

Accreditation Number

VIC/BDAV/10/1001

Assessor Email

Assessor Reference Number

Assessor Name

Michelle Monaghan

Assessor Phone

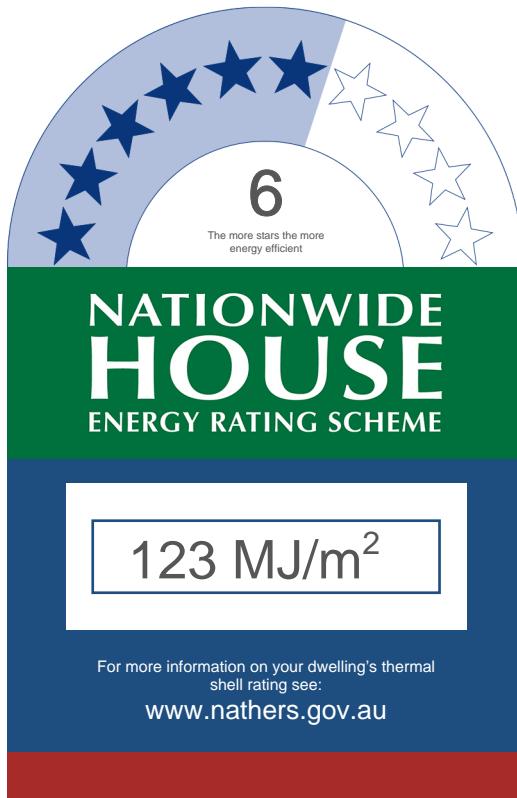
Organisation Name

LMD Studio

Date of Upload

1 Mar 2016

1. OVERVIEW



Scan the QR code below to view the online certificate


<https://www.fr5.com.au/QRCodeLanding?PublicId=E3NAJDSTXP>

Star rating

6

Dwelling address

[Address]

Postcode

3809

Climate zone

62

Thermal performance loads (area adjusted) MJ/m²

| Heating | Cooling | Total |
|---------|---------|-------|
| 112.8 | 10.2 | 123 |

Floor Area (m²)

| Conditioned | Unconditioned | Total | Garage |
|-------------|---------------|-------|--------|
| 200.5 | 20.6 | 254.5 | 33.4 |

NatHERS Accredited Assessor's Stamp

2. BUILDING FEATURES

| Zones | Occupancy Type | Conditioning | Area (m ²) | Ceiling Fans |
|----------------|----------------|-----------------|------------------------|--------------|
| WIR | otherNightCond | Heated & Cooled | 7 | 0 |
| Master Bedroom | bedroom | Heated & Cooled | 17.5 | 0 |
| Ensuite | otherNightCond | Heated & Cooled | 9.4 | 0 |
| WIR/Study | otherNightCond | Heated & Cooled | 7.2 | 0 |
| WIL/Ldry | otherDayCond | | 12.5 | 0 |
| Rumpus/Theatre | living | Heated & Cooled | 16.8 | 0 |
| Entry | otherDayCond | Heated & Cooled | 19.3 | 0 |
| Kitch/Din/Fam | kitchen | Heated & Cooled | 53.2 | 0 |
| Bedroom 2 | bedroom | Heated & Cooled | 11.2 | 0 |
| Bath/Pdr | otherDayCond | | 8 | 0 |
| Bedroom 3 | bedroom | Heated & Cooled | 10.6 | 0 |
| Hall | otherDayCond | Heated & Cooled | 3.9 | 0 |
| Prayer | otherDayCond | Heated & Cooled | 6.1 | 0 |
| B'Ptry | otherDayCond | Heated & Cooled | 11.9 | 0 |
| WC | otherDayCond | Heated & Cooled | 1.8 | 0 |
| Store | otherDayCond | Heated & Cooled | 5.6 | 0 |
| Salon | living | Heated & Cooled | 18.8 | 0 |
| Garage | garage | | 33.4 | 0 |

