SUSTAINABLE MANAGEMENT PLAN

PROPOSED MIXED-USE DEVELOPMENT

1-7 Waterfront Place,
Port Melbourne

GIW24041
Revision C

Prepared for:
GFM Group Pty Ltd (ACN 675 440 730) in its capacity as trustee of the GFM BTS Trust Subtrust No. 4 (ABN 12 757 352 180)

3 February 2025

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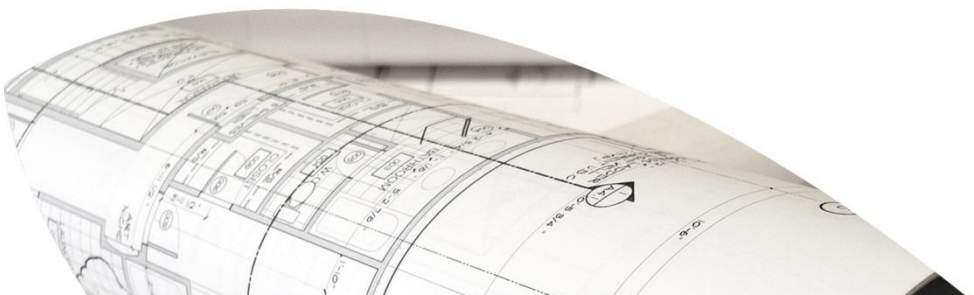

Limitations

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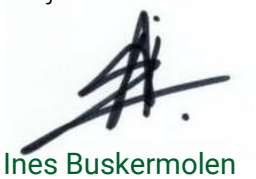
Revision History

Revision Number	Date Issued	Author	Approved	Comments
A	20/12/2024	IB	GW	Draft
B	23/01/2025	IB	GW	Final
C	03/02/2025	IB	GW	Final

Prepared by:
Project Consultant



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Contents

1. Introduction

Project Information

GIW Environmental Solutions Pty Ltd ("GIW") has been engaged by GFM Group Pty Ltd (ACN 675 440 730) in its capacity as trustee of the GFM BTS Trust Subtrust No. 4 (ABN 12 757 352 180) to provide Environmentally Sustainable Design (ESD) consulting services for the proposed mixed-use development at 1-7 Waterfront Place, Port Melbourne.

The proposed development will include 84 apartments, 2 retail tenancies, communal areas constructed over ground plus 9 levels and basement carpark, and will consist of the following:

- 5 x 1-bedroom apartments
- 24 x 2-bedroom apartments
- 46 x 3-bedroom apartments
- 9 x 4-bedroom apartments / loft
- 593m^2 retail

The site located at 1-7 Waterfront Place, Port Melbourne has an approximate surface area of 5,487m^2 and is currently the location of a 2-storey building. Distance from the site to Melbourne CBD is approximately 4km.

Figure 1 - Pre-existing sites at 1-7 Waterfront Place, Port Melbourne.

Statutory Requirements

This Sustainable Management Plan (SMP) has been prepared to assess the proposed development's sustainability credentials and performance targets in accordance with City of Port Phillip Planning Scheme - Clause 15.01-2L-02 Environmentally Sustainable Development, which states:

Development Type	Application Requirement	Example Tools
Development of 10 or more dwellings.	Sustainability Management Plan (SMP)	BESS Green Star MUSIC STORM

Further to the above, this SMP also responds to Victoria Planning Provisions VC216 – Clause 15.01-2S.

Built Environment Sustainability Scorecard (BESS)

The proposed mixed-use development has been assessed against the Built Environment Sustainability Scorecard (BESS) guidelines. The BESS tool addresses nine key environmental categories as follows:

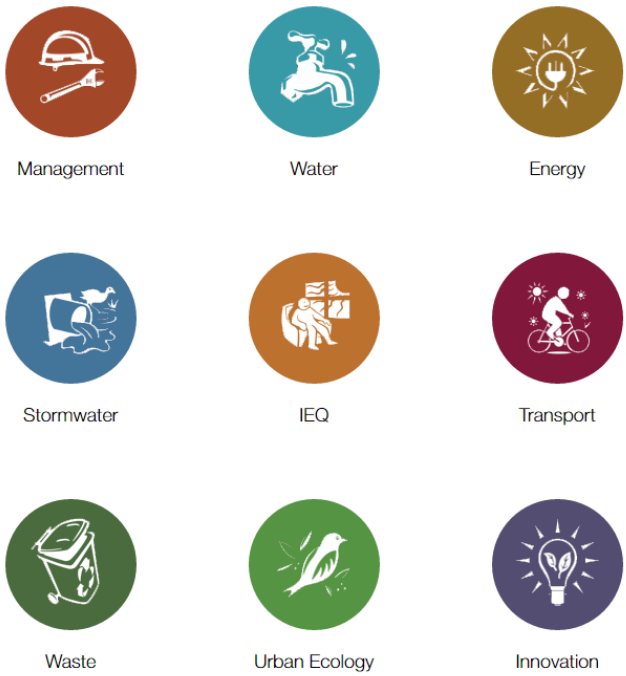


Figure 2 - BESS Environmental Categories (www.bess.net.au)

All ESD measures described under the nine key environmental categories are proposed to be suitably incorporated into relevant project documentation at the appropriate project phase.

Responsibilities & Implementation

GFM Group Pty Ltd (ACN 675 440 730) in its capacity as trustee of the GFM BTS Trust Subtrust No. 4 (ABN 12 757 352 180) will be responsible for the suitable implementation of the requirements of this report throughout the design and development phases. Should the development be sold the responsibility will pass to the new owner. At such time as a builder is novated or a building contract is put in place the builder will be responsible for implementation during the construction phase. At occupancy, the Owners Corporation and individual lot owners and or tenants will be responsible for the correct use of installed equipment and building systems in line with the provided Building User's Guide.

Sources of Information

The following 'Sources of Information' have been used to guide the design solutions:

- Woods Bagot – Project No. 131042 – Planning Drawings Rev A (dated: 17/01/2025).
- Woods Bagot – Project No. 131042 – Urban Context Report Rev A (dated: 17/01/2025)
- Municipal Association of Victoria - SDAPP Explained; Building Design for a Sustainable Future
- Built Environment Sustainability Scorecard (BESS)
- CSIRO 1999, Urban Stormwater – Best Practise Environmental Management Guidelines

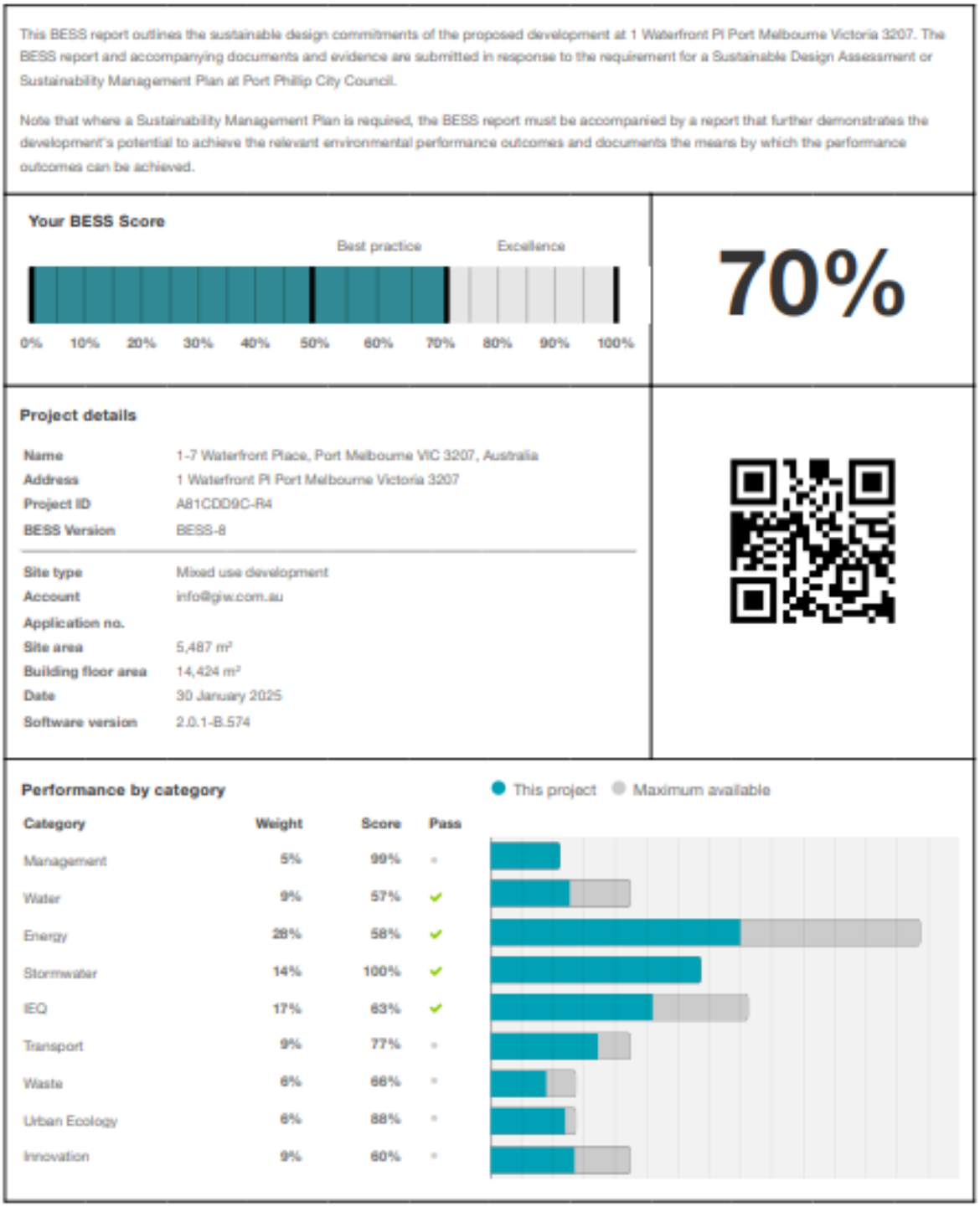
2. ESD Summary

The proposed mixed-use development at 1-7 Waterfront Place, Port Melbourne will implement the following ESD initiatives:

1. The project achieves a total BESS score of 70% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%.
2. 70% (59 out of 87) of the development's apartments are naturally cross-ventilated.
3. Daylight modelling has been conducted for a representative sample of apartments. The summary result is as follows:
    - 90% of living floor area achieves >90% above DF 1
    - 86% of bedroom floor area achieves >90% above DF0.5
4. The retail areas are targeting a 2% DF to 60% of the nominated area.
5. 52% (44 out of 84) of apartments achieve at least 3 hours of sunlight.
6. The development is provided with a comprehensive shading strategy.
7. The development is to achieve a 7.0 Star average NatHERS Energy Rating result.
8. The non-residential areas aim to reduce heating and cooling energy consumption below the reference case (BCA Section J 2022).
9. The development is to utilise a heat pump hot water system.
10. A 30kW Solar PV system is to be located on the roof of the proposed development.
11. Individual cold water and electricity meters will be provided to the apartments, commercial tenancies and communal areas.
12. Water efficient fittings and fixtures are applied throughout.
13. A 25,000-litre rainwater tank will harvest rainwater from all roof areas. This tank will be connected to all retail WC's, pool backwash and makeup. A 35,000-litre rainwater tank will harvest rainwater from all terraces and will be connected to landscape irrigation.
14. The landscaping is to be a combination of native vegetation with no irrigation demand after the initial establishment period or where landscape irrigation is required, the irrigation system will be connected to rainwater tank.
15. In total 84 bicycle spaces are to be provided for residents.
16. In total 17 bicycle spaces are to be provided for residential visitors.
17. In total 6 bicycle spaces are to be provided for employees & 2 bicycle spaces are to be provided for non-residential visitors.
18. 1,068m2 of communal space will be provided at ground and level 1.
19. The communal food production area will be provided at ground floor public realm.

3. BESS Performance

The project achieves a total BESS score of 70% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%. This figure represents a percentage improvement over a benchmark project. A score of 50% and higher equates to 'best practice' and is an effective pass of the BESS tool. A score of 70% and higher equates to BESS 'excellence' and exists as a higher benchmark in the tool.



This BESS report outlines the sustainable design commitments of the proposed development at 1 Waterfront Pl Port Melbourne Victoria 3207. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Port Phillip City Council.

Note that where a Sustainability Management Plan is required, the BESS report must be accompanied by a report that further demonstrates the development's potential to achieve the relevant environmental performance outcomes and documents the means by which the performance outcomes can be achieved.

Your BESS Score

Best practice Excellence

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

70%

Project details

Name	1-7 Waterfront Place, Port Melbourne VIC 3207, Australia
Address	1 Waterfront Pl Port Melbourne Victoria 3207
Project ID	A81CDD9C-R4
BESS Version	BESS-8
Site type	Mixed use development
Account	info@giw.com.au
Application no.	
Site area	5,487 m²
Building floor area	14,424 m²
Date	30 January 2025
Software version	2.0.1-B.574

Performance by category

This project Maximum available

Category	Weight	Score	Pass
Management	5%	99%	-
Water	9%	57%	✓
Energy	28%	58%	✓
Stormwater	14%	100%	✓
IEQ	17%	63%	✓
Transport	9%	77%	-
Waste	6%	66%	-
Urban Ecology	6%	88%	-
Innovation	9%	60%	-

4. ESD Assessment

Management

Council ESD objectives:

- To encourage a holistic and integrated design and construction process and ongoing high performance.

Council Best Practice Standard

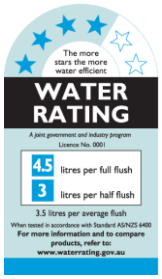
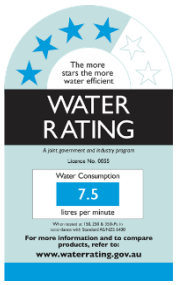
Criteria		Construction and Building Management Actions
Pre-Application Meeting	To ensure appropriate sustainable design principles and strategies are considered from the preliminary design stage of each development.	GIW has been involved in a pre-application meeting with Council on 08/01/2025.
Metering	To provide building users with information that allows monitoring of energy and water consumption	Electricity, and cold water metering is to be provided to each individual apartment and retail/civic tenancy. Lighting and general power to common areas is to be separately metered to quantify energy used for common areas spaces. Additionally, the main electrical switchboard to contain at least two empty three-phase circuit breaker slots and four DIN rail spaces labelled to indicate the use of each space for a battery system.
Building User's Guide	To encourage and recognise initiatives that will help building users to use the building more efficiently.	A Building User's Guide will be provided to all occupants explaining the correct use of installed equipment and building systems. This shall cover at a minimum: • Energy and Environmental Strategy • Monitoring and Targeting • Building Services • Transport Facilities • Materials and Waste Policy • Expansion/Re-fit Considerations • References and Further Information

Water

Council ESD objectives:

- To ensure the efficient use of water
- To reduce total operating potable water use
- To encourage the collection and reuse of stormwater
- To encourage the appropriate use of alternative water sources (e.g. grey water)
- To minimize associated water costs

Council Best Practice Standard

Criteria		Development Provision
Potable Water Reduction	To reduce total potable water use due through the use of efficient fixtures, appliances, and the use of rainwater.	WELS 4 Star - Toilets  WELS 6 Star - Taps  WELS 4 Star - Showerhead  WELS 5 Star - Dishwasher 
Rainwater Collection & Reuse		A 25,000-litre rainwater tank will harvest rainwater from all roof areas. This tank will be connected to all retail WC's, pool backwash and makeup. A 35,000-litre rainwater tank will harvest rainwater from all terraces and will be connected to landscape irrigation. It is estimated that combined this will save more than 489kL of potable water every year and meet 76.9% of the demand in these areas. Stormwater drainage mechanism is to be determined by the hydraulics services engineer at the design development phase. Refer Appendix A – WSUD Response
Landscape Irrigation	To ensure the efficient use of water and to reduce total operating potable water use through encouraging water efficient landscape design.	The landscaping is to be a combination of native vegetation with no irrigation demand after the initial establishment period or where landscape irrigation is required, the irrigation system will be connected to rainwater tank.

Council Best Practice Standard

Criteria		Development Provision
Building System Water Use Reduction	Ensure the efficient use of water, to reduce total operating potable water use and to encourage the appropriate use of alternative water sources for cooling and fire testing systems.	>80% of fire test water (e.g. hydrant pump test water or SCV annubar test) is to be reused on site. The proposed development is to incorporate air-cooled HVAC systems for both the residential and non-residential areas within the development.

Energy

Council ESD objectives:

- To ensure the efficient use of energy
- To reduce total operating greenhouse emissions
- To reduce energy peak demand
- To reduce associated energy costs

Council Best Practice Standard

<table>
<tr><th>Criteria</th><th></th><th>Development Provision</th></tr>
<tr><td>Thermal Performance Rating - Residential</td><td>To reduce energy needed to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.</td><td>The National Construction Code (NCC) Class 2 – Sole Occupancy Unit(s) residential building component is to be designed in accordance with NCC Section J (2022) NatHERS requirements. The residential units are targeting to achieve an average 7.0 Star rating, with no unit achieving below 6.0 Stars.

Further to this the development will need to comply with the following heating and cooling load limits:

<table>
<tr><th>Climate Zone</th><th>Heating load limits (MJ/m2)</th><th>Cooling load limits (MJ/m2)</th></tr>
<tr><td>21 Melbourne RO</td><td>Average: 48
Maximum: 55</td><td>Average: 32
Maximum: 30 (BADS)</td></tr>
</table>

The apartments are currently achieving a 7.3 Star average. The below sample ratings demonstrate the developments ability to achieve these requirements. Refer Appendix B for Preliminary FirstRate Certificates.

<table>
<tr><th>Apartment No.</th><th>ACE Total MJ/M2</th><th>ACE Heating</th><th>ACE Cooling</th><th>ACE NCFA</th><th>Star Rating</th></tr>
<tr><td>00.2M1</td><td>59.7</td><td>53.2</td><td>6.5</td><td>104.2</td><td>7.1</td></tr>
<tr><td>01.3F</td><td>63.1</td><td>51.5</td><td>11.6</td><td>231.4</td><td>6.9</td></tr>
<tr><td>02.3U</td><td>39.7</td><td>23.3</td><td>16.4</td><td>138.6</td><td>8.2</td></tr>
<tr><td>02.3B</td><td>27.2</td><td>19.9</td><td>7.3</td><td>141.6</td><td>8.9</td></tr>
<tr><td>03.3J</td><td>63</td><td>52.3</td><td>10.7</td><td>156.5</td><td>6.9</td></tr>
<tr><td>04.3K</td><td>69.8</td><td>41.5</td><td>28.3</td><td>155.9</td><td>6.6</td></tr>
<tr><td>04.3N</td><td>70.9</td><td>49.6</td><td>21.3</td><td>135.5</td><td>6.5</td></tr>
<tr><td>04.3X</td><td>41.9</td><td>28.8</td><td>13.1</td><td>147.3</td><td>8.1</td></tr>
</table>
</td></tr>
</table>

Council Best Practice Standard

Criteria	Development Provision

05.2H	54.7	33.7	21	110.5	7.4
06.3O	56.8	32.9	23.9	184.4	7.3
06.2B	57.1	43.3	13.8	114.5	7.2
07.3Z	66.3	54.8	11.5	128.3	6.8
08.4F	46.1	22.7	23.4	218.3	7.9
09.3S	70.8	52.1	18.7	206.6	6.5
Average	**56.2**	**40.0**	**16.3**	**155.3**	**7.3**

*Apartments are assessed using FirstRate5 v5.5.5a

Construction assumptions for preliminary FirstRate ratings are listed below. Note, these assumptions are based on the sample of apartments assessed and may vary throughout the development. These assumptions are not to be relied upon for any other purpose beyond Town Planning assessment.

Element	Material	Insulation Value
Floor	Concrete	R3.2
External Walls	Concrete	R2.5
	Spandrel	R2.5
Internal Walls	Concrete	R1.8
	Plasterboard	R2.5
Where exposed above	Concrete	R2.75
Roof & Large Terraces	Concrete	R4.6 (applied above the slab)
Fixed Windows (L1-2)	Aluminium Framed, Double Glazed, Argon Filled, Low-E, Clear	Total System: - U-Value: 2.71 - SHGC: 0.58
Sliding Doors (L1-2)	Aluminium Framed, Double Glazed, Argon Filled, Low-E, Clear	Total System: - U-Value: 3.19 - SHGC: 0.48
Awning Windows (L1-2)	Aluminium Framed, Double Glazed, Argon Filled, Low-E,	Total System: - U-Value: 4.42

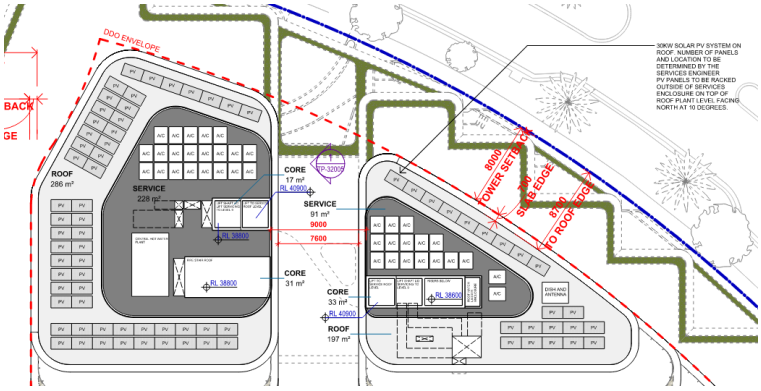
Council Best Practice Standard

Criteria		Development Provision		
			Clear	- SHGC: 0.41
		Fixed Windows (L3-9)	Aluminium Framed, Double Glazed, Argon Filled, Spectrally Selective	Total System: - U-Value: 2.69 - SHGC: 0.40
		Sliding Doors/ Windows (L3-9)	Aluminium Framed, Double Glazed, Argon Filled, Spectrally Selective	Total System: - U-Value: 2.83 - SHGC: 0.39
		Awning Windows (L3-9)	Aluminium Framed, Double Glazed, Argon Filled, Spectrally Selective	Total System: - U-Value: 3.35 - SHGC: 0.37
Thermal Performance Rating – Non-Residential	To reduce energy needed to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.	The non-residential areas aim to reduce heating and cooling energy consumption below the reference case (BCA Section J 2022). Refer Appendix C – Preliminary J4D6 Façade Calculator.		
Electrification	To support the transition to renewable energy sources.	The development will be all-electric with no gas connection.		
HVAC System	To ensure the efficient use of energy and to reduce consumption of electricity.	Inverter split systems are to be installed and sized to maintain conditions of the habitable rooms of each apartment. The efficiency of the air conditioning system is to be within 1 star rating of best available under MEPS Post-October 2012 measurement standard. VRV / VRF systems with a COP of 3.3 are to be installed to the non-residential areas.		
Hot Water	To ensure the	The development is to utilise a heat pump hot water system.		

Council Best Practice Standard

Criteria		Development Provision
System	efficient use of energy and to reduce consumption and greenhouse emissions from water heating.	
Car Park Ventilation	To ensure the efficient use of energy, reduce total operating greenhouse gas emissions and to reduce energy peak demand.	Carpark ventilation fans are driven by a VSD motor connected to CO sensors within the carpark. The inclusion of CO sensor control will allow the ventilation fans to ramp down when the car park is unoccupied. The system is to be designed in accordance with AS1668.2. The mechanical services engineer is responsible for the design and specification of the system. The contractor is to procure and install the specified system. Maintenance requirements of the CO sensor system are to be included in the O&M manual.
Clothes Drying	Ensure the efficient use of energy and to reduce energy consumption and greenhouse emissions associated with clothes drying	NIL
Internal Lighting - Residential	To ensure the efficient use of energy, to reduce energy consumption, greenhouse emissions associated with artificial lighting, and to reduce energy peak demand.	The maximum illumination power density (W/sqm) is at least 20% lower than NCC 2022 requirements. Lighting power density shall be as follows: • Dwellings: No greater than average 4W/m^2 • POS: No greater than average 4W/m^2 • Back of house and indoor car parks: No greater than average 5W/m^2 All common area, external and carpark lighting is to be controlled with daylight, motion sensors or timers (whichever is deemed appropriate).
Internal	To ensure the	The maximum illumination power density (W/m2) in the non-

Council Best Practice Standard

Criteria		Development Provision
Lighting – Non-Residential	efficient use of energy, to reduce energy consumption, greenhouse emissions associated with artificial lighting, and to reduce energy peak demand.	residential areas meets the requirements of Table J7D3a of the NCC 2022 Section J. Lighting power density shall be as follows: • Retail: No greater than average 14W/m^2
Renewable Energy Systems - Solar	To encourage on-site renewable energy generation and reduce greenhouse emissions.	A 30kW Solar PV system is to be located on the roof of the proposed development. The system is expected to generate approximately 40,204kWh and will contribute towards the common area lighting and power.  Location Solar PV System Refer Appendix D – Renewable Energy

Stormwater

Council ESD objectives:

- To reduce the impact of stormwater run-off
- To improve the water quality of stormwater run-off
- To achieve best practice stormwater quality outcomes
- To incorporate water sensitive urban design principles

Council Best Practice Standard

Criteria		Development Provision
Stormwater Treatment	To minimise negative environmental impacts of stormwater runoff and maximise onsite re-use of stormwater.	The eWater – Model for Urban Stormwater Improvement Conceptualisation (MUSIC) tool has been applied to determine performance relative to Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999). As per City of Hume Planning Scheme - Clause 53.18 Stormwater Management in Urban Development, the development is required to achieve a compliant MUSIC. A compliant MUSIC result is achieved via the following: • Rainwater collection off all roof areas is to be directed to a 25,000 litre tank connected to all retail WC's, pool backwash and makeup. • Rainwater collection off all terraces is to be directed to a 35,000 litre tank connected to landscape irrigation. • Prior to the LPOD an Atlan EcoCepter followed by Atlan FlowFilter will need to be installed to filter the rainwater before entering the stormwater system. Refer Appendix A – WSUD Response.

