

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 315056M\_06

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

This certificate is a revision of certificate number 315056M\_02 lodged with the consent authority or certifier on 07 October 2016 with application 436/2008/03.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

Secretary

Date of issue: Sunday, 21 October 2018

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



### Project summary

Project name	5 Commonwealth Parade_06
Street address	5 Commonwealth Parade Manly 2095
Local Government Area	Manly Council
Plan type and plan number	deposited 7180
Lot no.	2
Section no.	-
No. of residential flat buildings	1
No. of units in residential flat buildings	3
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 30	Target 30

### Certificate Prepared by

Name / Company Name: AGA Consultants

ABN (if applicable): 37159342711

# Description of project

## Project address

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## Project type

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No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	463
Roof area (m²)	120
Non-residential floor area (m²)	0.0
Residential car spaces	8
Non-residential car spaces	0

## Common area landscape

Common area lawn (m²)	0.0
Common area garden (m²)	2.5
Area of indigenous or low water use species (m²)	0.0

## Assessor details

Assessor number	BDAV/12/1475
Certificate number	0003274850
Climate zone	56

## Project score

Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 30	Target 30

## Description of project

The tables below describe the dwellings and common areas within the project

### Residential flat buildings - Building1, 3 dwellings, 5 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
1	3	181.6	0.0	6.5	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
2	3	176.5	3.4	34.3	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
3	4 or more bedrooms	198.6	9.1	31.6	0.0

## Description of project

The tables below describe the dwellings and common areas within the project

### Common areas of unit building - Building1

Common area	Floor area (m²)
Car park area, basement	277.9
Garbage room	7.1

Common area	Floor area (m²)
Lift car (No. 1)	-
Ground floor lobby types	18.4

Common area	Floor area (m²)
Switch room (NBN)	4.2
Hallway/lobby types	25.0

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building1

### (a) Dwellings

- (i) Water
- (ii) Energy
- (iii) Thermal Comfort

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 2. Commitments for multi-dwelling houses

## 3. Commitments for single dwelling houses

## 4. Commitments for common areas and central systems/facilities for the development (non-building specific)

- (i) Water
- (ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - Building1

#### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install:			
(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		✓	✓
(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓	✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	3 star	-	-	-	-	-	-	-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
1	gas instantaneous 5 star	individual fan, ducted to façade or roof	interlocked to light	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	interlocked to light
All other dwellings	gas instantaneous 5 star	individual fan, ducted to façade or roof	interlocked to light	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off



Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
1	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	3 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	yes
2	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	3 (dedicated)	3 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	yes
All other dwellings	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	1-phase airconditioning 4 Star (new rating)	5 (dedicated)	3 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	3	yes

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	3 star	3 star	-	yes	no

(iii) Thermal Comfort								Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.										
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.										

<b>(iii) Thermal Comfort</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✓		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must:  (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓

	<b>Thermal loads</b>	
<b>Dwelling no.</b>	<b>Area adjusted heating load (in mJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted cooling load (in mJ/m<sup>2</sup>/yr)</b>
1	53.3	7.8
2	44.8	23.2
All other dwellings	54.0	30.0

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area, basement	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	motion sensors	No
Lift car (No. 1)	-	-	compact fluorescent	connected to lift call button	No
Switch room (NBN)	ventilation supply only	thermostatically controlled	compact fluorescent	manual on / manual off	No
Garbage room	ventilation exhaust only	-	compact fluorescent	motion sensors	No
Ground floor lobby types	no mechanical ventilation	-	compact fluorescent	manual on / timer off	No
Hallway/lobby types	no mechanical ventilation	-	compact fluorescent	manual on / timer off	No

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 4

#### 4. Commitments for common areas and central systems/facilities for the development (non-building specific)

##### (b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

## Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

## Legend

1. Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✓" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

## NATHERS Thermal Performance Specifications (BASIX Thermal Comfort)

### 5 Commonwealth Parade, Manly

*These are the Specifications upon which the Certified Assessment is based. If details included in these Specifications vary from other drawings or written specifications, these Specifications shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the project.*

Windows	Glass	Frame	U value	SHGC	Detail
Default	Single glazed, low E high solar gain	Aluminium	5.4	0.49	Generally for window types: Awning, bi-fold, casement, tilt 'n' turn
Default	Single glazed, low E high solar gain	Aluminium	5.4	0.58	Generally for window types: Sliding window/ door, double hung, fixed, louvre

Skylights	Glass	Frame	U value	SHGC	Detail
Default	Single glazed, clear	Aluminium	7.3	0.79	All skylights