Window Types

| Code | Glass Type | Frame Type | U-value | SHGC |
|-------------|-----------------------|--|---------|------|
| GGG-05-001a | clear glass | Generic 01: Aluminium standard single-glazed | 7.32 | 0.77 |
| GGG-05-007a | clear/6 air gap/clear | Generic 15: Aluminium improved double-glazed | 3.95 | 0.68 |

Windows

| Zones | Window No. | Code | Height | Width | Orientation | Shade | Weather-strips |
|----------------|------------|-------------|--------|-------|-------------|-------|----------------|
| WIR | Opening 16 | GGG-05-001a | 2057 | 610 | E | No | Yes |
| Master Bedroom | Opening 15 | GGG-05-001a | 2110 | 2690 | E | No | Yes |
| Ensuite | Opening 17 | GGG-05-001a | 514 | 1450 | N | No | Yes |
| Rumpus/Theatre | Opening 12 | GGG-05-007a | 2057 | 610 | E | No | Yes |
| Rumpus/Theatre | Opening 13 | GGG-05-007a | 2057 | 610 | E | No | Yes |
| Entry | Opening 5 | GGG-05-001a | 2150 | 200 | W | No | Yes |
| Kitch/Din/Fam | Opening 10 | GGG-05-007a | 2057 | 850 | S | No | Yes |
| Kitch/Din/Fam | Opening 11 | GGG-05-007a | 2057 | 850 | S | No | Yes |
| Kitch/Din/Fam | Opening 14 | GGG-05-001a | 2110 | 2690 | E | No | Yes |
| Bedroom 2 | Opening 9 | GGG-05-001a | 2057 | 1810 | S | No | Yes |
| Bath/Pdr | Opening 7 | GGG-05-001a | 1200 | 850 | S | No | Yes |
| Bath/Pdr | Opening 8 | GGG-05-001a | 1200 | 849 | S | No | Yes |
| Bedroom 3 | Opening 6 | GGG-05-001a | 2057 | 1810 | S | No | Yes |
| Prayer | Opening 3 | GGG-05-007a | 2057 | 610 | W | No | Yes |
| Prayer | Opening 4 | GGG-05-007a | 2057 | 610 | W | No | Yes |
| Salon | Opening 1 | GGG-05-007a | 2057 | 610 | W | No | Yes |
| Salon | Opening 2 | GGG-05-007a | 2057 | 610 | W | No | Yes |

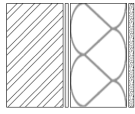
Roof Window Types


| Code | Glass Type | U-value | SHGC | | | |
|---------------------|-----------------|---------|------------------------|-------------|---------------|--------------|
| Roof Windows | | | | | | |
| Zones | Roof Window No. | Code | Area (m ²) | Orientation | Outdoor Shade | Indoor Shade |

Skylights

| Zones | Skylight No. | Type | Area (m ²) | Orientation | Outdoor Shade | Diffuser |
|-------|--------------|------|------------------------|-------------|---------------|----------|
|-------|--------------|------|------------------------|-------------|---------------|----------|

External Wall Types ¹


| | Thickness (mm) | Added Bulk Insulation (R) | | |
|--|----------------|---------------------------|--|---|
| 1: FR5-BV : Brick Veneer | | | | FR5 Wall |
| Brickwork: generic extruded clay brick (typical density) | 110 | | |  |
| Air gap vertical >66 mm (90 nominal) ventilated non-reflective (0.9/0.9; E = 0.82) | 2 | | | |
| Glass fibre batt: R2.5 | 110 | 2.5 | | |
| Plasterboard | 10 | | | |

| | | | | |
|--|-----|--|--|--|
| 2: FR5-BV : Brick Veneer | | | | FR5 Wall |
| Brickwork: generic extruded clay brick (typical density) | 110 | | |  |
| Air gap vertical >66 mm (90 nominal) unventilated non-reflective (0.9/0.9; E = 0.82) | 130 | | | |
| Plasterboard | 10 | | | |