Indoor Environment Quality

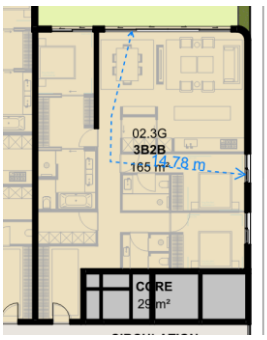
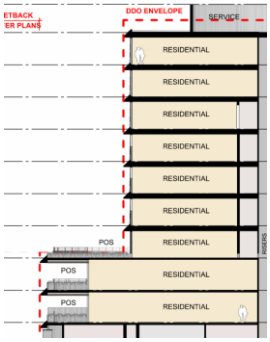
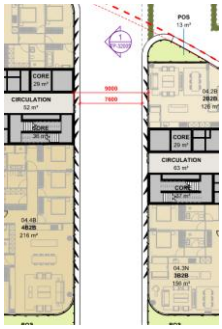
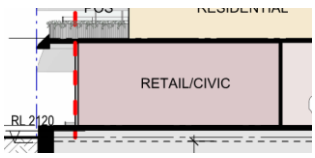
Council ESD objectives:

- to achieve a healthy indoor environment quality for the wellbeing of building occupants.
- to provide a naturally comfortable indoor environment will lower the need for building services, such as artificial lighting, mechanical ventilation and cooling and heating devices.

Council Best Practice Standard

Criteria		Development Provision
Daylight Access - Residential	To provide a high level of amenity and energy efficiency through design for natural light.	Daylight modelling has been conducted for a representative sample of apartments. The summary result is as follows: % of living floor area above DF 1.0: 90 % of bedroom floor area above DF 0.5: 86 Refer Appendix E - Daylight Modelling.
Winter Sunlight	To provide a high level of amenity and reduce need for artificial heating in winter.	52% (44 out of 84) of apartments achieve at least 3 hours of sunlight.
Daylight Access – Non-Residential	To provide a high level of amenity and energy efficiency through design for natural light.	The retail areas are targeting a 2% DF to 60% of the nominated area.
Minimal Internal Bedrooms	90% of bedrooms have an external window.	NIL internal bedrooms.
Effective Natural Ventilation	To provide fresh air and passive cooling opportunities.	70% (59 out of 87) of the development's apartments are naturally cross-ventilated. Apartments are provided with windows on opposite or adjacent facades or are effective single sided ventilated.

Council Best Practice Standard

Criteria		Development Provision
		 Typical natural cross-ventilated apartment
Ventilation – Non-Residential	To provide fresh air and passive cooling opportunities.	Outdoor air rate for the commercial areas is to be 50% increased compared to AS 1668:2012. This is to be included in the mechanical design and specifications.
Thermal Comfort	To provide comfortable indoor spaces and reduce energy needed for heating and cooling.	The development is provided with a comprehensive shading strategy:  North, west and east oriented windows are shaded by the overhanging slab of the floor above.  Windows facing into the central void are shaded by the built form and vertical fins.
Thermal Comfort – Non-Residential	To provide comfortable indoor spaces and reduce energy needed for heating and cooling.	The development is provided with a comprehensive shading strategy:  Retail windows are shaded by the overhanging slab or roof above.

Council Best Practice Standard

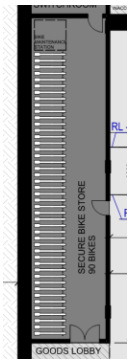
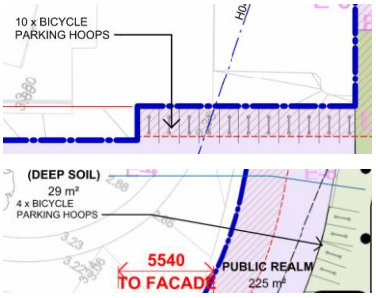
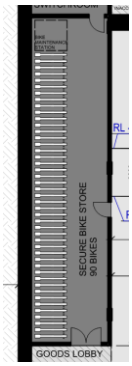
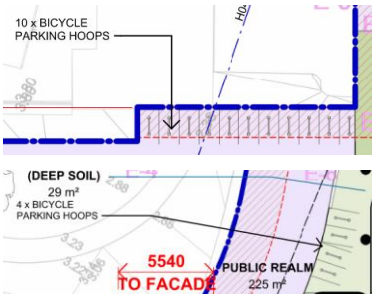
Criteria		Development Provision
		None of the regular use areas of the commercial areas are provided with ceiling fans.
Air Quality – Non-Residential	All paints and adhesives meet the maximum total indoor pollutant emission limits.	All internally applied paints adhesives and sealants are to have a low or ultra-low VOC content in line with Green Star Buildings V1 Credit 13.
	All carpet meets the maximum total indoor pollutant emission limits.	All internally applied carpets are to have a low VOC content in line with Green Star Buildings V1 Credit 13.
	All engineered wood meets the maximum total indoor pollutant emission limits.	All internally applied engineered wood products are to have low formaldehyde levels in line with Green Star Buildings V1 Credit 13.

Transport

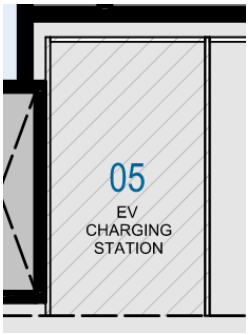
Council ESD objectives:

- To minimise car dependency.
- To ensure that the built environment is designed to promote the use of public transport, walking and cycling.

Council Best Practice Standard

Criteria		Development Provision	
Bicycle Parking – Residential & Residential Visitors	To encourage and recognise initiatives that facilitate cycling.	 In total 84 bicycle spaces are to be provided for residents. This will provide a ratio of approximately 1 resident bicycle space for every apartment.	 In total 17 bicycle spaces are to be provided for residential visitors. This will provide a ratio of approximately 1 visitor bicycle space for every 5 apartments.
Bicycle Parking – Non-Residential & Non-Residential Visitors	To encourage and recognise initiatives that facilitate cycling.	 In total 6 bicycle spaces are to be provided for employees. This represents a 50% increase over the planning scheme requirements.	 In total 2 bicycle spaces are to be provided for non-residential visitors. This represents a 50% increase over the planning scheme requirements.
End of Trip	To minimise car	NIL	

Council Best Practice Standard

Criteria		Development Provision
Facilities – Non-Residential	dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	
Electric Vehicle Infrastructure	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	One charging point for electrical vehicles is integrated in the proposed development.  Location of electric charging point. Future infrastructure for electrical charging points is incorporated in the services design including dedicated electrical distribution boards (DB-EV) for EV charging on every floor of the parking lot per NCC 2022 Table J9D4. Each DB-EV must be fitted with a charging control system with the ability to manage and schedule charging of electric vehicles in response to total building demand. When associated with a Class 2 building, have capacity for each circuit to support an electric vehicle charger able to deliver a minimum of 12 kWh from 11:00 pm to 7:00 am daily. Class 5 to 9 building, have capacity for each circuit to support an electric vehicle charger able to deliver a minimum of 12 kWh from 9:00 am to 5:00 pm daily. Additionally, each DB-EV must be sized to support the future installation of a 7 kW (32 A) type 2 electric vehicle charger in 100% of the car parking spaces associated with a Class 2 building.

Council Best Practice Standard

Criteria		Development Provision
		20% of car parking spaces associated with a Class 3, 7b, 8 or 9 building.
Car Share Scheme	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	NIL
Motorbikes / Mopeds	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	The proposed development will incorporate min. 6 motorbike / moped spaces in the basement carpark.

Materials

ESD objectives:

- Use of low embodied energy materials.
- Encourage use of recycled and reusable materials in building construction and undertake adaptive reuse of buildings, where practical.

Council Best Practice Standard

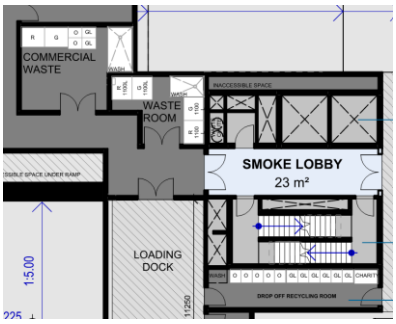
Criteria		Development Provision
Embodied Energy	Limited use of high embodied energy metals and materials, especially in a design with intended high churn (e.g. retail)	The design will seek to limit the use of high embodied energy metal finishes. At least 40% of coarse aggregate in the concrete is crushed slag aggregate or other alternative materials (measured by mass across all concrete mixes in the project).
Structural and Reinforcing Steel	Commitment to source structural and reinforcing steel from a responsible steel maker	The building's steel (by mass) is to be sourced from a Responsible Steel Maker with: • a currently valid and certified ISO 14001 Environmental Management System (EMS) in place; and • is a member of the World Steel Association's (WSA) Climate Action Programme (CAP)
Sustainable Timber	Commitment to source timber from sustainably managed source, with proof of audit trail.	Where timber is to be used, such timbers are to accord with the GBCA's 'Essential' criteria for forest certification. This may include FSC and / or PEFC Certification which are both internationally recognised schemes ensuring that timber is sourced from sustainable sources. Alternatively, recycled timber will be used.
PVC	Commitment to source best practice PVC products	Permanent formwork, pipes, flooring, blinds and cables in the project will seek to comply with the following: • Meet the GBCA's Best Practice Guidelines for PVC. or; • The supplier holds a valid ISO140001 certification.
Sustainable Products	Commitment to source products that meet the transparency and sustainability requirements	The project will incorporate products that meet the transparency and sustainability requirements where deemed appropriate. This includes the following: reused products, recycled content products, environmental product declarations, third party certified and stewardship programs.

Waste Management

Council ESD objectives:

- To ensure waste avoidance, reuse and recycling during the design, construction and operation stages of development.
- To ensure long term reusability of building materials.
- To meet Councils' requirement that all multi-unit developments must provide a Waste Management Plan in accordance with the *Guide to Best Practice for Waste Management in Multi-unit Developments 2010*, published by Sustainability Victoria.

Council Best Practice Standard

Criteria		Development Provision
Building Re-use	To ensure waste avoidance, reuse and recycling during the design.	None of the existing structure is re-used.
Construction and Demolition Waste	To reduce construction waste going to landfill	At least 80% of the waste generated during construction and demolition has been diverted from landfill.
Food & Garden Waste	To ensure waste avoidance, reuse and recycling during the operational life of the building.	Green waste storage is provided in the basement 1 bin room.
Convenience of Recycling	To ensure waste avoidance, reuse and recycling during the operational life of the building.	 Separate general, recycling, glass and organic waste storage will be provided at basement level 1. Retail/civic is to be provided with separate general, recycling and food and organics waste bins. This requirement is to be included in the owners corporation rules or lease agreement.

Council Best Practice Standard

Criteria	Development Provision
	Kitchen joinery for the residential units is to provide appropriate spatial allowance for food and organics, general and recycling waste collection.

Urban Ecology

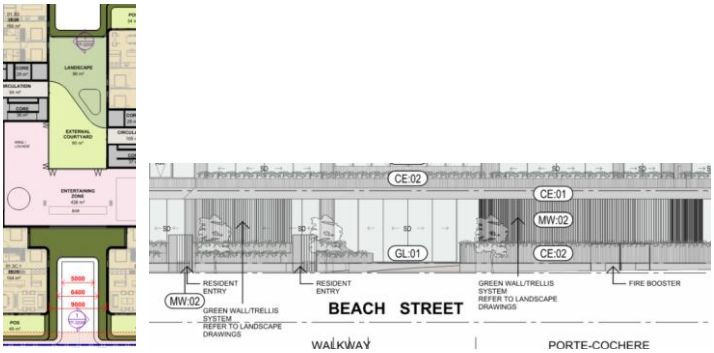
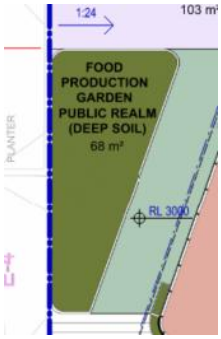
Council ESD objectives:

- To protect and enhance biodiversity.
- To provide sustainable landscaping.
- To protect and manage all remnant indigenous plant communities.
- To encourage the planting of indigenous vegetation.

Council Best Practice Standard

Criteria		Development Provision
Communal Space	To encourage and recognise initiatives that facilitate interaction between building occupants.	1,068m^2 of communal space will be provided at ground and level 1. Communal space will include the following amenities: home offices, landscaping, wellness centre, entertaining zone with golf simulator, private dining and lounge space. Additionally, 100m^2 of communal space for the retail areas is provided at ground floor.   Communal space will be provided at ground and level 1

Council Best Practice Standard

Criteria		Development Provision
Vegetation	To encourage and recognise the use of vegetation and landscaping within and around developments.	Planter boxes are to be located throughout the building. Landscaped area is to be located at ground and level 1. The total area of vegetation is 21% of the site area.
Green Walls / Roof	To encourage the appropriate use of green roofs, walls and facades to mitigate the impact of the urban heat island effect.	The proposed development will incorporate a green wall and green roof.  Green wall / roof location.
Private Open Space - Balcony / Courtyard Ecology	To encourage plants in a healthy ecological context to be grown on balconies and in courtyards.	All balconies or private open space have been provided with a tap and floor waste allowing residents to cultivate their own gardens.
Food Production - Residential	To encourage the production of fresh food on-site.	Min. 65m^2 of communal food production area will be provided. 

Council Best Practice Standard

Criteria		Development Provision
		The communal food production area will be provided at ground floor public realm.
Heat Island Effect	To reduce the contribution of the project site to the 'heat island effect	Roofs are to have a three year SRI of minimum 60 Unshaded hard-scaping elements are to have a three year SRI of minimum 40.

Innovation

Council ESD objectives:

- To encourage innovative technology, design and processes in all development, which positively influence the sustainability of buildings.

Council Best Practice Standard

Criteria		Development Provision
Carbon Neutral Ready Development	The building to be carbon neutral ready for future implementation.	The proposed development will be established with a carbon neutral power agreement between developer, owner's corporation, and electrical retailer to provide GreenPower for the communal areas. It is the intent to maintain this agreement for a minimum of 10 years. Occupants will be provided with GreenPower options within the Welcome Pack.
Air Tightness Testing	To improve facade air tightness and building energy efficiency.	Air tightness testing for a sample of units (10-20%) will be undertaken prior to plasterboard being installed and at practical completion. The development is to achieve an air permeability rate of 10 $m^3/hr.m^2$ at 50 Pa reference pressure.
ESD Checkpoint during Construction Phase	To ensure that all ESD items are suitably installed and incorporated during construction.	An ESD professional will be engaged throughout the design and construction process. The ESD professional will perform a minimum of 2 site inspections during the construction phase to ensure suitable implementation of the ESD initiatives. Any deficiencies compared to the endorsed SMP will be escalated to the project manager and resolved. The checkpoint assessments will be undertaken at two stages as follows: • Site Inspection 1: Prior to installation of internal linings. • Site inspection 2: At the time of project completion.
Life Cycle Assessment	To gain insight into the embodied carbon of the development	A life cycle assessment is to be undertaken during the Design Development / Construction phases. The embodied carbon of the development will be benchmarked against a standard practice building to determine the percentage reduction achieved. The life cycle results will be used to inform material selection, construction practices and end of life treatment.

Appendices

Appendix A: WSUD Response

Site layout Plan

The following architectural mark-up illustrates the rainwater collection and impervious areas of the proposed development site.

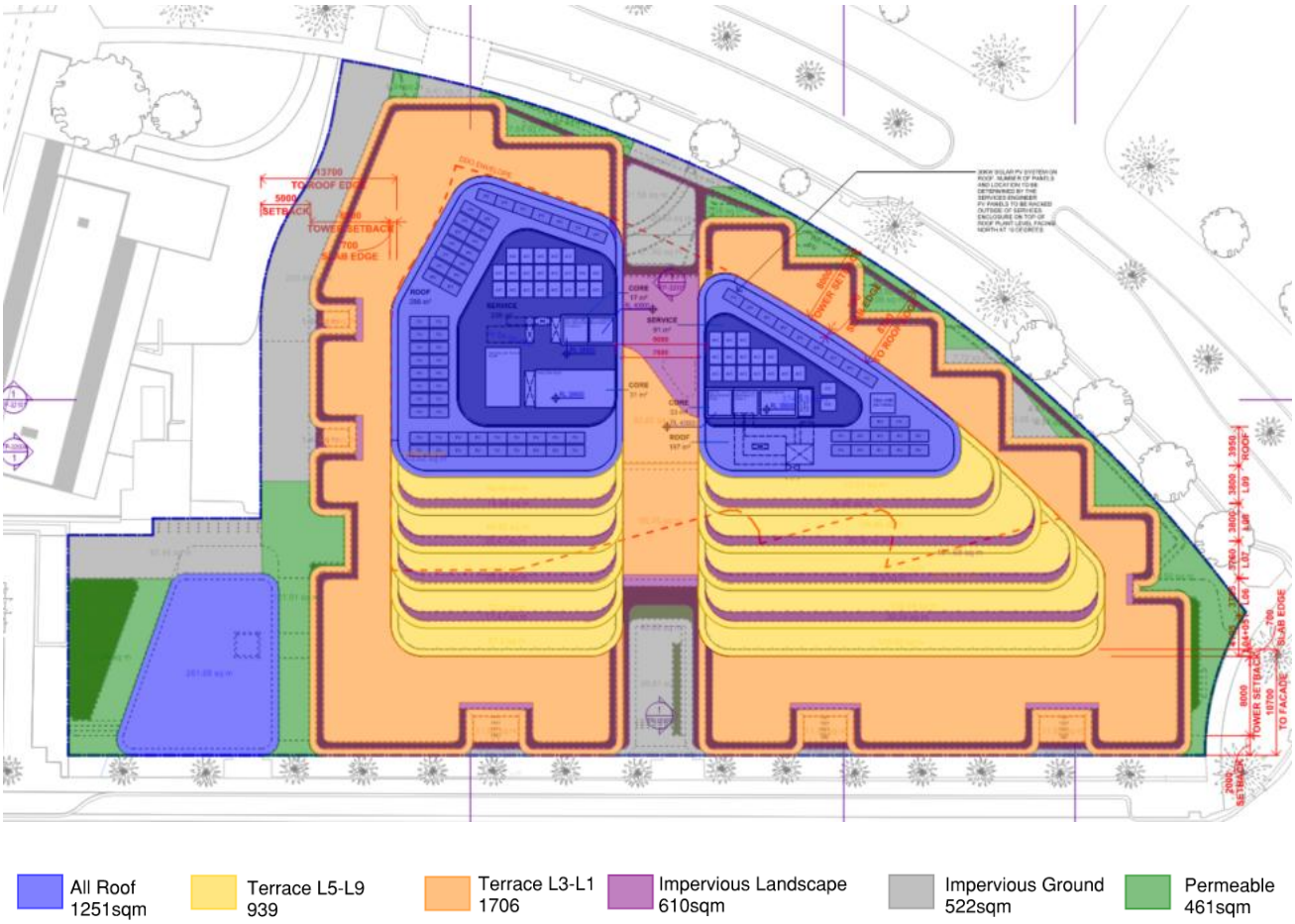


Figure 1 - Mark-up of water catchment and impervious areas

Weather File

Rainfall Station	Time Step
Melbourne Airport	6 minutes

Demand Inputs

A 25,000-litre rainwater tank is to be connected to all retail toilets and pool backwash and make-up. The following demand assumptions have been included in the modelling:

	Toilet Flushing
Assumption	• Occupant density for the retail per NCC Section D – Part D2 Table D2D18 and AS1668.2-2012. • 20L per day per occupant for toilet flushing. • 150m^3 pool. • Monthly backwash using 1,000 litre. • Average 323 litre evaporation per day.
Volume (kL/yr)	148kL

A second 35,000-litre rainwater tank is to be connected to the landscape irrigation with a total annual demand of 1,145kL/yr. The following monthly demand assumptions have been included in the modelling:

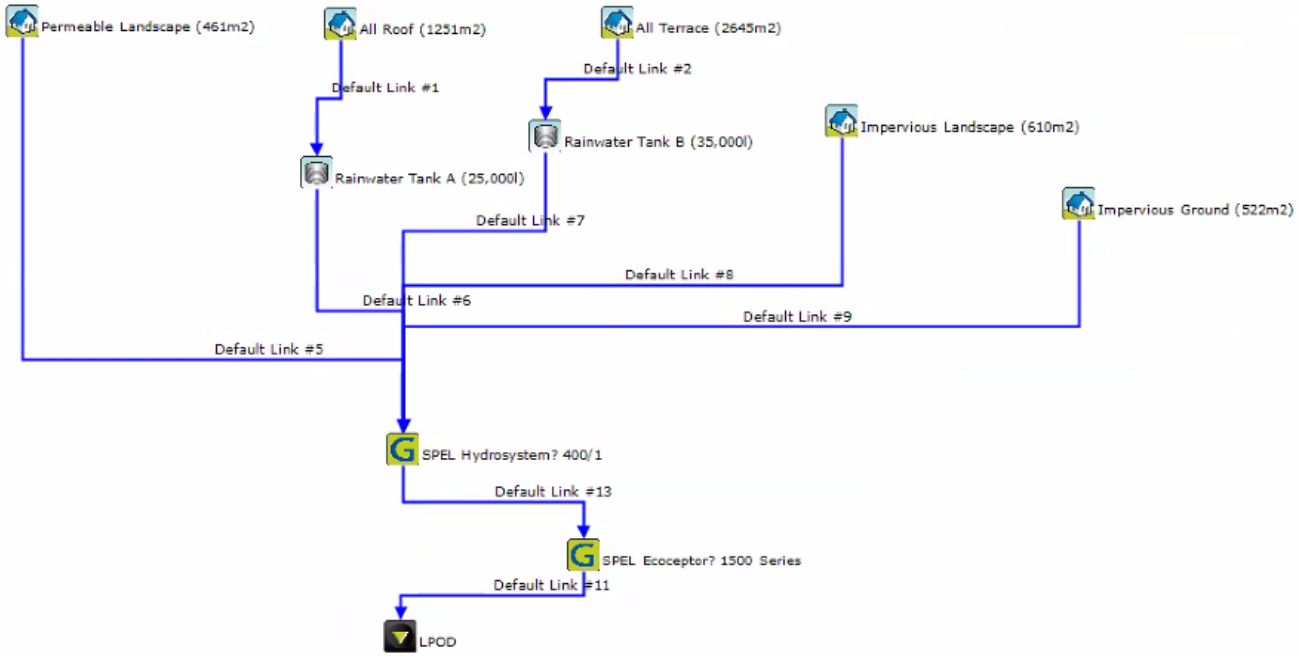
Monthly Demand	Percentage of Annual Demand (%)
January	15
February	13
March	7
April	7
May	7
June	3
July	3
August	3
September	9
October	9
November	9
December	15

MUSIC Model

A compliant MUSIC model result is achieved with the following WSUD initiatives:

- Rainwater collection off all roof areas is to be directed to a 25,000 litre tank connected to all retail WC's, pool backwash and makeup.
- Rainwater collection off all terraces is to be directed to a 35,000 litre tank connected to landscape irrigation.
- Prior to the LPOD an Atlan EcoCepter followed by Atlan FlowFilter will need to be installed to filter the rainwater before entering the stormwater system

The development demonstrates an improvement on the stormwater quality performance objectives as outlined in the Urban Stormwater Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999) for reduction in total suspended solids (TSS), total phosphorus (TP) and total nitrogen (TN) loads. Refer Figure 2 and Table 1 below for the stormwater quality performance objectives and results.



	Sources	Residual Load	% Reduction
Flow (ML/yr)	2.448	1.614	34.06
Total Suspended Solids (kg/yr)	431.6	45.93	89.36
Total Phosphorus (kg/yr)	0.8828	0.1183	86.6
Total Nitrogen (kg/yr)	6.5	1.711	73.68
Gross Pollutants (kg/yr)	91.39	0.2644	99.71

Figure 2 – MUSIC Model

	CSIRO performance objectives (reduction %)	1-7 Waterfront Place, Port Melbourne (reduction %)
Suspended Solids	80%	89.36%
Total Nitrogen	45%	73.68%
Total Phosphorus	45%	86.6%
Gross Pollutants	70%	99.71%

Table 1 - Stormwater quality performance objectives

WSUD Strategy

The development will include the provision of a 25,000-litre rainwater tank and associated pump in the basement garage. The rainwater tank is to be connected to all retail WC's, pool backwash and makeup.

The development will also include the provision of a 35,000-litre rainwater tank and associated pump in the basement garage. The rainwater tank is to be connected to landscape irrigation.

