OVEREND COURT BELL PARK
VASEY RSL CARE STAGE 1

SUSTAINABLE DESIGN ASSESSMENT

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DOCUMENT PROPERTIES

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DESCRIPTION: Sustainable Design Assessment

PROJECT NAME: Vasey RSL Care Stage 1

PROJECT SITE: Overend Court,
Bell Park, VIC 3215

PROJECT NUMBER: 26128

DOCUMENT AMENDMENTS

REVISION	DETAILS	AUTHOR/S	DATE	REVIEWED BY
01	Draft Issue	NS/GS	04/12/2025	KG
02	Revised to include project team feedback	KG	11/12/2025	KG
03	TP Submission	GS	12/12/2025	KG
04	Draft NatHERS certificate	GS	10/03/2026	KG

CONTENTS

1 INTRODUCTION

This report outlines the Environmentally Sustainable Design (ESD) initiatives for the proposed residential development at McClelland Drive, Overend Court & Neilson Square, Bell Park VIC.

The purpose of the Sustainable Design Assessment (SDA) is to identify key strategies to reduce the environmental impact of the development covering energy and water efficiency, waste management, indoor environment quality and materials selection. It also outlines performance targets to ensure that sustainability outcomes are quantifiable and monitored through the project's lifecycle.

Prepared in support of the proposed development within the City of Greater Geelong area, this assessment addresses the relevant sustainability requirements outlined in Clause 55.05 of the Planning Scheme. **This report also identifies additional sustainability measures which is beyond planning requirements in Section-03** of this report. In summary, the project aims to deliver inclusive and efficient housing while demonstrating a strong commitment to environmental performance.

1.1 DEVELOPMENT DESCRIPTION

The subject site, approximately 1695 Sq.m in area, is currently occupied by a single-storey residential building, which will be demolished. The proposed development comprises ten one-bedroom Independent Living Units (ILUs) in a two-storey building, with a resident's common area, associated car parking and landscaping.

Figure 1 Aerial view of the project site, showing the approximate site boundary.

1.2 COUNCIL PLANNING REQUIREMENTS

Greater Geelong City Council expects new developments to be designed, built and maintained at a level that reflects best practice sustainable development outcomes. The ESD response will need to ensure that the design meets sustainability targets in the areas of energy reduction, water use reduction and water sensitive urban design, indoor environment quality, materials selection, waste management and urban ecology.

This SDA incorporates initiatives to ensure that the council's ESD requirements are satisfied by addressing the Key Sustainable Building Categories, demonstrating that council's Best Practice Standards will be achieved.

1.3 REFERENCE DOCUMENTATION

This SDA should be read in conjunction with the other relevant documentation included within the development's town planning submission to council. These documents may include the following:

- Architectural documentation.
- Landscape plans.
- Traffic engineer's report.
- Civil Stormwater water management report.

2 PLANNING REQUIREMENTS

This development proposal is subject to planning requirements of the Greater Geelong Planning Scheme.

Under the provisions of the General Residential Zone, a development for multiple dwellings must meet the requirements of Clause 55, which implements a series of 'deemed to comply' standards relating to neighbourhood character, liveability, external amenity, and sustainability.

The standards of Clause 55 outline the key sustainability requirements which apply to this development. An assessment against these planning requirements is set out below in Section 2.2.

Beyond planning requirements, this SDA also incorporates ESD initiatives which ensure the design meets current best practice sustainability targets in the areas of energy reduction, water sensitive urban design and waste management. While not a requirement of Clause 55, these initiatives align with current authority and industry expectations around sustainable development outcomes. A full list of ESD initiatives is outlined in Section 3.

2.1 REFERENCE DOCUMENTATION

This SDA should be read in conjunction with the other relevant documentation included within the development's town planning submission to council. These documents may include the following:

- Architectural documentation.
- Landscape plans.
- Waste Management Plan.
- STORM Report and associated plan details.

2.2 CLAUSE 55 ASSESSMENT

Table 1 Summary of the Clause 55 assessment

CLAUSE 55.05 - REQUIREMENT	ESD RESPONSE
Clause 55 Standard B5-1 Permeability and stormwater management objective: To reduce impact of increased stormwater run-off on the drainage system and downstream waterways. To facilitate on-site stormwater infiltration. To encourage stormwater management that maximises the retention and reuse of stormwater. To contribute to urban cooling. The site area covered by the pervious surfaces is at least 20% of the site. The development includes a stormwater management system which is designed to: • Meet best practise quantitative performance objectives for stormwater quality specified in the Urban	38.5% of the site area is covered by pervious area – Refer to *Figure 3*. The development will include a stormwater management system to meet the best practice quantitative performance objectives for stormwater quality specified in the Urban stormwater management guidance (EPA Publication 1739.1, 2021) – Refer civil report. The objectives of Standard B5-1 have been met.

stormwater management guidance (EPA Publication 1739.1,2021) of: - suspended solids 80% reduction in mean annual load - total phosphorous and total nitrogen 45% reduction in mean annual load - litter 70% reduction of mean annual load Direct flows of stormwater into treatment areas, garden areas, tree pits and permeable surfaces, with drainage of residual flows to the legal point of discharge.	
Clause 55 Standard B5-2 Overshadowing domestic solar energy systems objective: To ensure that the height and setback of a building from a boundary allows reasonable solar access to existing domestic solar energy systems on the roofs of buildings. Any part of a new building that will reduce the sunlight at any time between 9am and 4 pm on 22nd September to an existing domestic solar energy system on the roof of a building on an adjoining lot be set back from the boundary to that lot by at least 1 metre at 3.6 metres above ground level, plus 0.3 metres for every metre of building height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres. In Clause 55. Standard 05-2 domestic solar energy system means a domestic solar energy system that existed at the date the application was lodged.	Refer to Architect's shadow studies/analysis which demonstrates that neighbouring buildings are not overshadowed by the proposed development. Hence the requirements of the Standard B5-2 are met.
Clause 55 Standard B5-3 Rooftop solar energy generation area objective: To support the future installation of appropriately sited rooftop solar energy systems for a dwelling. Clause 55.05-3 defines rooftop solar energy area as the area provided on the roof of a dwelling to enable the future installation of a solar energy system. An area on the roof is	Area for rooftop solar energy generation will be designed in accordance with Standard B5-3.

capable of siting a rooftop solar energy area for each dwelling which: • Has a minimum depth of 1.0m • Has a minimum area in accordance with Table B5-3 of standard B5-3 in Clause 55.05-3. • Is oriented to the north, west or east. • Is positioned on the top two thirds of a pitched roof. • Can be a contiguous area or multiple smaller areas. • Is free of obstructions on the roof of the dwelling within twice the height of each obstruction (H), measured horizontally (D) from the centre point of the base of the obstruction to the nearest point of the rooftop solar energy area – in reference to diagram B5-3 allowable distance between obstructions and the rooftop solar energy area.	
Clause 55 Standard B5-4 Solar protection to new north-facing windows objectives: To encourage external shading of north facing windows to minimise summer heat gain. North facing windows are shaded by eaves, fixed horizontal shading devices or fixed awnings with a minimum horizontal depth of 0.25 times the window height.	The site is oriented 43 deg. East of North and therefore there are no North facing windows. Refer to architectural drawings. Hence the requirements of the Standard B5-4 doesn't apply to this site.
Clause 55 Standard B5-5 Waste and recycling objectives: To ensure dwellings are designed to facilitate waste recycling. To ensure that waste and recycling facilities are accessible and are of sufficient size to manage organic and general waste, and mixed and glass recycling. To ensure that waste and recycling facilities are designed and managed to minimise impacts on residential amenity. The development includes a shared bin storage area for use by each dwelling of at least the	The development bin storage area will allow for assorted disposal of general waste, recycling, Food and Garden waste (FOGO) in-line with Clause 55 Standard B5-5 requirements. The development will include a shared bin storage with a minimum area of 7.0 m² complying Table B5-5.2 of Clause 55 Standard B5-5 (based on 10 apartment dwellings). This space is naturally ventilated. Refer to Waste Management Plan provided by the Waste Consultant. Hence the requirements of the Standard B5-5 are met.

applicable area, depth and height specified in Table B5-5.2 of Clause 55.05-5. Apartment bin storage. – 0.7m² per dwelling. The apartment bin storage has a minimum depth of 0.8m and a minimum height of 2.7m. Enclosed bin storage areas are ventilated by natural ventilation openings to the external air with an area of at least 5% of the area for bin storage area or a mechanical exhaust ventilation system. A tap and drain are provided to wash bins. A continuous path of travel is provided from each dwelling to bin storage areas. Each dwelling includes an internal waste and recycling storage space of at least 0.07 cubic metres with a minimum depth of 250mm.	
Clause 55 Standard B5-6 Noise impact's objective: To minimise the impact of mechanical plant noise located in the development. Mechanical plant, including mechanical car storage and lift facilities are not located immediately adjacent to bedrooms of new or existing dwellings or small second dwellings, unless a solid barrier is in place to provide a line-of-sight barrier to transmission of noise and the location of all relevant bedrooms.	Lift is not located immediately adjacent to bedrooms. Refer to architectural drawings. Hence the requirements of the Standard B5-6 are met.
Clause 55 Standard B5-7 Energy efficiency for apartment developments objectives: To achieve energy efficient dwellings and buildings. To ensure dwellings achieve adequate thermal efficiency. Dwellings in or forming part of an apartment development located in a climate zone identified in Table B5-7 of Clause 55.05-7 does not exceed the maximum NatHERS annual cooling load.	The development will achieve an avg. NatHERS rating ≥ 7-stars. All dwellings will have a cooling load ≤22MJ/² as per NatHERS Heating and Cooling Loads Limit 2022: Table 7 – Class 2 SOUs and Class 4 part of buildings – Heating and cooling load limits applying to NatHERS 7-stars, complying with Clause 55.05-7 Energy Efficiency for apartment developments objects. Refer to Section 4. Hence the requirements of the Standard B5-7 are met.

3 ESD INITIATIVES

This section outlines the various ESD initiatives targeted for the project which meets and/or exceeds the planning requirements of Clause 55.05.

As detailed below, the project addresses sustainability categories – including Indoor Environment Quality (IEQ), Energy Efficiency, Water Efficiency, Stormwater Management, Sustainable Building Materials, Construction Waste Management and Urban Ecology.

3.1 INDOOR ENVIRONMENTAL QUALITY (IEQ)

Improving the IEQ allows building occupants to enjoy a more comfortable space with healthier and more cohesive indoor environment. We spend a large amount of our time indoors; therefore, the quality of the indoor environment is vital to our health and wellbeing.

IEQ strategies implemented are shown below.

- Operable windows will be provided to allow occupants control of their environment.
- Insulated walls and roofs help reduce heat transfer and improve thermal comfort.
- Paints, adhesives and sealants used will comply with the Low-Volatile Organic Compound (VOC) paints, adhesives and sealants as shown in Appendix A.

3.2 ENERGY EFFICIENCY

Adopting energy efficiency practices will reduce the greenhouse gas emissions for the development, helping to reduce the buildings environmental impact by reducing greenhouse gas emissions. Energy efficiency practices can also enhance building performance and in turn improve thermal comfort for occupants. Energy efficiency measures incorporated in the project are detailed below.

- The development is all-electric; no gas connections will be provided.
- A highly insulated and thermally efficient building envelope, including thermal breaks in external walls, is proposed.
- Each dwelling will achieve a NatHERS rating ≥ 6-stars with an overall average of 7 Star, complying with 55.05-7 Energy Efficiency for apartment development objectives.
- Each dwelling will achieve a cooling load ≤22 MJ/m², complying with 55.05-7 Energy Efficiency for apartment development objectives.
- At least 20% of the roof area will be left clear for installation of a solar PV system. A minimum 0.5 kW solar PV system will be installed per dwelling.
- Efficient LED light fittings will be installed.
- External lighting will be sensor-controlled for energy efficiency. Sensor control applies only to privately installed lighting within the site boundary, public street, or roadway lighting excluded.

3.3 WATER EFFICIENCY

Installing water efficient fixtures allow us to reduce potable water consumption during operation and in turn reduce associated water cost. The development is installing appliances and fixtures shown below to enable water efficient practices by building occupants.

- Toilets: 4 Star.
- Taps (kitchen and bathroom): 5 Star.
- Showerheads: 3 Star.

Refer to architectural specifications for water fixture selections.

For the apartments, rainwater tanks will be installed capturing water runoff from the roof areas only and will be used for landscape irrigation.

3.4 STORMWATER

Better Stormwater practices are in-place to reduce the impact of stormwater runoff, improve its water quality, achieve best practice stormwater management outcomes, and incorporate water-sensitive urban design principles. The following items below are met to ensure better stormwater practices and meet Clause 55.05-1 Permeability and stormwater management objective:

- Stormwater post development flow rates must be ≤ predevelopment flow rates.
- The development includes a stormwater management system designed to meet the best practise quantitative performance objectives for stormwater quality specified in the Urban stormwater management guidance (EPA Publication 1739.1,2021) by meeting the targets below
  - 80% reduction in mean annual load of suspended solids.
  - 45% reduction in mean annual load of total phosphorous and total nitrogen.
  - 70% reduction in mean annual load of litter.
- The stormwater management system must be designed to direct flow of stormwater into treatment areas, garden areas, tree pits and permeable surfaces, with drainage of residual flows to LPOD.