External Walls

| Zone | Wall Type | Area (m ²) | Orientation |
|----------------|---------------------------|------------------------|-------------|
| WIR | 1 : FR5-BV : Brick Veneer | 3.9 | E |
| WIR | 1 : FR5-BV : Brick Veneer | 13.1 | N |
| Master Bedroom | 1 : FR5-BV : Brick Veneer | 1.1 | S |
| Master Bedroom | 1 : FR5-BV : Brick Veneer | 9.9 | E |
| Ensuite | 1 : FR5-BV : Brick Veneer | 10.1 | N |
| WIL/Ldry | 1 : FR5-BV : Brick Veneer | 7.5 | N |
| Rumpus/Theatre | 1 : FR5-BV : Brick Veneer | 12.5 | S |
| Rumpus/Theatre | 1 : FR5-BV : Brick Veneer | 9.8 | E |
| Rumpus/Theatre | 1 : FR5-BV : Brick Veneer | 6.6 | N |
| Rumpus/Theatre | 1 : FR5-BV : Brick Veneer | 1.7 | N |
| Entry | 1 : FR5-BV : Brick Veneer | 4.3 | W |
| Kitch/Din/Fam | 1 : FR5-BV : Brick Veneer | 11.7 | S |
| Kitch/Din/Fam | 1 : FR5-BV : Brick Veneer | 10.7 | E |
| Bedroom 2 | 1 : FR5-BV : Brick Veneer | 9.9 | S |
| Bath/Pdr | 1 : FR5-BV : Brick Veneer | 10.9 | S |
| Bedroom 3 | 1 : FR5-BV : Brick Veneer | 9.9 | S |
| Prayer | 1 : FR5-BV : Brick Veneer | 6.3 | W |
| Prayer | 1 : FR5-BV : Brick Veneer | 1.8 | W |
| Prayer | 1 : FR5-BV : Brick Veneer | 1.3 | S |
| Prayer | 1 : FR5-BV : Brick Veneer | 3.7 | S |
| Prayer | 1 : FR5-BV : Brick Veneer | 1.8 | N |
| Salon | 1 : FR5-BV : Brick Veneer | 1.9 | S |
| Salon | 1 : FR5-BV : Brick Veneer | 6.4 | N |
| Salon | 1 : FR5-BV : Brick Veneer | 3.8 | W |
| Salon | 1 : FR5-BV : Brick Veneer | 6.4 | W |
| Garage | 2 : FR5-BV : Brick Veneer | 3.3 | E |
| Garage | 2 : FR5-BV : Brick Veneer | 16.8 | N |
| Garage | 2 : FR5-BV : Brick Veneer | 15.3 | W |

Internal Insulated Wall Types

| | Thickness (mm) | Added Bulk Insulation (R) | |
|---|----------------|---------------------------|---|
| 1: FR5-Int : Internal Plasterboard Stud Wall | | | FR5 Wall |
| Plasterboard | 10 | |  |
| Glass fibre batt: R2.5 | 110 | 2.5 | |
| Plasterboard | 10 | | |

Internal Insulated Walls

| Adjacent Zones | Wall Type | Area (m ²) |
|----------------------|---|------------------------|
| WIL/Ldry & WIR/Study | 1 : FR5-Int : Internal Plasterboard Stud Wall | 5.1 |
| WIL/Ldry & Ensuite | 1 : FR5-Int : Internal Plasterboard Stud Wall | 6.8 |
| Bath/Pdr & Bedroom 2 | 1 : FR5-Int : Internal Plasterboard Stud Wall | 5.4 |
| Bedroom 3 & Bath/Pdr | 1 : FR5-Int : Internal Plasterboard Stud Wall | 5.3 |
| Hall & Bath/Pdr | 1 : FR5-Int : Internal Plasterboard Stud Wall | 11 |
| B'Ptry & WIL/Ldry | 1 : FR5-Int : Internal Plasterboard Stud Wall | 7.6 |
| Garage & Salon | 1 : FR5-Int : Internal Plasterboard Stud Wall | 7.3 |
| Garage & Store | 1 : FR5-Int : Internal Plasterboard Stud Wall | 5.7 |
| Garage & B'Ptry | 1 : FR5-Int : Internal Plasterboard Stud Wall | 3.2 |
| Garage & WIL/Ldry | 1 : FR5-Int : Internal Plasterboard Stud Wall | 12.6 |