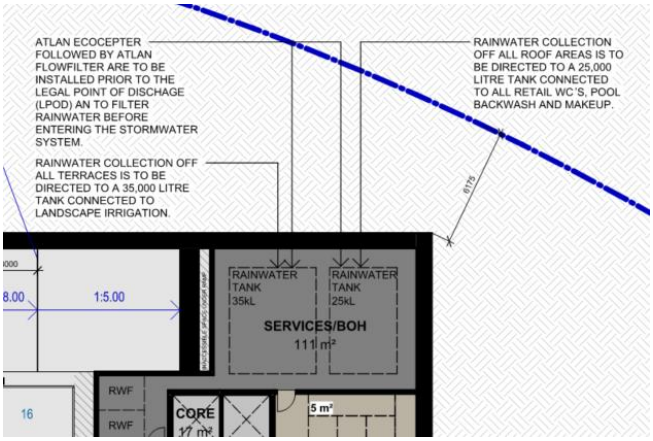


Figure 3 – Location Rainwater Tanks and Atlan systems

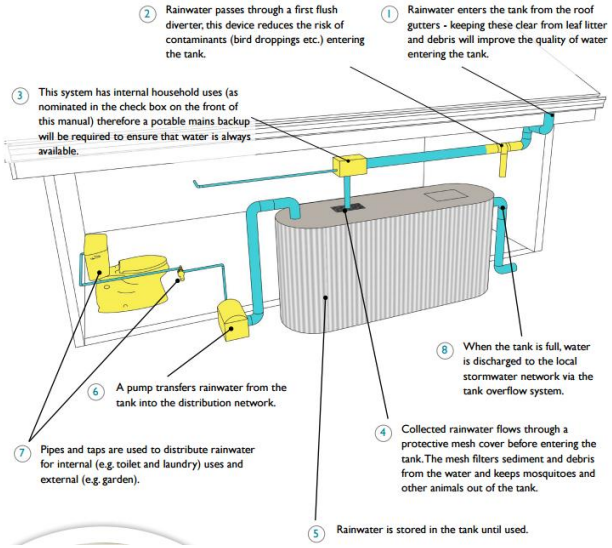


Figure 4 – Cross-section Tank
(City of Port Phillip)

Prior to the LPOD an Atlan EcoCepter followed by Atlan FlowFilter will need to be installed to filter the rainwater before entering the stormwater system.

Figure 5 – Atlan EcoCepter 1500 series

Figure 6 – Atlan FlowFilter HS.400/1

Site Management Statement

Prevention of litter, sediments and pollution entering the stormwater system in the construction phase is to be addressed through introduction of the following initiatives:

- Buffer strips to pervert stormwater runoff.
- Gravel sausage filters at stormwater inlets to prevent silt, mud or any other site contaminant from entering the stormwater system.
- Silt fences under grates at surface entry inlets to prevent sediment from entering the stormwater system.
- Temporary rumble grids to vibrate mud and dirt off vehicles prior to leaving the site.
- The site is to be kept clean from any loose rubbish or rubble.
- Introduction of offsite construction for building elements where deemed appropriate.

The builder is to include these initiatives in the construction management plan and address these during site induction of relevant contractors.

Maintenance Program

The following maintenance requirements are to be programmed to ensure the rainwater tank operates effectively:

Item	Description	Maintenance Interval
Gutters and downpipes	Eave and box gutters are to be inspected and cleaned to prevent large debris from being washed into rainwater tank.	3 monthly
First flush system (as applicable)	Inspect and clean excess sediment from diverter chamber to prevent blockages.	3 monthly
Tank contents	Siphon the tank to inspect contents. If sludge is present, a plumber will be required to drain tank contents and clean the tank.	2 to 3 years
Tank structure	Inspect tank externally for leaks	Yearly
Pump system	Inspect pump wiring, plumbing and check for smooth operation.	6 monthly
Plumbing	Plumbing and fixtures connected to the rainwater tank is to be inspected for leaks.	Yearly

The following maintenance requirements are to be programmed to ensure the Atlan Ecocepter and Atlan FlowFilter operates effectively:

Item	Description	Maintenance Interval
Atlan EcoCepter & Atlan FlowFilter	Visual inspection for silt and pollutant accumulation.	Every 6 months (or earlier as deemed necessary)
Silt Removal	Silt removal as required using conventional vacuum suction equipment.	Every 6 months (or earlier as deemed necessary)
Filters	Filter inserts are easily interchangeable and are to be replaced.	As deemed necessary

Appendix B: Preliminary FirstRate5 Certificates

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 8QCQAPYTQ6

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 1, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	104.2	suburban
Unconditioned*	2.5	**NatHERS climate zone**
Total	106.7	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

59.7 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:
www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	53.2	6.5
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Shared 1	basementCarPark	2365.3
Bedroom 2	bedroom	16
Bath	dayTime	6.7
Bedroom 1	bedroom	12.1
WIR	nightTime	7.6
Ensuite	nightTime	8.2
Pantry	unconditioned	2.5
Entry	dayTime	8.9
Kitchen/Living	kitchen	44.8

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-057-13 A	Capral 900 Sliding Door DG 6EA/12Ar/6	3.19	0.48	0.46	0.5
CAP-041-52 A	Capral 425 Fixed Window DG 6/12Ar/6EA	2.71	0.58	0.55	0.61

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	CAP-057-13 A	W02	3900	2110	sliding	45.0	S	No
Bedroom 1	CAP-057-13 A	W03	3900	2110	sliding	45.0	S	No
Kitchen/Living	CAP-057-13 A	W05	3900	3250	sliding	45.0	S	No
Kitchen/Living	CAP-041-52 A	Opening 15	3900	1110	fixed	0.0	S	No

Roof window* *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

*Refer to glossary.

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Retaining	0.5	Medium		No
2	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium		No
3	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
4	1-7 Waterfront - Concrete Ext	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Shared 1	1	3300	67758	S	0	No
Shared 1	1	3300	27080	E	0	No
Shared 1	1	3300	5812	NE	0	No

*Refer to glossary.

Shared 1	2	3300	24496	N	0	No
Shared 1	2	3300	4920	W	0	No
Shared 1	2	3300	11469	N	0	No
Shared 1	2	3300	12412	E	0	No
Shared 1	1	3300	11552	E	0	No
Shared 1	1	3300	20035	N	0	No
Shared 1	2	3300	6230	W	0	No
Shared 1	2	3300	12796	S	0	No
Shared 1	2	3300	12723	W	0	No
Shared 1	2	3300	6722	N	0	No
Shared 1	2	3300	5299	W	0	No
Shared 1	2	3300	7850	N	0	No
Shared 1	2	3300	13787	E	0	No
Shared 1	2	3300	6599	N	0	No
Shared 1	2	3300	22325	W	0	No
Shared 1	2	3300	4882	N	0	No
Shared 1	1	3300	2895	W	0	No
Shared 1	2	3300	4980	S	0	No
Shared 1	2	3300	3729	W	0	No
Shared 1	2	3300	4980	N	0	No
Shared 1	1	3300	6207	W	0	No
Shared 1	2	3300	5005	S	0	No
Shared 1	2	3300	5127	W	0	No
Bedroom 2	3	4050	5145	W	0	No
Bedroom 2	4	4050	3103	S	0	Yes
Bath	3	4050	2081	W	0	No
Bedroom 1	3	4050	3862	E	0	No
Bedroom 1	4	4050	3136	S	0	Yes
WIR	3	4050	2428	E	0	No
Ensuite	3	4050	2660	E	0	No
Ensuite	3	4050	3086	N	0	No
Pantry	3	4050	1987	N	0	No
Entry	3	4050	1983	W	0	No
Entry	3	4050	4477	N	0	No
Kitchen/Living	4	4050	5363	S	5383	Yes
Kitchen/Living	3	4050	1922	N	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation

*Refer to glossary.

1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	142.5

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Shared 1	FR5 - 250mm concrete slab	119.9	Enclosed	R0.0	none
Shared 1	FR5 - 250mm concrete slab	551.3	Enclosed	R0.0	none
Shared 1	FR5 - 250mm concrete slab	1694.1	Enclosed	R0.0	none
Shared 1	FR5 - 250mm concrete slab	0	Enclosed	R0.0	none
Shared 1	FR5 - 250mm concrete slab	0	Enclosed	R0.0	none
Bedroom 2	FR5 - 200mm concrete slab	16	Enclosed	R3.2	Carpet
Bath	FR5 - 200mm concrete slab	6.7	Enclosed	R3.2	Tiles
Bedroom 1	FR5 - 200mm concrete slab	12.1	Enclosed	R3.2	Carpet
WIR	FR5 - 200mm concrete slab	7.6	Enclosed	R3.2	Carpet
Ensuite	FR5 - 200mm concrete slab	8.2	Enclosed	R3.2	Tiles
Pantry	FR5 - 200mm concrete slab	2.5	Enclosed	R3.2	Timber
Entry	FR5 - 200mm concrete slab	8.9	Enclosed	R3.2	Timber
Kitchen/Living	FR5 - 200mm concrete slab	44.8	Enclosed	R3.2	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Shared 1	FR5 - 200mm concrete slab	R3.2	No
Shared 1	Plasterboard	R0.0	No
Shared 1	Plasterboard	R0.0	No
Shared 1	Plasterboard	R0.0	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 2	6	Downlights	80	80	Sealed
Bath	1	Exhaust Fans	250	250	Sealed
Bath	3	Downlights	80	80	Sealed
Bedroom 1	5	Downlights	80	80	Sealed
WIR	3	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
Ensuite	3	Downlights	80	80	Sealed
Pantry	1	Downlights	80	80	Sealed
Entry	4	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed

*Refer to glossary.

Kitchen/Living	18	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 300mm: 300mm Suspended Slab	0.0	0.5	Medium
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
External wall	90 x 40	600	0.75	0

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

*Refer to glossary.

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. V30PSFVY54

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 2, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	231.4	suburban
Unconditioned*	4.3	**NatHERS climate zone**
Total	235.7	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

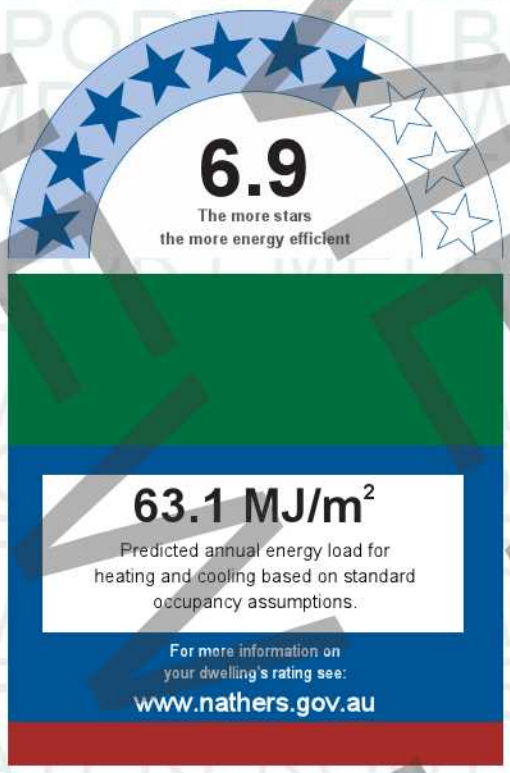
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	51.5	11.6
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
WIR	nightTime	7.6
Bedroom 2	bedroom	12.4
Ensuite	nightTime	11.2
Second Kitchenette	dayTime	9.3
Pantry	dayTime	6.3
Powder	unconditioned	4.3
Entry	dayTime	12.5
Master Ensuite	nightTime	5.2
Master WIR	nightTime	3.6
Master Bedroom	bedroom	16.7
Ensuite 3	dayTime	5.4
WIR 3	nightTime	3.9
Bedroom 3	bedroom	13.7
Corridor bedroom	dayTime	3.1
Study	dayTime	6.7
Corridor	dayTime	12.4
Kitchen/Living	kitchen	101.4

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-057-13 A	Capral 900 Sliding Door DG 6EA/12Ar/6	3.19	0.48	0.46	0.5

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	CAP-057-13 A	W01	2700	2340	sliding	45.0	N	No
Master Bedroom	CAP-057-13 A	W04	2700	3000	sliding	45.0	W	No
Bedroom 3	CAP-057-13 A	W05	2700	2560	sliding	45.0	W	No
Study	CAP-057-13 A	W08	2700	2310	sliding	45.0	W	No

*Refer to glossary.

Kitchen/Living	CAP-057-13 A	W010	2700	5480	sliding	45.0	N	No
Kitchen/Living	CAP-057-13 A	W12	2700	6630	sliding	0.0	W	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1-7 Waterfront - Concrete Ext	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

*Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
WIR	1	2700	1987	E	0	No
WIR	2	2700	173	N	0	Yes
WIR	2	2700	159	E	0	No
Bedroom 2	2	2700	3326	E	11755	Yes
Bedroom 2	2	2700	152	NE	0	No
Bedroom 2	2	2700	286	NE	0	No
Bedroom 2	2	2700	3127	N	4709	Yes
Ensuite	1	2700	3194	E	0	No
Second Kitchenette	1	2700	2665	E	0	No
Pantry	1	2700	1802	E	0	No
Powder	1	2700	1236	E	0	No
Entry	1	2700	3021	S	0	No
Entry	1	2700	4134	E	0	No
Entry	1	2700	973	W	0	No
Master Ensuite	1	2700	2718	S	0	No
Master WIR	1	2700	1895	S	0	No
Master Bedroom	2	2700	3130	W	1113	Yes
Master Bedroom	1	2700	3641	S	0	No
Bedroom 3	2	2700	3186	W	4750	Yes
Study	2	2700	2948	W	4952	Yes
Corridor	1	2700	2194	S	0	No
Kitchen/Living	2	2700	6278	N	4720	Yes
Kitchen/Living	2	2700	436	NW	4245	Yes
Kitchen/Living	2	2700	9643	W	2624	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	234.3	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
WIR	FR5 - 200mm concrete slab	7.6	Elevated	R3.2	Carpet
Bedroom 2	FR5 - 200mm concrete slab	12.4	Elevated	R3.2	Carpet
Ensuite	FR5 - 200mm concrete slab	11.2	Elevated	R3.2	Tiles
Second Kitchenette	FR5 - 200mm concrete slab	9.3	Elevated	R3.2	Tiles
Pantry	FR5 - 200mm concrete slab	6.3	Elevated	R3.2	Timber

*Refer to glossary.

Powder	FR5 - 200mm concrete slab	4.3	Elevated	R3.2	Tiles
Entry	FR5 - 200mm concrete slab	6.6	Enclosed	R0.0	Timber
Entry	FR5 - 200mm concrete slab	5.9	Elevated	R3.2	Timber
Master Ensuite	FR5 - 200mm concrete slab	5.2	Elevated	R3.2	Tiles
Master WIR	FR5 - 200mm concrete slab	3.6	Elevated	R3.2	Carpet
Master Bedroom	FR5 - 200mm concrete slab	16.7	Elevated	R3.2	Carpet
Ensuite 3	FR5 - 200mm concrete slab	5.4	Elevated	R3.2	Tiles
WIR 3	FR5 - 200mm concrete slab	3.9	Elevated	R3.2	Carpet
Bedroom 3	FR5 - 200mm concrete slab	13.7	Elevated	R3.2	Carpet
Corridor bedroom	FR5 - 200mm concrete slab	3.1	Elevated	R3.2	Carpet
Study	FR5 - 200mm concrete slab	6.7	Elevated	R3.2	Timber
Corridor	FR5 - 200mm concrete slab	12.4	Elevated	R3.2	Timber
Kitchen/Living	FR5 - 200mm concrete slab	101.4	Elevated	R3.2	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
WIR	3	Downlights	80	80	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
Ensuite	5	Downlights	80	80	Sealed
Second Kitchenette	1	Exhaust Fans	250	250	Sealed
Second Kitchenette	3	Downlights	80	80	Sealed
Pantry	3	Downlights	80	80	Sealed
Powder	1	Exhaust Fans	250	250	Sealed
Powder	2	Downlights	80	80	Sealed
Entry	5	Downlights	80	80	Sealed
Master Ensuite	1	Exhaust Fans	250	250	Sealed
Master Ensuite	2	Downlights	80	80	Sealed
Master WIR	1	Downlights	80	80	Sealed
Master Bedroom	7	Downlights	80	80	Sealed
Ensuite 3	1	Exhaust Fans	250	250	Sealed
Ensuite 3	2	Downlights	80	80	Sealed
WIR 3	1	Downlights	80	80	Sealed
Bedroom 3	5	Downlights	80	80	Sealed

*Refer to glossary.

Corridor bedroom	1	Downlights	80	80	Sealed
Study	3	Downlights	80	80	Sealed
Corridor	5	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Kitchen/Living	41	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
External wall	90 x 40	600	0.75	0
Floor	100 x 50	450	1.50	0

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity

*Refer to glossary.

No Whole of Home performance assessment conducted for this certificate.

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. RM77MP1ROT

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 4, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	141.6	suburban
Unconditioned*	2.2	**NatHERS climate zone**
Total	143.8	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

27.2 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:
www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	19.9	7.3
Load limits	55	38

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bedroom 1	bedroom	10.5
Bedroom 2	bedroom	11.4
Bathroom	dayTime	4.8
Laundry	unconditioned	2.2
Bedroom 3	bedroom	13.1
Ensuite 1	nightTime	9
WIR 1	dayTime	9.2
Ensuite 2	nightTime	4.7
WIR 2	dayTime	8.6
Corridor 2	dayTime	4.3
Corridor	dayTime	6.5
Entry	dayTime	7.4
Kitchen/Living	kitchen	52

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-057-13 A	Capral 900 Sliding Door DG 6EA/12Ar/6	3.19	0.48	0.46	0.5

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	CAP-057-13 A	Opening 18	1950	2115	sliding	45.0	N	No
Bedroom 2	CAP-057-13 A	Opening 17	1950	2500	sliding	45.0	N	No
Bedroom 3	CAP-057-13 A	Opening 14	2700	2950	sliding	45.0	N	No
Kitchen/Living	CAP-057-13 A	Opening 16	2700	4150	sliding	45.0	N	No

Roof window* *type and performance value*

Default* roof windows

Substitution tolerance ranges

*Refer to glossary.

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront - Concrete Ext	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
3	1-7 Waterfront - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bedroom 1	1	2700	3755	E	855	Yes

*Refer to glossary.

Bedroom 1	1	2700	2796	N	932	Yes
Bedroom 2	1	2700	3036	N	919	Yes
Bathroom	2	2700	2637	W	0	No
Laundry	2	2700	1222	W	0	No
Bedroom 3	3	2700	4394	W	0	No
Bedroom 3	1	2700	2996	N	6223	Yes
WIR 1	3	2700	2936	S	0	No
WIR 1	1	2700	4188	E	8410	Yes
WIR 1	1	2700	2559	E	830	Yes
Corridor	3	2700	3310	S	0	No
Entry	2	2700	1980	W	0	No
Entry	3	2700	3758	S	0	No
Kitchen/Living	3	2700	3964	S	0	No
Kitchen/Living	1	2700	5085	N	6182	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	170.4	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	FR5 - 200mm concrete slab	10.5	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 200mm concrete slab	11.4	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	4.8	Enclosed	R0.0	Tiles
Laundry	FR5 - 200mm concrete slab	2.2	Enclosed	R0.0	Tiles
Bedroom 3	FR5 - 200mm concrete slab	0.2	Enclosed	R0.0	Carpet
Bedroom 3	FR5 - 200mm concrete slab	13	Enclosed	R0.0	Carpet
Ensuite 1	FR5 - 200mm concrete slab	0.7	Enclosed	R0.0	Tiles
Ensuite 1	FR5 - 200mm concrete slab	8.4	Enclosed	R0.0	Tiles
WIR 1	FR5 - 200mm concrete slab	4.3	Enclosed	R0.0	Carpet
WIR 1	FR5 - 200mm concrete slab	4.9	Enclosed	R0.0	Carpet
Ensuite 2	FR5 - 200mm concrete slab	1.1	Enclosed	R0.0	Tiles
Ensuite 2	FR5 - 200mm concrete slab	3.6	Enclosed	R0.0	Tiles
WIR 2	FR5 - 200mm concrete slab	3.6	Enclosed	R0.0	Carpet
WIR 2	FR5 - 200mm concrete slab	5	Enclosed	R0.0	Carpet
Corridor 2	FR5 - 200mm concrete slab	4.3	Enclosed	R0.0	Timber
Corridor	FR5 - 200mm concrete slab	6.5	Enclosed	R0.0	Timber
Entry	FR5 - 200mm concrete slab	7.4	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	13.5	Enclosed	R0.0	Timber

*Refer to glossary.

Kitchen/Living	FR5 - 200mm concrete slab	38.4	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bedroom 1	Plasterboard	R2.8	No
Bedroom 2	Plasterboard	R2.8	No
Ensuite 1	Plasterboard	R2.8	No
WIR 1	Plasterboard	R2.8	No
Ensuite 2	Plasterboard	R2.8	No
WIR 2	Plasterboard	R2.8	No
Kitchen/Living	Plasterboard	R2.8	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 1	4	Downlights	80	80	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Laundry	1	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bedroom 3	5	Downlights	80	80	Sealed
Ensuite 1	4	Downlights	80	80	Sealed
Ensuite 1	1	Exhaust Fans	250	250	Sealed
WIR 1	4	Downlights	80	80	Sealed
Ensuite 2	2	Downlights	80	80	Sealed
Ensuite 2	1	Exhaust Fans	250	250	Sealed
WIR 2	3	Downlights	80	80	Sealed
Corridor 2	2	Downlights	80	80	Sealed
Corridor	3	Downlights	80	80	Sealed
Entry	3	Downlights	80	80	Sealed
Kitchen/Living	21	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

*Refer to glossary.

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. TOD0NC6ZPK

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 3, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	138.6	suburban
Unconditioned*	4.4	**NatHERS climate zone**
Total	143	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

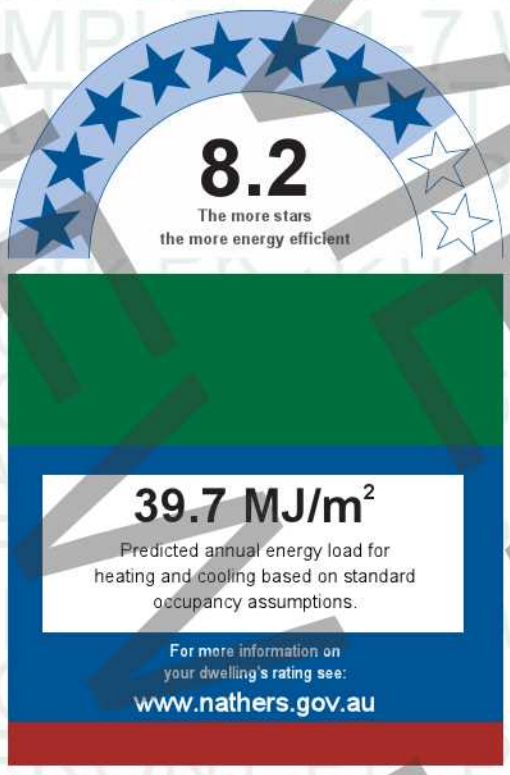
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	23.3	16.4
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bedroom 1	bedroom	12.5
Bedroom 2	bedroom	13.8
Corridor	dayTime	4.1
Bath	dayTime	5.9
Blankets	unconditioned	4.4
Entry	dayTime	11.9
Kitchen/Living	kitchen	56.6
Master Ensuite	nightTime	9.6
Master Bedroom	bedroom	12.1
Master WIR	dayTime	12.2

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-057-13 A	Capral 900 Sliding Door DG 6EA/12Ar/6	3.19	0.48	0.46	0.5
CAP-055-52 A	Capral 419 Flushline Fixed Window DG 6/12Ar/6EA	2.71	0.58	0.55	0.61
CAP-051-06 A	Capral 35 Awning in 400 Frame DG 6EA/12Ar/6	4.42	0.41	0.39	0.43

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	CAP-057-13 A	W01	2700	2450	sliding	45.0	W	No
Bedroom 2	CAP-055-52 A	W04	1950	2100	fixed	0.0	W	No
Bedroom 2	CAP-051-06 A	Opening 21	1950	1000	awning	60.0	W	No
Kitchen/Living	CAP-057-13 A	W08	2700	1600	sliding	45.0	W	No
Kitchen/Living	CAP-055-52 A	W05	1950	1420	fixed	0.0	W	No
Kitchen/Living	CAP-051-06 A	Opening 22	1950	1420	awning	60.0	W	No
Master Bedroom	CAP-057-13 A	W09	2700	2350	sliding	45.0	W	No

*Refer to glossary.

Roof window* *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront - Plasterboard Int	0.5	Medium		No
2	1-7 Waterfront - Concrete Ext	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bedroom 1	1	2700	4336	S	0	No
Bedroom 1	1	2700	1868	E	0	No

*Refer to glossary.