Refer to Civil Stormwater Management Plan for compliance with 3.4 Stormwater items above, as required by 55.05-1 Permeability and stormwater management objective.

3.5 BUILDING MATERIALS & CONSTRUCTION WASTE

Sourcing environmentally friendly building materials helps minimise the environmental impacts associated with the manufacturing, transport, and use of construction materials. The environmentally responsible practices outlined below contribute to reducing the overall environmental footprint of both the building's construction and its ongoing operation.

- Where deemed feasible, locally sourced materials will be used for construction, reducing transport emissions.
- All insulants will have a zero Ozone Depleting Potential (ODP).
- At least 80% of construction waste will be recycled diverted from landfill.

3.6 WASTE AND RECYCLING OBJECTIVES

The development will be designed to allow for convenient and responsible disposable of waste. The Waste Management Plan produced by the engaged waste consultant will cover the items mentioned below.

- The development bin storage area will allow for assorted disposal of general waste, recycling, Food and Garden waste (FOGO) in-line with Clause 55.05-5 requirements. Refer to *Figure 2* below shown in the architectural drawings.
- Shared bin storage area to be at least 7m² in area and have a minimum depth of 1m and minimum height of 2.7m, as required by Table B5-5.2 Apartment Bin Storage. Refer to *Figure 2* below showing the bin storage area meeting this requirement.
- The shared bin storage area must include a tap and drain for bin washing.
- A continuous path of travel is provided from each dwelling to bin storage areas. Refer to architectural drawings.

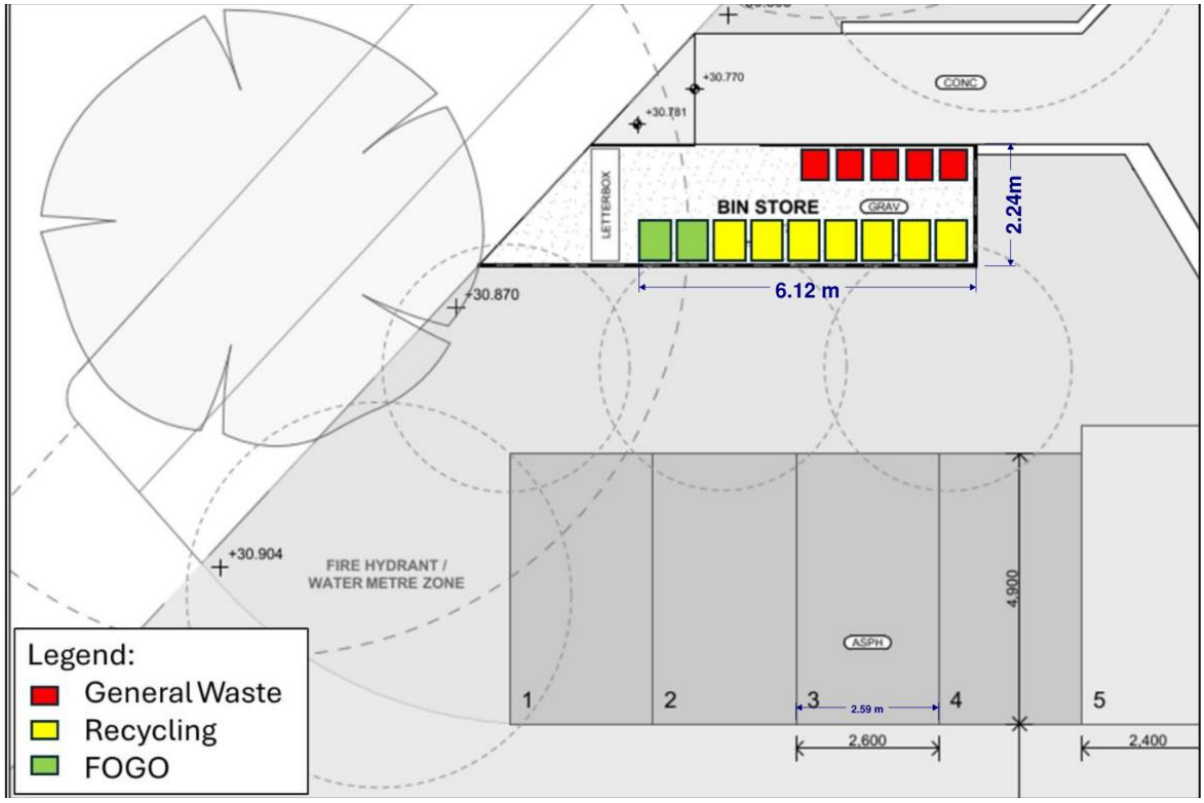


Figure 2 Site plan highlighting Waste room location

3.7 URBAN ECOLOGY

Enhancing a sites urban ecology will protect and enhance biodiversity and provide sustainable landscaping which will create a more resilient, liveable and ecologically balanced urban environment. The development incorporates the following strategies to enhance urban ecology.

- Permeable landscaping will cover at least 20% of the site, contributing to biodiversity and local ecology. Refer to *Figure 3* showing 651.7m² of the landscape space on the 1695m² site area (38.5%).
- External lighting will be designed to minimise light spill and avoid upward light pollution.

Figure 3 – 50.9% of the site is covered in landscape area.

4 PRELIMINARY NATHERS ASSESSMENT

4.1 CLASS 2 NATHERS

The following section summaries the preliminary NatHERS results for the Class 2 section of the project.

4.1.1 THERMAL ENVELOPE

For Class 2 buildings, the thermal envelope includes external walls, roofs, floors, glazing, and doors, as well as intertenancy walls, floors and ceilings that separate conditioned spaces from unconditioned areas or external conditions. NCC 2022 requires that these elements be designed to reduce unwanted heat loss and gain, improving thermal comfort and energy efficiency.

The following thermal construction details are proposed based on the preliminary assessment:

Table 2 Class 2 thermal construction details

BUILDING ELEMENT	THERMAL CONSTRUCTION DETAIL
Roof	R_M4.5 insulation
External Walls	R_M2.5 insulation + thermal break at studs
Party Walls Between Dwellings / Corridor	R_M2.0 insulation
Suspended Floor	R_M2.0 insulation
Slab Edge	NIL
Awning Window	LowE Double glazed – U_W = 3.0, $SHGC_W$ = 0.32
Fixed Window	LowE Double glazed – U_W = 2.7, $SHGC_W$ = 0.58
Casement Window	LowE Double glazed – U_W = 3.0, $SHGC_W$ = 0.32
Sliding Door	LowE Double glazed – U_W = 3.0, $SHGC_W$ = 0.32

R_M is the R-Value of the added insulation material.
U_W is total U-Value of the window element, including glazing and frame.
$SHGC_W$ is total Solar Heat Gain Coefficient of the window element including glazing and frame.
The calculation of the required total R-Value (R_T) and total system U-Value (U_W) has considered thermal bridging as per NCC requirements. Therefore, the required added insulation R-Value (R_M) can be considerably higher than the total construction R-Value (R_T).

4.1.2 NATHERS ASSESSMENT & RESULTS

Based on the thermal envelope mentioned above, the following NatHERS results have been achieved. The results demonstrate compliance with the targets set for the project to meet NCC and Council's requirements.

Table 3 Class 2 NatHERS results

LEVEL	DWELLING	HEATING	COOLING	STAR RATING	WoH
GROUND	Dwelling 01	87.7 MJ/m²	17.6 MJ/m²	6.8	66
	Dwelling 02	73.7 MJ/m²	11.5 MJ/m²	7.4	67
LEVEL-01	Dwelling 01	76.6 MJ/m²	12.3 MJ/m²	7.3	67
	Dwelling 02	61.7 MJ/m²	19.3 MJ/m²	7.6	67
	Dwelling 03	70.7 MJ/m²	16.2 MJ/m²	7.4	67
	Dwelling 04	83.2 MJ/m²	21.7 MJ/m²	6.8	66

Average	**75.6 MJ/m²**	**16.4 MJ/m²**	7.2
Minimum	**61.7 MJ/m²**	**11.5 MJ/m²**	6.8
Maximum	**87.7 MJ/m²**	**21.7 MJ/m²**	7.6

