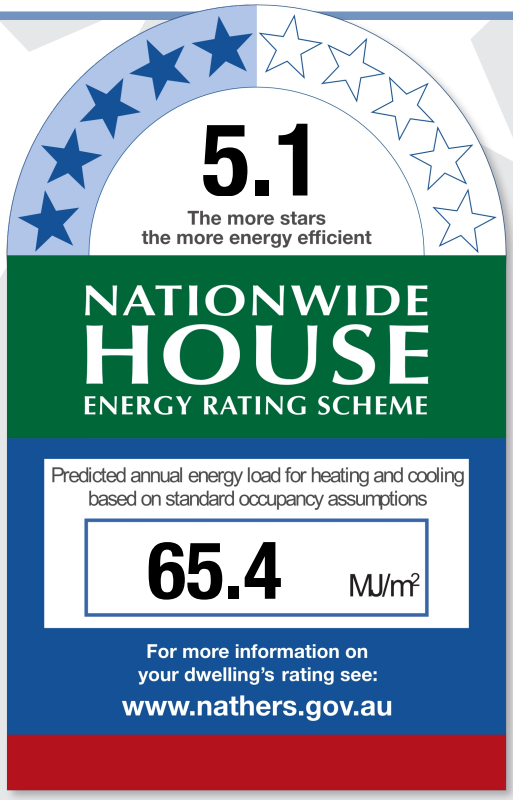
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 7.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**43.6**
Cooling:	**21.8**
TOTAL:	**65.4**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	N	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	W	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	W	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	W	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4295	3000	N	No	3200
Kitchen/Living	EW-1	8595	3000	W	No	200
Master_Bedroom	EW-1	2350	3000	W	No	4550
Master_Bedroom	EW-1	3250	3000	N	No	850
Bedroom_2	EW-1	3645	3000	W	No	200
entry/bathroom/	EW-1	1595	3000	S	No	125

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	62.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	36.0	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	31.9	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.9	Open	No Insulation	Carpet 10mm
entry/bathroom/	Suspended Concrete Slab 150mm	20.5	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752144 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.1

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752151** Certificate Date: **04 Apr 2019** ★Star rating: **5.3**

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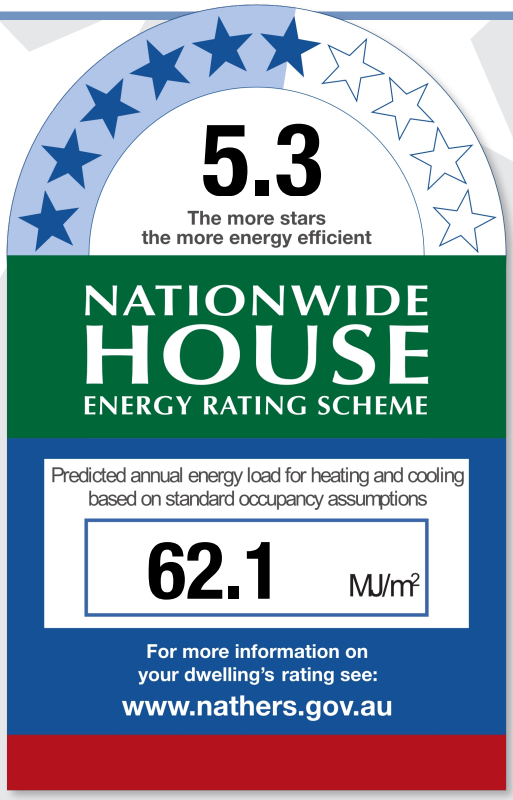
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 7.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**33.4**
Cooling:	**28.8**
TOTAL:	**62.1**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8595	3000	E	No	200
Kitchen/Living	EW-1	4295	3000	N	No	3200
Master_Bedroom	EW-1	3250	3000	N	No	850
Master_Bedroom	EW-1	2350	3000	E	No	4550
Bedroom_2	EW-1	3645	3000	E	No	200
entry/bathroom/	EW-1	1595	3000	S	No	125

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	62.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	36.0	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	31.9	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.9	Open	No Insulation	Carpet 10mm
entry/bathroom/	Suspended Concrete Slab 150mm	20.5	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752151 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.3