Floors ²

| Zone | Construction | Area (m ²) | Sub Floor Ventilation | Added Bulk Insulation (R) | Covering |
|----------------|----------------------|------------------------|-----------------------|---------------------------|-------------|
| WIR | CSOG: Slab on Ground | 7 | encl | 0.5 | floattimber |
| Master Bedroom | CSOG: Slab on Ground | 17.5 | encl | 0.5 | floattimber |
| Ensuite | CSOG: Slab on Ground | 9.4 | encl | 0.5 | Tiles |
| WIR/Study | CSOG: Slab on Ground | 7.2 | encl | 0.5 | floattimber |
| WIL/Ldry | CSOG: Slab on Ground | 12.5 | encl | 0.5 | Tiles |
| Rumpus/Theatre | CSOG: Slab on Ground | 16.8 | encl | 0.5 | floattimber |
| Entry | CSOG: Slab on Ground | 19.3 | encl | 0.5 | floattimber |
| Kitch/Din/Fam | CSOG: Slab on Ground | 53.2 | encl | 0.5 | floattimber |
| Bedroom 2 | CSOG: Slab on Ground | 11.2 | encl | 0.5 | floattimber |
| Bath/Pdr | CSOG: Slab on Ground | 8 | encl | 0.5 | Tiles |
| Bedroom 3 | CSOG: Slab on Ground | 10.6 | encl | 0.5 | floattimber |
| Hall | CSOG: Slab on Ground | 3.9 | encl | 0.5 | floattimber |
| Prayer | CSOG: Slab on Ground | 6.1 | encl | 0.5 | Carpet |
| B'Ptry | CSOG: Slab on Ground | 11.9 | encl | 0.5 | floattimber |
| WC | CSOG: Slab on Ground | 1.8 | encl | 0.5 | Tiles |
| Store | CSOG: Slab on Ground | 5.6 | encl | 0.5 | Tiles |
| Salon | CSOG: Slab on Ground | 18.8 | encl | 0.5 | Tiles |
| Garage | CSOG: Slab on Ground | 33.4 | encl | 0.5 | none |

Roofs ²

| Zone | Code | Area (m ²) | Added Bulk Insulation (R) Ceiling | Added Bulk Insulation (R) Roof |
|----------------|------|------------------------|-----------------------------------|--------------------------------|
| WIR | Disc | 7 | 6.0 | 0.0 |
| Master Bedroom | Disc | 17.5 | 6.0 | 0.0 |
| Ensuite | Disc | 9.4 | 6.0 | 0.0 |
| WIR/Study | Disc | 7.2 | 6.0 | 0.0 |
| WIL/Ldry | Disc | 12.5 | 6.0 | 0.0 |
| Rumpus/Theatre | Disc | 16.8 | 6.0 | 0.0 |
| Entry | Disc | 19.3 | 6.0 | 0.0 |
| Kitch/Din/Fam | Disc | 53.2 | 6.0 | 0.0 |
| Bedroom 2 | Disc | 11.2 | 6.0 | 0.0 |
| Bath/Pdr | Disc | 8 | 6.0 | 0.0 |
| Bedroom 3 | Disc | 10.6 | 6.0 | 0.0 |
| Hall | Disc | 3.9 | 6.0 | 0.0 |
| Prayer | Disc | 6.1 | 6.0 | 0.0 |
| B'Ptry | Disc | 11.9 | 6.0 | 0.0 |
| WC | Disc | 1.8 | 6.0 | 0.0 |
| Store | Disc | 5.6 | 6.0 | 0.0 |
| Salon | Disc | 18.8 | 6.0 | 0.0 |
| Garage | Disc | 33.4 | 0.0 | 0.0 |

Doors

| Zone | Area (m ²) | Weather-strips |
|----------|------------------------|----------------|
| WIL/Ldry | 1.7 | Yes |
| Entry | 1.9 | Yes |
| Salon | 1.7 | Yes |
| Garage | 1.7 | No |
| Garage | 10.1 | No |