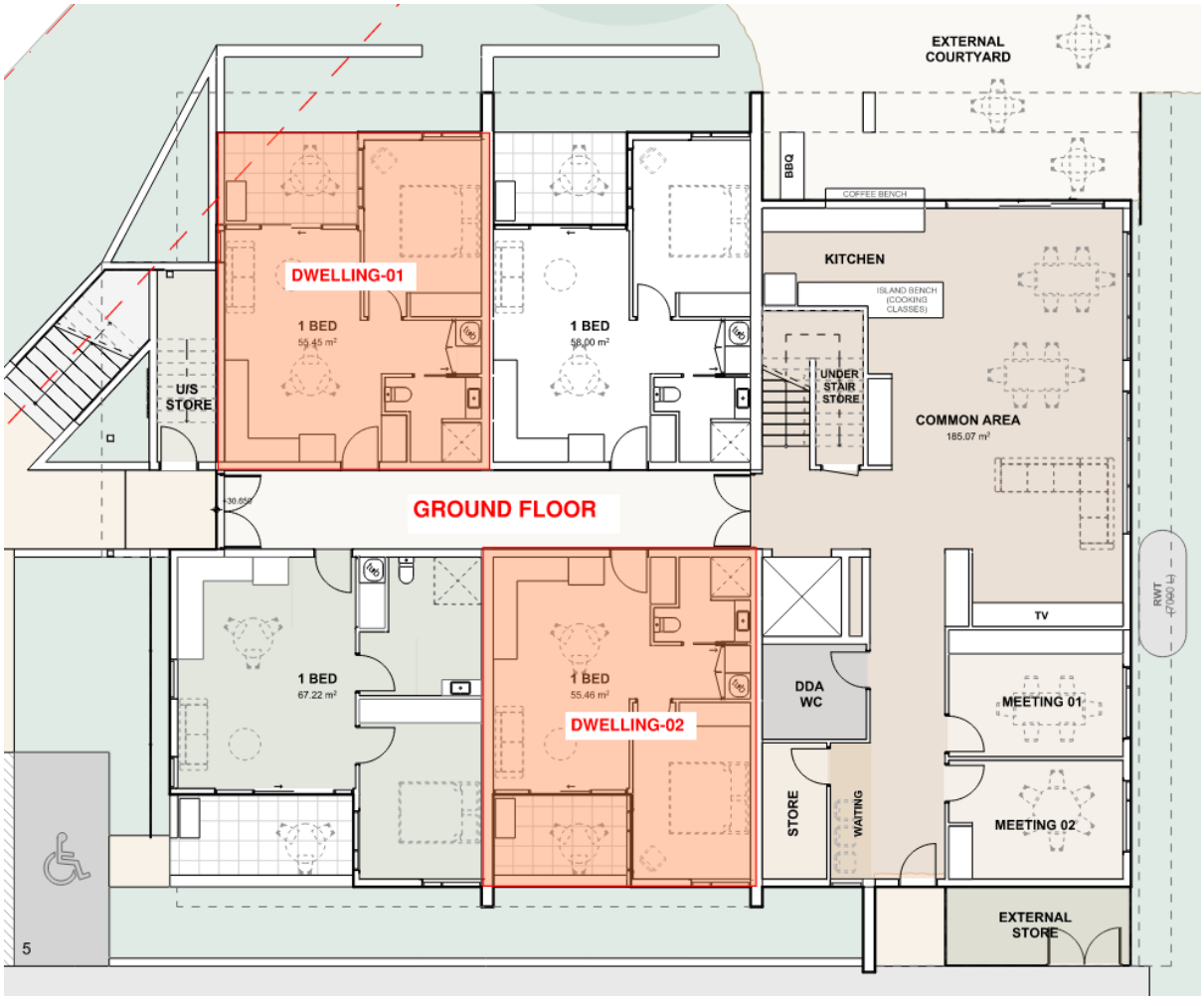


Figure 4 Ground floor Dwellings considered for NatHers assessment

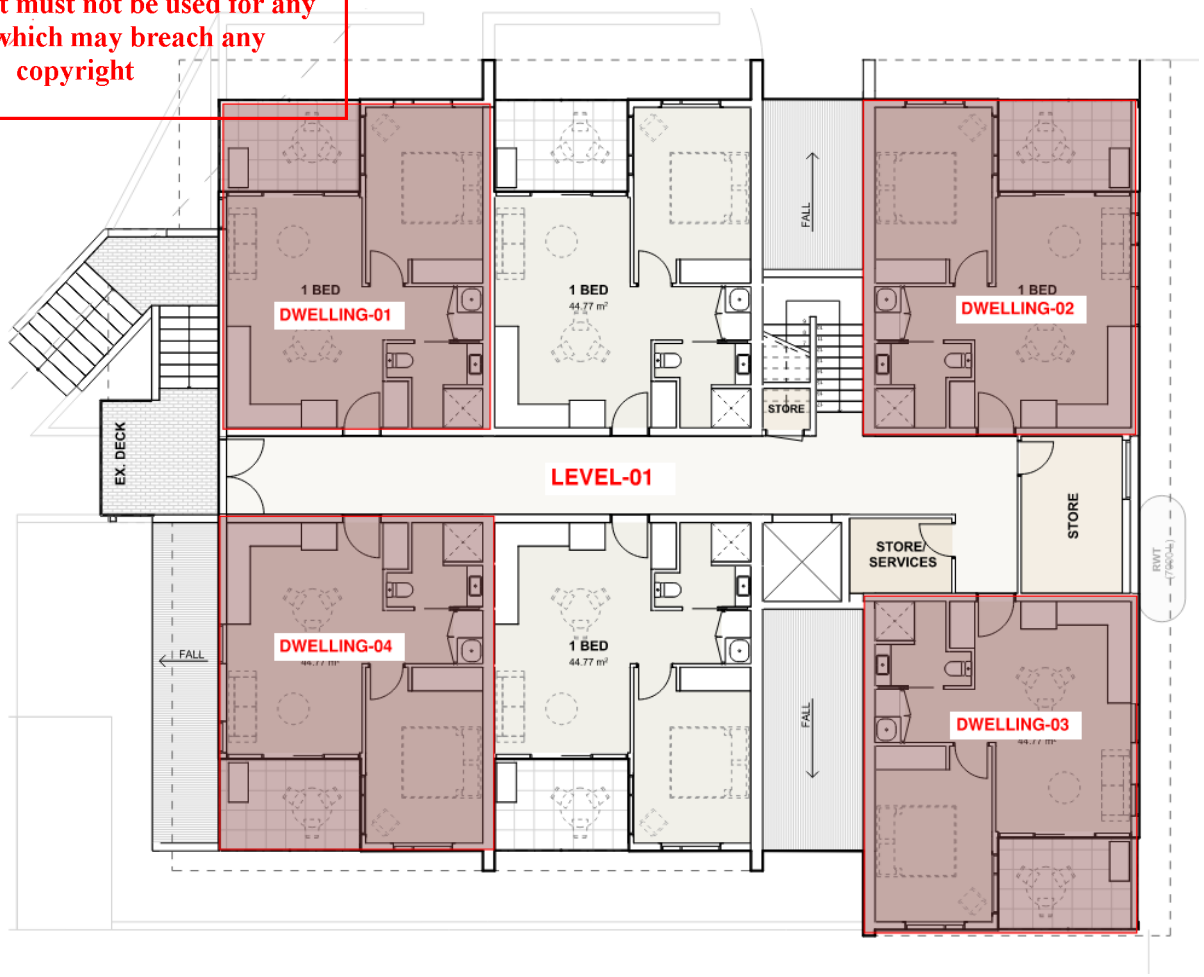


Figure 5 Level-01 Dwellings considered for NatHers assessment

4.1.3 WHOLE OF HOME

The Whole of Home (WoH) approach is integral to the NatHERS assessment process under NCC 2022. WoH considers the entire home's energy performance, including heating, cooling, lighting, and other operational energy uses. This holistic perspective ensures that all elements of the home, works together to achieve minimum energy efficiency and sustainability outcomes.

Table 4 Class 2 WoH minimum requirements

CATEGORY	MINIMUM NCC WOH REQUIREMENTS
Heating ZERL Star Rating	3.0 Star
Cooling ZERL Star Rating	3.0 Star
Hot Water	Heat Pump (Peak)
Cooking Stove Top	Electric
Cooking Oven	Electric
Lighting Density	5 W/m²
Solar Array Capacity per Dwelling	0.72kW
Solar Inverter Capacity per Dwelling	0.54kW

ZERL is Zoned Energy Rating Label.

The Whole of Home (WoH) minimum requirements outlined in Table 2 must be met to achieve the WoH scores detailed in Table 1.

NOTE

This preliminary house energy rating assessment is prepared only for the purpose for demonstrating that the development, as currently designed, is on track to meet the relevant regulatory targets as outlined by the BCA.

There is still significant design development to occur. As such, the construction details used within the assessment are not to be interpreted as a commitment to the final detailing that the development will use. The developer and design and construction teams reserve the right to modify the construction detailing as appropriate, within the general commitment that the development will meet the house energy rating performance targets as outlined in the "House Energy Rating Targets" section above.

4.2 GROUND FLOOR COMMON AREAS SECTION J

The common areas have achieved the compliance using the NCC 2022 DtS pathway as shown below.

J4D6 Walls and glazing (Method 2)

Each building class has been assessed against J4D6 Walls and glazing (Method 2)

Class 2 Multi-Unit Residential

To meet the acceptance criteria, the area-weighted aspects must achieve:

- a wall-glazing Total U-value less than or equal to 2.00
- a wall Total R-Value greater than or equal to 1.40
- an air-conditioning energy value less than or equal to 38.68

A total surface area of 340.62 m² was assessed, **meeting** the acceptance criteria.

	Performance	Requirement	Pass
Wall-glazing U-value (W/m².°K)	1.04	2.00	✓
Wall R-value (m².°K/W)	1.40	1.40	✓
AC value	23.54	38.68	✓

Building Fabric Performance:

External Walls – Total System R-Value-1.4

Glazing (Total system glass + frames) – U-value-3.5, SHGC-0.35, VLT-60%

APPENDIX – A VOC LIMITS

VOC LIMITS – PAINTS, ADHESIVES & SEALANTS

PRODUCT CATEGORY	MAX. TVOC (g/L OF READY TO USE PRODUCT)
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100

VOC LIMITS – CARPETS

COMPLIANCE OPTIONS	COMPLIANCE CRITERIA
A – PRODUCT CERTIFICATION	The product is certified under a recognised Product Certification Scheme (listed on the GBCA website under Green Star resources) or other recognised standards. The certificate must be current at the time of project registration or submission and list the relevant product name and model.
B – LABORATORY TESTING	ASTM D5116: - Total VOC limit: 0.5mg/m^2 per hour, & - 4-PC limit: 0.05mg/m^2 per hour ISO 16000 / EN 13419: - TVOC at three days: 0.5mg/m^2 per hour ISO 10580 / ISO/TC 219 (Document N238): - TVOC at 24 hours: 0.5mg/m^2 per hour

FORMALDEHYDE LIMITS

TEST PROTOCOL	EMISSION LIMIT/ UNIT OF MEASUREMENT
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	≤1mg/ L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1mg/ L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤1mg/ L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) - LVL	≤1mg/ L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤0.1 mg/m²hr
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤0.1 mg/m²hr
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤0.1 mg/m²hr (at 3 days)
ASTM D6007	≤0.12mg/m³
ASTM E1333	≤0.12mg/m³
EN 717-1 (also known as DIN EN 717-1)	≤0.12mg/m³
EN 717-2 (also known as DIN EN 717-2)	≤3.5mg/m²hr

APPENDIX B – DAYLIGHT COMPLIANCE

Daylight performance for the development has been assessed against the BESS requirements. Residential areas achieve compliance via the Deemed-to-Satisfy pathway, while non-residential spaces meet the daylight criteria through the Green Star hand calculation method as summarised below.

SPACE	COMPLAINT AREA%	TARGET ACHIEVED
Bedrooms	100%	✓
Living/Kitchen	100%	✓
Common area (including kitchen and meeting rooms)	51.5%	✓

BESS RESIDENTIAL CRITERIA

Deemed-to-Satisfy (DtS) Daylight Requirements: To achieve the daylight credits under the Deemed-to-Satisfy (DtS) pathway, all criteria listed below must be fully met. The DtS method does not allow partial compliance—every requirement must be satisfied to secure the full available points.

DtS Compliance Criteria

The development must satisfy each of the following conditions:

- Room Depth Requirements
  All living areas and bedrooms must have a room depth of less than 8 metres, or less than 5 metres where the room is south facing.
- Minimum Ceiling Height
  All living areas and bedrooms must provide a minimum floor-to-ceiling height of 2.7 metres.
- Glazing Performance
  All glazing serving living areas must achieve a Visible Light Transmittance (VLT) of at least 60%.
- External Window Access
  All living areas must be provided with an externally facing window, with no reliance on windows opening into courtyards, light wells, or other significantly obstructed spaces.
- Building Separation Compliance
  The proposal must comply with the building separation tables stipulated in the relevant assessment guidelines.

Additional Separation Requirements for This Site

For this specific development, the following minimum separations apply:

- A minimum 6-metre setback from all living room or main balcony outlooks to the property boundary.
- A minimum 3-metre setback from bedroom outlooks to the property boundary.

GREEN STAR DAYLIGHT AND VIEWS CALCULATION METHODOLOGY

The Green Star guide requires the following:

- The project is not overshadowed (as per Figure-1 below)
- The building glazing has a visual light transmittance (VLT) of at least 40%

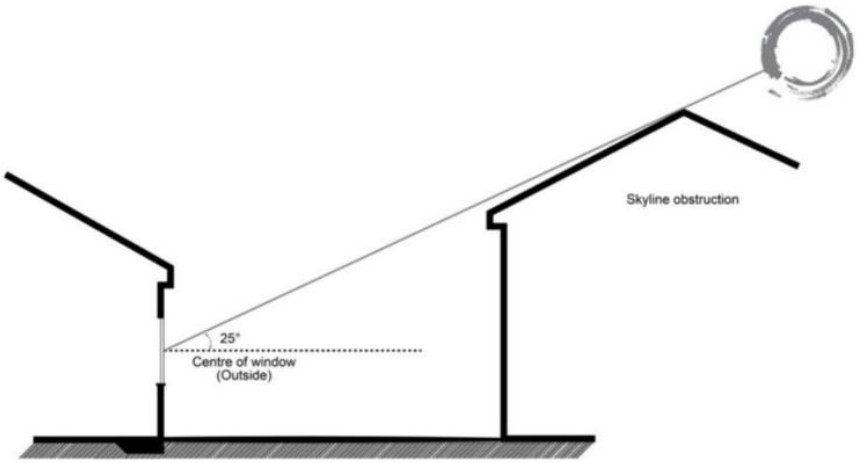


Figure 1: Angle of obstruction for external shading

Zone of compliance

The zone of compliance is an area in the horizontal plane (as shown in Figure 2) where there is access to daylight and is calculated as follows:

Zone of Compliance = d x w

Where:

d = depth = 2h

w = width = width of the glazing

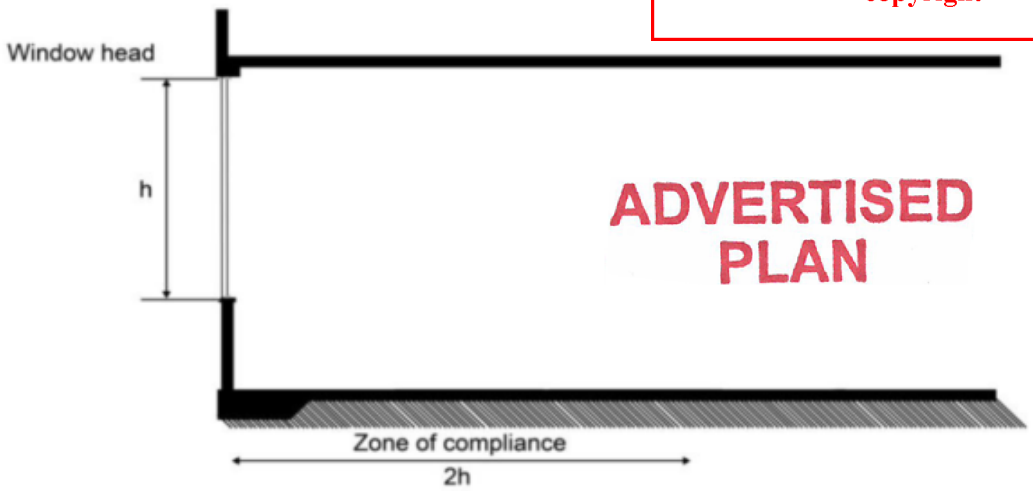
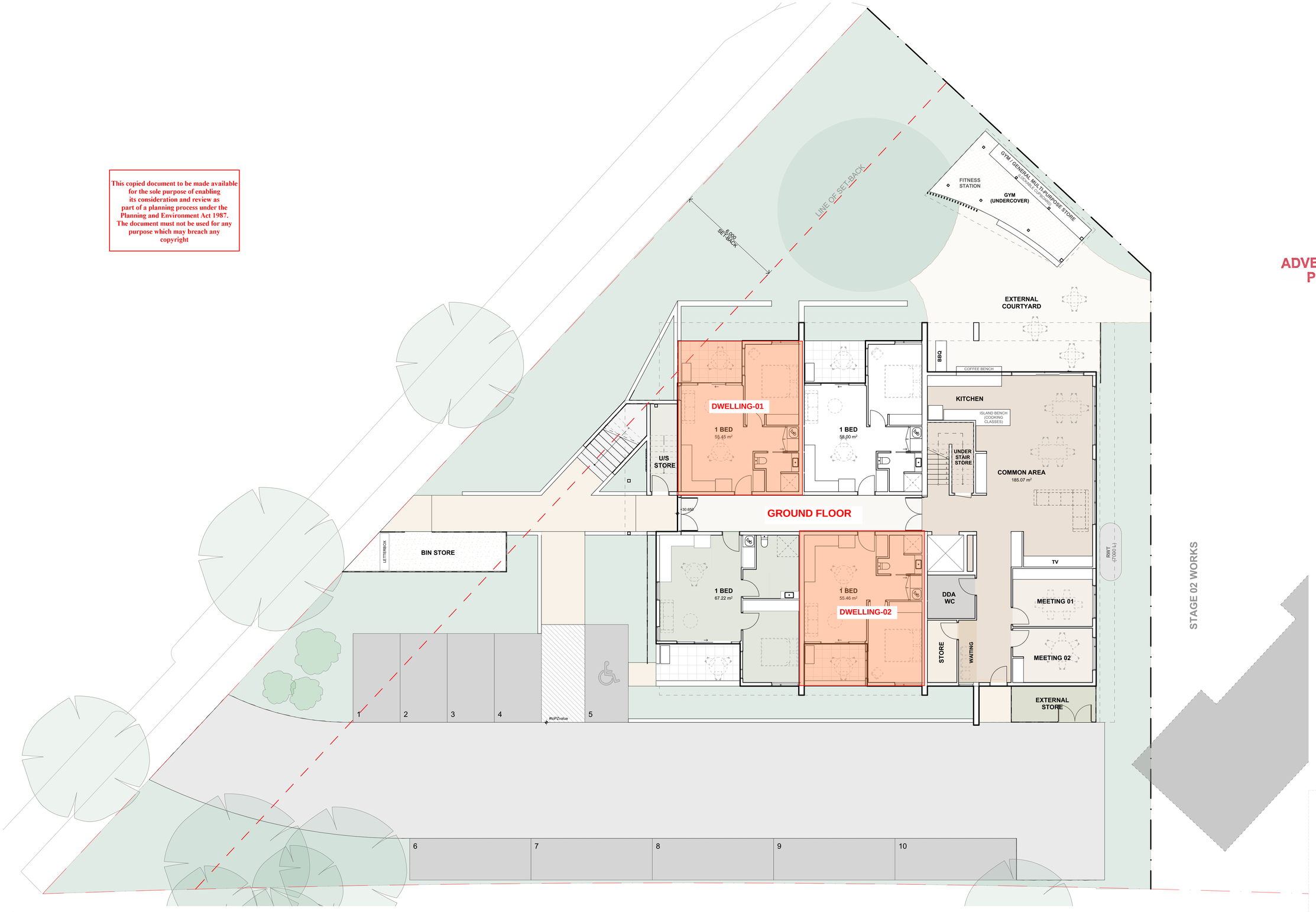


Figure 2: Dimensions for calculating the zone of compliance

APPENDIX C – DRAFT NATHERS CERTIFICATES



1 V-CENTRE I GROUND FLOOR PLAN
Scale 1:100

NOTES
1. DO NOT SCALE DRAWINGS.
2. FIGURED DIMENSIONS TAKE PRECEDENCE.
3. DIMENSIONS ARE IN MILLIMETRES
4. ANY DISCREPANCY IN THE DRAWINGS OR SPECIFICATIONS SHALL BE REFERRED TO FOREGROUND ARCHITECTURE.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SECONDARY CONSULTANTS DRAWINGS, DETAILS AND SPECIFICATIONS, AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCING ANY SHOP DRAWINGS OR WORKS ON SITE.

REV	DATE	BY	CH	DESCRIPTION
TP00 - WIP	Work in Progress			VASEY RSL CARE PRESENTATION

ID	CHANGE DESCRIPTION

WORK IN PROGRESS

Foreground architecture
Swanston Central Tenancy 3, Upper Mezzanine Level
160 Victoria Street, Carlton VIC 3053
Wurundjeri Woi Wurrung Country
foregroundarchitecture.com.au
info@foregroundarchitecture.com.au +61 (03) 9329 6555
ABN 44 005 000 859 ARBV 50053

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

43

SCALE 1:100 @A1
DRAWN
CHECKED
PLOT DATE 21/11/2025

DRAWING TITLE
Ground Floor Plan

PROJECT
V-SATELLITE BELL PARK
McClelland Drive, Overend Court & Neilson Square, Bell Park VIC 3215
Wurundjeri Country
FOR
Vasey RSL Care

PROJECT
2513

DWG NO.
TP.021

REVISION
TP00 - WIP

Nationwide House Energy Rating Scheme® NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1 (Chenath v3.23)

Property

Address	Unit 01, McClelland Drive, Bell Park, VIC, 3215
Lot/DP	
NCC Class*	2
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	37.7	Suburban	
Unconditioned*	5.2	**NatHERS climate zone**	
Total	42.9	60 - Tullamarine	
Garage	0.0		

Accredited assessor

Name	Aamer Khan
Business name	Wrap Engineering
Email	aamerk@wrapengineering.com.au
Phone	+61 412256292
Accreditation No.	10275
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	No

National Construction Code (NCC) requirements

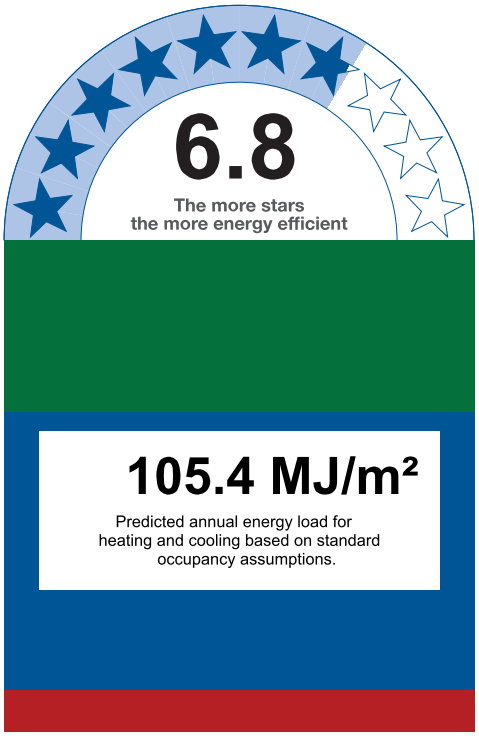
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

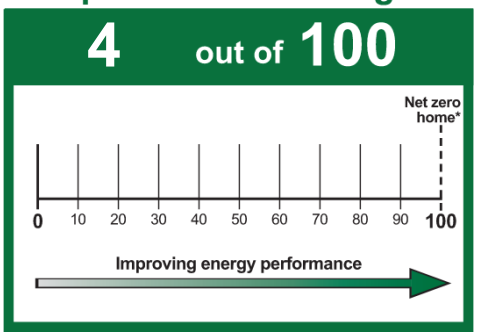
Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	87.7	17.6
Load limits	103	49

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating



Verification

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

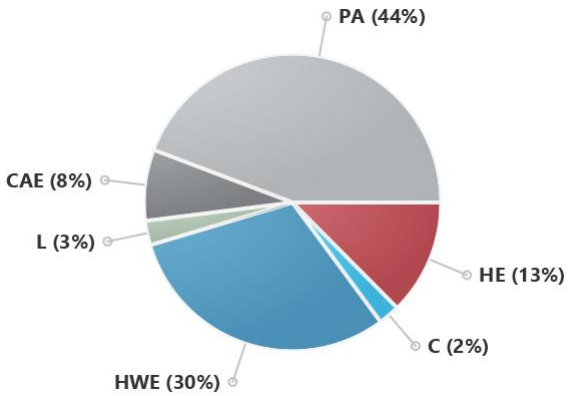
Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

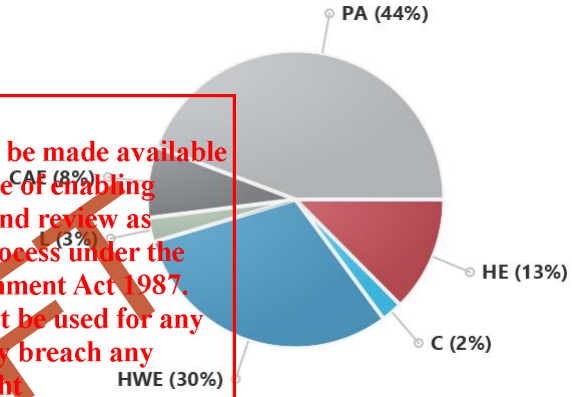
Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

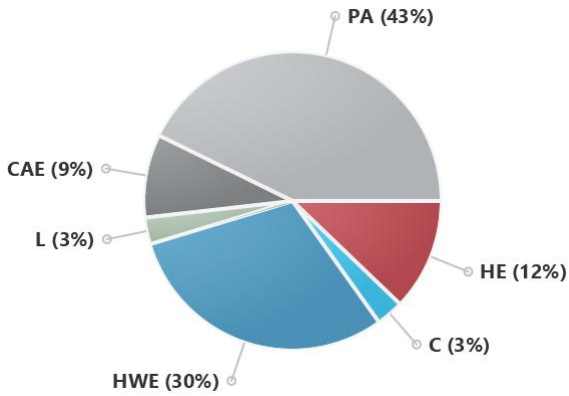
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

Colour:	Code:	Name:	Fuel type:
	HE	Heating	Electric
	HG	Heating	Gas
	HW	Heating	Wood
	C	Cooling	Electric
	HWE	Hot water	Electric
	HWG	Hot water	Gas
	L	Lights	Electric
	P	Pool/spa equipment	Electric
	PA	Plug-in appliances	Electric
	CAE	Cooking appliances	Electric
	CAG	Cooking appliances	Gas

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **4 out of 100**

This home's annual greenhouse emissions:
5310 kg CO2e (with solar)
5310 kg CO2e (without solar)

Predicted annual electricity generated: 0 kWh
Exported to the grid: 0 %
Used by the home: 0 %

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	13.17
Bathroom	Unconditioned	5.24
1 BED	Kitchen/Living	24.54

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
CAP-055-052	AGS 429 Flushline (Residential Size)	2.7	0.58	0.55	0.61
CAP-057-013	AGS 900 & Artisan Architectural 994TH Sliding Door	3.2	0.48	0.46	0.51
CAP-061-006	AGS 50 Awning in 425 Narrowline	4.4	0.40	0.38	0.42

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
1 BED	CAP-055-052	W04	2400	770	Fixed	0	SW	None
1 BED	CAP-055-052	W01-B	2400	887	Fixed	0	NW	None
1 BED	CAP-057-013	W01-C	2400	1556	Sliding	45	NW	None
1 BED	CAP-055-052	W01-A	2400	857	Fixed	0	NW	None
Bedroom 1	CAP-061-006	W03	2400	1500	Awning	30	NW	None
Bedroom 1	CAP-055-052	W02	2400	1500	Fixed	0	SW	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	5845	SW		No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	3303	NW	2181	Yes
Bedroom 1	CONC-200-PB	2700	2961	NW		Yes
Bedroom 1	CONC-200-PB	2700	2129	NE		Yes
Bedroom 1	CONC-200-PB	2700	2310	SW	3442	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
4CD Corridor	4CD Corridor	17.0	2.00
BV-REFL-CAV41	High St Party Wall R3.6	15.4	2.00
INT-PB	Internal Plasterboard Stud Wall	22.6	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1 BED	CSOG-200: Concrete Slab on Ground (200mm)	24.5	N/A	0.00	Timber (12mm)
Bathroom	CSOG-200: Concrete Slab on Ground (200mm)	5.2	N/A	0.00	Tile (8mm)
Bedroom 1	CSOG-200: Concrete Slab on Ground (200mm)	13.2	N/A	0.00	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	4	Downlight	200	Sealed
1 BED	1	Exhaust Fan	350	Sealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bedroom 1	2	Downlight	200	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
None			

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	Bedroom 1 / 1 BED	Electricity	0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	Bedroom 1 / 1 BED	Electricity	0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Electric Storage (Peak)	Electricity	4	n/a	48

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
None		

Battery *schedule*

Type	Storage Capacity [kWh]
None	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, the ratio of how much cooling is achieved under set conditions for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

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Generated on 26 Feb 2026 using Hero 4.1 (Chenath v3.23)

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Lot/DP	
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Floor/all Floors	1 of 1 floors
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Prepared by

Construction and environment

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Conditioned*	37.7	Suburban
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Total	42.9	60 - Tullamarine
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Accredited assessor

Name	Aamer Khan
Business name	Wrap Engineering
Email	aamerk@wrapengineering.com.au
Phone	+61 412256292
Accreditation No.	10275
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	No