Additional information

Explanatory notes

About this report

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Contact

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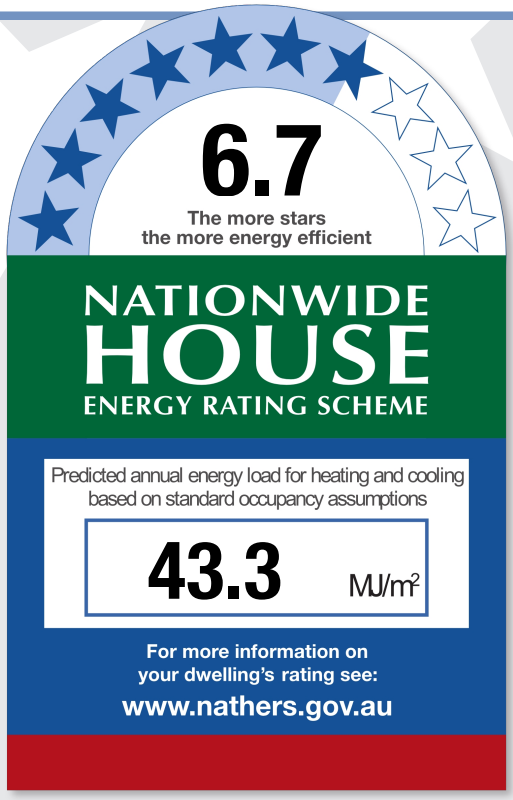
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752169** Certificate Date: **04 Apr 2019** ★Star rating: **6.7**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 7.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**15.5**
Cooling:	**27.7**
TOTAL:	**43.3**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	4300	N	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1150	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	W	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	2000	W	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2200	W	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	N	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	W	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4295	3000	N	No	2950
Kitchen/Living	EW-1	8595	3000	W	No	600
Master_Bedroom	EW-1	2350	3000	W	No	4950
Master_Bedroom	EW-1	3250	3000	N	No	600
Bedroom_2	EW-1	2995	3000	S	No	500
Bedroom_2	EW-1	3645	3000	W	No	600
entry/bathroom/	EW-1	2900	3000	S	No	475
entry/bathroom/	EW-1	1595	3000	S	No	475

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	44.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab, Unit Below 150mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
entry/bathroom/	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752169 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.7

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752177** Certificate Date: **04 Apr 2019** ★Star rating: **6.4**

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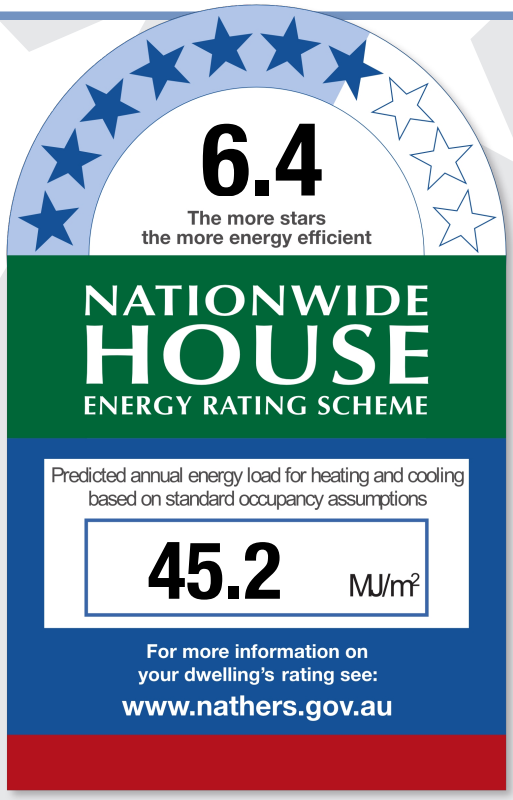
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 7.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**17.9**
Cooling:	**27.3**
TOTAL:	**45.2**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	N	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	E	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8595	3000	E	No	600
Kitchen/Living	EW-1	4295	3000	N	No	2950
Master_Bedroom	EW-1	3250	3000	N	No	600
Master_Bedroom	EW-1	2350	3000	E	No	4950
Bedroom_2	EW-1	3645	3000	E	No	600
Bedroom_2	EW-1	2995	3000	S	No	500
entry/bathroom/	EW-1	1595	3000	S	No	475
entry/bathroom/	EW-1	2900	3000	S	No	475

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	44.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab, Unit Below 150mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
entry/bathroom/	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752177 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.4