External walls	Construction	Added Insulation	Detail
Cavity brick		R 1.0	External walls generally
Framed		R 2.5	To level 3

Internal walls	Construction	Added Insulation	Detail
Brick plastered		None	Internal walls generally
Brick plastered		R 1.0	To unit 1: walls adjoining car park and lobby areas
Framed		None	To unit 3: internal walls for level 3

Floors	Construction	Added Insulation	Detail
Concrete		None	Generally
Concrete		R 1.0	To unit 1 - floors over non-conditioned spaces – basement, services areas

Ceilings	Construction	Added Insulation	Detail
Plasterboard		(see roof detail below)	

Roof	Construction	Added Insulation	Detail
Concrete		R 1.5	Concrete roofs generally
Concrete		R 2.0	Concrete roof to unit 3
Metal sheeting		R 3.5	

#### Other Requirements

All exhaust fans and downlights (if installed) to be **sealed** to prevent air-infiltration



Certificate no.: 0003274850  
 Assessor Name: Robert Mallindine  
 Accreditation no.: VIC/BDV/12/1475  
 Certificate date: 21 October 2018  
 Dwelling Address:

5 Commonwealth Parade  
 Manly, NSW  
 2095

[www.nathers.gov.au](http://www.nathers.gov.au)



# Nationwide House Energy Rating Scheme\* — Class 2 summary



Certificate number: **0003274850**

Certificate Date: **21 Oct 2018**

★ Average Star rating: **4.8**

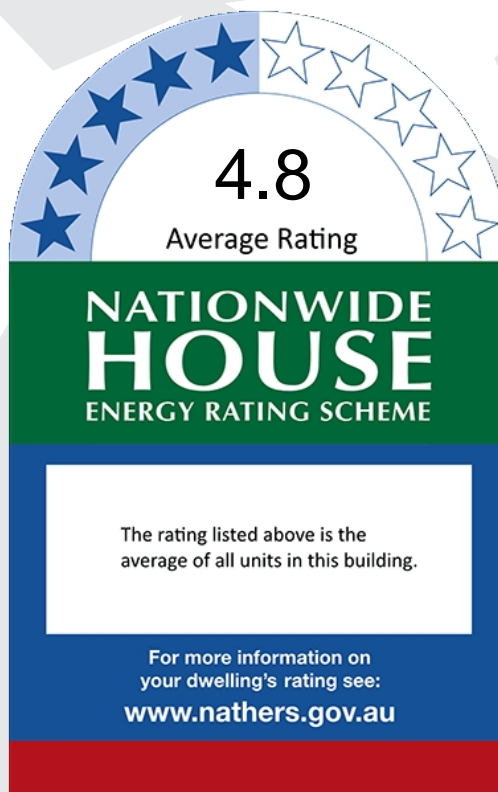
## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
  
AAO: **BDAV**

## Dwelling details

Street: **5 Commonwealth Parade**  
Suburb: **Manly**  
State: **NSW**  
Postcode: **2095**

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



## Summary of all dwellings

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0003274826	1	53.0	8.0	61.0	5.3
0003274834	2	45.0	23.0	68.0	4.9
0003274842	3	54.0	30.0	84.0	4.2



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003274826

Certificate Date: 21 Oct 2018

★ Star rating: 5.3



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 1, 5 Commonwealth Parade**  
Suburb: **Manly**  
State: **NSW** Postcode: **2095**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Concrete roof/Plasterboard Slab**  
Insulation: **R1.0 wall insulation**  
**Ceiling (uninsulated)**  
**R1.5 floor insulation**  
Glazing: **Aluminium B SG High Solar Gain**  
**Low-E**

### Net floor area (m<sup>2</sup>)

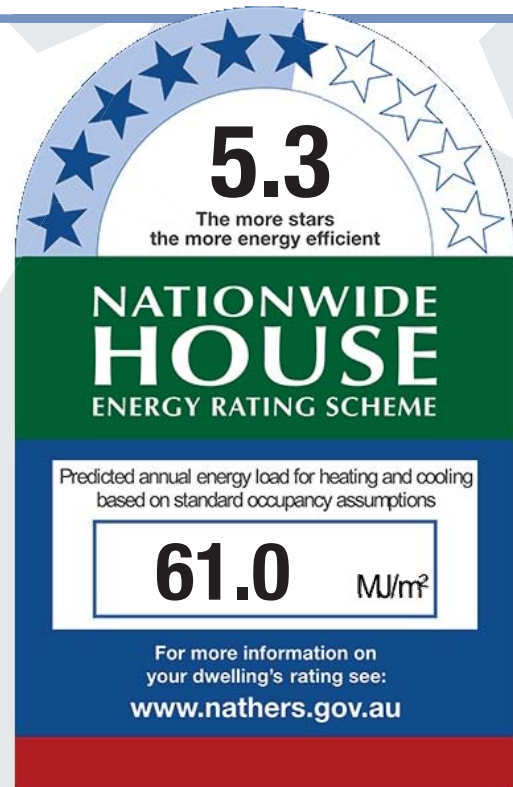
Conditioned: **179.0**  
Unconditioned: **2.0**  
Garage:  
TOTAL: **181.0**