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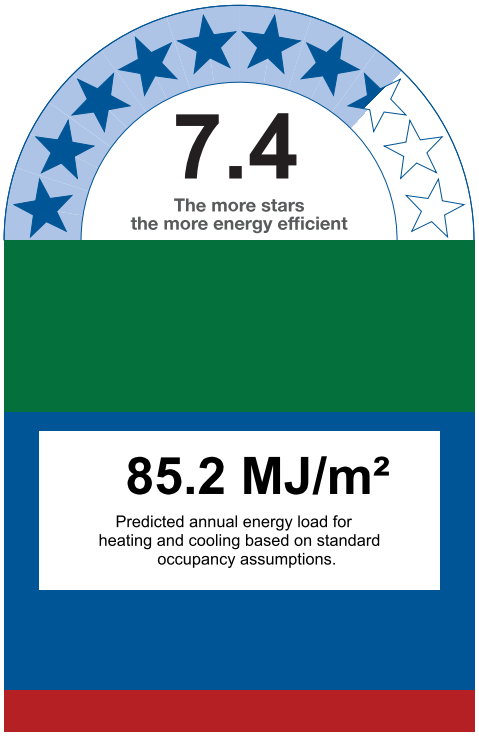


Thermal performance (MJ/m²)

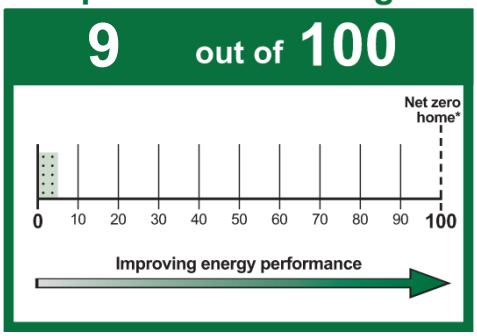
Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	73.7	11.5
Load limits	103	49

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating



Verification

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **9 out of 100**

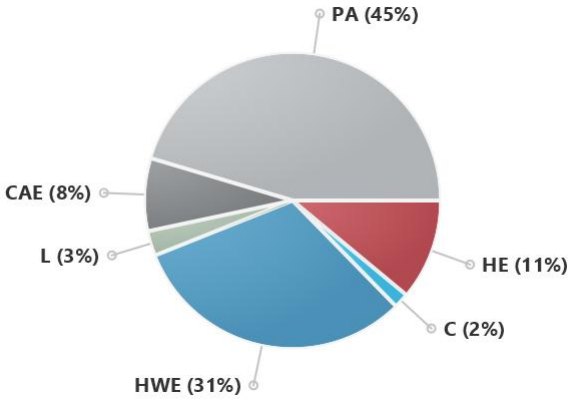
This home's annual greenhouse emissions:
5175 kg CO2e (with solar)
5175 kg CO2e (without solar)

Predicted annual electricity generated: 0 kWh
Exported to the grid: 0 %
Used by the home: 0 %

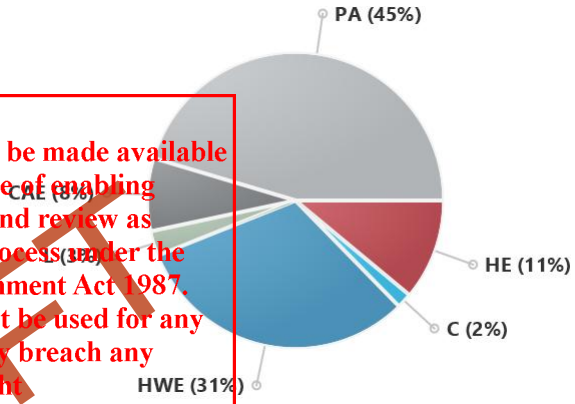
Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

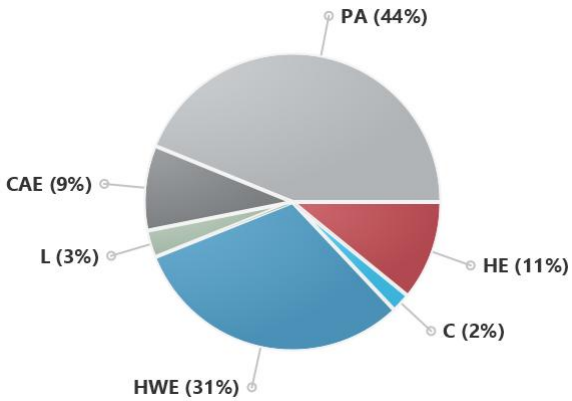
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

Colour:	Code:	Name:	Fuel type:
	HE	Heating	Electric
	HG	Heating	Gas
	HW	Heating	Wood
	C	Cooling	Electric
	HWE	Hot water	Electric
	HWG	Hot water	Gas
	L	Lights	Electric
	P	Pool/spa equipment	Electric
	PA	Plug-in appliances	Electric
	CAE	Cooking appliances	Electric
	CAG	Cooking appliances	Gas

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	13.17
Bathroom	Unconditioned	5.24
1 BED	Kitchen/Living	24.54

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
CAP-055-052	AGS 429 Flushline (Residential Size)	2.7	0.58	0.55	0.61
CAP-057-013	AGS 900 & Artisan Architectural 994TH Sliding Door	3.2	0.48	0.46	0.51
CAP-061-006	AGS 50 Awning in 425 Narrowline	4.4	0.40	0.38	0.42

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
1 BED	CAP-055-052	W01-B	2400	887	Fixed	0	SE	None
1 BED	CAP-057-013	W01-C	2400	1556	Sliding	45	SE	None
1 BED	CAP-055-052	W01-A	2400	857	Fixed	0	SE	None
Bedroom 1	CAP-061-006	W03	2400	1500	Awning	30	SE	None
Bedroom 1	CAP-055-052	W02	2400	1500	Fixed	0	SW	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit

None

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit

None

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade

None

Skylight *type and performance*

Skylight ID	Skylight description

None

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance

None

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation

None

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	3303	SE	2045	Yes
Bedroom 1	CONC-200-PB	2700	2961	SE		No
Bedroom 1	CONC-200-PB	2700	2310	SW	3184	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
4CD Corridor	4CD Corridor	17.0	2.00
BV-REFL-CAV41	High St Party Wall R3.6	36.9	2.00
INT-PB	Internal Plasterboard Stud Wall	22.6	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1 BED	CSOG-200: Concrete Slab on Ground (200mm)	24.5	N/A	0.00	Timber (12mm)
Bathroom	CSOG-200: Concrete Slab on Ground (200mm)	5.2	N/A	0.00	Tile (8mm)
Bedroom 1	CSOG-200: Concrete Slab on Ground (200mm)	13.2	N/A	0.00	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	4	Downlight	200	Sealed
1 BED	1	Exhaust Fan	350	Sealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 1	2	Downlight	200	Sealed

* Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
None			

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	Bedroom 1 / 1 BED	Electricity	0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	Bedroom 1 / 1 BED	Electricity	0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Electric Storage (Peak)	Electricity	4	n/a	48

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]

* Refer to glossary.

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
None		

Battery *schedule*

Type	Storage Capacity [kWh]
None	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, the ratio of how much cooling is achieved under set conditions for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme®
Class 2 Summary
NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1

Property

Address McClelland Drive, Bell Park, VIC, 3215

Lot/DP

NatHERS climate zone 60 - Tullamarine

Accredited assessor

Name Aamer Khan

Business name Wrap Engineering

Email aamerk@wrapengineering.com.au

Phone +61 412256292

Accreditation No. 10275

Assessor Accrediting Organisation HERA

Verification

DRAFT PREVIEW ISSUE - NOT TO BE USED FOR CERTIFICATION

National Construction Code (NCC) requirements

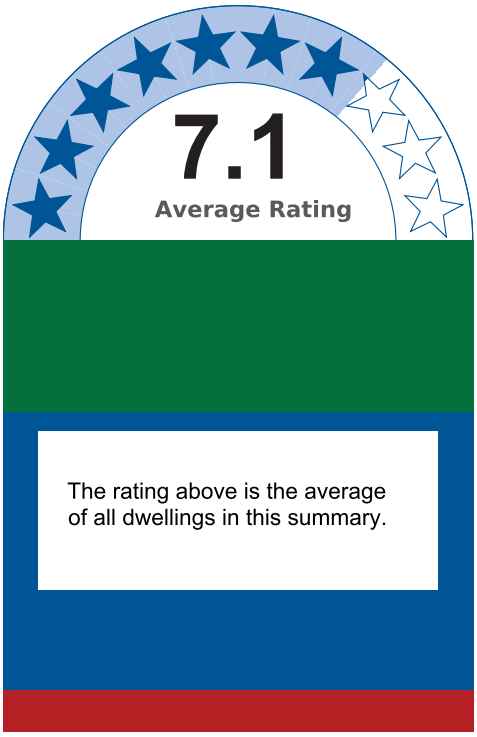
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

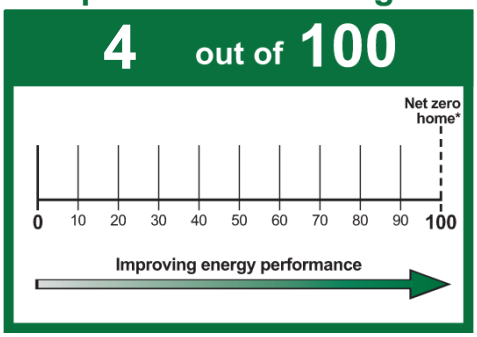


NCC heating and cooling maximum loads MJ/m².yr

Limits taken from ABCB Standard 2022

	Heating	Cooling
Average load	80.7	14.6
Maximum load	87.7	17.6
Average limit	88.0	48.0
Maximum limit	103.0	49.0

Whole of Home performance rating



The rating above is the lowest of all the dwellings in the summary

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
	Unit 01	87.7 (103)	17.6 (49)	105.4	6.8	4

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
	Unit 02	73.7 (103)	11.5 (49)	85.2	7.4	9
Averages	2x (Total)	80.7	14.6	95.3	7.1	7
Maximum Loads and Minimum Ratings		87.7	17.6	105.4	6.8	4

Explanatory notes

About the ratings

The thermal performance star rating in this Certificate is the average rating of all NCC Class 2 dwellings in an apartment block. The Whole of Home performance rating in this Certificate is the lowest rating for the apartment block. Individual unit ratings are listed in the *'Summary of all dwellings'* section of this Certificate.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes societal cost.
For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

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Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