Additional information

Explanatory notes

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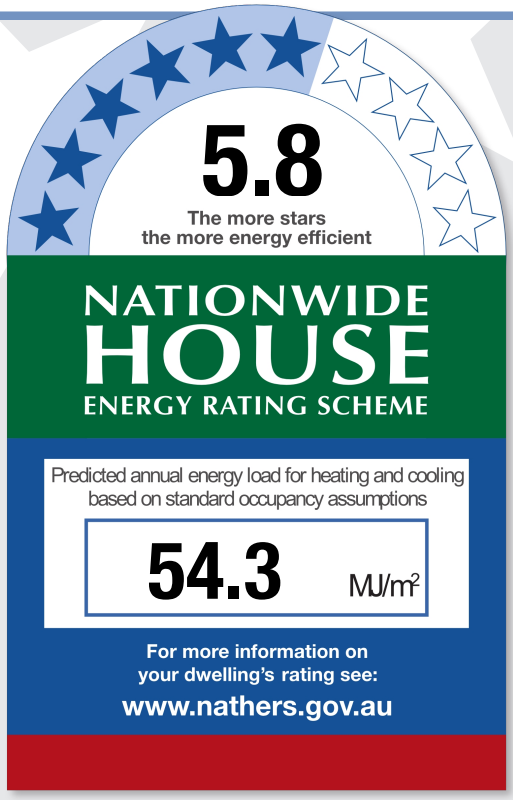
Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752185** Certificate Date: **04 Apr 2019** ★Star rating: **5.8**

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 8.1.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**33.8**
Cooling:	**20.5**
TOTAL:	**54.3**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	NE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	NW	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	NW	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	NW	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	NW	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4295	3000	NE	No	3200
Kitchen/Living	EW-1	8595	3000	NW	No	200
Master_Bedroom	EW-1	2350	3000	NW	No	4550
Master_Bedroom	EW-1	3250	3000	NE	No	850
Bedroom_2	EW-1	3645	3000	NW	No	200
entry/bathroom/	EW-1	1595	3000	SW	No	125

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	62.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	36.0	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	31.9	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.9	Open	No Insulation	Carpet 10mm
entry/bathroom/	Suspended Concrete Slab 150mm	20.5	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752185 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.8

Additional information

Explanatory notes

About this report

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General Information

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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.

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Accredited Assessors

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752193** Certificate Date: **04 Apr 2019** ★Star rating: **5.3**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
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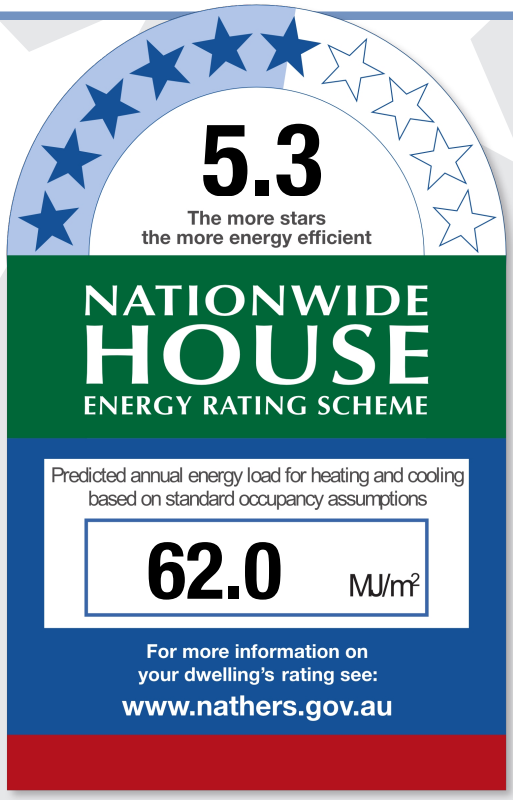

Overview

Dwelling details

Street:	**Unit 8.1.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**43.6**
Cooling:	**18.4**
TOTAL:	**62.0**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	4300	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2200	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8595	3000	SE	No	200
Kitchen/Living	EW-1	4295	3000	NE	No	3200
Master_Bedroom	EW-1	3250	3000	NE	No	850
Master_Bedroom	EW-1	2350	3000	SE	No	4550
Bedroom_2	EW-1	3645	3000	SE	No	200
entry/bathroom/	EW-1	1595	3000	SW	No	125

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	62.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	36.0	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	31.9	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.9	Open	No Insulation	Carpet 10mm
entry/bathroom/	Suspended Concrete Slab 150mm	20.5	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
entry/bathroom/	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752193 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.3

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752235** Certificate Date: **04 Apr 2019** ★Star rating: **6.6**