### Annual thermal performance loads (MJ/m<sup>2</sup>)

Heating: **53.0**  
Cooling: **8.0**  
TOTAL: **61.0**

### Plan documents

Plan ref/date: **28/08/2018**  
Prepared by: **Platform Architects**



### 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: **No downlights modelled**

### Window selection - default windows only

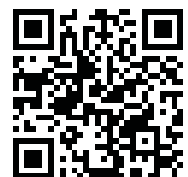
Note on allowable window values:  
With a 10% tolerance to the nominated SHGC window values shown on page 2, the following ratings are achieved:

-10% SHGC **5.2**  
+10% SHGC **5.4**

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 the rating listed above falls below 6.0 stars or the required rating, then the window with this tolerance can NOT be selected.**

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



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274826**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**5.3**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	DEFAULTS: 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
Living / Dining / Kitchen	ALM-002-03 A	01	2600	4500	SE	None
Living / Dining / Kitchen	ALM-002-03 A	02	2600	2400	SE	None
Bedroom 1	ALM-002-03 A	03	2200	800	NE	None
Bedroom 1	ALM-002-03 A	04	2600	3300	SE	None
Bedroom 3	ALM-002-03 A	05	2600	900	SE	None
Bedroom 2	ALM-002-03 A	06	2600	1800	SE	None
Bedroom 2	ALM-002-03 A	07	2600	1100	NE	None
Bedroom 2	ALM-002-03 A	HL	600	1100	NW	None
Bedroom 2 (Ens)	ALM-002-03 A	08	2200	800	NE	None

### 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-005	Double Brick	Polystyrene extruded: R1.0	No
EW-011	Brick wall/Plasterboard	Polystyrene expanded (k = 0.039): R0.5/Glass fibre batt: R1.0	No
EW-017	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-005	4500	2600	SE	Yes	2100
Living / Dining / Kitchen	EW-005	1900	2600	SW	Yes	2600
Living / Dining / Kitchen	EW-005	2400	2600	SE	Yes	3800
Living / Dining / Kitchen	EW-005	5300	2600	SW	No	
Living / Dining / Kitchen	EW-011	2300	2600	SW	No	
Bedroom 1	EW-005	7000	2600	NE	No	
Bedroom 1	EW-005	3300	2600	SE	Yes	1350

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274826**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**5.3**



## Building features continued

Bedroom 1 (Ens)	EW-005	2600	2600	NE	No	
Bedroom 1 (Ens)	EW-005	600	2600	NW	Yes	11000
Bedroom 1 (Ens)	EW-011	1500	2600	SW	No	
Bedroom 3	EW-005	900	2600	SE	Yes	1600
Bedroom 3	EW-017	4400	2600	SW	No	
Bedroom 2	EW-017	5000	3200	NE	No	
Bedroom 2	EW-005	1800	2600	SE	Yes	9000
Bedroom 2	EW-005	1100	2600	NE	Yes	1000
Bedroom 2	EW-005	3000	2600	NW	Yes	1500
Bedroom 2	EW-011	6400	1000	SW	No	
Bedroom 2	EW-005	1100	800	NW	No	
Bedroom 2 (Ens)	EW-005	1400	2600	NE	Yes	1000
Bedroom 2 (Ens)	EW-011	2500	2600	SW	No	
Media / Hall	EW-017	3500	2600	SW	No	
Media / Hall	EW-011	4800	1000	SW	No	
Media / Hall	EW-011	1500	2600	SW	No	
Bathroom	EW-017	2400	2600	SW	No	
Powder Room	EW-011	2400	2600	SW	No	
Pantry	EW-005	2000	2600	SW	Yes	1000
Store cupboard	EW-011	8500	1300	SW	No	
Store cupboard	EW-005	1300	1300	NW	Yes	1500
Store cupboard	EW-017	1300	1300	SW	No	