Air leakage

| Zone | Exhaust Fans | | Wall/Ceiling Vents | | Chimneys | | Downlights | | Unflued Gas Heaters | | Heater Flues | |
|----------------|--------------|----------|--------------------|----------|----------|----------|------------|----------|---------------------|----------|--------------|----------|
| | Sealed | Unsealed | Sealed | Unsealed | Sealed | Unsealed | Sealed | Unsealed | Sealed | Unsealed | Sealed | Unsealed |
| WIR | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | - | 0 | - | 0 |
| Master Bedroom | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | - | 0 | - | 0 |
| Ensuite | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | - | 0 | - | 0 |
| WIR/Study | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | - | 0 | - | 0 |
| WIL/Ldry | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | - | 0 | - | 0 |
| Rumpus/Theatre | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | - | 0 | - | 0 |
| Entry | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | - | 0 | - | 0 |
| Kitch/Din/Fam | 1 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | - | 0 | - | 0 |
| Bedroom 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | - | 0 | - | 0 |
| Bath/Pdr | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | - | 0 | - | 0 |
| Bedroom 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | - | 0 | - | 0 |
| Hall | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | - | 0 | - | 0 |
| Prayer | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | - | 0 | - | 0 |
| B'Ptry | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | - | 0 | - | 0 |
| WC | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | - | 0 | - | 0 |
| Store | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | - | 0 | - | 0 |
| Salon | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | - | 0 | - | 0 |
| Garage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | - | 0 |
| Total | 5 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 |

Site Exposure:

suburban

Software name and version:

FirstRate5: 51011 c

Restrictions on use of this software:

FirstRate5 cannot model slab edge insulation.

3. 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, TV's etc. or solar panel or water tank requirements. The efficiency or specification of these items is generally covered by other regulations, standards or guidelines.

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 certified drawing set. Changes to any of these 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

ENDNOTES

- Each airspace within a wall construction has a thermal resistance. This varies based on a number of criteria. Each airspace in this certificate is described using these criteria. They are as follows:
Orientation (vertical, horizontal, etc); Width; Air movement (ventilated or non-ventilated); and the Emissivity (e) of the surfaces on either side of the air space. Emissivity ranges from 0.9 for common non reflective building materials to 0.03 for the shiniest reflective foil products. The figures in brackets in each description (eg 0.2/0.9; E = 0.2) refer firstly to the emissivity of each of the two vertical surfaces facing into the space (in this case one surface is 0.2, for example an anti glare coated foil, and the other 0.9, a normal building material). The value of E is the effective Emissivity of the air space taking into account the emissivity of the surfaces on either side of the air space.
 - Ceilings with zones above are described as the floor of the zone above (see Floors schedule).
- Ceilings with a roof or a neighbour above are described as the roof of that zone/area (see Roofs schedule)

Project Notes

Slab Waffle Pods 225mm. Wall Insulation R2.5 batts to house with sisalation paper, incl. party walls between garage & house. R2.5 to internal walls to Ldy/WIL, Bath/WC. Ceiling Insulation R6.0 batts to house. Double glazing to the following windows: Salon, Prayer, Family, Rumpus. Single glazed alum windows and doors U-value 7.32, SHGC 0.77, Double glazed alum windows U-value 3.95, SHGC 0.68. All exhaust fans are self closing. All gaps around external doors, windows & down lights are sealed. Weather strips/seals to entry & garage P/A door.

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Slab Waffle Pods 225mm. Wall Insulation R2.5 batts to house with sisalation paper, incl. party walls between garage & house. R2.5 to internal walls to Ldy/WIL, Bath/WC. Ceiling Insulation R6.0 batts to house. Double glazing to the following windows: Salon, Prayer, Family, Rumpus. Single glazed alum windows and doors U-value 7.32, SHGC 0.77, Double glazed alum windows U-value 3.95, SHGC 0.68. All exhaust fans are self closing. All gaps around external doors, windows & down lights are sealed. Weather strips/seals to entry & garage P/A door.