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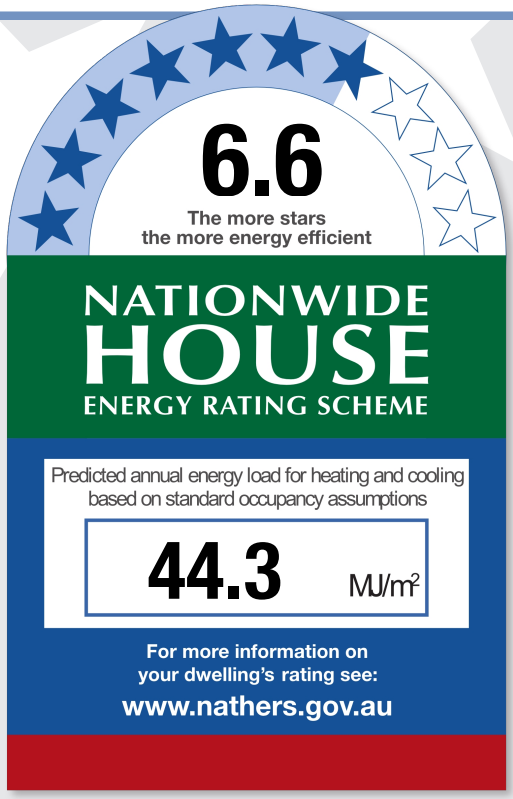
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 8.2.1, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**17.2**
Cooling:	**27.1**
TOTAL:	**44.3**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	NE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	NW	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	NW	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	NW	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	NW	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	4295	3000	NE	No	2950
Kitchen/Living	EW-1	8595	3000	NW	No	600
Master_Bedroom	EW-1	2350	3000	NW	No	4950
Master_Bedroom	EW-1	3250	3000	NE	No	600
Bedroom_2	EW-1	2995	3000	SW	No	500
Bedroom_2	EW-1	3645	3000	NW	No	600
entry/bathroom/	EW-1	2900	3000	SW	No	475
entry/bathroom/	EW-1	1595	3000	SW	No	475

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	44.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab, Unit Below 150mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
entry/bathroom/	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752235 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.6

Additional information

Explanatory notes

About this report

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752201** Certificate Date: **04 Apr 2019** ★Star rating: **6.1**

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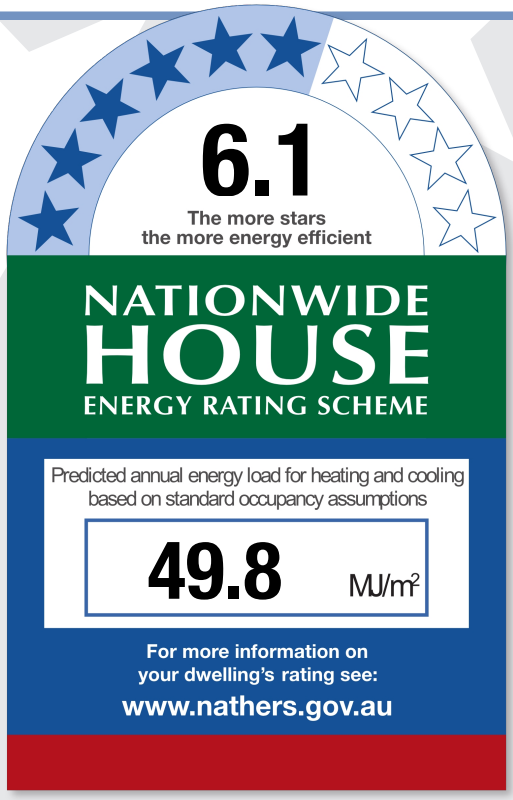
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 8.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Ceiling penetrations

(see following pages for details)

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

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: **Unknown**

Net floor area (m²)

Conditioned:	**99.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**99.0**

Annual thermal performance loads (MJ/m²)

Heating:	**25.4**
Cooling:	**24.4**
TOTAL:	**49.8**

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.