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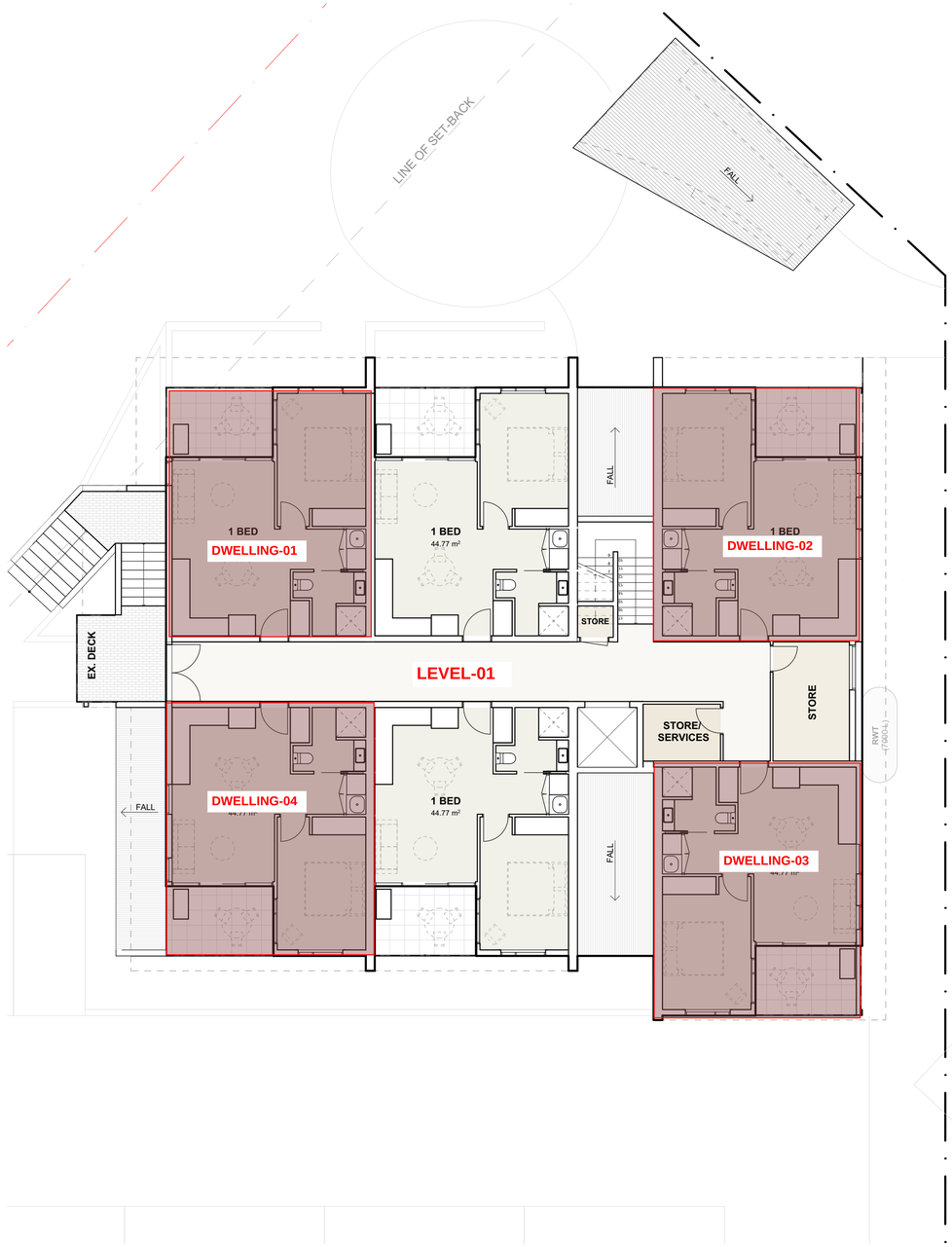
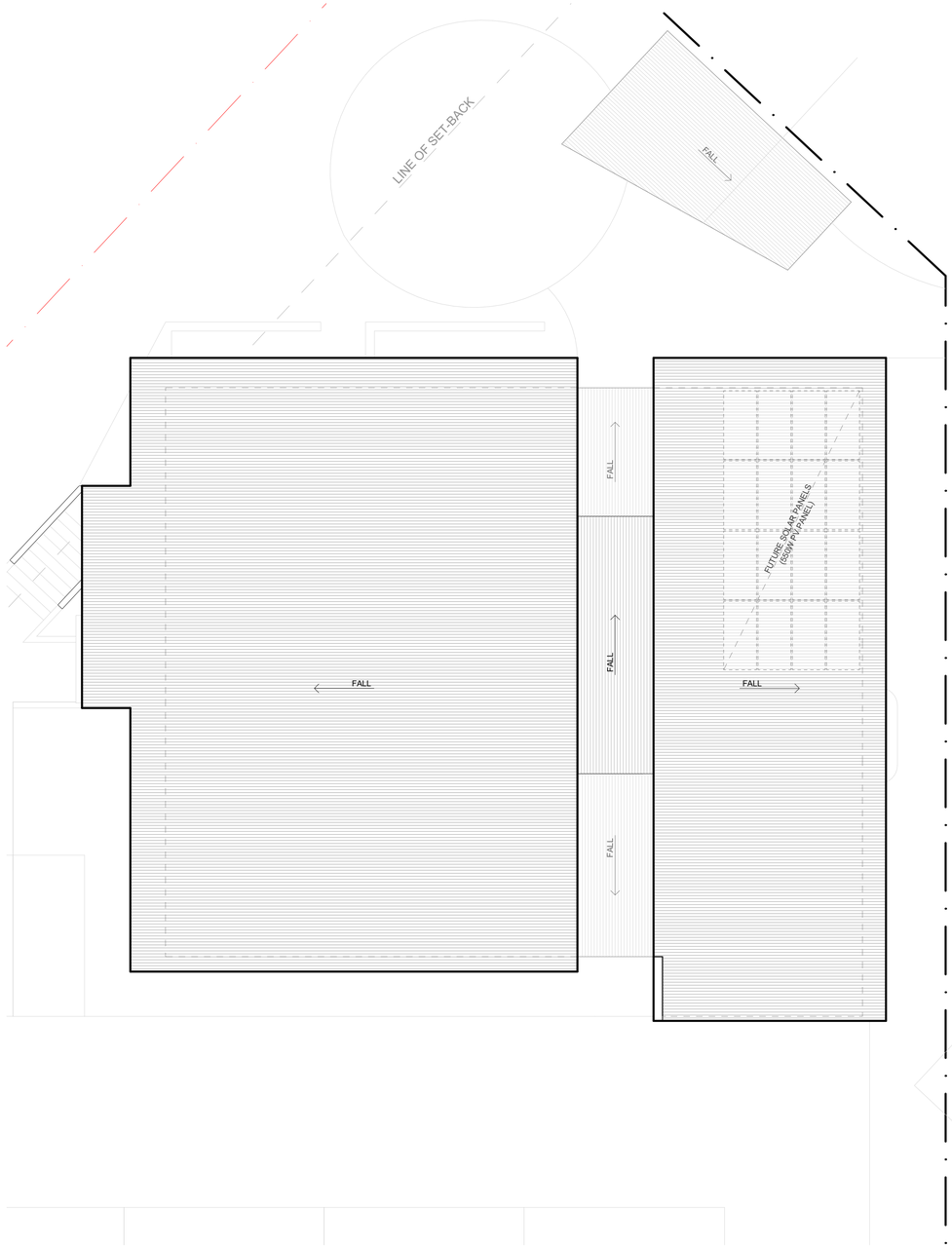


1 V-CENTRE I LEVEL 1 FLOOR PLAN
Scale 1:100



2 V-CENTRE I ROOF PLAN
Scale 1:100

ADVERTISED PLAN

NOTES
1. DO NOT SCALE DRAWINGS.
2. FIGURED DIMENSIONS TAKE PRECEDENCE.
3. DIMENSIONS ARE IN MILLIMETRES
4. ANY DISCREPANCY IN THE DRAWINGS OR SPECIFICATIONS SHALL BE REFERRED TO FOREGROUND ARCHITECTURE.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SECONDARY CONSULTANTS DRAWINGS, DETAILS AND SPECIFICATIONS, AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCING ANY SHOP DRAWINGS OR WORKS ON SITE.

WORK IN PROGRESS

REV	DATE	BY	CH	DESCRIPTION

ID	CHANGE DESCRIPTION

Foreground architecture
Swanston Central Tenancy 3, Upper Mezzanine Level
160 Victoria Street, Carlton VIC 3053
Wurundjeri Woi Wurrung Country
foregroundarchitecture.com.au
info@foregroundarchitecture.com.au +61 (03) 9329 6555
ABN 44 005 000 859 ARBV 50053

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

SCALE 1:100 @A1
DRAWN
CHECKED
PLOT DATE 21/11/2025

DRAWING TITLE
First Floor & Roof Plan

PROJECT
V-SATELLITE BELL PARK
McClelland Drive, Overend Court & Neilson Square, Bell Park VIC 3215
Wurundjeri Country
FOR
Vasey RSL Care

PROJECT
2513

DWG NO.
TP.022

REVISION
TP00 - WIP

Nationwide House Energy Rating Scheme® NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1 (Chenath v3.23)

Property

Address	Unit 01, McClelland Drive, Bell Park, VIC, 3215
Lot/DP	
NCC Class*	2
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	37.5	Open
Unconditioned*	5.2	**NatHERS climate zone**
Total	42.8	60 - Tullamarine
Garage	0.0	

Accredited assessor

Name	Aamer Khan
Business name	Wrap Engineering
Email	aamerk@wrapengineering.com.au
Phone	+61 412256292
Accreditation No.	10275
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	No

National Construction Code (NCC) requirements

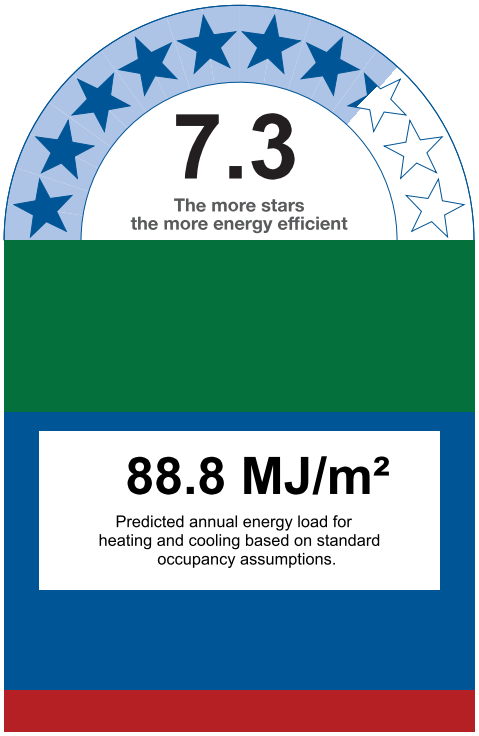
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

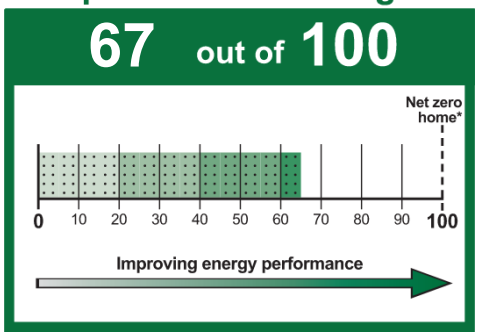
Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	76.6	12.3
Load limits	103	49

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating



Verification

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

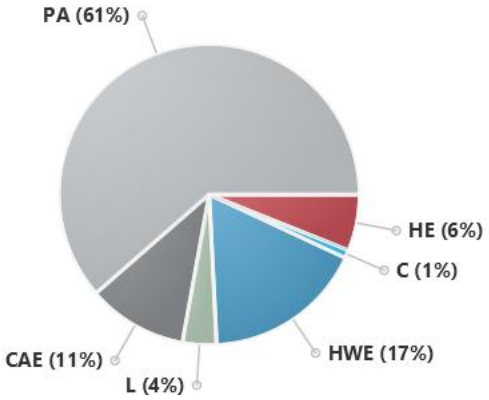
Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

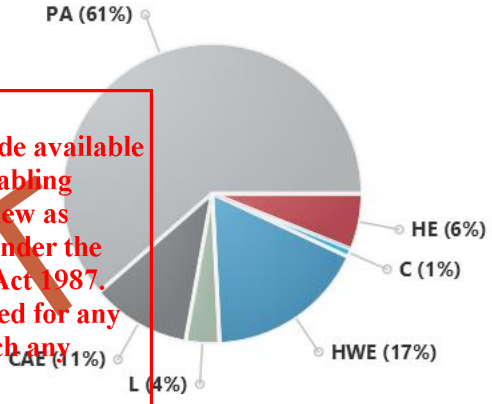
Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

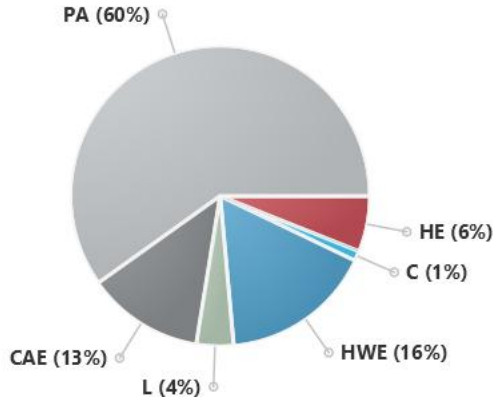
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

Colour:	Code:	Name:	Fuel type:
	HE	Heating	Electric
	HG	Heating	Gas
	HW	Heating	Wood
	C	Cooling	Electric
	HWE	Hot water	Electric
	HWG	Hot water	Gas
	L	Lights	Electric
	P	Pool/spa equipment	Electric
	PA	Plug-in appliances	Electric
	CAE	Cooking appliances	Electric
	CAG	Cooking appliances	Gas

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **47 out of 100**

This home's annual greenhouse emissions:
2735 kg CO2e (with solar)
3823 kg CO2e (without solar)

Predicted annual electricity generated: 971 kWh
Exported to the grid: 13.8 %
Used by the home: 86.2 %

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	12.98
Bathroom	Unconditioned	5.24
1 BED	Kitchen/Living	24.54

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
A&L-004-313	Al Awning Window	3.0	0.33	0.31	0.34
CAP-055-052	AGS 429 Flushline (Residential Size)	2.7	0.58	0.55	0.61

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
1 BED	CAP-055-052	W01-B	2400	887	Fixed	0	NW	None
1 BED	A&L-004-313	W01-C	2400	1556	Sliding	45	NW	None
1 BED	CAP-055-052	W01-A	2400	857	Fixed	0	NW	None
1 BED	A&L-004-313	W04	1500	770	Awning	30	SW	None
Bedroom 1	A&L-004-313	W03	1500	1500	Awning	30	NW	None
Bedroom 1	A&L-004-313	W02-D	1500	500	Awning	60	SW	None
Bedroom 1	A&L-004-313	W02-C	1500	1000	Awning	60	SW	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	3303	NW	3103	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	5845	SW		No
Bedroom 1	CONC-200-PB	2700	2961	NW	856	Yes
Bedroom 1	CONC-200-PB	2700	2066	NE		Yes
Bedroom 1	CONC-200-PB	2700	2247	SW	4415	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
4CD Party Wall Sydney Rd	4CD Party Wall Sydney Rd	31.2	2.00
INT-PB	Internal Plasterboard Stud Wall	22.6	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1 BED	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	24.5	N/A	0.00	Timber (12mm)
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.2	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.0	N/A	0.00	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
1 BED	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bathroom	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bedroom 1	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	4	Downlight	100	Sealed
1 BED	1	Exhaust Fan	250	Sealed
Bathroom	1	Downlight	100	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	250	Sealed
Bedroom 1	2	Downlight	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	1.00	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	2.0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	1.0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]

* Refer to glossary.