Bedroom 1	2	2700	3066	W	4765	Yes
Bedroom 2	2	2700	3173	W	1267	Yes
Corridor	1	2700	3535	S	0	No
Entry	1	2700	2760	S	0	No
Entry	1	2700	4312	E	0	No
Kitchen/Living	1	2700	5277	E	0	No
Kitchen/Living	2	2700	2234	W	4705	Yes
Kitchen/Living	2	2700	3042	W	1271	Yes
Master Ensuite	1	2700	4882	N	0	No
Master Bedroom	1	2700	3737	N	0	No
Master Bedroom	2	2700	3239	W	4685	Yes
Master WIR	1	2700	3266	E	0	No
Master WIR	1	2700	1958	N	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	136.3	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	FR5 - 200mm concrete slab	1.2	Enclosed	R0.0	Carpet
Bedroom 1	FR5 - 200mm concrete slab	11.3	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 200mm concrete slab	2	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 200mm concrete slab	11.8	Enclosed	R0.0	Carpet
Corridor	FR5 - 200mm concrete slab	4.1	Enclosed	R0.0	Timber
Bath	FR5 - 200mm concrete slab	5.9	Enclosed	R0.0	Tiles
Blankets	FR5 - 200mm concrete slab	4.4	Enclosed	R0.0	Tiles
Entry	FR5 - 200mm concrete slab	11.9	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	37	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	19.6	Enclosed	R0.0	Timber
Master Ensuite	FR5 - 200mm concrete slab	9.6	Enclosed	R0.0	Tiles
Master Bedroom	FR5 - 200mm concrete slab	12.1	Enclosed	R0.0	Carpet
Master WIR	FR5 - 200mm concrete slab	12.2	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bedroom 1	Plasterboard	R2.8	No
Bedroom 2	Plasterboard	R2.8	No

*Refer to glossary.

Kitchen/Living	Plasterboard	R2.8	No
Master Bedroom	Plasterboard	R2.8	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 1	5	Downlights	80	80	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
Corridor	2	Downlights	80	80	Sealed
Bath	1	Exhaust Fans	250	250	Sealed
Bath	2	Downlights	80	80	Sealed
Blankets	2	Downlights	80	80	Sealed
Entry	5	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Kitchen/Living	28	Downlights	80	80	Sealed
Master Ensuite	1	Exhaust Fans	250	250	Sealed
Master Ensuite	4	Downlights	80	80	Sealed
Master Bedroom	5	Downlights	80	80	Sealed
Master WIR	5	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
Cathedral ceiling/flat roof	200 x 75	900	1.50	0

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

*Refer to glossary.

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. D8TGCONNM6

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 5, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	156.5	open
Unconditioned*	5.9	**NatHERS climate zone**
Total	162.4	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

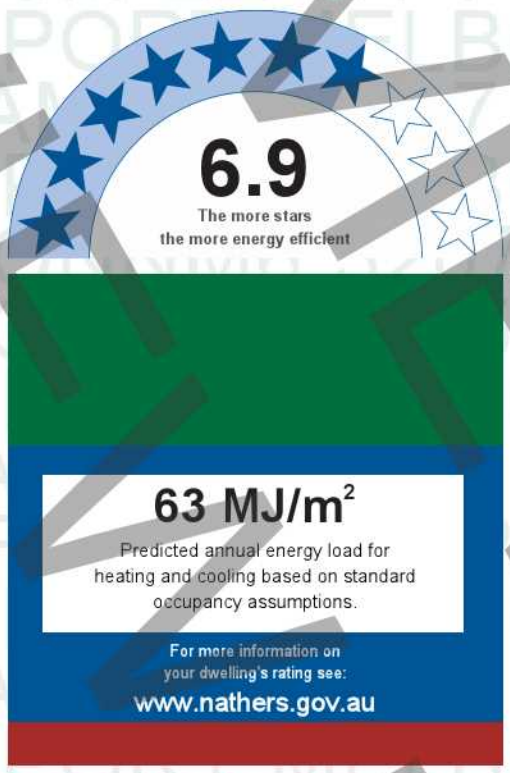
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	52.3	10.7
Load limits	55	38

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bedroom 3	bedroom	13.3
Bathroom	dayTime	6.5
Bedroom 2	bedroom	13.8
Laundry	unconditioned	5.9
Bedroom 1	bedroom	14.2
WIR	nightTime	5.8
Ensuite	nightTime	11.2
Kitchen/Living	kitchen	76.7
Entry	dayTime	15.3

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 3	CAP-034-33 A	Opening 26	2500	1344	awning	60.0	E	No
Bedroom 3	CAP-127-31 A	Opening 22	2500	1702	sliding	45.0	E	No
Bedroom 2	CAP-055-108 A	Opening 24	2500	364	fixed	0.0	E	No
Bedroom 2	CAP-034-33 A	Opening 21	2300	1478	awning	60.0	E	No
Bedroom 2	CAP-055-108 A	Opening 23	2500	1266	fixed	0.0	E	No
Bedroom 1	CAP-127-31 A	Opening 10	2700	3150	sliding	45.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 12	2700	5210	sliding	45.0	S	No
Kitchen/Living	CAP-055-108 A	Opening 27	2700	1176	fixed	0.0	SE	No

*Refer to glossary.

Kitchen/Living	CAP-055-108 A	Opening 28	2700	1181	fixed	0.0	SE	No
Kitchen/Living	CAP-055-108 A	Opening 29	2700	1239	fixed	0.0	E	No
Kitchen/Living	CAP-055-108 A	Opening 16	2500	2581	fixed	0.0	E	No
Kitchen/Living	CAP-034-33 A	Opening 17	2500	827	awning	60.0	E	No
Kitchen/Living	CAP-055-108 A	Opening 18	2500	1500	fixed	0.0	E	No
Kitchen/Living	CAP-034-33 A	Opening 19	2500	1500	awning	60.0	E	No
Kitchen/Living	CAP-055-108 A	Opening 20	2500	959	fixed	0.0	E	No

Roof window* *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

*Refer to glossary.

2	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
3	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bedroom 3	1	2700	1362	E	608	Yes
Bedroom 3	1	2700	1745	E	608	Yes
Bedroom 3	2	2700	4271	N	0	No
Bathroom	3	2700	2038	W	0	No
Bathroom	2	2700	3204	N	0	No
Bedroom 2	1	2700	382	E	591	Yes
Bedroom 2	1	2700	1523	E	591	Yes
Bedroom 2	1	2700	1296	E	591	Yes
Laundry	3	2700	1844	W	0	No
Bedroom 1	2	2700	4336	W	0	No
Bedroom 1	1	2700	3267	S	602	Yes
WIR	2	2700	1783	W	0	No
Ensuite	2	2700	3419	W	0	No
Ensuite	3	2700	2054	N	0	No
Kitchen/Living	1	2700	5265	S	647	Yes
Kitchen/Living	1	2700	1242	SE	611	Yes
Kitchen/Living	1	2700	1240	SE	653	Yes
Kitchen/Living	1	2700	1280	E	687	Yes
Kitchen/Living	1	2700	2282	E	613	Yes
Kitchen/Living	1	2700	1545	E	612	Yes
Kitchen/Living	1	2700	1505	E	612	Yes
Kitchen/Living	1	2700	1491	E	614	Yes
Kitchen/Living	1	2700	1024	E	613	Yes
Entry	2	2700	1201	N	0	No
Entry	3	2700	2252	W	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	123.4	

Floor *type*

*Refer to glossary.

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 3	FR5 - 200mm concrete slab	9	Elevated	R4.6	Carpet
Bedroom 3	FR5 - 200mm concrete slab	4.2	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	6.5	Enclosed	R0.0	Tiles
Bedroom 2	FR5 - 200mm concrete slab	9.4	Elevated	R4.6	Carpet
Bedroom 2	FR5 - 200mm concrete slab	4.4	Enclosed	R0.0	Carpet
Laundry	FR5 - 200mm concrete slab	5.9	Enclosed	R0.0	Tiles
Bedroom 1	FR5 - 200mm concrete slab	10.4	Enclosed	R0.0	Carpet
Bedroom 1	FR5 - 200mm concrete slab	3.8	Enclosed	R0.0	Carpet
WIR	FR5 - 200mm concrete slab	5.8	Enclosed	R0.0	Carpet
Ensuite	FR5 - 200mm concrete slab	11.2	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 200mm concrete slab	24.1	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	35.7	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	16.7	Elevated	R4.6	Timber
Kitchen/Living	FR5 - 200mm concrete slab	0.1	Elevated	R4.6	Timber
Entry	FR5 - 200mm concrete slab	15.3	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bedroom 1	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 3	5	Downlights	80	80	Sealed
Bathroom	3	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Bedroom 2	8	Downlights	80	80	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bedroom 1	6	Downlights	80	80	Sealed
WIR	2	Downlights	80	80	Sealed
Ensuite	4	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
Kitchen/Living	31	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Entry	6	Downlights	80	80	Sealed

*Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

*Refer to glossary.

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. TGTEKHGLH0

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 6, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	155.9	open
Unconditioned*	4.2	**NatHERS climate zone**
Total	160.1	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

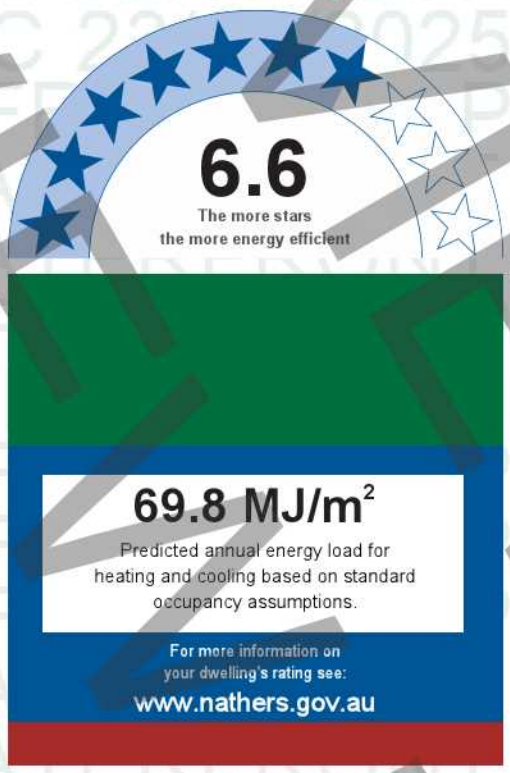
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	41.5	28.3
Load limits	55	38

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bedroom 3	bedroom	11.6
WIR	dayTime	5.7
Bathroom	unconditioned	4.2
Laundry	dayTime	4.4
Corridor	dayTime	2.4
Ensuite 2	nightTime	4.3
Bedroom 2	bedroom	11.8
WIR 2	dayTime	8.3
Bedroom 1	bedroom	14.6
Ensuite 1	nightTime	10.3
Pantry	dayTime	4.7
Entry	dayTime	16.8
Kitchen/Living	kitchen	61

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 3	CAP-055-108 A	Opening 20	2700	1550	fixed	0.0	W	No
Bedroom 3	CAP-034-33 A	Opening 26	2700	1550	awning	60.0	W	No
Bedroom 2	CAP-055-108 A	Opening 19	2700	1550	fixed	0.0	W	No
Bedroom 2	CAP-034-33 A	Opening 27	2700	1550	awning	60.0	W	No

*Refer to glossary.

Bedroom 1	CAP-055-108 A	Opening 18	2700	1550	fixed	0.0	W	No
Bedroom 1	CAP-034-33 A	Opening 28	2700	1550	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 17	2700	2960	fixed	0.0	W	No
Kitchen/Living	CAP-034-33 A	Opening 29	2700	1550	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 23	2700	1231	fixed	0.0	SW	No
Kitchen/Living	CAP-055-108 A	Opening 24	2700	1146	fixed	0.0	SW	No
Kitchen/Living	CAP-055-108 A	Opening 25	2700	1200	fixed	0.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 15	2700	5215	sliding	45.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 16	2700	2760	sliding	45.0	S	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

*Refer to glossary.

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bedroom 3	1	2700	3716	N	0	No
Bedroom 3	2	2700	3111	W	767	No
WIR	1	2700	1833	N	0	No
Bathroom	1	2700	2119	N	0	No
Laundry	1	2700	2214	N	0	No
Laundry	3	2700	1979	E	0	No
Bedroom 2	2	2700	3179	W	753	No
Bedroom 1	2	2700	3173	W	719	No
Entry	1	2700	4326	E	0	No
Entry	3	2700	3280	E	0	No
Kitchen/Living	2	2700	4206	W	729	No
Kitchen/Living	2	2700	1246	SW	4775	No
Kitchen/Living	2	2700	1201	SW	4305	Yes
Kitchen/Living	2	2700	1220	S	4029	Yes
Kitchen/Living	2	2700	8029	S	3753	Yes
Kitchen/Living	1	2700	6582	E	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	168.2	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 3	FR5 - 200mm concrete slab	11.6	Enclosed	R0.0	Carpet
WIR	FR5 - 200mm concrete slab	5.7	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	4.2	Enclosed	R0.0	Tiles
Laundry	FR5 - 200mm concrete slab	4.4	Enclosed	R0.0	Tiles

*Refer to glossary.

Corridor	FR5 - 200mm concrete slab	2.4	Enclosed	R0.0	Timber
Ensuite 2	FR5 - 200mm concrete slab	4.3	Enclosed	R0.0	Tiles
Bedroom 2	FR5 - 200mm concrete slab	11.8	Enclosed	R0.0	Carpet
WIR 2	FR5 - 200mm concrete slab	8.3	Enclosed	R0.0	Carpet
Bedroom 1	FR5 - 200mm concrete slab	14.6	Enclosed	R0.0	Carpet
Ensuite 1	FR5 - 200mm concrete slab	10.3	Enclosed	R0.0	Tiles
Pantry	FR5 - 200mm concrete slab	4.7	Enclosed	R0.0	Timber
Entry	FR5 - 200mm concrete slab	16.8	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	61	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 3	5	Downlights	80	80	Sealed
WIR	2	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Corridor	1	Downlights	80	80	Sealed
Ensuite 2	2	Downlights	80	80	Sealed
Ensuite 2	1	Exhaust Fans	250	250	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
WIR 2	3	Downlights	80	80	Sealed
Bedroom 1	6	Downlights	80	80	Sealed
Ensuite 1	4	Downlights	80	80	Sealed
Ensuite 1	1	Exhaust Fans	250	250	Sealed
Pantry	2	Downlights	80	80	Sealed
Entry	7	Downlights	80	80	Sealed
Kitchen/Living	24	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

*Refer to glossary.

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]

*Refer to glossary.

No Whole of Home performance assessment conducted for this certificate.

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. U4ZJC5ZVAJ

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 7, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	135.5	open
Unconditioned*	3.8	**NatHERS climate zone**
Total	139.3	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

70.9 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:
www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	49.6	21.3
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bedroom 1	bedroom	16.3
Ensuite 1	nightTime	4.4
Laundry	unconditioned	3.8
Bedroom 2	bedroom	14.2
Bathroom	dayTime	4.7
Corridor 2	dayTime	2.6
Pantry	dayTime	5.2
Entry	dayTime	8.5
Kitchen/Living	kitchen	54.2
Bedroom 3	bedroom	16.3
Ensuite 3	nightTime	9.1

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	CAP-055-108 A	Opening 19	2100	1502	fixed	0.0	W	No
Bedroom 1	CAP-034-33 A	Opening 18	2700	1528	awning	45.0	W	No
Bedroom 2	CAP-127-31 A	Opening 16	2700	3000	sliding	45.0	W	No
Bedroom 2	CAP-034-33 A	Opening 24	2700	1000	awning	60.0	W	No
Pantry	CAP-034-33 A	Opening 15	2700	1150	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 14	2700	2600	fixed	0.0	W	No

*Refer to glossary.

Kitchen/Living	CAP-055-108 A	Opening 21	2700	1224	fixed	0.0	SW	No
Kitchen/Living	CAP-055-108 A	Opening 22	2700	1159	fixed	0.0	SW	No
Kitchen/Living	CAP-055-108 A	Opening 23	2700	1242	fixed	0.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 12	2700	3712	sliding	45.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 13	2700	2728	sliding	45.0	S	No
Bedroom 3	CAP-127-31 A	Opening 11	2700	3200	sliding	45.0	S	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

*Refer to glossary.

2	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bedroom 1	1	2950	4369	N	0	No
Bedroom 1	2	2950	1558	W	750	Yes
Bedroom 1	2	2950	1561	W	750	Yes
Ensuite Ensuite 1	1	2950	2295	N	0	No
Laundry	3	2950	1944	E	0	No
Laundry	1	2950	1976	N	0	No
Bedroom 2	2	2950	3962	W	740	Yes
Pantry	2	2950	1086	W	802	Yes
Entry	3	2950	3053	E	0	No
Kitchen/Living	2	2950	2644	W	741	Yes
Kitchen/Living	2	2950	1265	SW	1627	No
Kitchen/Living	2	2950	1173	SW	3040	Yes
Kitchen/Living	2	2950	1247	S	4064	Yes
Kitchen/Living	2	2950	6631	S	3962	Yes
Bedroom 3	2	2950	3146	S	0	Yes
Bedroom 3	3	2950	5173	E	0	No
Ensuite 3	3	2950	3128	N	0	No
Ensuite 3	3	2950	2906	E	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	147.8	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	FR5 - 200mm concrete slab	16.3	Enclosed	R0.0	Carpet
Ensuite Ensuite 1	FR5 - 200mm concrete slab	4.4	Enclosed	R0.0	Tiles
Laundry	FR5 - 200mm concrete slab	3.8	Enclosed	R0.0	Tiles
Bedroom 2	FR5 - 200mm concrete slab	14.2	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	4.7	Enclosed	R0.0	Tiles
Corridor 2	FR5 - 200mm concrete slab	2.6	Enclosed	R0.0	Timber

*Refer to glossary.

Pantry	FR5 - 200mm concrete slab	5.2	Enclosed	R0.0	Timber
Entry	FR5 - 200mm concrete slab	8.5	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	54.2	Enclosed	R0.0	Timber
Bedroom 3	FR5 - 200mm concrete slab	16.3	Enclosed	R0.0	Carpet
Ensuite 3	FR5 - 200mm concrete slab	9.1	Enclosed	R0.0	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 1	7	Downlights	80	80	Sealed
Ensuite Ensuite 1	2	Downlights	80	80	Sealed
Ensuite Ensuite 1	1	Exhaust Fans	250	250	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bedroom 2	6	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Corridor 2	1	Downlights	80	80	Sealed
Pantry	2	Downlights	80	80	Sealed
Entry	3	Downlights	80	80	Sealed
Kitchen/Living	22	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Bedroom 3	7	Downlights	80	80	Sealed
Ensuite 3	1	Exhaust Fans	250	250	Sealed
Ensuite 3	4	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium

Thermal bridging *schedule for steel frame elements*

*Refer to glossary.

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. TF7CNANYGN

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 8, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	147.3	open
Unconditioned*	4.2	**NatHERS climate zone**
Total	151.5	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	28.8	13.1
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bed 3	bedroom	14.2
Ensuite bed 3	nightTime	7.2
WIR bed 3	dayTime	12.7
Bed 2	bedroom	11.7
WIR Bed 2	dayTime	8
Ensuite bed 2	nightTime	4
Storage	dayTime	8
Bathroom	unconditioned	4.2
Pantry	dayTime	4.9
Laundry	dayTime	5
Entry	dayTime	15
Kitchen/Living	kitchen	44.4
Bed 1	bedroom	12.4

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bed 3	CAP-055-108 A	Opening 17	2700	1150	fixed	0.0	N	No
Bed 3	CAP-034-33 A	Opening 29	2700	1450	awning	60.0	N	No
Bed 3	CAP-055-108 A	Opening 30	2700	1450	fixed	0.0	N	No
Bed 2	CAP-127-31 A	Opening 15	2700	2726	sliding	45.0	E	No

*Refer to glossary.

Bed 2	CAP-055-108 A	Opening 22	2700	1150	fixed	0.0	N	No
Bed 2	CAP-034-33 A	Opening 31	2700	1300	awning	60.0	N	No
Bed 2	CAP-055-108 A	Opening 32	2700	1300	fixed	0.0	N	No
WIR Bed 2	CAP-127-31 A	Opening 23	2700	1972	sliding	0.0	E	No
Kitchen/Living	CAP-055-108 A	Opening 28	2700	1180	fixed	0.0	NE	No
Kitchen/Living	CAP-127-31 A	Opening 26	2700	6070	sliding	45.0	N	No
Bed 1	CAP-055-108 A	Opening 19	2700	2000	fixed	0.0	NE	No
Bed 1	CAP-034-33 A	Opening 33	2700	1470	awning	60.0	NE	No
Bed 1	CAP-055-108 A	Opening 34	2700	1350	fixed	0.0	NE	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

*Refer to glossary.

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bed 3	1	2700	5422	W	0	No
Bed 3	2	2700	4070	N	702	No
Ensuite bed 3	1	2700	2991	W	0	No
WIR bed 3	1	2700	2558	W	0	No
WIR bed 3	1	2700	129	S	0	No
Bed 2	2	2700	2884	E	9653	Yes
Bed 2	2	2700	3675	N	841	No
WIR Bed 2	2	2700	2113	E	9642	Yes
Storage	1	2700	3065	W	0	No
Storage	1	2700	2608	N	0	No
Bathroom	1	2700	1641	W	0	No
Bathroom	1	2700	2587	S	0	No
Pantry	1	2700	1993	S	0	No
Laundry	1	2700	2058	S	0	No
Entry	1	2700	2044	S	0	No
Kitchen/Living	1	2700	7141	S	0	No
Kitchen/Living	1	2700	151	E	0	No
Kitchen/Living	2	2700	1238	NE	853	No
Kitchen/Living	2	2700	6225	N	7933	Yes
Bed 1	1	2700	3202	S	0	No
Bed 1	1	2700	2390	E	0	No
Bed 1	2	2700	4344	NE	767	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	158.9	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering

*Refer to glossary.

Bed 3	FR5 - 200mm concrete slab	14.2	Enclosed	R0.0	Carpet
Ensuite bed 3	FR5 - 200mm concrete slab	7.2	Enclosed	R0.0	Tiles
WIR bed 3	FR5 - 200mm concrete slab	12.7	Enclosed	R0.0	Carpet
Bed 2	FR5 - 200mm concrete slab	11.7	Enclosed	R0.0	Carpet
WIR Bed 2	FR5 - 200mm concrete slab	8	Enclosed	R0.0	Carpet
Ensuite bed 2	FR5 - 200mm concrete slab	4	Enclosed	R0.0	Tiles
Storage	FR5 - 200mm concrete slab	8	Enclosed	R0.0	Timber
Bathroom	FR5 - 200mm concrete slab	4.2	Enclosed	R0.0	Tiles
Pantry	FR5 - 200mm concrete slab	4.9	Enclosed	R0.0	Timber
Laundry	FR5 - 200mm concrete slab	5	Enclosed	R0.0	Tiles
Entry	FR5 - 200mm concrete slab	15	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	44.4	Enclosed	R0.0	Timber
Bed 1	FR5 - 200mm concrete slab	12.4	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bed 3	6	Downlights	80	80	Sealed
Ensuite bed 3	2	Downlights	80	80	Sealed
Ensuite bed 3	1	Exhaust Fans	250	250	Sealed
WIR bed 3	5	Downlights	80	80	Sealed
Bed 2	5	Downlights	80	80	Sealed
WIR Bed 2	3	Downlights	80	80	Sealed
Ensuite bed 2	2	Exhaust Fans	250	250	Sealed
Storage	3	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Pantry	2	Downlights	80	80	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Entry	6	Downlights	80	80	Sealed
Kitchen/Living	18	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Bed 1	5	Downlights	80	80	Sealed

Ceiling *fans*

*Refer to glossary.

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. 2EO95YN5WJ

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 9, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	110.5	open
Unconditioned*	4.3	**NatHERS climate zone**
Total	114.8	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

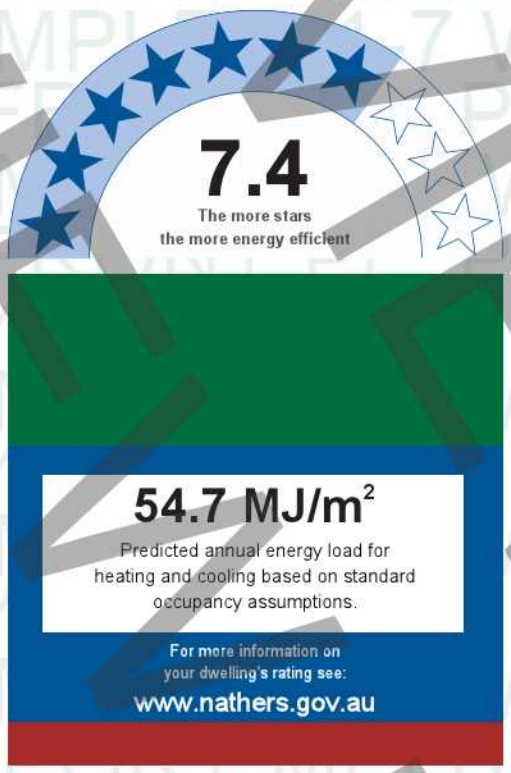
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	33.7	21
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Master bed	bedroom	15.1
WIR	dayTime	5.8
Ensuite masster bed	nightTime	10.1
Bed 1	bedroom	16.4
Ensuite bed 1	unconditioned	4.3
Entry	dayTime	10.4
Kitchen/Living	kitchen	52.8

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans Iam 638_12_6	2.69	0.4	0.38	0.42
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans Iam 638_8_4	3.35	0.37	0.35	0.39
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans Iam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Master bed	CAP-055-108 A	Opening 35	2700	1016	fixed	0.0	W	No
Master bed	CAP-034-33 A	Opening 42	2700	1195	awning	60.0	W	No
Master bed	CAP-055-108 A	Opening 43	2700	739	fixed	0.0	W	No
Master bed	CAP-055-108 A	Opening 36	2700	1991	fixed	0.0	S	No
Bed 1	CAP-055-108 A	Opening 37	2700	2071	fixed	0.0	N	No
Bed 1	CAP-055-108 A	Opening 38	2700	962	fixed	0.0	W	No
Bed 1	CAP-034-33 A	Opening 44	2700	969	awning	60.0	W	No
Bed 1	CAP-055-108 A	Opening 45	2700	1107	fixed	0.0	W	No
Kitchen/Living	CAP-127-31 A	Opening 39	2700	6421	sliding	45.0	W	No

*Refer to glossary.