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	2000	1150	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	1000	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2000	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	4300	NE	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NE	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	2200	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	3100	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	8595	3000	SE	No	600
Kitchen/Living	EW-1	4295	3000	NE	No	2950
Master_Bedroom	EW-1	3250	3000	NE	No	600
Master_Bedroom	EW-1	2350	3000	SE	No	4950
Bedroom_2	EW-1	3645	3000	SE	No	600
Bedroom_2	EW-1	2995	3000	SW	No	500
entry/bathroom/	EW-1	1595	3000	SW	No	475
entry/bathroom/	EW-1	2900	3000	SW	No	475

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	60.0	No insulation	No
IW-2 - Cavity brick, plasterboard	44.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.9	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	Carpet 10mm
entry/bathroom/	Concrete Slab, Unit Below 150mm	20.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
entry/bathroom/	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752201 **Certificate Date:** 04 Apr 2019 ★Star rating: 6.1

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752219** Certificate Date: **04 Apr 2019** ★Star rating: **5.3**

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Assessor details

Accreditation number:	20570
Name:	John Caley
Organisation:	Ecological Design Pty Ltd
Email:	john@ecologicaldesign.com.au
Phone:	0418 262 706
Declaration of interest:	The Assessor has provided design advice to the Applicant
Software:	BERS Pro v4.3.0.2d (3.13)
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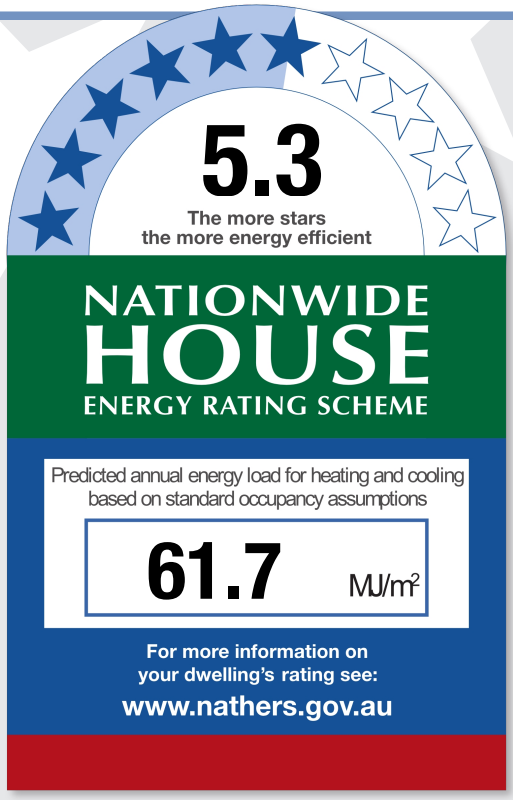

Overview

Dwelling details

Street:	Unit 9.1.1, 1113 Oxford Falls Road		
Suburb:	Frenchs Forest		
State:	NSW	Postcode:	2086
Type:	New Dwelling	NCC Class:	1A
		NatHERS climate zone:	56
Lot/DP number:	752038	Exposure:	Suburban

Key construction and insulation materials

(see following pages for details)

Construction:	Cavity Brick Concrete, Plasterboard Suspended Concrete Slab
Insulation:	Reflective wall insulation No ceiling insulation No floor insulation
Glazing:	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear

Net floor area (m²)

Conditioned:	103.0
Unconditioned:	11.0
Garage:	0.0
TOTAL:	115.0

Annual thermal performance loads (MJ/m²)

Heating:	40.1
Cooling:	21.6
TOTAL:	61.7

Plan documents

Plan ref/date:	Revision L
Prepared by:	marchesepartners

Ceiling penetrations

(see following pages for details)

Sealed:	0
Unsealed:	0
TOTAL:**	0

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Principle downlight type: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	5900	NE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	2000	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1150	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2100	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2800	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	5895	3000	NE	No	3100
Kitchen/Living	EW-1	8895	3000	NW	No	150
Master_Bedroom	EW-1	2200	3000	NW	No	6100
Master_Bedroom	EW-1	3250	3000	NE	No	900
Bedroom_2	EW-1	2995	3000	NW	No	150

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	82.0	No insulation	No
IW-2 - Cavity brick, plasterboard	70.0	No Insulation	No

Floors

Building features continued

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	51.3	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	32.4	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	10.9	Open	No Insulation	Carpet 10mm
Laundry/bathroo	Suspended Concrete Slab 150mm	11.4	Open	No Insulation	Ceramic Tiles 8mm
storage	Suspended Concrete Slab 150mm	8.5	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No
Laundry/bathroo	Concrete, Plasterboard	No insulation	No
storage	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752219 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.3

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752227** Certificate Date: **04 Apr 2019** ★Star rating: **5.2**