## Internal wall type

ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-004	Plasterboard	14.0		No
IW-005	Plasterboard	134.9		No

## Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 430	47.8		R1.5	Ceramic tile
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 430	10.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 430	24.3		R1.5	Carpet 10 + felt underlay 10
Bedroom 1 (Ens)/Outdoor Air	R1.0 - CP - tiles - concrete 430	6.8		R1.5	Ceramic tile
Bedroom 3/Outdoor Air	R1.0 - CP - carpet - concrete 430	16.3		R1.5	Carpet 10 + felt underlay 10
Bedroom 2/Outdoor Air	R1.0 - CP - carpet - concrete 430	21.8		R1.5	Carpet 10 + felt underlay 10
Bedroom 2 (Ens)/Outdoor Air	R1.0 - CP - tiles - concrete 430	3.2		R1.5	Ceramic tile

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274826**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**5.3**



## Building features continued

Media / Hall/Outdoor Air	R1.0 - CP - carpet - concrete 430 23.1	R1.5	Carpet 10 + felt underlay 10
Bathroom/Outdoor Air	R1.0 - CP - tiles - concrete 430 8.9	R1.5	Ceramic tile
Powder Room/Outdoor Air	R1.0 - CP - tiles - concrete 430 2.4	R1.5	Ceramic tile
Pantry/Outdoor Air	R1.0 - CP - tiles - concrete 430 5.0	R1.5	Ceramic tile
Store cupboard/Outdoor Air	R1.0 - CP - carpet - concrete 430 12.0	R1.5	Carpet 10 + felt underlay 10

## Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 (Ens)	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 2 (Ens)	carpet - concrete 200mm		No
Neighbour/Media / Hall	carpet - concrete 200mm		No
Neighbour/Bathroo m	carpet - concrete 200mm		No
Neighbour/Powder Room	carpet - concrete 200mm		No
Neighbour/Pantry	carpet - concrete 200mm		No
Neighbour/Store cupboard	carpet - concrete 200mm		No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	21	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	8	Downlight		Sealed
Bedroom 1 (Ens) 2		Downlight		Sealed
Bedroom 1 (Ens) 1		Ceiling exhaust fan	160	Sealed
Bedroom 3	6	Downlight		Sealed
Bedroom 2	6	Downlight		Sealed
Bedroom 2 (Ens) 2		Downlight		Sealed
Bedroom 2 (Ens) 1		Ceiling exhaust fan	160	Sealed
Media / Hall	6	Downlight		Sealed
Bathroom	2	Downlight		Sealed

## Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274826**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**5.3**



### Building features continued

Bathroom	1	Ceiling exhaust fan	160	Sealed
Powder Room	1	Downlight		Sealed
Powder Room	1	Ceiling exhaust fan	160	Sealed
Pantry	1	Downlight		Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R3.5 - Metal Deck - Horiz pitch Colourbond steel roof + Plasterb'd ceiling under	R3.5	Medium
R1.5 - Concrete slab 200mm	R1.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003274826

Certificate Date: 21 Oct 2018

★ Star rating: 5.3



## Additional information

## Explanatory notes

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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.

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### Contact

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For more information on energy efficient design and insulation visit [www.yourhome.gov.au](http://www.yourhome.gov.au)



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003274834

Certificate Date: 21 Oct 2018

★ Star rating: 4.9



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 2, 5 Commonwealth Parade**  
Suburb: **Manly**  
State: **NSW** Postcode: **2095**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Concrete roof/Plasterboard Slab**  
Insulation: **R1.0 wall insulation**  
**Ceiling (uninsulated)**  
**Floor (uninsulated)**  
Glazing: **Aluminium B SG High Solar Gain**  
**Low-E**