Roof window* *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)

*Refer to glossary.

Master bed	1	2700	3040	W	751	No
Master bed	1	2700	2203	S	6698	Yes
Master bed	1	2400	124	W	0	Yes
Master bed	2	2700	4878	N	0	No
WIR	2	2700	1850	N	0	No
Ensuite masster bed	2	2700	3076	E	0	No
Ensuite masster bed	2	2700	3287	N	0	No
Bed 1	1	2700	2208	N	6699	Yes
Bed 1	1	2700	3097	W	746	No
Bed 1	2	2700	4505	S	0	No
Ensuite bed 1	2	2700	2221	S	0	No
Entry	2	2700	3394	S	0	No
Entry	2	2700	3063	E	0	No
Kitchen/Living	1	2700	6421	W	2954	Yes
Kitchen/Living	2	2700	6448	E	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	78.9	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Master bed	FR5 - 200mm concrete slab	15.1	Enclosed	R0.0	Carpet
WIR	FR5 - 200mm concrete slab	5.8	Enclosed	R0.0	Carpet
Ensuite masster bed	FR5 - 200mm concrete slab	10.1	Enclosed	R0.0	Tiles
Bed 1	FR5 - 200mm concrete slab	16.4	Enclosed	R0.0	Carpet
Ensuite bed 1	FR5 - 200mm concrete slab	4.3	Enclosed	R0.0	Tiles
Entry	FR5 - 200mm concrete slab	10.4	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	52.8	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Master bed	6	Downlights	80	80	Sealed
WIR	2	Downlights	80	80	Sealed

*Refer to glossary.

Ensuite masster bed	4	Downlights	80	80	Sealed
Ensuite masster bed	1	Exhaust Fans	250	250	Sealed
Bed 1	7	Downlights	80	80	Sealed
Ensuite bed 1	2	Downlights	80	80	Sealed
Ensuite bed 1	1	Exhaust Fans	250	250	Sealed
Entry	4	Downlights	80	80	Sealed
Kitchen/Living	22	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

*Refer to glossary.

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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.

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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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. 91GRRM7TP5

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 11, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	114.5	open
Unconditioned*	3.6	**NatHERS climate zone**
Total	118.1	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

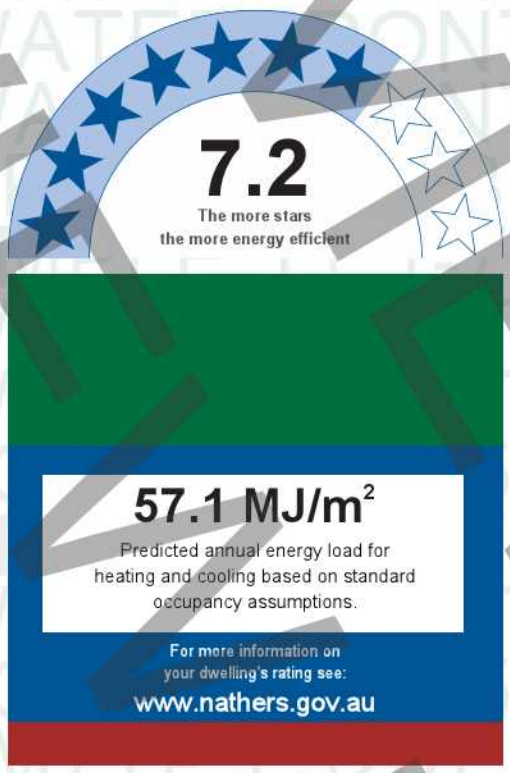
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	43.3	13.8
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Entry	dayTime	9.8
Kitchen/Living	kitchen	55.1
Pantry	dayTime	3.3
Bed 1	bedroom	14.6
Master bed	bedroom	15.5
Bathroom	unconditioned	3.6
WIR	nightTime	4.7
Ensuite	nightTime	11.6

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	CAP-127-31 A	Opening 86	2700	7046	sliding	45.0	N	No
Kitchen/Living	CAP-055-108 A	Opening 88	2700	891	fixed	0.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 89	2700	1653	fixed	0.0	W	No
Kitchen/Living	CAP-034-33 A	Opening 91	2700	1372	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 92	2700	1143	fixed	0.0	W	No
Pantry	CAP-034-33 A	Opening 93	2700	1039	awning	60.0	W	No
Pantry	CAP-055-108 A	Opening 94	2700	327	fixed	0.0	W	No
Bed 1	CAP-055-108 A	Opening 84	2700	1180	fixed	0.0	N	No
Bed 1	CAP-034-33 A	Opening 95	2700	1222	awning	60.0	N	No

*Refer to glossary.

Bed 1	CAP-055-108 A	Opening 96	2700	1106	fixed	0.0	N	No
Master bed	CAP-055-108 A	Opening 82	2700	1418	fixed	0.0	N	No
Master bed	CAP-034-33 A	Opening 97	2700	1314	awning	60.0	N	No
Master bed	CAP-055-108 A	Opening 98	2700	1053	fixed	0.0	N	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
2	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

*Refer to glossary.

3	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Entry	1	2700	1729	S	0	No
Entry	1	2700	2822	W	0	No
Entry	2	2700	1333	S	0	No
Kitchen/Living	3	2700	282	NE	0	Yes
Kitchen/Living	3	2700	7169	N	5770	Yes
Kitchen/Living	3	2700	918	W	694	Yes
Kitchen/Living	3	2700	1675	W	694	Yes
Kitchen/Living	3	2700	1464	W	694	Yes
Kitchen/Living	3	2700	1202	W	694	Yes
Kitchen/Living	1	2700	6040	S	0	No
Pantry	3	2700	1605	W	706	Yes
Pantry	3	2700	966	W	706	Yes
Pantry	1	2700	1273	S	0	No
Bed 1	3	2700	3575	N	954	No
Master bed	2	2700	3705	E	0	No
Master bed	3	2700	3887	N	756	No
Bathroom	2	2700	506	S	0	No
WIR	2	2700	2828	E	0	No
Ensuite	2	2700	4293	E	0	No
Ensuite	2	2700	4293	W	0	No
Ensuite	2	2700	2710	S	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	84.6	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	FR5 - 200mm concrete slab	9.8	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	55.1	Enclosed	R0.0	Timber
Pantry	FR5 - 200mm concrete slab	3.3	Enclosed	R0.0	Timber
Bed 1	FR5 - 200mm concrete slab	14.6	Enclosed	R0.0	Carpet
Master bed	FR5 - 200mm concrete slab	15.5	Enclosed	R0.0	Carpet

*Refer to glossary.

Bathroom	FR5 - 200mm concrete slab	3.6	Enclosed	R0.0	Tiles
WIR	FR5 - 200mm concrete slab	4.7	Enclosed	R0.0	Carpet
Ensuite	FR5 - 200mm concrete slab	11.6	Enclosed	R0.0	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Entry	4	Downlights	80	80	Sealed
Kitchen/Living	22	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Pantry	2	Downlights	80	80	Sealed
Bed 1	6	Downlights	80	80	Sealed
Master bed	6	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
WIR	2	Downlights	80	80	Sealed
Ensuite	5	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

*Refer to glossary.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

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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.

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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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. C4JLEJTYDQ

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 10, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	184.4	open
Unconditioned*	4.6	**NatHERS climate zone**
Total	189	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	32.9	23.9
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bed 3	bedroom	14.2
WIR bed 3	nightTime	7.9
Ensuite bed 3	nightTime	8.4
Storage	dayTime	6.7
Bathroom	unconditioned	4.6
Bed 2	bedroom	19.7
Bed 1	bedroom	14
WIR bed 1	dayTime	7.9
Ensuite bed 1	nightTime	7.6
Entry	dayTime	29.4
Study	dayTime	3.9
Kitchen/Living	kitchen	64.6

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bed 3	CAP-034-33 A	Opening 67	2700	1215	awning	60.0	W	No
Bed 3	CAP-055-108 A	Opening 75	2700	1230	fixed	0.0	W	No
Bed 3	CAP-055-108 A	Opening 68	2700	930	fixed	0.0	W	No
Bed 2	CAP-055-108 A	Opening 60	2700	1133	fixed	0.0	N	No
Bed 2	CAP-034-33 A	Opening 78	2700	1202	awning	60.0	N	No

*Refer to glossary.

Bed 2	CAP-055-108 A	Opening 79	2700	927	fixed	0.0	N	No
Bed 2	CAP-055-108 A	Opening 62	2700	960	fixed	0.0	W	No
Bed 1	CAP-055-108 A	Opening 70	2700	795	fixed	0.0	E	No
Bed 1	CAP-055-108 A	Opening 69	2700	1388	fixed	0.0	E	No
Bed 1	CAP-055-108 A	Opening 57	2700	1458	fixed	0.0	NE	No
Bed 1	CAP-055-108 A	Opening 58	2700	1002	fixed	0.0	N	No
Bed 1	CAP-055-108 A	Opening 59	2700	927	fixed	0.0	N	No
Bed 1	CAP-034-33 A	Opening 80	2700	876	awning	60.0	N	No
WIR bed 1	CAP-055-108 A	Opening 72	2700	1274	fixed	0.0	E	No
WIR bed 1	CAP-055-108 A	Opening 71	2700	514	fixed	0.0	E	No
Ensuite bed 1	CAP-055-108 A	Opening 83	2700	1202	fixed	0.0	E	No
Ensuite bed 1	CAP-055-108 A	Opening 81	2700	978	fixed	0.0	E	No
Ensuite bed 1	CAP-034-33 A	Opening 82	2700	551	awning	60.0	E	No
Kitchen/Living	CAP-127-31 A	Opening 63	2700	9835	sliding	45.0	N	No
Kitchen/Living	CAP-055-108 A	Opening 66	2700	1023	fixed	0.0	W	No
Kitchen/Living	CAP-034-33 A	Opening 76	2700	1350	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 77	2700	5561	fixed	0.0	W	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser

*Refer to glossary.

No Data Available

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bed 3	1	2700	4852	S	0	No
Bed 3	2	2700	2486	W	825	No
Bed 3	2	2700	998	W	677	No
WIR bed 3	1	2700	2455	S	0	No
Ensuite bed 3	1	2700	2663	S	0	No
Storage	3	2700	2547	S	0	No
Bathroom	3	2700	1748	S	0	No
Bed 2	2	2700	3323	N	750	No
Bed 2	2	2700	1159	W	16248	Yes
Bed 1	2	2700	913	E	749	Yes
Bed 1	2	2700	1425	E	749	Yes
Bed 1	2	2700	1555	NE	762	No
Bed 1	2	2700	1079	N	1172	No
Bed 1	2	2700	1897	N	720	No
WIR bed 1	2	2700	1377	E	785	Yes
WIR bed 1	2	2700	529	E	785	Yes
Ensuite bed 1	3	2700	3350	S	0	No
Ensuite bed 1	2	2700	1222	E	775	Yes
Ensuite bed 1	2	2700	1555	E	775	Yes
Entry	1	2700	1791	S	0	No

*Refer to glossary.

Entry	3	2700	2828	E	0	No
Entry	3	2700	1156	S	0	No
Entry	1	2700	2372	W	0	No
Kitchen/Living	2	2700	9815	N	4838	Yes
Kitchen/Living	2	2700	8003	W	755	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	178	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bed 3	FR5 - 200mm concrete slab	14.2	Enclosed	R0.0	Carpet
WIR bed 3	FR5 - 200mm concrete slab	7.9	Enclosed	R0.0	Carpet
Ensuite bed 3	FR5 - 200mm concrete slab	8.4	Enclosed	R0.0	Tiles
Storage	FR5 - 200mm concrete slab	6.7	Enclosed	R0.0	Timber
Bathroom	FR5 - 200mm concrete slab	4.6	Enclosed	R0.0	Tiles
Bed 2	FR5 - 200mm concrete slab	19.7	Enclosed	R0.0	Carpet
Bed 1	FR5 - 200mm concrete slab	14	Enclosed	R0.0	Carpet
WIR bed 1	FR5 - 200mm concrete slab	7.9	Enclosed	R0.0	Carpet
Ensuite bed 1	FR5 - 200mm concrete slab	7.6	Enclosed	R0.0	Tiles
Entry	FR5 - 200mm concrete slab	29.4	Enclosed	R0.0	Timber
Study	FR5 - 200mm concrete slab	3.9	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	64.6	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bed 3	6	Downlights	80	80	Sealed
WIR bed 3	3	Downlights	80	80	Sealed
Ensuite bed 3	3	Downlights	80	80	Sealed
Ensuite bed 3	1	Exhaust Fans	250	250	Sealed
Storage	3	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed

*Refer to glossary.

Bed 2	8	Downlights	80	80	Sealed
Bed 1	6	Downlights	80	80	Sealed
WIR bed 1	3	Downlights	80	80	Sealed
Ensuite bed 1	3	Downlights	80	80	Sealed
Ensuite bed 1	1	Exhaust Fans	250	250	Sealed
Entry	12	Downlights	80	80	Sealed
Study	2	Downlights	80	80	Sealed
Kitchen/Living	26	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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.

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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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. R390J18QUB

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 12, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	128.3	open
Unconditioned*	5.3	**NatHERS climate zone**
Total	133.6	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	54.8	11.5
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bed 1	bedroom	16.9
Bathroom	unconditioned	5.3
Storage	dayTime	3.5
Kitchen/Living	kitchen	60.4
Study	dayTime	5.5
Bed 2	bedroom	13
Entry	dayTime	7.5
Ensuite	nightTime	5.1
WIR	dayTime	4.8
Master bed	bedroom	11.7

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bed 1	CAP-034-33 A	Opening 116	2700	879	awning	60.0	W	No
Bed 1	CAP-055-108 A	Opening 115	2700	2270	fixed	0.0	W	No
Bed 1	CAP-055-108 A	Opening 114	2700	1057	fixed	0.0	SW	No
Bed 1	CAP-055-108 A	Opening 113	2700	1225	fixed	0.0	S	No
Bed 1	CAP-127-31 A	Opening 112	2700	947	sliding	45.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 109	2700	5016	sliding	45.0	S	No
Kitchen/Living	CAP-055-108 A	Opening 110	2700	2237	fixed	0.0	S	No

*Refer to glossary.

Kitchen/Living	CAP-127-31 A	Opening 111	2700	4901	sliding	45.0	S	No
Bed 2	CAP-127-31 A	Opening 107	2700	2965	sliding	45.0	S	No
Master bed	CAP-127-31 A	Opening 105	2700	3031	sliding	45.0	S	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

*Refer to glossary.

3	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bed 1	1	2700	1658	W	738	Yes
Bed 1	1	2700	2372	W	738	Yes
Bed 1	1	2700	1656	SW	977	Yes
Bed 1	1	2700	1296	S	1136	Yes
Bed 1	1	2700	1037	S	1052	Yes
Bed 1	2	2700	3040	N	0	No
Storage	2	2700	1861	N	0	No
Kitchen/Living	1	2700	13173	S	1053	Yes
Kitchen/Living	3	2700	4902	N	0	No
Kitchen/Living	2	2700	471	W	0	No
Kitchen/Living	2	2700	4278	N	0	No
Bed 2	1	2700	3087	S	1065	Yes
Entry	3	2700	3780	N	0	No
Ensuite	3	2700	1802	N	0	No
Ensuite	3	2700	2815	E	0	No
WIR	3	2700	2435	N	0	No
Master bed	3	2700	3341	E	0	No
Master bed	1	2700	3175	S	1067	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	112.4	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bed 1	FR5 - 200mm concrete slab	10.9	Enclosed	R0.0	Carpet
Bed 1	FR5 - 200mm concrete slab	6	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	4.9	Enclosed	R0.0	Tiles
Bathroom	FR5 - 200mm concrete slab	0.3	Enclosed	R0.0	Tiles
Storage	FR5 - 200mm concrete slab	3.5	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 200mm concrete slab	38	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	22.4	Enclosed	R0.0	Timber
Study	FR5 - 200mm concrete slab	4.6	Enclosed	R0.0	Carpet

*Refer to glossary.

Study	FR5 - 200mm concrete slab	0.9	Enclosed	R0.0	Carpet
Bed 2	FR5 - 200mm concrete slab	11.4	Enclosed	R0.0	Carpet
Bed 2	FR5 - 200mm concrete slab	1.5	Enclosed	R0.0	Carpet
Entry	FR5 - 200mm concrete slab	7.5	Enclosed	R0.0	Timber
Ensuite	FR5 - 200mm concrete slab	0.3	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	4.7	Enclosed	R0.0	Tiles
WIR	FR5 - 200mm concrete slab	4.8	Enclosed	R0.0	Carpet
Master bed	FR5 - 200mm concrete slab	0.6	Enclosed	R0.0	Carpet
Master bed	FR5 - 200mm concrete slab	11.1	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bed 1	Plasterboard	R4.6	No
Bathroom	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No
Study	Plasterboard	R4.6	No
Bed 2	Plasterboard	R4.6	No
Master bed	Plasterboard	R4.6	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bed 1	7	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Storage	2	Downlights	80	80	Sealed
Kitchen/Living	24	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Study	2	Downlights	80	80	Sealed
Bed 2	5	Downlights	80	80	Sealed
Entry	3	Downlights	80	80	Sealed
Ensuite	2	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR	2	Downlights	80	80	Sealed
Master bed	5	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

*Refer to glossary.

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
SlabExt:Slab - Suspended Slab - External Insul : 200mm: 200mm Suspended Slab - External Insul	0.0	0.6	Dark
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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.

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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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. ITUZ5OIR0K

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 13, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	218.3	exposed
Unconditioned*	4	**NatHERS climate zone**
Total	222.3	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

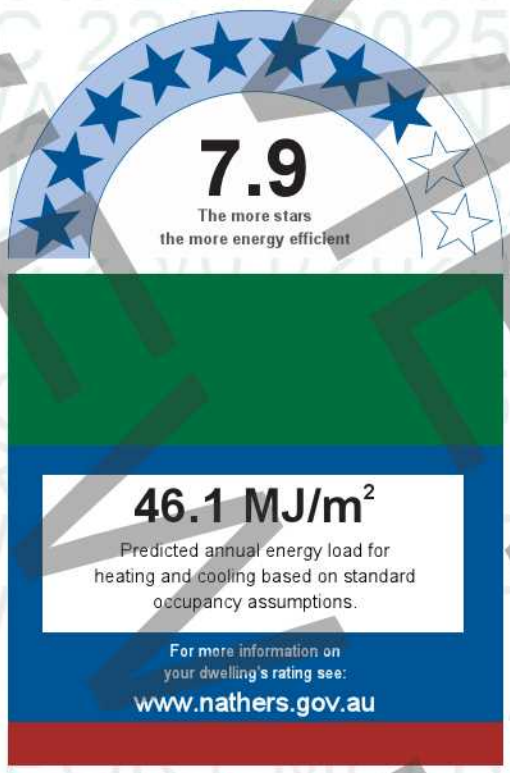
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	22.7	23.4
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Ensuite 3	nightTime	11
WIR 3	nightTime	7.6
Bedroom 3	bedroom	12.7
Powder	unconditioned	4
Living	living	31.1
Kitchen/Living	kitchen	78.3
Bedroom 1	bedroom	20.2
WIR 2	dayTime	5.5
Bedroom 2	bedroom	16.3
Ensuite 2	nightTime	7.1
Corridor	dayTime	3.8
Laundry	dayTime	6.5
Bathroom	dayTime	4.8
Entrance	dayTime	13.5

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 3	CAP-127-31 A	Opening 26	2700	1116	sliding	45.0	W	No
Bedroom 3	CAP-034-33 A	Opening 47	2700	1028	awning	60.0	W	No
Bedroom 3	CAP-055-108 A	Opening 48	2700	974	fixed	0.0	W	No

*Refer to glossary.

Living	CAP-034-33 A	Opening 28	2700	1432	awning	60.0	W	No
Living	CAP-055-108 A	Opening 46	2700	1506	fixed	0.0	W	No
Living	CAP-055-108 A	Opening 40	2700	909	fixed	0.0	W	No
Kitchen/Living	CAP-127-31 A	Opening 31	2700	9795	sliding	45.0	N	No
Kitchen/Living	CAP-055-108 A	Opening 29	2700	1638	fixed	0.0	W	No
Kitchen/Living	CAP-034-33 A	Opening 44	2700	1067	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 45	2700	4518	fixed	0.0	W	No
Bedroom 1	CAP-055-108 A	Opening 32	2700	932	fixed	0.0	W	No
Bedroom 1	CAP-127-31 A	Opening 33	2700	1122	sliding	45.0	N	No
Bedroom 1	CAP-034-33 A	Opening 49	2100	1098	awning	60.0	N	No
Bedroom 1	CAP-055-108 A	Opening 50	2100	1079	fixed	0.0	N	No
Bedroom 2	CAP-055-108 A	Opening 38	2700	3260	fixed	0.0	E	No
Bedroom 2	CAP-055-108 A	Opening 39	2700	900	fixed	0.0	E	No
Bedroom 2	CAP-055-108 A	Opening 43	2700	974	fixed	0.0	NE	No
Bedroom 2	CAP-055-108 A	Opening 42	2700	1139	fixed	0.0	NE	No
Bedroom 2	CAP-034-33 A	Opening 41	2700	1097	awning	60.0	N	No
Bedroom 2	CAP-055-108 A	Opening 34	2700	1280	fixed	0.0	N	No
Ensuite 2	CAP-034-33 A	Opening 36	2700	700	awning	60.0	E	No
Ensuite 2	CAP-055-108 A	Opening 37	2700	1894	fixed	0.0	E	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

*Refer to glossary.

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
3	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Ensuite 3	1	2700	3449	S	0	No
Ensuite 3	2	2700	704	E	0	No
WIR 3	1	2700	2400	S	0	No
Bedroom 3	1	2700	3978	S	0	No
Bedroom 3	3	2700	3183	W	755	No
Living	3	2700	2980	W	810	No
Living	3	2700	1017	W	766	No
Kitchen/Living	3	2700	9875	N	3852	Yes
Kitchen/Living	3	2700	7376	W	721	No
Bedroom 1	3	2700	1170	W	9295	Yes
Bedroom 1	3	2700	3336	N	771	No
Bedroom 2	3	2700	4320	E	715	Yes
Bedroom 2	3	2700	828	NE	733	No
Bedroom 2	3	2700	1212	NE	723	No
Bedroom 2	3	2700	1180	N	774	No
Bedroom 2	3	2700	1433	N	793	No
Ensuite 2	2	2700	3259	S	0	No

*Refer to glossary.

Ensuite 2	3	2700	2653	E	729	Yes
Laundry	2	2700	2512	S	0	No
Bathroom	2	2700	1857	S	0	No
Entrance	2	2700	1831	S	0	No
Entrance	2	2700	3069	E	0	No
Entrance	2	2700	1170	S	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	199.4	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Ensuite 3	FR5 - 275mm concrete slab	11	Enclosed	R0.0	Tiles
WIR 3	FR5 - 275mm concrete slab	7.6	Enclosed	R0.0	Carpet
Bedroom 3	FR5 - 275mm concrete slab	12.7	Enclosed	R0.0	Carpet
Powder	FR5 - 275mm concrete slab	4	Enclosed	R0.0	Tiles
Living	FR5 - 275mm concrete slab	31.1	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 275mm concrete slab	78.3	Enclosed	R0.0	Timber
Bedroom 1	FR5 - 275mm concrete slab	20.2	Enclosed	R0.0	Carpet
WIR 2	FR5 - 275mm concrete slab	5.5	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 275mm concrete slab	16.3	Enclosed	R0.0	Carpet
Ensuite 2	FR5 - 275mm concrete slab	7.1	Enclosed	R0.0	Tiles
Corridor	FR5 - 275mm concrete slab	3.8	Enclosed	R0.0	Timber
Laundry	FR5 - 275mm concrete slab	6.5	Enclosed	R0.0	Tiles
Bathroom	FR5 - 275mm concrete slab	4.8	Enclosed	R0.0	Tiles
Entrance	FR5 - 275mm concrete slab	13.5	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Ensuite 3	4	Downlights	80	80	Sealed
Ensuite 3	1	Exhaust Fans	250	250	Sealed
WIR 3	3	Downlights	80	80	Sealed
Bedroom 3	5	Downlights	80	80	Sealed

*Refer to glossary.

Powder	1	Downlights	80	80	Sealed
Powder	1	Exhaust Fans	250	250	Sealed
Living	12	Downlights	80	80	Sealed
Kitchen/Living	31	Downlights	80	80	Sealed
Bedroom 1	8	Downlights	80	80	Sealed
WIR 2	2	Downlights	80	80	Sealed
Bedroom 2	7	Downlights	80	80	Sealed
Ensuite 2	3	Downlights	80	80	Sealed
Corridor	1	Downlights	80	80	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Entrance	5	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 275mm: 275mm Suspended Slab	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

*Refer to glossary.