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Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
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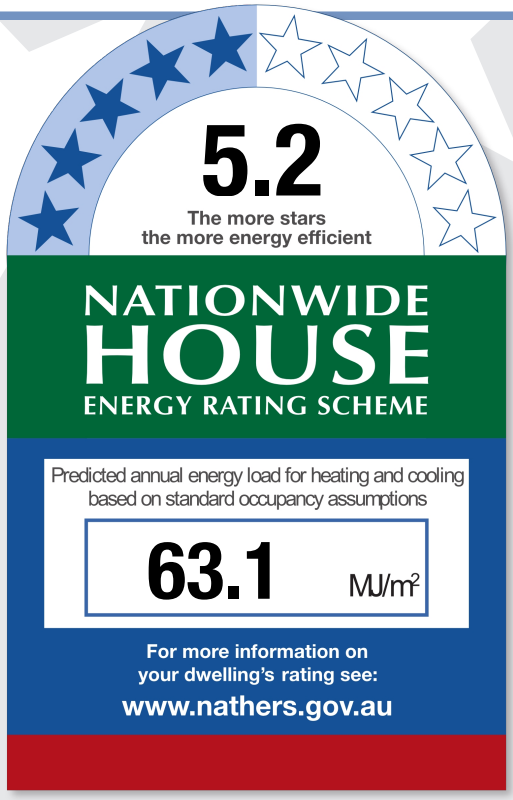

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		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Concrete, Plasterboard** **Suspended Concrete Slab**
Insulation:	**Reflective wall insulation** **No ceiling insulation** **No floor insulation**
Glazing:	**ALM-004-03 A Aluminium B DG Air Fill** **High Solar Gain low-E -Clear**

Net floor area (m²)

Conditioned:	**149.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**149.0**

Annual thermal performance loads (MJ/m²)

Heating:	**42.3**
Cooling:	**20.8**
TOTAL:	**63.1**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

Window selection - default windows only

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	1500	E	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	2550	SE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	3000	5850	NE	No Shading
Master_Bedroom	ALM-001-03 A	n/a	2000	1399	NE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2100	SE	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	1749	NE	No Shading
Bedroom_2/bathr	ALM-001-03 A	n/a	2000	2000	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	1800	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	2132	3000	E	No	160
Kitchen/Living	EW-1	6395	3000	SE	No	100
Kitchen/Living	EW-1	5795	3000	NE	No	2700
Master_Bedroom	EW-1	1450	3000	NE	No	225
Master_Bedroom	EW-1	2300	3000	SE	No	6500
Master_Bedroom	EW-1	1695	3000	NE	No	3050
Bedroom_2/bathr	EW-1	2945	3000	SE	No	100
Bedroom_2/bathr	EW-2	5345	3000	SW	No	100
Study/laundry/b	EW-2	1650	3000	NW	No	100
Study/laundry/b	EW-2	5295	3000	SW	No	100
Bedroom_2	EW-1	3040	3000	SE	No	100

Building features continued

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	96.0	No insulation	No
IW-2 - Cavity brick, plasterboard	44.0	No Insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Suspended Concrete Slab 150mm	59.3	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Suspended Concrete Slab 150mm	34.1	Open	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2/bathr	Suspended Concrete Slab 150mm	15.7	Open	No Insulation	Carpet 10mm
Study/laundry/b	Suspended Concrete Slab 150mm	28.1	Open	No Insulation	80/20 Carpet 10mm/Ceramic
Bedroom_2	Suspended Concrete Slab 150mm	11.2	Open	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Master_Bedroom	Concrete, Plasterboard	No insulation	No
Bedroom_2/bathr	Concrete, Plasterboard	No insulation	No
Study/laundry/b	Concrete, Plasterboard	No insulation	No
Bedroom_2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
None Present		

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752227 **Certificate Date:** 04 Apr 2019 ★Star rating: 5.2

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752250-01** Certificate Date: **05 Apr 2019** ★Star rating: **7.3**

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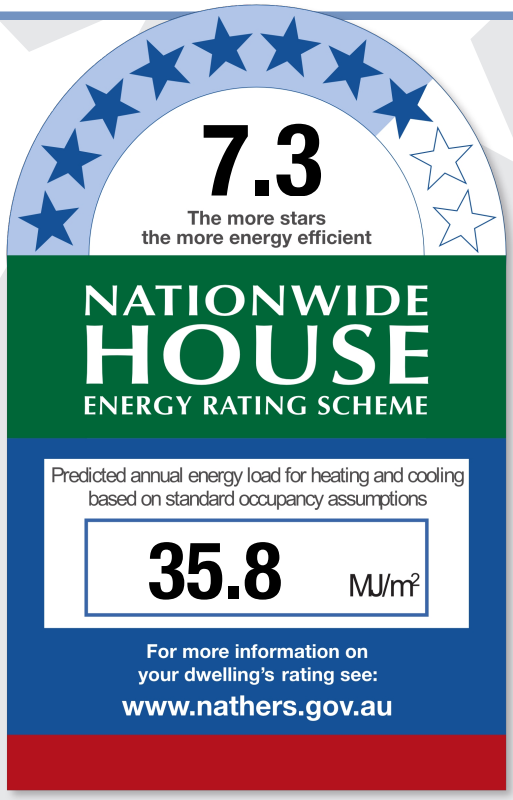
Assessor details