### Net floor area (m<sup>2</sup>)

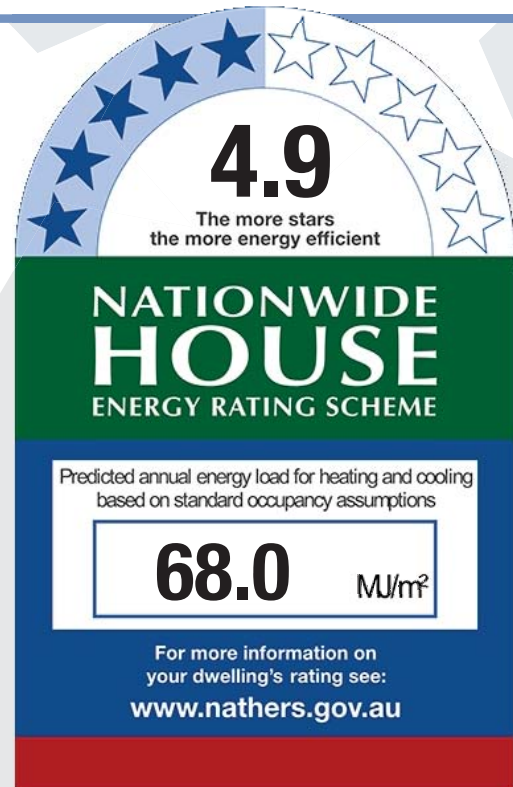
Conditioned: **177.0**  
Unconditioned: **3.0**  
Garage:  
TOTAL: **180.0**

### Annual thermal performance loads (MJ/m<sup>2</sup>)

Heating: **45.0**  
Cooling: **23.0**  
TOTAL: **68.0**

### Plan documents

Plan ref/date: **28/08/2018**  
Prepared by: **Platform Architects**



### Ceiling penetrations

(see following pages for details)

Sealed: **18**  
Unsealed: **0**  
TOTAL:\*\* **18**

\*\*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: **Light-emitting diode (LED)**

### Window selection - default windows only

Note on allowable window values:  
With a 10% tolerance to the nominated SHGC window values shown on page 2, the following ratings are achieved:

-10% SHGC **4.8**  
+10% SHGC **4.9**

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



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274834**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**4.9**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	DEFAULTS: 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
Living / Dining / Kitchen	ALM-002-03 A	01	2200	800	NE	None
Living / Dining / Kitchen	ALM-002-03 A	02	2600	9200	SE	None
Living / Dining / Kitchen	ALM-002-03 A	03	2600	1500	SW	None
Bedroom 1	ALM-002-03 A	04	2200	1300	NE	None
Bedroom 1	ALM-002-03 A	05	2600	3300	NW	None
Bedroom 1 (Ens)	ALM-002-03 A	06	2600	900	SE	None
Bedroom 3	ALM-002-03 A	07	2600	1300	NW	None
Bedroom 2	ALM-002-03 A	08	2200	900	SE	None
Bedroom 2	ALM-002-03 A	09	2200	600	SW	None
Media	ALM-002-03 A	10	2200	600	SW	None
Media	ALM-002-03 A	11	2600	2900	NW	None
Laundry	ALM-002-03 A	12	2200	900	SW	None

### Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
SG-Generic-01 A	DEFAULTS: Clear AI SG DEFAULT ROOF WINDOW System 01	7.3	0.79

### Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
Bathroom	SG-Generic-01 A	01	0.7	NE	None	None

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-005	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-005	5900	2600	NE	No	
Living / Dining / Kitchen	EW-005	9900	2600	SE	Yes	2600
Living / Dining / Kitchen	EW-005	1500	2600	SW	Yes	900
Living / Dining / Kitchen	EW-005	400	2600	SE	Yes	3000
Living / Dining / Kitchen	EW-005	5500	2600	SW	Yes	1200
Bedroom 1	EW-005	6200	2600	NE	No	



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274834**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**4.9**



## Building features continued

Bedroom 1	EW-005	3300	2600	NW	Yes	1800
Bedroom 1	EW-005	800	2600	N	No	
Bedroom 1	EW-005	3400	2600	NE	No	
Bedroom 1 (Ens)	EW-005	3600	2600	NE	No	
Bedroom 1 (Ens)	EW-005	1000	2600	SE	Yes	500
Bedroom 3	EW-005	3000	2600	SW	No	
Bedroom 3	EW-005	1300	2600	NW	Yes	500
Bedroom 2	EW-005	900	2600	SE	Yes	1000
Bedroom 2	EW-005	3700	2600	SW	No	
Media	EW-005	4300	2600	SW	No	
Media	EW-005	3100	2600	NW	Yes	1200
Bathroom	EW-005	2500	2600	SW	No	
Pantry	EW-005	1700	2600	NE	Yes	1500
Laundry	EW-005	1700	2600	SW	Yes	1500

## Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	158.3		No
IW-004	Plasterboard	14.8		No

## Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	56.2			Ceramic tile
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	10.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	26.8			Carpet 10 + felt underlay 10
Bedroom 1/Outdoor Air	carpet - concrete 200mm	7.2			Carpet 10 + felt underlay 10
Bedroom 1 (Ens)/Neighbour	tiles - concrete 200mm	5.8			Ceramic tile
Bedroom 1 (Ens)/Outdoor Air	tiles - concrete 200mm	6.2			Ceramic tile
Bedroom 3/Neighbour	carpet - concrete 200mm	10.8			Carpet 10 + felt underlay 10
Bedroom 2/Neighbour	carpet - concrete 200mm	12.3			Carpet 10 + felt underlay 10
Hall / WC/Neighbour	carpet - concrete 200mm	18.5			Carpet 10 + felt underlay 10
Media/Neighbour	carpet - concrete 200mm	5.7			Carpet 10 + felt underlay 10
Media/Outdoor Air	carpet - concrete 200mm	7.6			Carpet 10 + felt underlay 10
Bathroom/Neighbour	tiles - concrete 200mm	4.8			Ceramic tile
Pantry/Neighbour	tiles - concrete 200mm	4.6			Ceramic tile

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274834**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**4.9**



## Building features continued

Laundry/Neighbour tiles - concrete 200mm 3.4 Ceramic tile

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 (Ens)	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Hall / WC	carpet - concrete 200mm		No
Neighbour/Media	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No
Neighbour/Pantry	carpet - concrete 200mm		No
Neighbour/Laundry	carpet - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	26	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	13	Downlight		Sealed
Bedroom 1 (Ens)	5	Downlight		Sealed
Bedroom 1 (Ens)	1	Ceiling exhaust fan	160	Sealed
Bedroom 3	5	Downlight		Sealed
Bedroom 2	5	Downlight		Sealed
Hall / WC	6	Downlight		Sealed
Hall / WC	1	Ceiling exhaust fan	160	Sealed
Media	5	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Pantry	1	Downlight		Sealed
Laundry	2	Downlight		Sealed
Laundry	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274834**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**4.9**



### Building features continued

#### Roof type

Construction	Added insulation	Roof colour
R1.5 - Concrete slab 200mm	R1.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003274834

Certificate Date: 21 Oct 2018

★ Star rating: 4.9



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003274842

Certificate Date: 21 Oct 2018

★ Star rating: 4.2



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 3, 5 Commonwealth Parade**  
Suburb: **Manly**  
State: **NSW** Postcode: **2095**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Concrete roof/Plasterboard Slab**  
Insulation: **R1.0 wall insulation**  
**Ceiling (uninsulated)**  
**Floor (uninsulated)**  
Glazing: **Aluminium B SG High Solar Gain**  
**Low-E**

### Net floor area (m<sup>2</sup>)

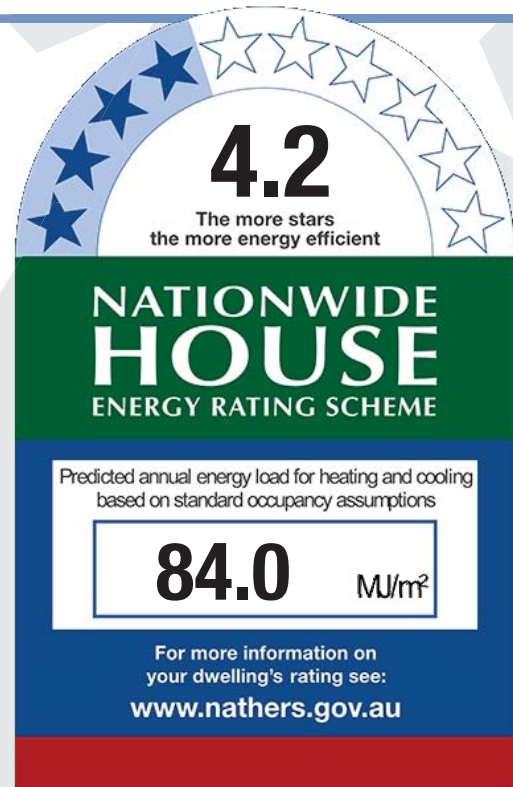
Conditioned: **199.0**  
Unconditioned: **9.0**  
Garage:  
TOTAL: **208.0**

### Annual thermal performance loads (MJ/m<sup>2</sup>)

Heating: **54.0**  
Cooling: **30.0**  
TOTAL: **84.0**

### Plan documents

Plan ref/date: **28/08/2018**  
Prepared by: **Platform Architects**



### Ceiling penetrations

(see following pages for details)

Sealed: **66**  
Unsealed: **0**  
TOTAL:\*\* **66**

\*\*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: **Light-emitting diode (LED)**