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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. 3RF47PQ0OO

Generated on 23 Jan 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	Sample 15, 1-7 Waterfront Pl, Port Melbourne, Port Melbourne, VIC, 3207
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	Rev M
Prepared by	-

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	206.6	exposed
Unconditioned*	3.6	**NatHERS climate zone**
Total	210.2	21 Melbourne RO
Garage	-	

Accredited assessor

Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 1
State/Territory variation	Yes

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

70.9 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:
www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	52.1	18.8
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.fr5.com.au.

*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 & 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 NatHERS heating and cooling load limits Standard 2022 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

No Whole of Home performance assessment conducted for this certificate.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

*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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*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 performance 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.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Bedroom 2	bedroom	19.1
Ensuite	nightTime	6.7
WIR	nightTime	5.6
Bedroom 1	bedroom	14.5
Bathroom	dayTime	4.3
Corridor	dayTime	4.6
Laundry	unconditioned	3.6
Kitchen/Living	kitchen	94.3
Ensuite 3	nightTime	13.9
Bedroom 3	bedroom	25.1
Entrance	dayTime	9.5
WIR	nightTime	9

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-055-108 A	Capral 419 Flushline Fixed Window DG 020_AGG PLUS WTrans lam 638_12_6	2.69	0.4	0.38	0.42
CAP-034-33 A	Urban 582 Awning Window DG 014_AGG PLUS WTrans lam 638_8_4	3.35	0.37	0.35	0.39
CAP-127-31 A	Capral : Urban 584 Sliding Door DG 014_AGG PLUS WTrans lam 638_8_4	2.83	0.39	0.37	0.41

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	CAP-055-108 A	Opening 23	2700	1114	fixed	0.0	W	No
Bedroom 2	CAP-034-33 A	Opening 40	2700	1039	awning	60.0	W	No
Bedroom 2	CAP-055-108 A	Opening 41	2700	1037	fixed	0.0	W	No
Bedroom 1	CAP-055-108 A	Opening 21	2700	1206	fixed	0.0	W	No
Bedroom 1	CAP-034-33 A	Opening 42	2700	1012	awning	60.0	W	No

*Refer to glossary.

Bedroom 1	CAP-055-108 A	Opening 43	2700	1004	fixed	0.0	W	No
Kitchen/Living	CAP-127-31 A	Opening 19	2700	627	sliding	45.0	W	No
Kitchen/Living	CAP-034-33 A	Opening 20	2700	1232	awning	0.0	W	No
Kitchen/Living	CAP-034-33 A	Opening 44	2700	1200	awning	60.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 45	2700	2559	fixed	0.0	W	No
Kitchen/Living	CAP-055-108 A	Opening 33	2700	1164	fixed	0.0	SW	No
Kitchen/Living	CAP-055-108 A	Opening 34	2700	1148	fixed	0.0	SW	No
Kitchen/Living	CAP-055-108 A	Opening 35	2700	1100	fixed	0.0	S	No
Kitchen/Living	CAP-127-31 A	Opening 17	2700	9864	sliding	45.0	S	No
Bedroom 3	CAP-127-31 A	Opening 13	2700	4186	sliding	45.0	S	No
Bedroom 3	CAP-055-108 A	Opening 14	2700	2863	fixed	0.0	S	No
Bedroom 3	CAP-055-108 A	Opening 36	2700	1166	fixed	0.0	SE	No
Bedroom 3	CAP-055-108 A	Opening 37	2700	1091	fixed	0.0	SE	No
Bedroom 3	CAP-055-108 A	Opening 38	2700	1082	fixed	0.0	E	No
Bedroom 3	CAP-127-31 A	Opening 16	2700	1625	sliding	45.0	E	No
WIR	CAP-034-33 A	Opening 30	2700	1625	awning	60.0	E	No

Roof window* *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser

*Refer to glossary.

No Data Available

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	1-7 Waterfront Place, Port Melbourne - Internal Plasterboard Stud Wall	0.5	Medium		No
2	1-7 Waterfront Place, Port Melbourne - Spandrel Wall	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	1-7 Waterfront Place, Port Melbourne - Concrete Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Bedroom 2	1	2700	3825	N	0	No
Bedroom 2	2	2700	3182	W	826	No
Bedroom 2	3	2700	680	E	0	No
Bedroom 2	1	2700	385	E	0	No
Ensuite	1	2700	3376	N	0	No
WIR	1	2700	1969	E	0	No
WIR	1	2700	2841	N	0	No
Bedroom 1	2	2700	3228	W	841	No
Kitchen/Living	2	2700	5551	W	774	No
Kitchen/Living	2	2700	1236	SW	955	Yes
Kitchen/Living	2	2700	1242	SW	982	Yes
Kitchen/Living	2	2700	1203	S	1217	Yes
Kitchen/Living	2	2700	10039	S	1173	Yes
Kitchen/Living	3	2700	1499	E	0	No
Ensuite 3	3	2700	3239	N	0	No
Bedroom 3	2	2700	6842	S	1170	No
Bedroom 3	2	2700	1171	SE	1265	Yes
Bedroom 3	2	2700	1194	SE	752	Yes
Bedroom 3	2	2700	1178	E	1018	Yes
Bedroom 3	2	2700	1630	E	710	Yes
Entrance	3	2700	2042	E	0	No

*Refer to glossary.

Entrance	3	2700	2051	N	0	No
Entrance	3	2700	1895	E	0	No
WIR	2	2700	1602	E	704	Yes
WIR	3	2700	5621	N	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	171.7	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 2	FR5 - 200mm concrete slab	5	Enclosed	R0.0	Timber
Bedroom 2	FR5 - 200mm concrete slab	14.1	Enclosed	R0.0	Timber
Ensuite	FR5 - 200mm concrete slab	3.4	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	3.3	Enclosed	R0.0	Tiles
WIR	FR5 - 200mm concrete slab	5.6	Enclosed	R0.0	Timber
Bedroom 1	FR5 - 200mm concrete slab	14.5	Enclosed	R0.0	Timber
Bathroom	FR5 - 200mm concrete slab	2.3	Enclosed	R0.0	Tiles
Bathroom	FR5 - 200mm concrete slab	2	Enclosed	R0.0	Tiles
Corridor	FR5 - 200mm concrete slab	1.2	Enclosed	R0.0	Timber
Corridor	FR5 - 200mm concrete slab	3.5	Enclosed	R0.0	Timber
Laundry	FR5 - 200mm concrete slab	3.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 200mm concrete slab	23.2	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	71.1	Enclosed	R0.0	Timber
Ensuite 3	FR5 - 200mm concrete slab	7.8	Enclosed	R0.0	Tiles
Ensuite 3	FR5 - 200mm concrete slab	6.1	Enclosed	R0.0	Tiles
Bedroom 3	FR5 - 200mm concrete slab	25.1	Enclosed	R0.0	Timber
Entrance	FR5 - 200mm concrete slab	9.5	Enclosed	R0.0	Timber
WIR	FR5 - 200mm concrete slab	9	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bedroom 2	Plasterboard	R4.6	No
Bedroom 2	Plasterboard	R4.6	No
Ensuite	Plasterboard	R4.6	No
Ensuite	Plasterboard	R4.6	No
WIR	Plasterboard	R4.6	No
Bedroom 1	Plasterboard	R4.6	No
Bathroom	Plasterboard	R4.6	No

*Refer to glossary.

Bathroom	Plasterboard	R4.6	No
Corridor	Plasterboard	R4.6	No
Corridor	Plasterboard	R4.6	No
Laundry	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No
Ensuite 3	Plasterboard	R4.6	No
Ensuite 3	Plasterboard	R4.6	No
Bedroom 3	Plasterboard	R4.6	No
Entrance	Plasterboard	R4.6	No
WIR	Plasterboard	R4.6	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 2	8	Downlights	80	80	Sealed
Ensuite	3	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR	2	Downlights	80	80	Sealed
Bedroom 1	6	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Corridor	2	Downlights	80	80	Sealed
Laundry	1	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Kitchen/Living	41	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Ensuite 3	5	Downlights	80	80	Sealed
Ensuite 3	1	Exhaust Fans	250	250	Sealed
Bedroom 3	10	Downlights	80	80	Sealed
Entrance	2	Downlights	80	80	Sealed
WIR	4	Downlights	80	80	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]

*Refer to glossary.

SlabExt:Slab - Suspended Slab - External Insul : 200mm: 200mm Suspended Slab - External Insul	0.0	0.5	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]
No Data Available				

Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*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, measure of how much cooling can be achieved by an air conditioner 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 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 air gap 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.

*Refer to glossary.

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.

Appendix C: Preliminary J4D6 Façade Calculator

J4D6 Façade Calculator

Address	1-7 Waterfront Plc, Port Melbourne
Climate Zone	6
Building Classification	Class 6
Level	GF

	North	East	South	West	Internal
Façade area (m2)	54.7	128.6	199.7	139.0	0.0

Number of Rows 12

		Dimensions			Shading (m)	
Window No.	Orientation	Height (m)	Width (m)	Area (m2)	P	H
GF North Windows	North	4.1	8	32.8	3	7.1
L1 North Windows	North	2.7	8.1	21.87	3	2.7
GF West Windows	West	4.1	16.3	66.83	0.7	4.1
GF West Windows	West	4.1	7.6	31.16	0.7	4.1
L1 West Windows	West	2.7	15.2	41.04	3.3	2.7
GF South Windows	South	4.1	43.3	177.53	2	4.1
L1 South Windows	South	2.7	8.2	22.14	2.95	2.7
GF East Windows	East	4.1	12.9	52.89	0.7	4.1
GF East Windows	East	4.1	10.1	41.41	2	4.1
L1 East Windows	East	2.7	12.7	34.29	0.7	2.7

RESULTS

Method 1	U-Value	SHGC	Min. Wall R-values
North	2.00	0.18	1
East	2.00	0.18	1
South	2.00	0.18	1
West	2.00	0.19	1
Internal	7.50		1.4

	U-Value	SHGC
Method 2	2.00	0.19

Appendix D: Renewable Energy

Inputs Solar PV

Peak Wattage of System	30.0	kWp
Azimuth	0	degrees
Inclination	10	degrees

Outputs Solar PV

Electricity Produced per Year	40,204	kWh
No. Panels Required	71	
Total Roof Area Required	148	sqm
Annual Carbon Savings	45,029	kg CO2

Economic Output

Cost of System	45,000	$
Annual Savings	8,041	$
Simple Payback	6	Years

Appendix E: Daylight Modelling

Scope of Modelling

We have undertaken daylight modelling for 10 apartments assessing both living and bedroom areas. 00.1B, 00.2O, 00.3W.1, 01.3C.1, 02.1A.2, 02.2A.1, 02.3A, 03.1C, 03.2B, 03.4A and 04.4B have been selected with consideration of internal layout, inherent and adjacent building shading features. These apartments reflect a worst-case scenario with all other units anticipated to achieve the BESS performance requirements.

The development has been modelled under an existing scenario with Beach Street along the north and east, Waterfront Place along the south and a single storey heritage Port Melbourne railway station to the west.

Methodology

The daylight levels in apartments are benchmarked against the best practice requirements as set out under the Built Environment Sustainability Scorecard (BESS) tool: Indoor Environment Quality (IEQ) – Daylight Access Living Areas and Bedrooms. These levels are as follows:

> *"Dwellings should achieve the following daylight factors (DF)*
> - *80% of the total number of living rooms achieve a daylight factor greater than 1% to 90% of the floor area of each living area, including kitchens.*
> - *80% of the total number of bedrooms achieve a daylight factor greater than 0.5% to 90% of the floor area in each room."*

The daylight modelling has been completed using the Radiance software suite, an accurate computing program used to predict light levels in a space prior to construction. Scene geometric data and material properties are interfaced into the Radiance software using DesignBuilder.

Daylight Factor has been calculated using a CIE uniform cloudy sky.

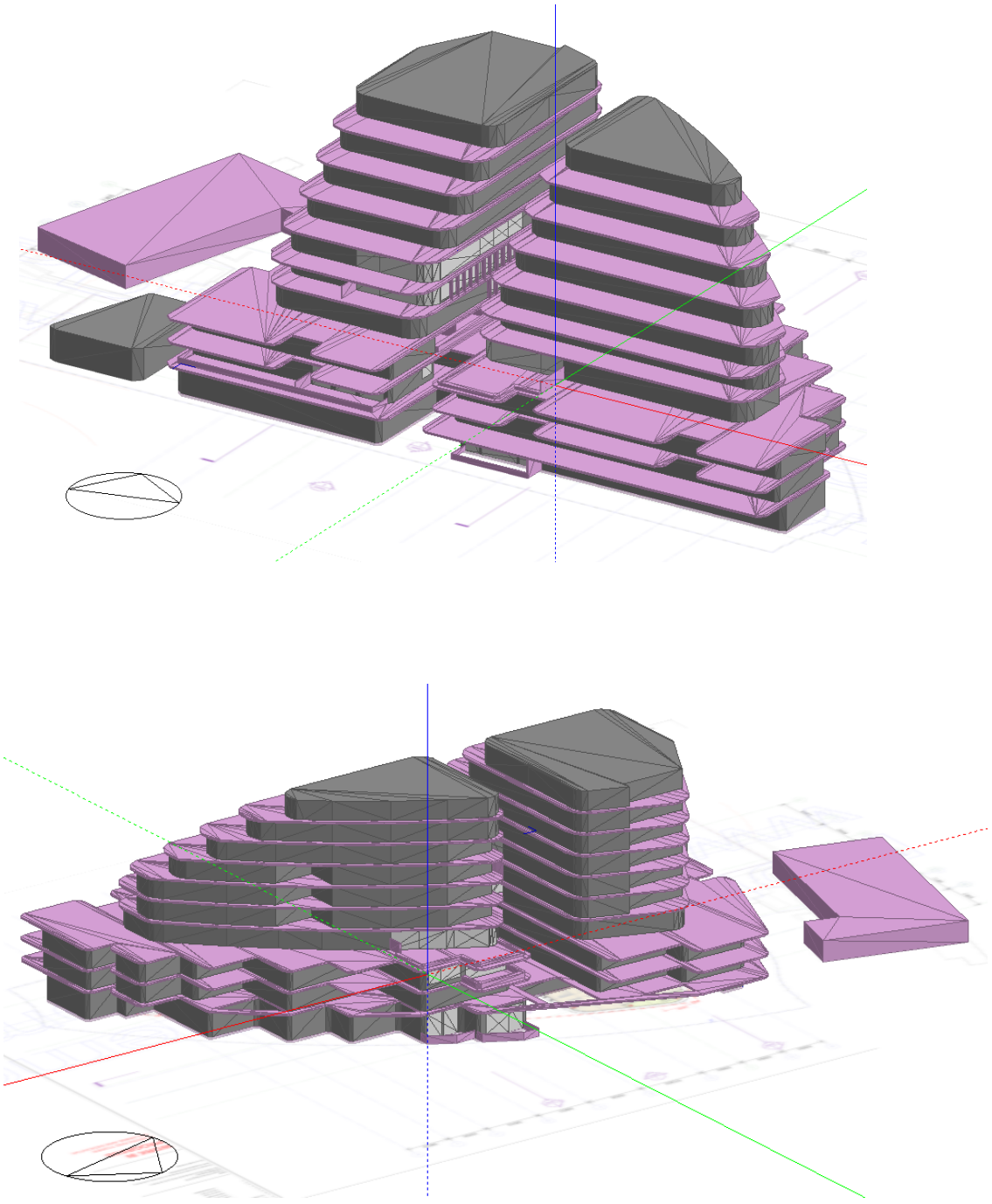


Figure 7 – DesignBuilder model of proposed and adjacent buildings

Modelling Assumptions

The following assumptions have been made with respect to the modelling:

- Modelled window dimensions and shading structures are as depicted on the Architectural drawings.
- The glazing performance used for external windows is as follows:
  - Windows G - L2: Double glazed, low-e, clear window with a total system VLT of 0.61.
  - Windows L3 – L9: Double glazed, low-e, spectrally selective window with a total system VLT of 0.57.
  - GF windows behind screen: Double glazed, low-e, clear window with a total system VLT of 0.45.
- The reflectance of all materials is in accordance with the below:
  - Internal Floors: 0.3
  - Internal Walls: 0.7
  - Ceilings: 0.8
- Transient and unoccupied spaces such as corridors and wardrobes have been excluded from the modelled area.
- The reflectance of external buildings and structures is assumed to be 0.4.

Daylight Results – Numerical

The daylight results for living areas of 1-7 Waterfront Place, Port Melbourne can be summarised as follows:

Area	Floor Area (m2)	Floor Area above DF1 (m2)	% of floor area above DF1	Status
00.1B Living	27.5	27.5	100.0	Compliant
00.2O Living	40.6	40.6	100.0	Compliant
00.3W.1 Living	40.3	40.3	100.0	Compliant
01.3C.1 Living	51.3	50.7	98.7	Compliant
02.1A.2 Living	33.4	0.0	0.0	Non-compliant
02.2A.1 Living	42.6	28.0	65.7	Non-compliant
02.3A Living	57.3	57.3	100.0	Compliant
03.1C Living	32.5	3.6	10.9	Non-compliant
03.2B Living	63.6	63.4	99.6	Compliant
03.4A Living	51.3	51.1	99.6	Compliant
04.4B Living	74.4	74.2	99.6	Compliant

The daylight results for bedrooms of 1-7 Waterfront Place, Port Melbourne can be summarised as follows:

Area	Floor Area (m2)	Floor Area above DF0.5 (m2)	% of floor area above DF0.5	Status
00.1B Bed 1	9.4	9.4	100.0	Compliant
00.2O Bed 1	10.1	10.1	100.0	Compliant
00.2O Bed 2	12.8	9.5	74.1	Non-compliant
00.3W.1 Bed1	9.6	9.4	97.5	Compliant
00.3W.1 Bed2	9.3	9.3	100.0	Compliant
00.3W.1 Bed3	11.2	11.2	100.0	Compliant
01.3C.1 Bed1	10.9	10.9	100.0	Compliant
01.3C.1 Bed2	9.5	9.3	97.8	Compliant
01.3C.1 Bed3	11.4	0.0	0.0	Non-compliant
02.1A.2 Bed 1	10.9	2.9	26.4	Non-compliant
02.2A.1 Bed1	11.2	11.2	100.0	Compliant
02.2A.1 Bed2	11.2	11.2	100.0	Compliant
02.3A Bed1	11.8	11.8	99.9	Compliant
02.3A Bed2	13.6	5.4	39.2	Non-compliant
02.3A Bed3	14.1	4.4	31.3	Non-compliant
03.1C Bed1	9.9	0.0	0.0	Non-compliant
03.2B Bed1	14.7	14.7	100.0	Compliant
03.2B Bed2	12.2	12.2	100.0	Compliant
03.4A Bed1	12.1	12.1	100	Compliant
03.4A Bed2	11.5	7.9	68.3	Non-compliant
03.4A Bed3	11.5	5.3	46.0	Non-compliant
03.4A Bed4	10.6	9.7	91.2	Compliant
04.4B Bed1	12.5	12.3	97.8	Compliant
04.4B Bed2	10.9	3.9	36.1	Non-compliant
04.4B Bed3	10.5	3.6	34.1	Non-compliant
04.4B Bed4	10.5	5.4	51.3	Non-compliant