Accreditation number:	20570
Name:	John Caley
Organisation:	Ecological Design Pty Ltd
Email:	john@ecologicaldesign.com.au
Phone:	0418 262 706
Declaration of interest:	The Assessor has provided design advice to the Applicant
Software:	BERS Pro v4.3.0.2d (3.13)
AAO:	ABSA



Overview

Dwelling details

Street:	Unit 9.2.1, 1113 Oxford Falls Road		
Suburb:	Frenchs Forest		
State:	NSW	Postcode:	2086
Type:	New Dwelling	NCC Class:	1A
		NatHERS climate zone:	56
Lot/DP number:	752038	Exposure:	Suburban

Key construction and insulation materials

(see following pages for details)

Construction:	Cavity Brick Corrugated Iron Concrete Slab, Unit Below
Insulation:	Reflective wall insulation R3.0 ceiling insulation No floor insulation
Glazing:	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear

Net floor area (m²)

Conditioned:	103.0
Unconditioned:	11.0
Garage:	0.0
TOTAL:	115.0

Annual thermal performance loads (MJ/m²)

Heating:	6.7
Cooling:	29.1
TOTAL:	35.8

Plan documents

Plan ref/date:	Revision L
Prepared by:	marchesepartners

Ceiling penetrations

(see following pages for details)

Sealed:	0
Unsealed:	0
TOTAL:**	0

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-004-03 A	n/a	3000	5900	NE	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1000	NW	No Shading
Kitchen/Living	ALM-001-03 A	n/a	2000	2300	NW	No Shading
Kitchen/Living	ALM-004-03 A	n/a	2000	1150	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	2100	NW	No Shading
Master_Bedroom	ALM-004-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	2800	NW	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	5895	3000	NE	No	2850
Kitchen/Living	EW-1	8895	3000	NW	No	650
Master_Bedroom	EW-1	2200	3000	NW	No	6600
Master_Bedroom	EW-1	3250	3000	NE	No	650
Bedroom_2	EW-1	2995	3000	NW	No	650

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	82.0	No insulation	No
IW-2 - Cavity brick, plasterboard	70.0	No Insulation	No

Floors

Building features continued

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	51.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	32.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	10.9	None	No Insulation	Carpet 10mm
Laundry/bathroo	Concrete Slab, Unit Below 150mm	11.4	None	No Insulation	60/40 Carpet 10mm/Ceramic
storage	Concrete Slab, Unit Below 150mm	8.5	None	No Insulation	60/40 Carpet 10mm/Ceramic

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes
Laundry/bathroo	Plasterboard	Bulk Insulation R3	Yes
storage	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752250-01 **Certificate Date:** 05 Apr 2019 ★Star rating: 7.3

Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate number: **0003752243** Certificate Date: **04 Apr 2019** ★Star rating: **7.2**

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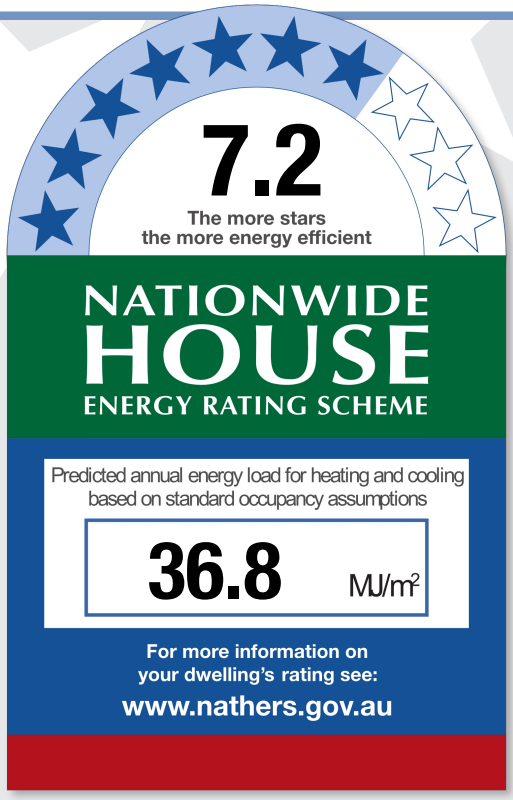
Assessor details