### Window selection - default windows only

Note on allowable window values:  
With a 10% tolerance to the nominated SHGC window values shown on page 2, the following ratings are achieved:

-10% SHGC **4.1**

+10% SHGC **4.2**

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 the rating listed above falls below 6.0 stars or the required rating, then the window with this tolerance can NOT be selected.**

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



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003274842**

Certificate Date:

**21 Oct 2018**

★ Star rating:

**4.2**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-03 A	DEFAULTS: 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
Living / Dining / Kitchen	ALM-002-03 A	01	2600	9000	SE	None
Living / Dining / Kitchen	ALM-002-03 A	02	2600	1900	SW	None
Bedroom 2	ALM-002-03 A	03	2200	900	NE	None
Bedroom 2	ALM-002-03 A	04	2600	3400	NW	None
Bedroom 2 (Ens)	ALM-002-03 A	05	2200	900	NE	None
Bedroom 3	ALM-002-03 A	06	2600	3000	NW	None
Bedroom 4	ALM-002-03 A	07	2200	900	SW	None
Bedroom 4	ALM-002-03 A	07	2200	900	SW	None
Bathroom	ALM-002-03 A	09	2200	900	SW	None
Laundry	ALM-002-03 A	10	2200	900	NE	None
Bedroom Master	ALM-002-03 A	11	2400	6500	SE	None
Bedroom Master	ALM-002-03 A	12	2400	1000	NE	None
Bedroom Master WIR	ALM-002-03 A	13	2400	900	NE	None
Bedroom Master WIR	ALM-002-03 A	14	2400	900	SW	None
Bedroom Master Ens	ALM-002-03 A	15	2400	2700	SW	None
Study	ALM-002-03 A	16	2400	4100	NW	None
Landing	ALM-002-03 A	17	2400	3700	NE	None

### Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
SG-Generic-01 A	DEFAULTS: Clear AI SG DEFAULT ROOF WINDOW System 01	7.3	0.79

### Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
Bedroom 4	SG-Generic-01 A	01	1.1	NE	None	None

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-005	Double Brick	Polystyrene extruded: R1.0	No
EW-018	Fibre-cement sheet wall/Plasterboard	Glass fibre batt: R2.5	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining /	EW-005	4800	2600	NE	No	

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## Building features continued

Kitchen						
Living / Dining / Kitchen	EW-005	9700	2600	SE	Yes	2800
Living / Dining / Kitchen	EW-005	1900	2600	SW	Yes	900
Living / Dining / Kitchen	EW-005	300	2600	SE	Yes	3000
Living / Dining / Kitchen	EW-005	4100	2600	SW	No	
Bedroom 2	EW-005	4300	2600	NE	No	
Bedroom 2	EW-005	4000	2600	NW	Yes	3500
Bedroom 2 (Ens)	EW-005	3800	2600	NE	No	
Bedroom 3	EW-005	4700	2600	SW	Yes	500
Bedroom 3	EW-005	3000	2600	NW	Yes	2900
Bedroom 4	EW-005	4200	2600	SW	No	
Bathroom	EW-005	3100	2600	SW	No	
Pantry	EW-005	1800	2600	NE	No	
Laundry	EW-005	2100	2600	NE	No	
Bedroom Master	EW-018	6500	2400	SE	Yes	1400
Bedroom Master	EW-018	4300	2400	SW	Yes	400
Bedroom Master	EW-018	3300	2400	NE	Yes	400
Bedroom Master WIR	EW-018	1500	2400	NE	Yes	400
Bedroom Master WIR	EW-018	3100	2400	SW	Yes	400
Bedroom Master Ens	EW-018	4500	2400	SW	Yes	400
Study	EW-018	3150	2400	SW	Yes	400
Study	EW-018	4100	2400	NW	Yes	2000
Study	EW-018	3200	2400	NE	Yes	400
Landing	EW-018	3800	2400	NE	Yes	400

## Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	58.1		No
IW-005	Plasterboard	135.5		No

## Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	44.7			Ceramic tile
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	10.0			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	14.8			Carpet 10 + felt underlay 10
Bedroom 2 (Ens)/Neighbour	tiles - concrete 200mm	7.8			Ceramic tile



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## Building features continued