Daylight Results – Visual

Figure 8 - Daylight Map – 00.1B

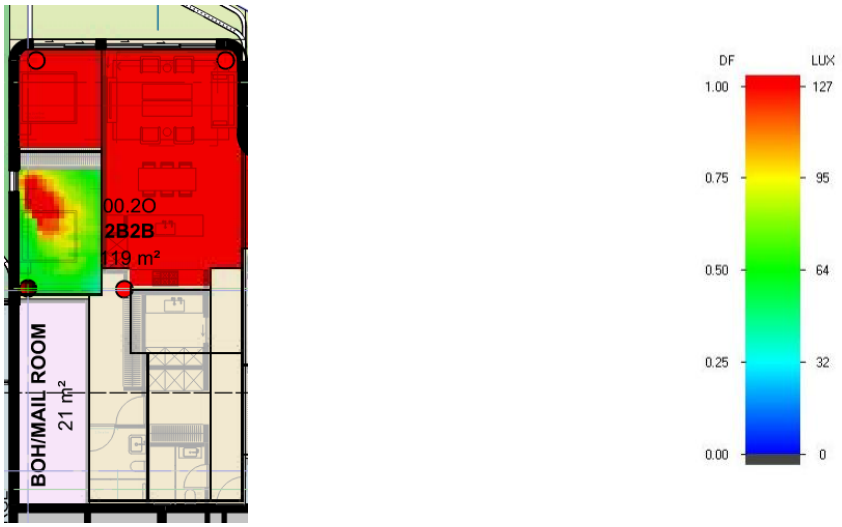


Figure 9 - Daylight Map - 00.2O

Figure 10 - Daylight Map - 00.3W.1

Figure 11 - Daylight Map – 01.3C.1

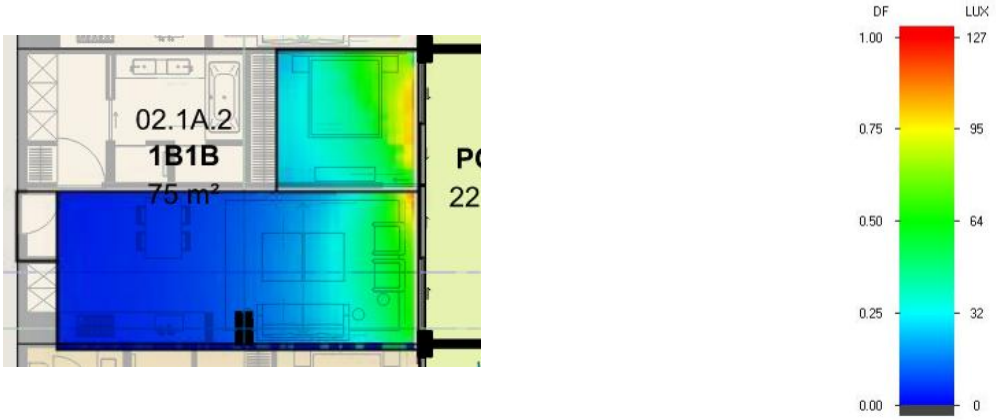


Figure 12 - Daylight Map - 02.1A.2

Figure 13 - Daylight Map - 02.2A.1

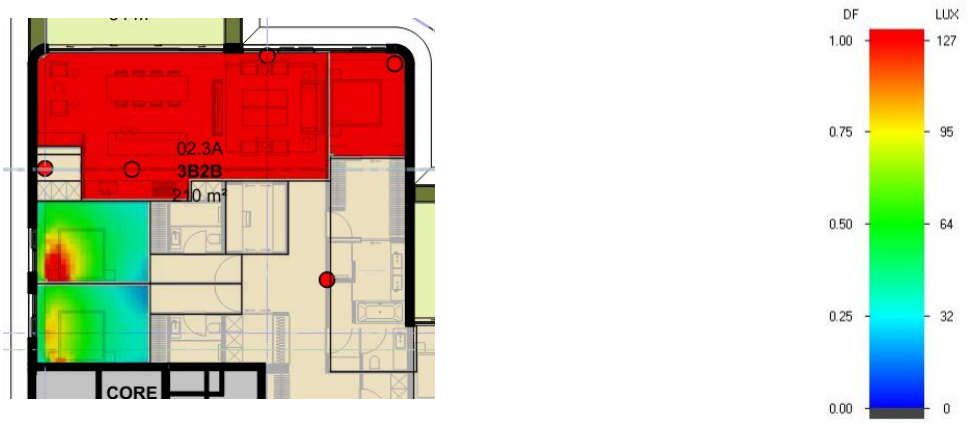


Figure 14 - Daylight Map - 02.3A

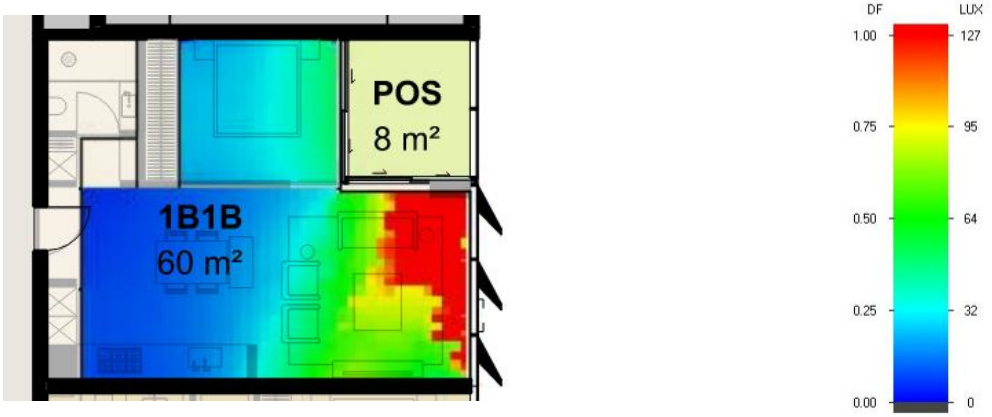


Figure 15 - Daylight Map - 03.1C

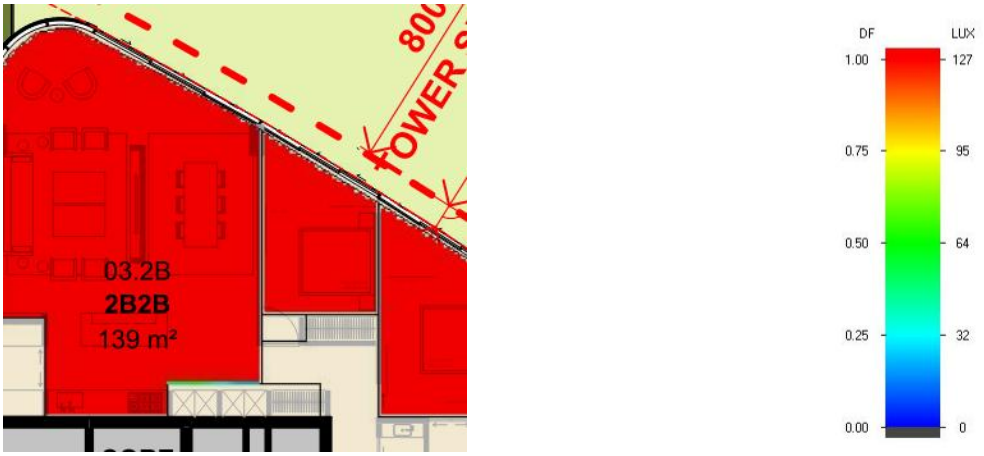


Figure 16 - Daylight Map - 03.2B

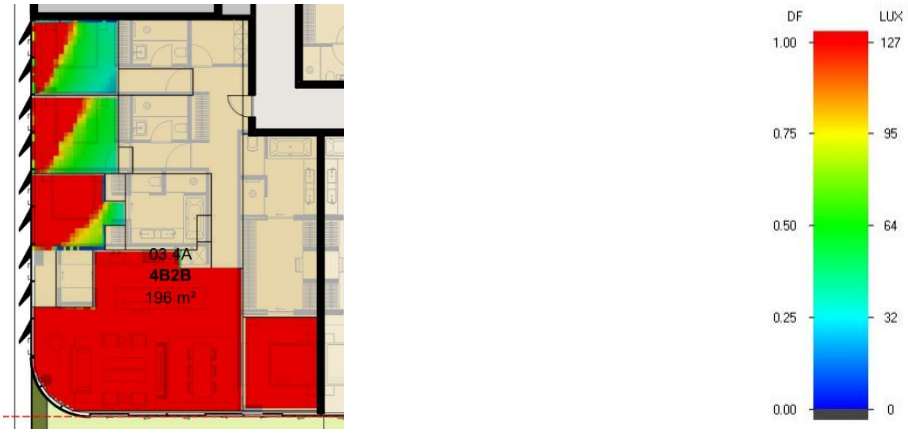


Figure 17 - Daylight Map - 03.4A

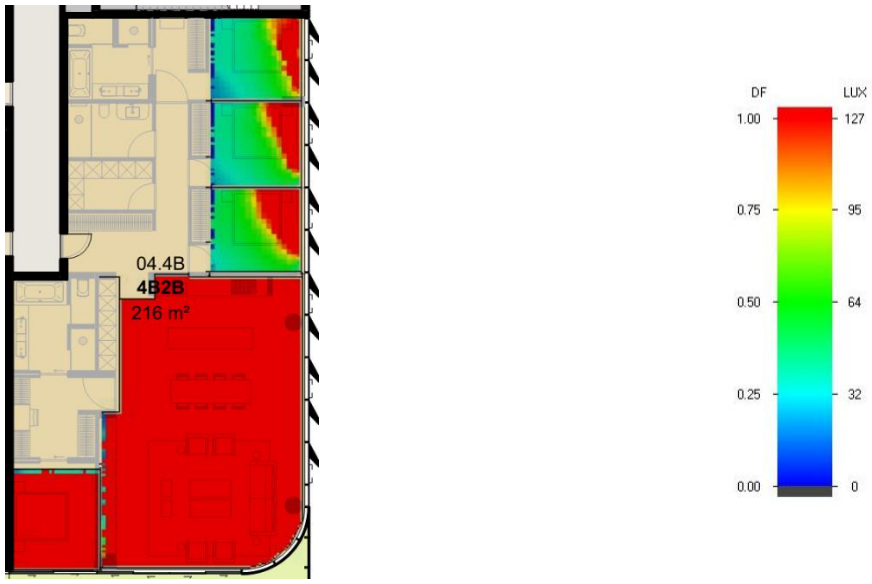


Figure 18 - Daylight Map - 04.4B

Overall Building Results

Apartment No.	Total Living Areas	Living Areas Compliant	Total Bedrooms	Bedrooms Compliant
00.2O	1	1	2	1
00.1B	1	1	1	1
00.2N	1	1	2	2
00.3W.2	1	1	3	3
00.2M.2	1	1	2	2
00.2M.1	1	1	2	2
00.3W.1	1	1	3	2
01.3A	1	1	3	1
01.3B	1	1	3	3
01.2C	1	1	2	2
01.3V	1	1	3	3
01.2A.2	1	1	2	2
01.2A.1	1	1	2	2
01.3C.2	1	1	3	2
01.3C.1	1	1	3	2
01.3E	1	1	3	3
01.3U	1	0	3	3
02.2A.3	1	0	2	2
01.3F	1	1	3	3
01.3G	1	1	3	3
02.3A	1	1	3	1
02.3B	1	1	3	3
02.2C	1	1	2	2
02.3V	1	1	3	3
02.2A.3	1	1	2	2
02.2A.2	1	1	2	2
02.3D.2	1	1	3	2
02.1A.3	1	0	1	0
02.1A.1	1	0	1	0
02.1A.2	1	0	1	0

Apartment No.	Total Living Areas	Living Areas Compliant	Total Bedrooms	Bedrooms Compliant
02.3D.1	1	1	3	2
02.3E	1	1	3	3
02.3U	1	0	3	3
02.2A.1	1	0	2	2
02.3F	1	1	3	3
02.3G	1	1	3	3
03.2B	1	1	2	2
03.2D	1	1	3	3
03.3I	1	1	3	3
03.2E	1	1	2	2
03.4A	1	1	4	2
03.1C	1	0	1	0
03.3J	1	1	3	1
03.3K	1	1	3	3
03.3L	1	1	3	3
03.3M	1	1	3	3
04.2B	1	1	2	2
04.3X	1	1	3	3
04.3Y	1	1	3	3
04.2G	1	1	2	2
04.3N	1	1	3	1
04.4B	1	1	4	1
04.3K	1	1	3	3
04.2H	1	1	2	2
04.3O	1	1	3	3
05.2B	1	1	2	2
05.3X	1	1	3	3
05.3Y	1	1	3	3
05.2G	1	1	2	2
05.3N	1	1	3	1
05.4B	1	1	4	1

Apartment No.	Total Living Areas	Living Areas Compliant	Total Bedrooms	Bedrooms Compliant
05.3K	1	1	3	3
05.2H	1	1	2	2
05.3O	1	1	3	3
06.2B	1	1	2	2
06.3X	1	1	3	3
06.3P	1	1	3	3
06.2I	1	1	2	2
06.3J	1	1	3	1
06.3T	1	1	3	3
06.2H	1	1	2	2
06.3O	1	1	3	3
07.2B	1	1	2	2
07.3Q	1	1	3	3
07.3Z	1	1	3	3
07.3R	1	1	3	1
07.4E	1	1	3	3
07.4F	1	1	3	3
08.4D	1	1	4	4
08.4C	1	1	4	4
08.4G	1	1	4	4
08.4F	1	1	4	4
09.3S	1	1	3	3
09.3S	1	1	3	3
Total	84	76	225	193
Percentage	90%		86%	

Conclusion

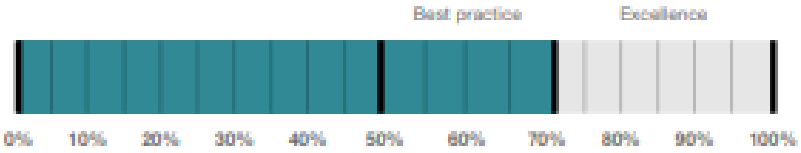
The development has been assessed and it has been determined that 90% of the living areas and 86% of bedrooms will achieve the daylight factors as prescribed under BESS and therefore the development will meet the BESS IEQ guidelines for daylight.

Appendix F: BESS Assessment

This BESS report outlines the sustainable design commitments of the proposed development at 1 Waterfront Pl Port Melbourne Victoria 3207. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Port Phillip City Council.

Note that where a Sustainability Management Plan is required, the BESS report must be accompanied by a report that further demonstrates the development's potential to achieve the relevant environmental performance outcomes and documents the means by which the performance outcomes can be achieved.

Your BESS Score

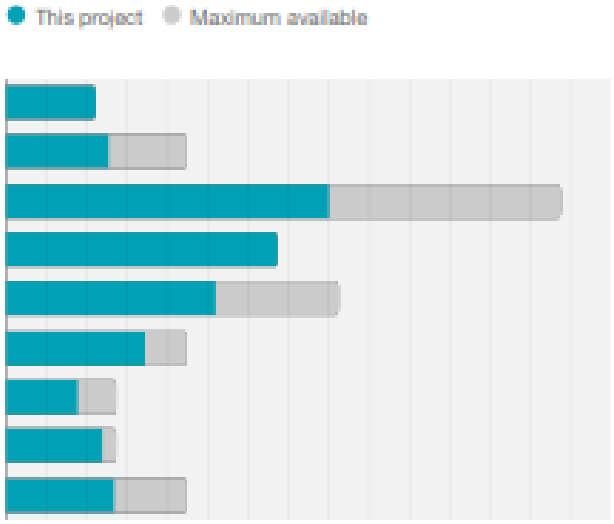


70%

Project details

Name	1-7 Waterfront Place, Port Melbourne VIC 3207, Australia
Address	1 Waterfront Pl Port Melbourne Victoria 3207
Project ID	A81CDD9C-R4
BESS Version	BESS-8
Site type	Mixed use development
Account	info@giw.com.au
Application no.	
Site area	5,487 m²
Building floor area	14,424 m²
Date	30 January 2025
Software version	2.0.1-B.574

Performance by category



Category	Weight	Score	Pass
Management	5%	99%	
Water	9%	57%	✓
Energy	28%	58%	✓
Stormwater	14%	100%	✓
IEQ	17%	63%	✓
Transport	9%	77%	
Waste	6%	66%	
Urban Ecology	6%	88%	
Innovation	9%	60%	

Buildings

Name	Height	Footprint	% of total footprint
Building 1	10	18,124 m²	98%
Building 2	2	310 m²	1%

Dwellings & Non Res Spaces

Dwellings

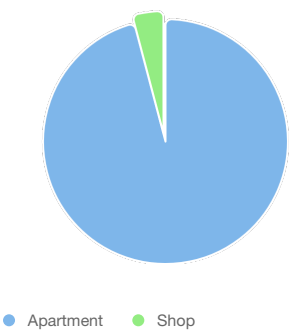
Name	Quantity	Area	Building	% of total area
Apartment				
04.3O, 05.3O, 06.3O	3	206 m²	Building 1	4%
04.3X, 05.3X, 06.3X	3	167 m²	Building 1	3%
04.2B, 05.2B, 06.2B, 07.2B	4	128 m²	Building 1	3%
01.3F, 02.3F	2	264 m²	Building 1	3%
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	4	133 m²	Building 1	3%
08.4D	1	395 m²	Building 1	2%
04.2H, 05.2H, 06.2H	3	129 m²	Building 1	2%
04.3K, 05.3K	2	180 m²	Building 1	2%
04.4B, 05.4B	2	215 m²	Building 1	2%
04.3N, 05.3N	2	156 m²	Building 1	2%
01.3G, 02.3G	2	165 m²	Building 1	2%
01.3U, 02.3U	2	159 m²	Building 1	2%
01.3E, 02.3E	2	204 m²	Building 1	2%
01.3C.1, 02.3D.1	2	174 m²	Building 1	2%
01.3C.2, 0.2.3D.2	2	174 m²	Building 1	2%
01.3V, 02.3V	2	148 m²	Building 1	2%
01.3B, 02.3B	2	168 m²	Building 1	2%
01.3A, 02.3A	2	210 m²	Building 1	2%
09.3S	1	229 m²	Building 1	1%
09.3O	1	207 m²	Building 1	1%
08.4F	1	244 m²	Building 1	1%
08.4G	1	275 m²	Building 1	1%
08.4C	1	207 m²	Building 1	1%
07.4F	1	244 m²	Building 1	1%
07.4E	1	201 m²	Building 1	1%
07.3R	1	151 m²	Building 1	1%
07.3Z	1	150 m²	Building 1	1%
07.3Q	1	170 m²	Building 1	1%
06.3J	1	181 m²	Building 1	1%
06.3P	1	146 m²	Building 1	1%
04.2G, 05.2G	2	113 m²	Building 1	1%
04.3Y, 05.3Y	2	142 m²	Building 1	1%
03.3M	1	196 m²	Building 1	1%
03.3L	1	214 m²	Building 1	1%
03.3K	1	178 m²	Building 1	1%
03.3J	1	178 m²	Building 1	1%

03.4A	1	197 m²	Building 1	1%
03.2E	1	147 m²	Building 1	1%
03.3I	1	195 m²	Building 1	1%
03.2D	1	187 m²	Building 1	1%
02.1A.1, 02.1A.2, 02.1A.3	3	75.0 m²	Building 1	1%
02.2A.3, 02.2A.1	2	135 m²	Building 1	1%
01.2C, 02.2C01	2	140 m²	Building 1	1%
00.2M.1, 00.2M.2	2	120 m²	Building 1	1%
00.3W1, 00.3W2	2	120 m²	Building 1	1%
06.3T	1	137 m²	Building 1	< 1%
06.2I	1	121 m²	Building 1	< 1%
1B1B	1	60.0 m²	Building 1	< 1%
03.3H	1	141 m²	Building 1	< 1%
00.2N	1	136 m²	Building 1	< 1%
00.1B	1	74.0 m²	Building 1	< 1%
00.2O	1	119 m²	Building 1	< 1%
Total	**84**	**13,831 m²**	**95%**	

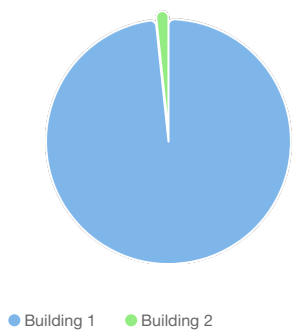
Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Shop				
Retail/Civic	1	290 m²	Building 1	2%
Retail/Civic	1	303 m²	Building 2	2%
Total	**2**	**593 m²**	**4%**	

Project composition



Building composition



Supporting Evidence

Shown on Floor Plans

Credit	Requirement	Response	Status
Management 3.1	Annotation: Individual utility meters to be provided to all individual dwellings		-

Credit	Requirement	Response	Status
Management 3.2	Annotation: Individual utility meters to be provided to all individual commercial tenancies		-
Management 3.3	Annotation: Sub-meters to be provided to all major common area services (list each)		-
Water 3.1	Annotation: Water efficient garden details		-
Energy 3.1	Carpark with natural ventilation or CO monitoring system		-
Energy 4.2	Location and size of solar photovoltaic system		-
Stormwater 1.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)		-
IEQ 1.1	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.2	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.5	Floor plans with compliant bedrooms marked		-
IEQ 2.1	Dwellings meeting the requirements for being 'naturally ventilated'		-
Transport 1.1	Location of residential bicycle parking spaces		-
Transport 1.2	Location of residential visitor bicycle parking spaces		-
Transport 1.4	Location of non-residential bicycle parking spaces		-
Transport 1.5	Location of non-residential visitor bicycle parking spaces		-
Transport 2.1	Location of electric vehicle charging infrastructure		-
Transport 2.3	Location of nominated motorbicycle parking spaces		-
Waste 2.1	Location of food and garden waste facilities		-
Waste 2.2	Location of recycling facilities		-
Urban Ecology 1.1	Location and size of communal spaces		-
Urban Ecology 2.1	Location and size of vegetated areas		-
Urban Ecology 2.2	Location and size of green roof		-
Urban Ecology 2.3	Location and size of green facade		-
Urban Ecology 2.4	Location of taps and floor waste on balconies / courtyards		-
Urban Ecology 3.1	Location of food production areas		-

Supporting Documentation

Credit	Requirement	Response	Status
Management 2.2	Preliminary NatHERS assessments		-
Management 2.3a	Section J glazing assessment		-
Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Energy 3.1	Details of either the fully natural carpark ventilation or CO monitoring system proposed		-
Energy 3.6	Average lighting power density and lighting type(s) to be used		-
Energy 3.7	Average lighting power density and lighting type(s) to be used		-
Energy 4.2	Specifications of the solar photovoltaic system(s)		-
Stormwater 1.1	STORM report or MUSIC model		-
IEQ 1.1	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.2	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.4	A short report detailing assumptions used and results achieved.		-
IEQ 1.5	A list of compliant bedrooms		-
IEQ 2.1	A list of naturally ventilated dwellings		-

Credit summary

Management Overall contribution 4.5%

	99%
1.1 Pre-Application Meeting	100%
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100%
2.3 Thermal Performance Modelling - Non-Residential	50%
3.1 Metering - Residential	100%
3.2 Metering - Non-Residential	100%
3.3 Metering - Common Areas	100%
4.1 Building Users Guide	100%

Water Overall contribution 9.0%

	Minimum required 50%	57%	✔ Pass
1.1 Potable Water Use Reduction		40%	
3.1 Water Efficient Landscaping		100%	
4.1 Building Systems Water Use Reduction		100%	

Energy Overall contribution 27.5%

	Minimum required 50%	58%	✔ Pass
1.1 Thermal Performance Rating - Non-Residential		12%	
1.2 Thermal Performance Rating - Residential		0%	✔ Achieved
2.1 Greenhouse Gas Emissions		2%	
2.2 Peak Demand		0%	
2.6 Electrification		100%	
2.7 Energy consumption		100%	
3.1 Carpark Ventilation		100%	
3.2 Hot Water		100%	
3.4 Clothes Drying		0%	
3.6 Internal Lighting - Apartments		100%	
3.7 Internal Lighting - Non-Residential		100%	
4.1 Combined Heat and Power (cogeneration / trigeneration)		N/A	✣ Scoped Out
		No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar		95%	
4.4 Renewable Energy Systems - Other		N/A	✣ Scoped Out
		No other (non-solar PV) renewable energy is in use.	

Stormwater Overall contribution 13.5%

	Minimum required 100%	100%	✔ Pass
1.1 Stormwater Treatment		100%	

IEQ Overall contribution 16.5%

	Minimum required 50%	63%	✔ Pass
1.1 Daylight Access - Living Areas		66%	
1.2 Daylight Access - Bedrooms		66%	
1.3 Winter Sunlight		0%	
1.4 Daylight Access - Non-Residential		60%	✔ Achieved
1.5 Daylight Access - Minimal Internal Bedrooms		100%	
2.1 Effective Natural Ventilation		66%	
2.3 Ventilation - Non-Residential		33%	✔ Achieved
3.4 Thermal comfort - Shading - Non-Residential		100%	
3.5 Thermal Comfort - Ceiling Fans - Non-Residential		0%	
4.1 Air Quality - Non-Residential		100%	

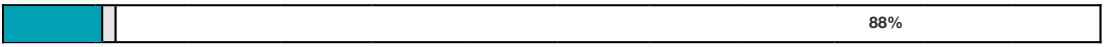
Transport Overall contribution 9.0%

	77%
1.1 Bicycle Parking - Residential	100%
1.2 Bicycle Parking - Residential Visitor	100%
1.3 Bicycle Parking - Convenience Residential	0%
1.4 Bicycle Parking - Non-Residential	100%
1.5 Bicycle Parking - Non-Residential Visitor	100%
1.6 End of Trip Facilities - Non-Residential	0%
2.1 Electric Vehicle Infrastructure	100%
2.2 Car Share Scheme	0%
2.3 Motorbikes / Mopeds	100%

Waste Overall contribution 5.5%

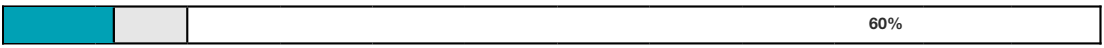
	66%
1.1 - Construction Waste - Building Re-Use	0%
2.1 - Operational Waste - Food & Garden Waste	100%
2.2 - Operational Waste - Convenience of Recycling	100%

Urban Ecology Overall contribution 5.5%



1.1 Communal Spaces	100%
2.1 Vegetation	75%
2.2 Green Roofs	100%
2.3 Green Walls and Facades	100%
2.4 Private Open Space - Balcony / Courtyard Ecology	100%
3.1 Food Production - Residential	100%
3.2 Food Production - Non-Residential	0%

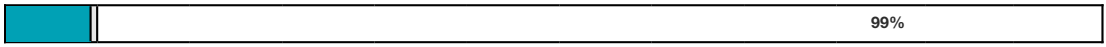
Innovation Overall contribution 9.0%



1.1 Innovation	60%

Credit breakdown

Management Overall contribution 4.5%



1.1 Pre-Application Meeting	100%
Score Contribution	This credit contributes 37.5% towards the category score.
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?
Question	Criteria Achieved ?
Project	Yes
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100%
Score Contribution	This credit contributes 23% towards the category score.
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?
Question	Criteria Achieved ?
Apartment	Yes
2.3 Thermal Performance Modelling - Non-Residential	50%
Score Contribution	This credit contributes 1% towards the category score.
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2022 Section J4D6?
Question	Criteria Achieved ?
Shop	Yes
Criteria	Has preliminary modelling been undertaken in accordance with either NCC2022 Section J (Energy Efficiency), NABERS or Green Star?
Question	Criteria Achieved ?
Shop	No
3.1 Metering - Residential	100%
Score Contribution	This credit contributes 11% towards the category score.
Criteria	Have utility meters been provided for all individual dwellings?
Question	Criteria Achieved ?
Apartment	Yes
3.2 Metering - Non-Residential	100%
Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	Have utility meters been provided for all individual commercial tenants?
Question	Criteria Achieved ?
Shop	Yes
3.3 Metering - Common Areas	100%

Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Have all major common area services been separately submetered?
Question	Criteria Achieved ?
Apartment	Yes
Shop	Yes

4.1 Building Users Guide 100%

Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Will a building users guide be produced and issued to occupants?
Question	Criteria Achieved ?
Project	Yes

Water Overall contribution 9.0%

			Minimum required 50%	57%	✔ Pass

Water Approach	
What approach do you want to use for Water?:	Use the built in calculation tools
Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	Yes
Are you installing a rainwater tank?:	Yes
Fixtures, fittings & connections profile	

Showerhead:	
Retail/Civic	Scope out
Retail/Civic	
00.2O	4 Star WELS (>= 6.0 but <= 7.5)
00.1B	
00.2N	
00.3W1, 00.3W2	
00.2M.1, 00.2M.2	
01.3A, 02.3A	
01.3B, 02.3B	
01.2C, 02.2C01	
01.3V, 02.3V	
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	
01.3C.2, 0.2.3D.2	
01.3C.1, 02.3D.1	
01.3E, 02.3E	
01.3U, 02.3U	
02.2A.3, 02.2A.1	
01.3F, 02.3F	
01.3G, 02.3G	
02.1A.1, 02.1A.2, 02.1A.3	
03.3H	
03.2D	
03.3I	
03.2E	
03.4A	
1B1B	
03.3J	
03.3K	
03.3L	
03.3M	
04.2B, 05.2B, 06.2B, 07.2B	
04.3X, 05.3X, 06.3X	
04.3Y, 05.3Y	
04.2G, 05.2G	
04.3N, 05.3N	
04.4B, 05.4B	
04.3K, 05.3K	
04.2H, 05.2H, 06.2H	
04.3O, 05.3O, 06.3O	
06.3P	
06.2I	
06.3J	
06.3T	
07.3Q	
07.3Z	
07.3R	
07.4E	
07.4F	
08.4D	
08.4C	
08.4G	
08.4F	
09.3O	
09.3S	

Bath:	
Retail/Civic 00.2O 00.3W1, 00.3W2 Retail/Civic 03.3H 1B1B	Scope out
00.1B 00.2N 00.2M.1, 00.2M.2 01.3A, 02.3A 01.3B, 02.3B 01.2C, 02.2C01 01.3V, 02.3V 01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2 01.3C.2, 0.2.3D.2 01.3C.1, 02.3D.1 01.3E, 02.3E 01.3U, 02.3U 02.2A.3, 02.2A.1 01.3F, 02.3F 01.3G, 02.3G 02.1A.1, 02.1A.2, 02.1A.3 03.2D 03.3I 03.2E 03.4A 03.3J 03.3K 03.3L 03.3M 04.2B, 05.2B, 06.2B, 07.2B 04.3X, 05.3X, 06.3X 04.3Y, 05.3Y 04.2G, 05.2G 04.3N, 05.3N 04.4B, 05.4B 04.3K, 05.3K 04.2H, 05.2H, 06.2H 04.3O, 05.3O, 06.3O 06.3P 06.2I 06.3J 06.3T 07.3Q 07.3Z 07.3R 07.4E 07.4F 08.4D 08.4G 08.4F 09.3O 09.3S	Medium Sized Contemporary Bath
08.4C	Extra Large Bath or Spa

Kitchen Taps: All	>= 5 Star WELS rating
Bathroom Taps: All	>= 6 Star WELS rating
Dishwashers: All	>= 5 Star WELS rating
WC: All	>= 4 Star WELS rating
Urinals: All	Scope out