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Heat Pump (Peak)	Electricity	4	17 STCs	48

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
Solar PV	0 (N)	0.72

Battery *schedule*

Type	Storage Capacity [kWh]
None	

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads.
The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, the ratio of how much cooling is achieved under set conditions for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme® NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1 (Chenath v3.23)

Property

Address	Unit 02, McClelland Drive, Bell Park, VIC, 3215
Lot/DP	
NCC Class*	2
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	37.4	Open
Unconditioned*	5.1	**NatHERS climate zone**
Total	42.6	60 - Tullamarine
Garage	0.0	

Accredited assessor

Name	Aamer Khan
Business name	Wrap Engineering
Email	aamerk@wrapengineering.com.au
Phone	+61 412256292
Accreditation No.	10275
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	No

National Construction Code (NCC) requirements

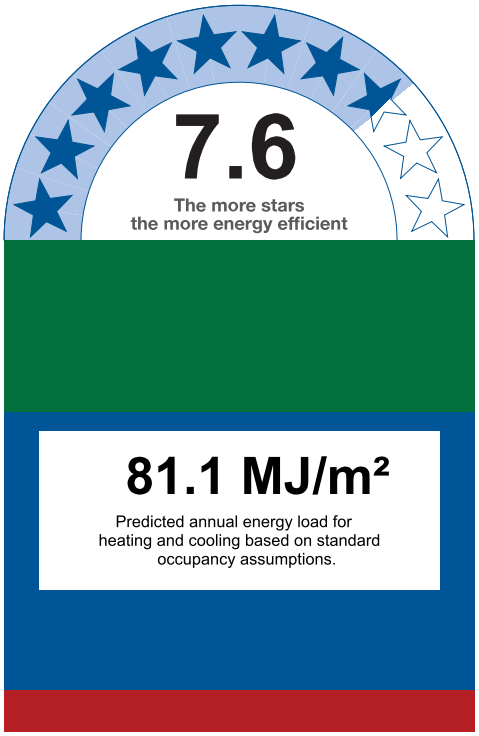
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

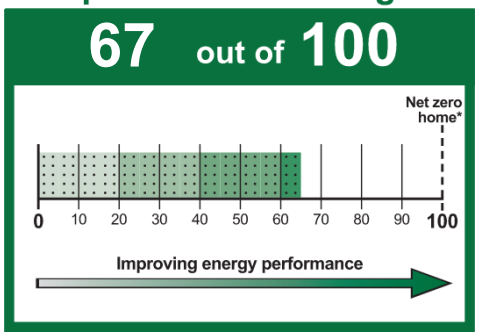
Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	61.7	19.3
Load limits	103	49

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating



Verification

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

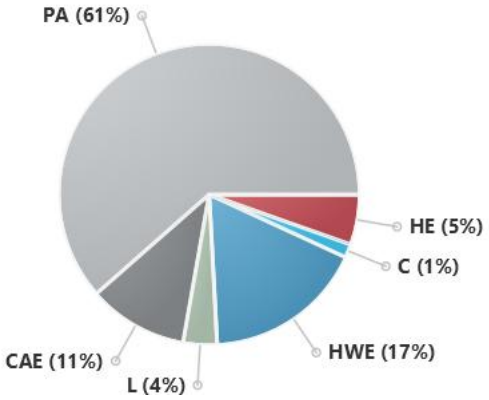
Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

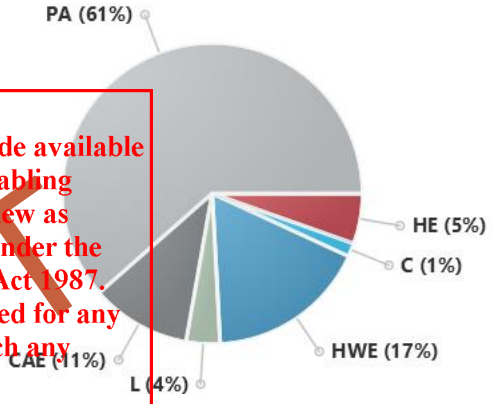
Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

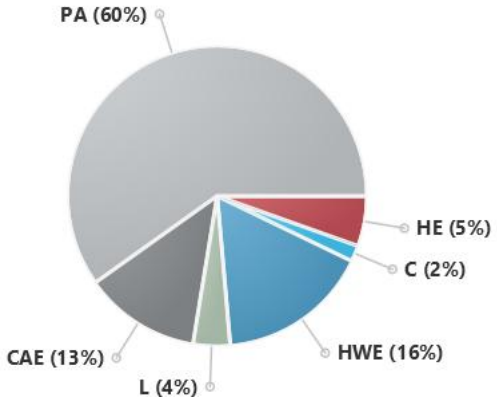
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

Colour:	Code:	Name:	Fuel type:
	HE	Heating	Electric
	HG	Heating	Gas
	HW	Heating	Wood
	C	Cooling	Electric
	HWE	Hot water	Electric
	HWG	Hot water	Gas
	L	Lights	Electric
	P	Pool/spa equipment	Electric
	PA	Plug-in appliances	Electric
	CAE	Cooking appliances	Electric
	CAG	Cooking appliances	Gas

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **48 out of 100**

This home's annual greenhouse emissions:
2732 kg CO2e (with solar)
3819 kg CO2e (without solar)

Predicted annual electricity generated: 971 kWh
Exported to the grid: 13.7 %
Used by the home: 86.3 %

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	12.52
Bathroom	Unconditioned	5.15
1 BED	Kitchen/Living	21.04
Day Time 1	Day Time	3.86

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
A&L-004-313	Al Awning Window	3.0	0.33	0.31	0.34
CAP-055-052	AGS 429 Flushline (Residential Size)	2.7	0.58	0.55	0.61

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
1 BED	CAP-055-052	W01-B	2400	887	Fixed	0	NW	None
1 BED	A&L-004-313	W01-C	2400	1556	Sliding	45	NW	None
1 BED	CAP-055-052	W01-A	2400	857	Fixed	0	NW	None
1 BED	CAP-055-052	W05	1500	978	Fixed	0	NE	None
1 BED	A&L-004-313	W04-B	1500	812	Awning	30	NE	None
Bedroom 1	A&L-004-313	W03	1500	1500	Awning	30	NW	None
Bedroom 1	A&L-004-313	W02-B	1500	1000	Awning	60	NE	None
Bedroom 1	A&L-004-313	W02-A	1500	500	Awning	60	NE	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	3409	NW	3049	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	5845	NE	627	Yes
Bedroom 1	CONC-200-PB	2700	2862	NW	821	Yes
Bedroom 1	CONC-200-PB	2700	4383	SW		Yes
Bedroom 1	CONC-200-PB	2700	2237	NE	4219	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
4CD Party Wall Sydney Rd	4CD Party Wall Sydney Rd	16.5	2.00
4CD Party Wall Sydney Rd	4CD Party Wall Sydney Rd	9.8	2.50
4CD Party Wall Sydney Rd	4CD Party Wall Sydney Rd	0.3	2.70
INT-PB	Internal Plasterboard Stud Wall	22.8	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1 BED	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	21.0	N/A	0.00	Timber (12mm)
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.1	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.6	N/A	2.00	Carpet
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.0	N/A	0.00	Carpet
Day Time 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.9	N/A	0.00	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
1 BED	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bathroom	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bedroom 1	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Day Time 1	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	4	Downlight	100	Sealed
1 BED	1	Exhaust Fan	250	Sealed
Bathroom	1	Downlight	100	Sealed
Bathroom	1	Exhaust Fan	250	Sealed
Bedroom 1	2	Downlight	100	Sealed
Day Time 1	1	Downlight	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	1.00	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED / Day Time 1	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	2.0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED / Day Time 1	Electricity	3.0 stars	n/a

* Refer to glossary.

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	Bedroom 1	Electricity	1.0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Heat Pump (Peak)	Electricity	4	17 STCs	48

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
Solar PV	0 (N)	0.72

Battery *schedule*

Type	Storage Capacity [kWh]
None	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, the ratio of how much cooling is achieved under set conditions for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme® NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1 (Chenath v3.23)

Property

Address	Unit 03, McClelland Drive, Bell Park, VIC, 3215
Lot/DP	
NCC Class*	2
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	37.7	Open	
Unconditioned*	5.2	**NatHERS climate zone**	
Total	43.0	60 - Tullamarine	
Garage	0.0		

Accredited assessor

Name	Aamer Khan
Business name	Wrap Engineering
Email	aamerk@wrapengineering.com.au
Phone	+61 412256292
Accreditation No.	10275
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	No

National Construction Code (NCC) requirements

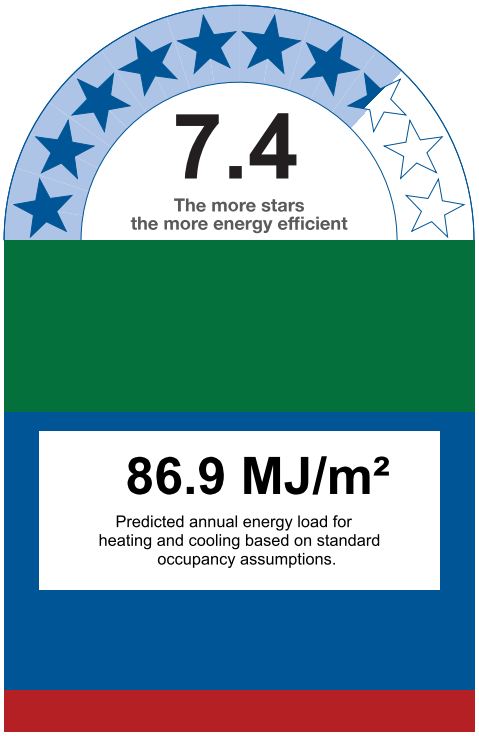
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

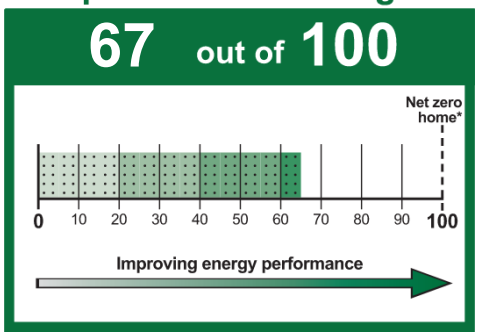
Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	70.7	16.2
Load limits	103	49

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating



Verification

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

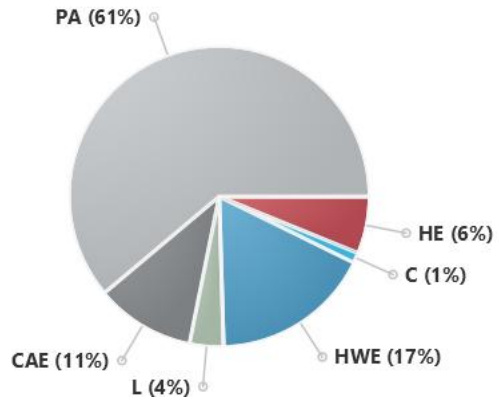
Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

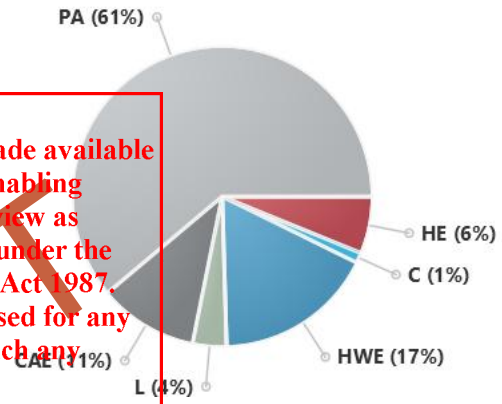
Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

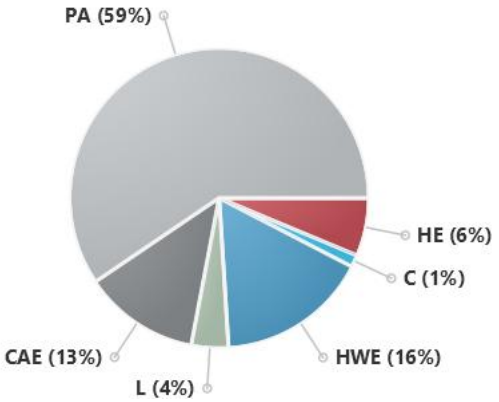
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

Colour:	Code:	Name:	Fuel type:
	HE	Heating	Electric
	HG	Heating	Gas
	HW	Heating	Wood
	C	Cooling	Electric
	HWE	Hot water	Electric
	HWG	Hot water	Gas
	L	Lights	Electric
	P	Pool/spa equipment	Electric
	PA	Plug-in appliances	Electric
	CAE	Cooking appliances	Electric
	CAG	Cooking appliances	Gas

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **47 out of 100**

This home's annual greenhouse emissions:
2756 kg CO2e (with solar)
3843 kg CO2e (without solar)

Predicted annual electricity generated: 971 kWh
Exported to the grid: 13.7 %
Used by the home: 86.3 %

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	13.19
Bathroom	Unconditioned	5.24
1 BED	Kitchen/Living	24.54

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
A&L-004-313	Al Awning Window	3.0	0.33	0.31	0.34
CAP-055-052	AGS 429 Flushline (Residential Size)	2.7	0.58	0.55	0.61

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
1 BED	A&L-004-313	W04	1500	770	Awning	30	NE	None
1 BED	CAP-055-052	W05	1500	1092	Fixed	0	NE	None
1 BED	CAP-055-052	W01-B	2400	887	Fixed	0	SE	None
1 BED	A&L-004-313	W01-C	2400	1556	Sliding	45	SE	None
1 BED	CAP-055-052	W01-A	2400	857	Fixed	0	SE	None
Bedroom 1	A&L-004-313	W03	1500	1500	Awning	30	SE	None
Bedroom 1	A&L-004-313	W02-H	1500	592	Awning	60	NE	None
Bedroom 1	A&L-004-313	W02-G	1500	908	Awning	60	NE	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	5845	NE	646	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	3303	SE	2431	Yes
Bedroom 1	CONC-200-PB	2700	2961	SE	121	Yes
Bedroom 1	CONC-200-PB	2700	1788	SW		Yes
Bedroom 1	CONC-200-PB	2700	2310	NE	4150	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
4CD Party Wall Sydney Rd	4CD Party Wall Sydney Rd	29.0	2.00
INT-PB	Internal Plasterboard Stud Wall	4.4	2.50
INT-PB	Internal Plasterboard Stud Wall	22.6	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1 BED	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	24.5	N/A	0.00	Timber (12mm)
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.2	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.3	N/A	0.00	Carpet
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.9	N/A	2.00	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
1 BED	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bathroom	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bedroom 1	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	4	Downlight	100	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	1	Exhaust Fan	250	Sealed
Bathroom	1	Downlight	100	Sealed
Bathroom	1	Exhaust Fan	250	Sealed
Bedroom 1	2	Downlight	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	1.00	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	2.0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	1.0 stars	n/a

* Refer to glossary.