Bedroom 3/Neighbour	carpet - concrete 200mm	14.1	Carpet 10 + felt underlay 10
Bedroom 4/Neighbour	carpet - concrete 200mm	12.6	Carpet 10 + felt underlay 10
Bathroom/Neighbour	tiles - concrete 200mm	5.6	Ceramic tile
Pantry/Neighbour	tiles - concrete 200mm	4.3	Ceramic tile
Laundry/Neighbour	tiles - concrete 200mm	3.5	Ceramic tile
Hall / Foyer/Neighbour	carpet - concrete 200mm	22.1	Carpet 10 + felt underlay 10
Bedroom Master/Living / Dining / Kitchen	carpet - concrete 200mm	23.6	Carpet 10 + felt underlay 10
Bedroom Master WIR/Bedroom 4	carpet - concrete 200mm	5.0	Carpet 10 + felt underlay 10
Bedroom Master WIR/Hall / Foyer	carpet - concrete 200mm	5.8	Carpet 10 + felt underlay 10
Bedroom Master WIR/Neighbour	carpet - concrete 200mm	3.0	Carpet 10 + felt underlay 10
Bedroom Master Ens/Bedroom 3	tiles - concrete 200mm	0.8	Ceramic tile
Bedroom Master Ens/Bathroom	tiles - concrete 200mm	1.3	Ceramic tile
Bedroom Master Ens/Hall / Foyer	tiles - concrete 200mm	7.3	Ceramic tile
Study/Bedroom 2	carpet - concrete 200mm	3.7	Carpet 10 + felt underlay 10
Study/Bedroom 3	carpet - concrete 200mm	6.5	Carpet 10 + felt underlay 10
Study/Hall / Foyer	carpet - concrete 200mm	3.0	Carpet 10 + felt underlay 10
Landing/Hall / Foyer	carpet - concrete 200mm	5.0	Carpet 10 + felt underlay 10
Landing/Neighbour	carpet - concrete 200mm	3.7	Carpet 10 + felt underlay 10
Landing/Bedroom 4	carpet - concrete 200mm	1.5	Carpet 10 + felt underlay 10
Landing/Bedroom 3	carpet - concrete 200mm	0.5	Carpet 10 + felt underlay 10

## Ceiling type

Location	Construction	Added insulation	Roof space above
Bedroom Master/Living / Dining / Kitchen	carpet - concrete 200mm		No
Study/Bedroom 2	carpet - concrete 200mm		No
Study/Bedroom 3	carpet - concrete 200mm		No
Bedroom Master Ens/Bedroom 3	tiles - concrete 200mm		No
Landing/Bedroom 3	carpet - concrete 200mm		No
Bedroom Master WIR/Bedroom 4	carpet - concrete 200mm		No



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## Building features continued

Landing/Bedroom 4	carpet - concrete 200mm	No
Bedroom Master	tiles - concrete 200mm	No
Ens/Bathroom		
Bedroom Master	tiles - concrete 200mm	No
Ens/Hall / Foyer		
Landing/Hall / Foyer	carpet - concrete 200mm	No
Bedroom Master	carpet - concrete 200mm	No
WIR/Hall / Foyer		
Study/Hall / Foyer	carpet - concrete 200mm	No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	21	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	5	Downlight		Sealed
Bedroom 2 (Ens)	2	Downlight		Sealed
Bedroom 2 (Ens)	1	Ceiling exhaust fan	160	Sealed
Bedroom 3	5	Downlight		Sealed
Bedroom 4	5	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Pantry	2	Downlight		Sealed
Laundry	2	Downlight		Sealed
Laundry	1	Ceiling exhaust fan	160	Sealed
Hall / Foyer	8	Downlight		Sealed
Bedroom Master	9	Downlight		Sealed
Bedroom Master WIR	5	Downlight		Sealed
Bedroom Master Ens	5	Downlight		Sealed
Bedroom Master Ens	1	Ceiling exhaust fan	160	Sealed
Study	5	Downlight		Sealed
Landing	4	Downlight		Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
R2.0 - Concrete slab 200mm	R2.0	Medium

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### Building features continued

R3.5 - steel roof with R3.0 bulk insul + Plasterb'd ceiling under

R3.5

Medium

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## Additional information

## Explanatory notes

### About this report

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

### General Information

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

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

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

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

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

All information relating to energy loads presented in this report is based on a range of standard assumptions in order to allow for comparisons with reports prepared for other homes and to demonstrate minimum regulatory compliance.

The standard assumptions include figures for occupancy, indoor air temperature and are based on a unique climate file for your region.

### Accredited Assessors

To ensure you get a high-quality, professional NatHERS House Energy Rating report, you should always use an accredited assessor, accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

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

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

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

### Disclaimer

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

### Contact

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

For more information on energy efficient design and insulation visit [www.yourhome.gov.au](http://www.yourhome.gov.au)