Washing Machine Water Efficiency:	
Retail/Civic	Scope out
Retail/Civic	
00.2O	Occupant to Install
00.1B	
00.2N	
00.3W1, 00.3W2	
00.2M.1, 00.2M.2	
01.3A, 02.3A	
01.3B, 02.3B	
01.2C, 02.2C01	
01.3V, 02.3V	
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	
01.3C.2, 0.2.3D.2	
01.3C.1, 02.3D.1	
01.3E, 02.3E	
01.3U, 02.3U	
02.2A.3, 02.2A.1	
01.3F, 02.3F	
01.3G, 02.3G	
02.1A.1, 02.1A.2, 02.1A.3	
03.3H	
03.2D	
03.3I	
03.2E	
03.4A	
1B1B	
03.3J	
03.3K	
03.3L	
03.3M	
04.2B, 05.2B, 06.2B, 07.2B	
04.3X, 05.3X, 06.3X	
04.3Y, 05.3Y	
04.2G, 05.2G	
04.3N, 05.3N	
04.4B, 05.4B	
04.3K, 05.3K	
04.2H, 05.2H, 06.2H	
04.3O, 05.3O, 06.3O	
06.3P	
06.2I	
06.3J	
06.3T	
07.3Q	
07.3Z	
07.3R	
07.4E	
07.4F	
08.4D	
08.4C	
08.4G	
08.4F	
09.3O	
09.3S	

Which non-potable water source is the dwelling/space connected to?:	
Retail/Civic Retail/Civic	RWT 1
00.2O	-1
00.1B	
00.2N	
00.3W1, 00.3W2	
00.2M.1, 00.2M.2	
01.3A, 02.3A	
01.3B, 02.3B	
01.2C, 02.2C01	
01.3V, 02.3V	
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	
01.3C.2, 0.2.3D.2	
01.3C.1, 02.3D.1	
01.3E, 02.3E	
01.3U, 02.3U	
02.2A.3, 02.2A.1	
01.3F, 02.3F	
01.3G, 02.3G	
02.1A.1, 02.1A.2, 02.1A.3	
03.3H	
03.2D	
03.3I	
03.2E	
03.4A	
1B1B	
03.3J	
03.3K	
03.3L	
03.3M	
04.2B, 05.2B, 06.2B, 07.2B	
04.3X, 05.3X, 06.3X	
04.3Y, 05.3Y	
04.2G, 05.2G	
04.3N, 05.3N	
04.4B, 05.4B	
04.3K, 05.3K	
04.2H, 05.2H, 06.2H	
04.3O, 05.3O, 06.3O	
06.3P	
06.2I	
06.3J	
06.3T	
07.3Q	
07.3Z	
07.3R	
07.4E	
07.4F	
08.4D	
08.4C	
08.4G	
08.4F	
09.3O	
09.3S	

Non-potable water source connected to Toilets:	
Retail/Civic Retail/Civic	Yes
00.2O 00.1B 00.2N 00.3W1, 00.3W2 00.2M.1, 00.2M.2 01.3A, 02.3A 01.3B, 02.3B 01.2C, 02.2C01 01.3V, 02.3V 01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2 01.3C.2, 0.2.3D.2 01.3C.1, 02.3D.1 01.3E, 02.3E 01.3U, 02.3U 02.2A.3, 02.2A.1 01.3F, 02.3F 01.3G, 02.3G 02.1A.1, 02.1A.2, 02.1A.3 03.3H 03.2D 03.3I 03.2E 03.4A 1B1B 03.3J 03.3K 03.3L 03.3M 04.2B, 05.2B, 06.2B, 07.2B 04.3X, 05.3X, 06.3X 04.3Y, 05.3Y 04.2G, 05.2G 04.3N, 05.3N 04.4B, 05.4B 04.3K, 05.3K 04.2H, 05.2H, 06.2H 04.3O, 05.3O, 06.3O 06.3P 06.2I 06.3J 06.3T 07.3Q 07.3Z 07.3R 07.4E 07.4F 08.4D 08.4C 08.4G 08.4F 09.3O 09.3S	No

Non-potable water source connected to Laundry (washing machine): All	No
Non-potable water source connected to Hot Water System: All	No

Rainwater tank profile

What is the total roof area connected to the rainwater tank?:	
RWT 1	1,251 m²
RWT 2	2,645 m²
Tank Size:	
RWT 1	25,000 Litres
RWT 2	35,000 Litres
Irrigation area connected to tank:	
RWT 1	-
RWT 2	1,251 m²
Is connected irrigation area a water efficient garden?:	
RWT 1	Yes
RWT 2	No
Other external water demand connected to tank?:	
RWT 1	5,453 Litres/Day
RWT 2	0.0 Litres/Day

1.1 Potable Water Use Reduction 40%

Score Contribution	This credit contributes 71.4% towards the category score.
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.
Output	Reference
Project	21001 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	17113 kL
Output	Proposed (including rainwater and recycled water use)
Project	15709 kL
Output	% Reduction in Potable Water Consumption
Project	25 %
Output	% of connected demand met by rainwater
Project	90 %
Output	How often does the tank overflow?
Project	Very Often
Output	Opportunity for additional rainwater connection
Project	7957 kL

3.1 Water Efficient Landscaping 100%

Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Will water efficient landscaping be installed?
Question	Criteria Achieved ?
Project	Yes

4.1 Building Systems Water Use Reduction 100%

Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Where applicable, have measures been taken to reduce potable water consumption by >80% in the buildings air-conditioning chillers and when testing fire safety systems?
Question	Criteria Achieved ?
Project	Yes

Energy Overall contribution 27.5%

		Minimum required 50%	58%	✔ Pass

Use the BESS Deem to Satisfy (DtS) method for Non-residential spaces?:	No
Dwellings Energy Approach	
What approach do you want to use for Dwellings?:	Use the built in calculation tools
Are you installing any solar photovoltaic (PV) system(s)?:	Yes
Are you installing any other renewable energy system(s)?:	No
Energy Supply:	All-electric
Dwelling Energy Profiles	
Building: All	Building 1

Below the floor is:	
00.2O	Ground or Carpark
00.1B	
00.2N	
00.3W1, 00.3W2	
00.2M.1, 00.2M.2	
01.3A, 02.3A	Another Occupancy
01.3B, 02.3B	
01.2C, 02.2C01	
01.3V, 02.3V	
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	
01.3C.2, 0.2.3D.2	
01.3C.1, 02.3D.1	
01.3E, 02.3E	
01.3U, 02.3U	
02.2A.3, 02.2A.1	
01.3F, 02.3F	
01.3G, 02.3G	
02.1A.1, 02.1A.2, 02.1A.3	
03.3H	
03.2D	
03.3I	
03.2E	
03.4A	
1B1B	
03.3J	
03.3K	
03.3L	
03.3M	
04.2B, 05.2B, 06.2B, 07.2B	
04.3X, 05.3X, 06.3X	
04.3Y, 05.3Y	
04.2G, 05.2G	
04.3N, 05.3N	
04.4B, 05.4B	
04.3K, 05.3K	
04.2H, 05.2H, 06.2H	
04.3O, 05.3O, 06.3O	
06.3P	
06.2I	
06.3J	
06.3T	
07.3Q	
07.3Z	
07.3R	
07.4E	
07.4F	
08.4D	
08.4C	
08.4G	
08.4F	
09.3O	
09.3S	

Above the ceiling is:	
00.2O	Another Occupancy
00.1B	
00.2N	
00.3W1, 00.3W2	
00.2M.1, 00.2M.2	
01.3A, 02.3A	
01.3B, 02.3B	
01.2C, 02.2C01	
01.3V, 02.3V	
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	
01.3C.2, 0.2.3D.2	
01.3C.1, 02.3D.1	
01.3E, 02.3E	
01.3U, 02.3U	
02.2A.3, 02.2A.1	
01.3F, 02.3F	
01.3G, 02.3G	
02.1A.1, 02.1A.2, 02.1A.3	
03.3H	
03.2D	
03.3I	
03.2E	
03.4A	
1B1B	
03.3J	
03.3K	
03.3L	
03.3M	
04.2B, 05.2B, 06.2B, 07.2B	
04.3X, 05.3X, 06.3X	
04.3Y, 05.3Y	
04.2G, 05.2G	
04.3N, 05.3N	
04.4B, 05.4B	
04.3K, 05.3K	
04.2H, 05.2H, 06.2H	
04.3O, 05.3O, 06.3O	
06.3P	
06.2I	
06.3J	
06.3T	
07.3Q	
07.3Z	
07.3R	
07.4E	
07.4F	
08.4C	
08.4G	
08.4F	
08.4D	Outside
09.3O	
09.3S	

Exposed sides:	
00.2O	2
00.1B	
00.2N	
00.3W1, 00.3W2	
01.3B, 02.3B	
01.2C, 02.2C01	
01.3V, 02.3V	
01.3C.2, 0.2.3D.2	
01.3C.1, 02.3D.1	
01.3E, 02.3E	
01.3F, 02.3F	
01.3G, 02.3G	
03.3H	
03.3I	
03.4A	
03.3J	
03.3K	
04.2B, 05.2B, 06.2B, 07.2B	
04.3Y, 05.3Y	
04.3N, 05.3N	
04.4B, 05.4B	
04.3K, 05.3K	
06.3P	
06.2I	
06.3J	
06.3T	
07.3Q	
07.3Z	
07.3R	
07.4E	
08.4C	
00.2M.1, 00.2M.2	1
01.2A.1, 01.2A.2, 02.2A.3, 02.2A.2	
01.3U, 02.3U	
02.2A.3, 02.2A.1	
02.1A.1, 02.1A.2, 02.1A.3	
03.2D	
03.2E	
1B1B	
03.3L	
04.3X, 05.3X, 06.3X	
04.2G, 05.2G	
04.2H, 05.2H, 06.2H	
01.3A, 02.3A	3
03.3M	
04.3O, 05.3O, 06.3O	
07.4F	
08.4G	
08.4F	
09.3O	
09.3S	
08.4D	4

NatHERS Annual Energy Loads - Heat: All	40.0 MJ/sqm
NatHERS Annual Energy Loads - Cool: All	16.3 MJ/sqm
NatHERS star rating: All	7.0
Type of Heating System: All	Reverse cycle space
Heating System Efficiency: All	2.5 Stars (2019 MEPS)
Type of Cooling System: All	Refrigerative space
Cooling System Efficiency: All	4 Stars (2011 MEPS)
Type of Hot Water System: All	Electric Heat Pump Band 1
Is the hot water system shared by multiple dwellings?: All	Yes
Clothes Line: All	No drying facilities
Clothes Dryer: All	Occupant to install

Non-residential buildings profiles

Heating, Cooling & Comfort Ventilation - Electricity Reference fabric & services: All	1,000 kWh
Heating, Cooling & Comfort Ventilation - Electricity - proposed fabric and reference services: All	1,000 kWh
Heating, Cooling & Comfort Ventilation - Electricity Proposed fabric & services: All	1,000 kWh
Hot Water - Electricity - Reference: All	1,000 kWh
Hot Water - Electricity - Proposed: All	1,000 kWh
Lighting - Reference: All	1,000 kWh
Lighting - Proposed: All	1,000 kWh

Solar Photovoltaic system profile

System Size (lesser of inverter and panel capacity): PV Sutem 2	30.0 kW peak
Orientation (which way is the system facing)?: PV Sutem 2	North
Inclination (angle from horizontal): PV Sutem 2	10.0 Angle (degrees)
Which Building Class does this apply to?: PV Sutem 2	Apartment

1.1 Thermal Performance Rating - Non-Residential 12%

Score Contribution	This credit contributes 1.9% towards the category score.
Criteria	What is the % reduction in heating and cooling energy consumption against the reference case (NCC2022 Section J)?
Output	Total Improvement
Shop	0 %

1.2 Thermal Performance Rating - Residential 0% ✔ Achieved

Score Contribution	This credit contributes 16.7% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Apartment	7.0 Stars

2.1 Greenhouse Gas Emissions 2%

Score Contribution	This credit contributes 17.2% towards the category score.
Criteria	What is the % reduction in annual greenhouse gas emissions against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Apartment	241,198 kg CO2
Shop	1,735 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Apartment	225,454 kg CO2
Shop	1,735 kg CO2
Output	% Reduction in GHG Emissions
Apartment	6 %
Shop	0 %

2.2 Peak Demand 0%

Score Contribution	This credit contributes 0.2% towards the category score.
Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?

2.6 Electrification 100%

Score Contribution	This credit contributes 17.4% towards the category score.
Criteria	Is the development all-electric?
Question	Criteria Achieved?
Project	Yes

2.7 Energy consumption 100%

Score Contribution	This credit contributes 23.2% towards the category score.
Criteria	What is the % reduction in annual energy consumption against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Apartment	2,204,048 MJ
Shop	7,348 MJ
Output	Proposed Building with Proposed Services (Actual Building)
Apartment	954,865 MJ
Shop	7,348 MJ
Output	% Reduction in total energy
Apartment	56 %
Shop	0 %

3.1 Carpark Ventilation 100%

Score Contribution	This credit contributes 5.8% towards the category score.
Criteria	If you have an enclosed carpark, is it: (a) fully naturally ventilated (no mechanical ventilation system) or (b) 40 car spaces or less with Carbon Monoxide monitoring to control the operation and speed of the ventilation fans?
Question	Criteria Achieved ?
Project	Yes

3.2 Hot Water 100%

Score Contribution	This credit contributes 0.2% towards the category score.
Criteria	What is the % reduction in annual energy consumption (gas and electricity) of the hot water system against the benchmark?
Output	Reference
Shop	3,674 MJ
Output	Proposed
Shop	3,674 MJ
Output	Improvement
Shop	0 %

3.4 Clothes Drying 0%

Score Contribution	This credit contributes 5.6% towards the category score.
Criteria	What is the % reduction in annual energy consumption (gas and electricity) from a combination of clothes lines and efficient driers against the benchmark?
Output	Reference
Apartment	48,919 kWh
Output	Proposed
Apartment	48,919 kWh
Output	Improvement
Apartment	0 %

3.6 Internal Lighting - Apartments 100%

Score Contribution	This credit contributes 5.6% towards the category score.
Criteria	Is the maximum illumination power density (W/m2) in at least 90% of the relevant building class at least 20% lower than required by clause J7D3(1)(a) and Table J6.2a of the NCC 2022 Vol 1 (Class 2-9)?
Question	Criteria Achieved ?
Apartment	Yes

3.7 Internal Lighting - Non-Residential 100%

Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	Does the maximum illumination power density (W/m2) in at least 90% of the area of the relevant building class meet the requirements in Table J7D3a of the NCC 2022 Vol 1?
Question	Criteria Achieved ?
Shop	Yes

4.1 Combined Heat and Power (cogeneration / trigeneration) N/A Scoped Out

No cogeneration or trigeneration system in use.

This credit was scoped out	No cogeneration or trigeneration system in use.

4.2 Renewable Energy Systems - Solar 95%

Score Contribution	This credit contributes 5.8% towards the category score.
Criteria	What % of the estimated energy consumption of the building class it supplies does the solar power system provide?
Output	Solar Power - Energy Generation per year
Apartment	36,355 kWh
Output	% of Building's Energy
Apartment	13 %

4.4 Renewable Energy Systems - Other N/A Scoped Out

No other (non-solar PV) renewable energy is in use.

This credit was scoped out	No other (non-solar PV) renewable energy is in use.

Stormwater Overall contribution 13.5%

Minimum required 100% **100%** ✔ **Pass**

Which stormwater modelling software are you using?:	MUSIC or other modelling software

1.1 Stormwater Treatment 100%

Score Contribution	This credit contributes 100% towards the category score.
Criteria	Has best practice stormwater management been demonstrated?
Question	Flow (ML/year)
Project	34.1 % Reduction
Question	Total Suspended Solids (kg/year)
Project	89.4 % Reduction
Question	Total Phosphorus (kg/year)
Project	86.6 % Reduction
Question	Total Nitrogen (kg/year)
Project	73.7 % Reduction

IEQ **Overall contribution 16.5%**

	Minimum required 50%	63%	✔ Pass

Use the BESS Deemed to Satisfy (DtS) method for daylight to Dwellings?:	No
What approach do you want to use for daylight to Dwellings?:	Provide our own calculations

1.1 Daylight Access - Living Areas		66%
Score Contribution	This credit contributes 25.6% towards the category score.	
Criteria	What % of living areas achieve a daylight factor greater than 1%	
Question	Percentage Achieved ?	
Apartment	90 %	
1.2 Daylight Access - Bedrooms		66%
Score Contribution	This credit contributes 25.6% towards the category score.	
Criteria	What % of bedrooms achieve a daylight factor greater than 0.5%	
Question	Percentage Achieved ?	
Apartment	86 %	
1.3 Winter Sunlight		0%
Score Contribution	This credit contributes 8.5% towards the category score.	
Criteria	Do 70% of dwellings receive at least 3 hours of direct sunlight in all Living areas between 9am and 3pm in mid-winter?	
Question	Criteria Achieved ?	
Apartment	No	
1.4 Daylight Access - Non-Residential		60% ✔ Achieved
Score Contribution	This credit contributes 2.2% towards the category score.	
Criteria	What % of the nominated floor area has at least 2% daylight factor?	
Question	Percentage Achieved?	
Shop	60 %	
1.5 Daylight Access - Minimal Internal Bedrooms		100%
Score Contribution	This credit contributes 8.5% towards the category score.	
Criteria	Do at least 90% of dwellings have an external window in all bedrooms?	
Question	Criteria Achieved ?	
Apartment	Yes	
2.1 Effective Natural Ventilation		66%
Score Contribution	This credit contributes 25.6% towards the category score.	
Criteria	What % of dwellings are effectively naturally ventilated?	
Question	Percentage Achieved?	
Apartment	70 %	
2.3 Ventilation - Non-Residential		33% ✔ Achieved
Score Contribution	This credit contributes 2.2% towards the category score.	

Criteria	What % of the regular use areas are effectively naturally ventilated?
Question	Percentage Achieved?
Shop	-

Criteria	What increase in outdoor air is available to regular use areas compared to the minimum required by AS 1668.2:2012?
Question	Percentage Achieved?
Shop	50 %

Criteria	What CO2 concentrations are the ventilation systems designed to achieve, to monitor and to maintain?
Question	Value
Shop	-

3.4 Thermal comfort - Shading - Non-Residential	100%
Score Contribution	This credit contributes 1.1% towards the category score.

Criteria	What percentage of east, north and west glazing to regular use areas is effectively shaded?
Question	Percentage Achieved?
Shop	100 %

3.5 Thermal Comfort - Ceiling Fans - Non-Residential	0%
Score Contribution	This credit contributes 0.4% towards the category score.
Criteria	What percentage of regular use areas in tenancies have ceiling fans?
Question	Percentage Achieved?
Shop	-

4.1 Air Quality - Non-Residential	100%
Score Contribution	This credit contributes 0.4% towards the category score.

Criteria	Do all paints, sealants and adhesives meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Shop	Yes

Criteria	Does all carpet meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Shop	Yes

Criteria	Does all engineered wood meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Shop	Yes

Transport Overall contribution 9.0%

77%

1.1 Bicycle Parking - Residential	100%
Score Contribution	This credit contributes 21.4% towards the category score.
Criteria	How many secure and undercover bicycle spaces are there for residents?
Question	Bicycle Spaces Provided ?
Apartment	84
Output	Min Bicycle Spaces Required
Apartment	84

1.2 Bicycle Parking - Residential Visitor	100%
Score Contribution	This credit contributes 21.4% towards the category score.
Criteria	How many secure bicycle spaces are there for visitors?
Question	Visitor Bicycle Spaces Provided ?
Apartment	17
Output	Min Visitor Bicycle Spaces Required
Apartment	17

1.3 Bicycle Parking - Convenience Residential	0%
Score Contribution	This credit contributes 10.7% towards the category score.
Criteria	Are bike parking facilities for residents located at ground or entry level?
Question	Criteria Achieved ?
Apartment	No

1.4 Bicycle Parking - Non-Residential	100%
Score Contribution	This credit contributes 0.9% towards the category score.
Criteria	Have the planning scheme requirements for employee bicycle parking been exceeded by at least 50% (or a minimum of 2 where there is no planning scheme requirement)?
Question	Criteria Achieved ?
Shop	Yes
Question	Bicycle Spaces Provided ?
Shop	6

1.5 Bicycle Parking - Non-Residential Visitor	100%
Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	Have the planning scheme requirements for visitor bicycle parking been exceeded by at least 50% (or a minimum of 1 where there is no planning scheme requirement)?
Question	Criteria Achieved ?
Shop	Yes
Question	Bicycle Spaces Provided ?
Shop	2

1.6 End of Trip Facilities - Non-Residential	0%

Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	Where adequate bicycle parking has been provided. Is there also: * 1 shower for the first 5 employee bicycle spaces plus 1 to each 10 employee bicycles spaces thereafter, * changing facilities adjacent to showers, and * one secure locker per employee bicycle space in the vicinity of the changing / shower facilities?
Question	Number of showers provided ?
Shop	-
Question	Number of lockers provided ?
Shop	-
Output	Min Showers Required
Shop	1
Output	Min Lockers Required
Shop	6

2.1 Electric Vehicle Infrastructure 100%

Score Contribution	This credit contributes 22.3% towards the category score.
Criteria	Are facilities provided for the charging of electric vehicles?
Question	Criteria Achieved ?
Project	Yes

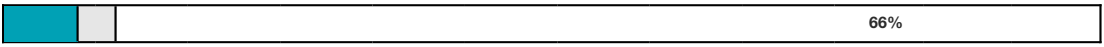
2.2 Car Share Scheme 0%

Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Question	Criteria Achieved ?
Project	No

2.3 Motorbikes / Mopeds 100%

Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	Yes

Waste **Overall contribution 5.5%**



1.1 - Construction Waste - Building Re-Use		0%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?	
Question	Criteria Achieved ?	
Project	No	
2.1 - Operational Waste - Food & Garden Waste		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Are facilities provided for on-site management of food and garden waste?	
Question	Criteria Achieved ?	
Project	Yes	
2.2 - Operational Waste - Convenience of Recycling		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Are the recycling facilities at least as convenient for occupants as facilities for general waste?	
Question	Criteria Achieved ?	
Project	Yes	

Urban Ecology Overall contribution 5.5%

88%

1.1 Communal Spaces	100%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Is there at least the following amount of common space measured in square meters : * 1m² for each of the first 50 occupants * Additional 0.5m² for each occupant between 51 and 250 * Additional 0.25m² for each occupant above 251?
Question	Common space provided
Apartment	1,068 m²
Shop	100 m²
Output	Minimum Common Space Required
Apartment	201 m²
Shop	54 m²

2.1 Vegetation	75%
Score Contribution	This credit contributes 44.6% towards the category score.
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area?
Question	Percentage Achieved ?
Project	21 %

2.2 Green Roofs	100%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Does the development incorporate a green roof?
Question	Criteria Achieved ?
Project	Yes

2.3 Green Walls and Facades	100%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Does the development incorporate a green wall or green façade?
Question	Criteria Achieved ?
Project	Yes

2.4 Private Open Space - Balcony / Courtyard Ecology	100%
Score Contribution	This credit contributes 10.7% towards the category score.
Criteria	Is there a tap and floor waste on every balcony and courtyard (including any roof terraces)?
Question	Criteria Achieved ?
Apartment	Yes

3.1 Food Production - Residential	100%

Score Contribution	This credit contributes 10.7% towards the category score.
Criteria	What area of space per resident is dedicated to food production?
Question	Food Production Area
Apartment	65.0 m²
Output	Min Food Production Area
Apartment	65 m²

3.2 Food Production - Non-Residential	0%

Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	What area of space per occupant is dedicated to food production?
Question	Food Production Area
Shop	0.0 m²
Output	Min Food Production Area
Shop	15 m²

Innovation Overall contribution 9.0%

60%

Innovations	
Description:	
Carbon Neutral Ready Development	The proposed development will be established with a carbon neutral power agreement between developer, owner's corporation, and electrical retailer to provide GreenPower for the communal areas. It is the intent to maintain this agreement for a minimum of 10 years. Occupants will be provided with GreenPower options within the Welcome Pack.
ESD Verification	An ESD professional will be engaged throughout the design and construction process. The ESD professional will perform a minimum of 2 site inspections during the construction phase to ensure suitable implementation of the ESD initiatives. Any deficiencies compared to the endorsed SMP will be escalated to the project manager and resolved. The checkpoint assessments will be undertaken at two stages as follows: • Site Inspection 1: Prior to installation of internal linings. • Site inspection 2: At the time of project completion.
Air tightness testing	Air tightness testing for a sample of units (10-20%) will be undertaken prior to plasterboard being installed and at practical completion. The development is to achieve an air permeability rate of 10 $m^3/hr.m^2$ at 50 Pa reference pressure.
Life Cycle Assessment	A life cycle assessment is to be undertaken during the Design Development / Construction phases. The embodied carbon of the development will be benchmarked against a standard practice building to determine the percentage reduction achieved. The life cycle results will be used to inform material selection, construction practices and end of life treatment.
Points Targeted:	
Carbon Neutral Ready Development	2
ESD Verification	1
Air tightness testing	1
Life Cycle Assessment	2

1.1 Innovation	60%

Score Contribution	This credit contributes 100% towards the category score.
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?

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