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Heat Pump (Peak)	Electricity	4	17 STCs	48

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
Solar PV	0 (N)	0.72

Battery *schedule*

Type	Storage Capacity [kWh]
None	

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads.
The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, the ratio of how much cooling is achieved under certain conditions for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme® NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1 (Chenath v3.23)

Property

Address	Unit 04, McClelland Drive, Bell Park, VIC, 3215
Lot/DP	
NCC Class*	2
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	38.7	Open	
Unconditioned*	5.0	**NatHERS climate zone**	
Total	43.7	60 - Tullamarine	
Garage	0.0		

Accredited assessor

Name	Aamer Khan
Business name	Wrap Engineering
Email	aamerk@wrapengineering.com.au
Phone	+61 412256292
Accreditation No.	10275
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	No

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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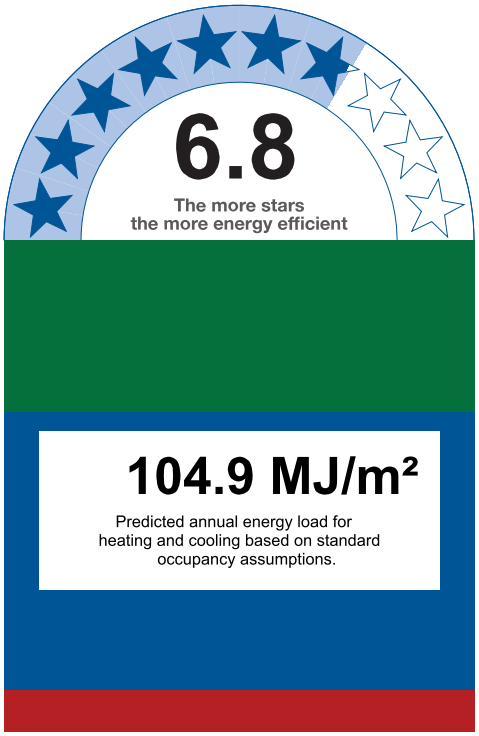
Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

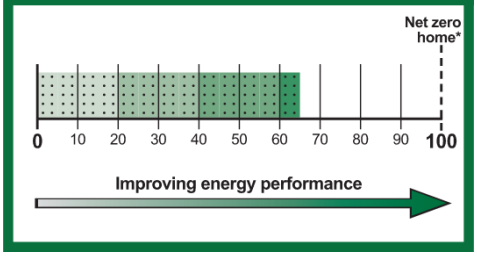
	Heating	Cooling
Modelled	83.2	21.7
Load limits	103	49

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating

66 out of 100



Verification

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

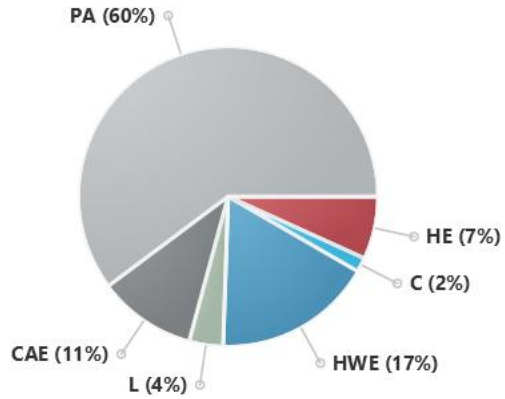
Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

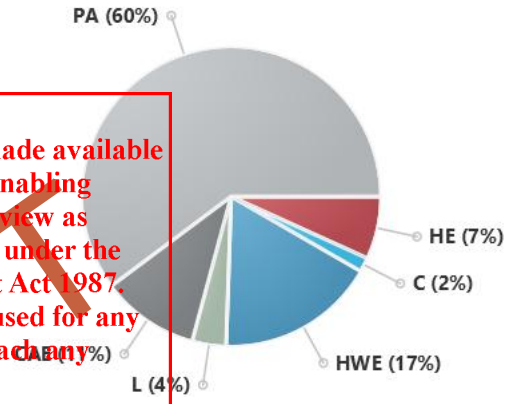
Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

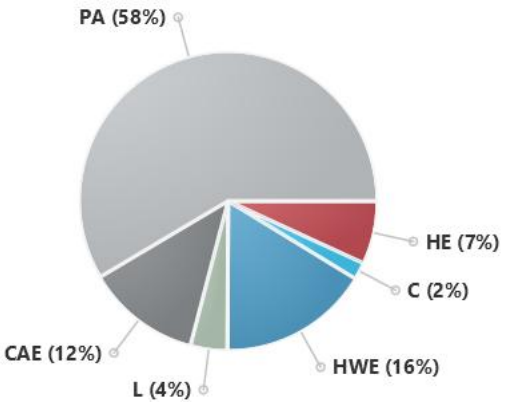
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

Colour:	Code:	Name:	Fuel type:
	HE	Heating	Electric
	HG	Heating	Gas
	HW	Heating	Wood
	C	Cooling	Electric
	HWE	Hot water	Electric
	HWG	Hot water	Gas
	L	Lights	Electric
	P	Pool/spa equipment	Electric
	PA	Plug-in appliances	Electric
	CAE	Cooking appliances	Electric
	CAG	Cooking appliances	Gas

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **46 out of 100**

This home's annual greenhouse emissions:
2821 kg CO2e (with solar)
3909 kg CO2e (without solar)

Predicted annual electricity generated: 971 kWh
Exported to the grid: 13.2 %
Used by the home: 86.8 %

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	12.67
Bathroom	Unconditioned	5.04
1 BED	Kitchen/Living	26.04

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
A&L-004-313	Al Awning Window	3.0	0.33	0.31	0.34
CAP-055-052	AGS 429 Flushline (Residential Size)	2.7	0.58	0.55	0.61

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
1 BED	CAP-055-052	W04	1500	900	Fixed	0	SW	None
1 BED	CAP-055-052	W05	2400	900	Fixed	0	SW	None
1 BED	CAP-055-052	W01-B	2400	887	Fixed	0	SE	None
1 BED	A&L-004-313	W01-C	2400	1556	Sliding	45	SE	None
1 BED	CAP-055-052	W01-A	2400	857	Fixed	0	SE	None
Bedroom 1	A&L-004-313	W03	1500	1500	Awning	30	SE	None
Bedroom 1	A&L-004-313	W02-F	1500	1000	Awning	60	SW	None
Bedroom 1	A&L-004-313	W02-E	1500	500	Awning	60	SW	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	5947	SW	1006	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
1 BED	CONC-200-PB	2700	3445	SE	2633	Yes
Bedroom 1	CONC-200-PB	2700	2924	SE	410	Yes
Bedroom 1	CONC-200-PB	2700	2217	SW	4640	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
4CD Party Wall Sydney Rd	4CD Party Wall Sydney Rd	27.5	2.00
CONC-200-PB	Precast 200mm Concrete - Plasterboard Internally	10.9	2.50
INT-PB	Internal Plasterboard Stud Wall	22.2	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1 BED	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	26.0	N/A	0.00	Timber (12mm)
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.0	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	12.7	N/A	0.00	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
1 BED	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bathroom	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No
Bedroom 1	CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	3.50	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
1 BED	4	Downlight	100	Sealed
1 BED	1	Exhaust Fan	250	Sealed
Bathroom	1	Downlight	100	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	250	Sealed
Bedroom 1	2	Downlight	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
CLT-200-FLAT-EXP: CLT (200mm) with Metal Roof & Exposed Ceiling	1.00	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	2.0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Room Air-Conditioner	1 BED	Electricity	3.0 stars	n/a
Unknown or None (Default AC)	Bedroom 1	Electricity	1.0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]

* Refer to glossary.

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Heat Pump (Peak)	Electricity	4	17 STCs	49

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
Solar PV	0 (N)	0.72

Battery *schedule*

Type	Storage Capacity [kWh]
None	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, the ratio of how much cooling is achieved under set conditions for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme®
Class 2 Summary
NatHERS® Certificate No.

Generated on 26 Feb 2026 using Hero 4.1

Property

Address McClelland Drive, Bell Park, VIC, 3215

Lot/DP

NatHERS climate zone 60 - Tullamarine

Accredited assessor

Name Aamer Khan

Business name Wrap Engineering

Email aamerk@wrapengineering.com.au

Phone +61 412256292

Accreditation No. 10275

Assessor Accrediting Organisation HERA

Verification

DRAFT PREVIEW ISSUE - NOT TO BE USED FOR CERTIFICATION

National Construction Code (NCC) requirements

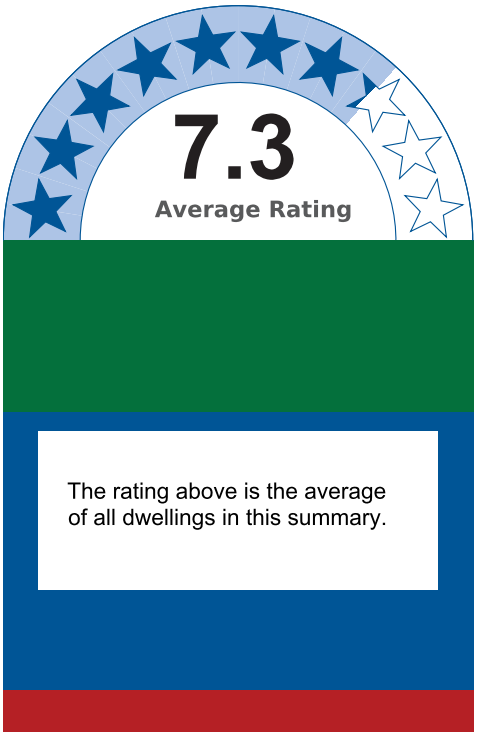
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

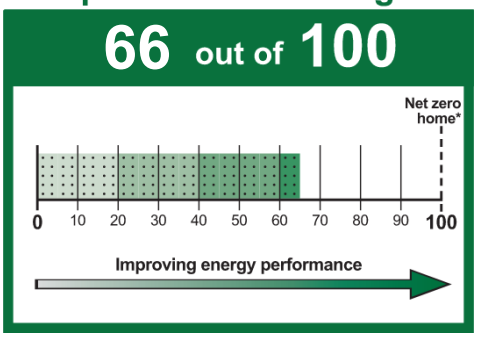


NCC heating and cooling maximum loads MJ/m².yr

Limits taken from ABCB Standard 2022

	Heating	Cooling
Average load	73.0	17.4
Maximum load	83.2	21.7
Average limit	88.0	48.0
Maximum limit	103.0	49.0

Whole of Home performance rating



The rating above is the lowest of all the dwellings in the summary

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
	Unit 01	76.6 (103)	12.3 (49)	88.8	7.3	67

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
	Unit 02	61.7 (103)	19.3 (49)	81.1	7.6	67
	Unit 03	70.7 (103)	16.2 (49)	86.9	7.4	67
	Unit 04	83.2 (103)	21.7 (49)	104.9	6.8	66
Averages	4x (Total)	73.0	17.4	90.4	7.3	67
Maximum Loads and Minimum Ratings		83.2	21.7	104.9	6.8	66

Explanatory notes

About the ratings

The thermal performance star rating in this Certificate is the average rating of all NCC Class 2 dwellings in an apartment block. The Whole of Home performance rating in this Certificate is the lowest rating for the apartment block. Individual unit ratings are listed in the *'Summary of all dwellings'* section of this Certificate.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes societal cost.
For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.