Accreditation number:	**20570**
Name:	**John Caley**
Organisation:	**Ecological Design Pty Ltd**
Email:	**john@ecologicaldesign.com.au**
Phone:	**0418 262 706**
Declaration of interest:	**The Assessor has provided design advice to the Applicant**
Software:	**BERS Pro v4.3.0.2d (3.13)**
AAO:	**ABSA**



Overview

Dwelling details

Street:	**Unit 9.2.2, 1113 Oxford Falls Road**		
Suburb:	**Frenchs Forest**		
State:	**NSW**	Postcode:	**2086**
Type:	**New Dwelling**	NCC Class:	**1A**
		NatHERS climate zone:	**56**
Lot/DP number:	**752038**	Exposure:	**Suburban**

Key construction and insulation materials

(see following pages for details)

Construction:	**Cavity Brick** **Corrugated Iron** **Concrete Slab, Unit Below**
Insulation:	**Reflective wall insulation** **R3.0 ceiling insulation** **No floor insulation**
Glazing:	**ALM-002-03 A Aluminium B SG High Solar Gain Low-E**

Net floor area (m²)

Conditioned:	**145.0**
Unconditioned:	**0.0**
Garage:	**0.0**
TOTAL:	**145.0**

Annual thermal performance loads (MJ/m²)

Heating:	**16.8**
Cooling:	**20.0**
TOTAL:	**36.8**

Plan documents

Plan ref/date:	**Revision L**
Prepared by:	**marchesepartners**

Ceiling penetrations

(see following pages for details)

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

NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceded 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: **Unknown**

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.

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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Kitchen/Living	ALM-002-03 A	n/a	3000	1500	E	No Shading
Kitchen/Living	ALM-002-03 A	n/a	2000	2500	SE	No Shading
Kitchen/Living	ALM-002-03 A	n/a	3000	5850	NE	No Shading
Master_Bedroom	ALM-002-03 A	n/a	3000	3200	NE	No Shading
Bedroom_2/bathr	ALM-001-03 A	n/a	2000	2000	SE	No Shading
Bedroom_2	ALM-001-03 A	n/a	2000	1800	SE	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Cavity Brick	Foil Sided Bubble Wrap, Anti-glare one side	Yes
EW-2	Cavity Brick	Foil, Anti-glare one side, Reflective other	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Kitchen/Living	EW-1	2132	3000	E	No	2327
Kitchen/Living	EW-1	6395	3000	SE	No	625
Kitchen/Living	EW-1	5795	3000	NE	No	2800
Master_Bedroom	EW-1	3195	3000	NE	No	2800
Bedroom_2/bathr	EW-1	2945	3000	SE	No	600
Bedroom_2/bathr	EW-2	5345	3000	SW	No	550
Study/laundry/b	EW-2	2000	3000	NW	No	3900
Study/laundry/b	EW-2	5295	3000	SW	No	550
Bedroom_2	EW-1	3040	3000	SE	No	625

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	96.0	No insulation	No
IW-2 - Cavity brick, plasterboard	36.0	No Insulation	No

Building features continued

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	59.3	None	No Insulation	60/40 Carpet 10mm/Ceramic
Master_Bedroom	Concrete Slab, Unit Below 150mm	31.0	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2/bathr	Concrete Slab, Unit Below 150mm	15.7	None	No Insulation	Carpet 10mm
Study/laundry/b	Concrete Slab, Unit Below 150mm	28.1	None	No Insulation	60/40 Carpet 10mm/Ceramic
Bedroom_2	Concrete Slab, Unit Below 150mm	11.2	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Kitchen/Living	Plasterboard	Bulk Insulation R3	Yes
Master_Bedroom	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2/bathr	Plasterboard	Bulk Insulation R3	Yes
Study/laundry/b	Plasterboard	Bulk Insulation R3	Yes
Bedroom_2	Plasterboard	Bulk Insulation R3	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
None Present				

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1	Dark

Nationwide House Energy Rating Scheme* Certificate

Certificate number: 0003752243 **Certificate Date:** 04 Apr 2019 ★Star rating: 7.2

Additional information

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