SUSTAINABLE MANAGEMENT PLAN

PROPOSED MULTI-UNIT DEVELOPMENT

1 Kent Road & 24 Durham Road, Surrey Hills

GIW25021
Revision H

Prepared for:
VJ 1 KR Pty Ltd

28 May 2026

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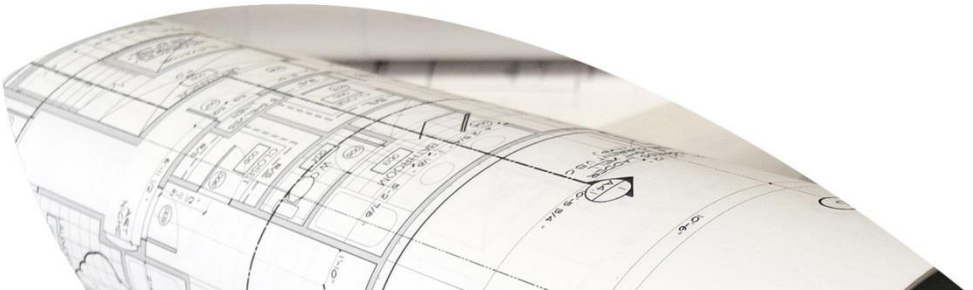

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Revision History

Revision Number	Date Issued	Author	Approved	Comments
A	15/12/2025	AS	IB	Draft
B	10/02/2026	AS	IB	2nd Draft
C	16/02/2026	AS	IB	Final
D	18/02/2026	AS	IB	Final
E	22/05/2026	AS	IB	Final
F	26/05/2026	AS	IB	Final
G	27/05/2026	AS	IB	Final
H	27/05/2026	AS	IB	Final

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Contents

1. Introduction

Project Information

GIW Environmental Solutions Pty Ltd ("GIW") has been engaged by VJ 1 KR Pty Ltd to provide Environmentally Sustainable Design (ESD) consulting services for the proposed multi-dwelling development at 1 Kent Road & 24 Durham Road, Surrey Hills.

The proposed development will include 65 apartments constructed over 4 levels over basement together with 11 duplexes, and will consist of the following:

- Middlesex residence:
  - 14 x 3 bedroom apartments
  - 21 x 2 bedroom apartments
  - 1 x 1 bedroom apartments
- Durham residence:
  - 13 x 3 bedroom apartments
  - 11 x 2 bedroom apartments
  - 5 x 1 bedroom apartments
- St Joseph:
  - 3 x 3 bedroom duplexes
  - 6 x 2 bedroom duplexes
- Nuns Quarters
  - 2 x 3 bedroom duplexes

The site located at 1 Kent Road & 24 Durham Road, Surrey Hills has an approximate surface area of 9,158m^2 and is currently the location of 2 storey brick buildings and a number of heritage listed buildings. Distance from the site to Melbourne CBD is approximately 11km.

Figure 1 - Pre-existing sites at 1 Kent Road & 24 Durham Road, Surrey Hills.

Statutory Requirements

This Sustainable Management Plan (SMP) has been prepared to inform the Department of Transport and Planning (DTP) of the proposed development's sustainability credentials and performance targets. The project team is committed to achieving a building solution which responds to the City of Boroondara Planning Scheme requirements:

Planning Scheme Clause	Application Requirement	Example Tools
City of Boroondara sustainability objectives and obligations.	Sustainability Management Plan (SMP)	BESS Green Star MUSIC Blue Factor
City of Boroondara Planning Scheme - Clause 57.05-1	The site area covered by the pervious surfaces should be at least 20 percent of the site. Meet the best practice quantitative performance objectives for stormwater quality specified in the *Urban stormwater management guidance* (EPA Publication 1739.1, 2021)	Blue Factor / MUSIC
City of Boroondara Planning Scheme - Clause 57.05-7	Dwellings located in a climate zone identified in Table E5-7 should not exceed the maximum NatHERS annual cooling load.	NatHERS
City of Boroondara Planning Scheme - Clause 15.01-2S	N/A	N/A

Built Environment Sustainability Scorecard (BESS)

The proposed commercial development will be assessed against the Built Environment Sustainability Scorecard (BESS) guidelines. The BESS tool addresses eight key environmental categories as follows:

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

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

Responsibilities & Implementation

VJ 1 KR Pty Ltd 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, individual lot / unit 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 Baggot – Project No. 131135 Rev 2 dated 26/05/2026
- KTA – Project No. 2535 – Rev TP00 Drawings dated: 27/05/2026
- 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

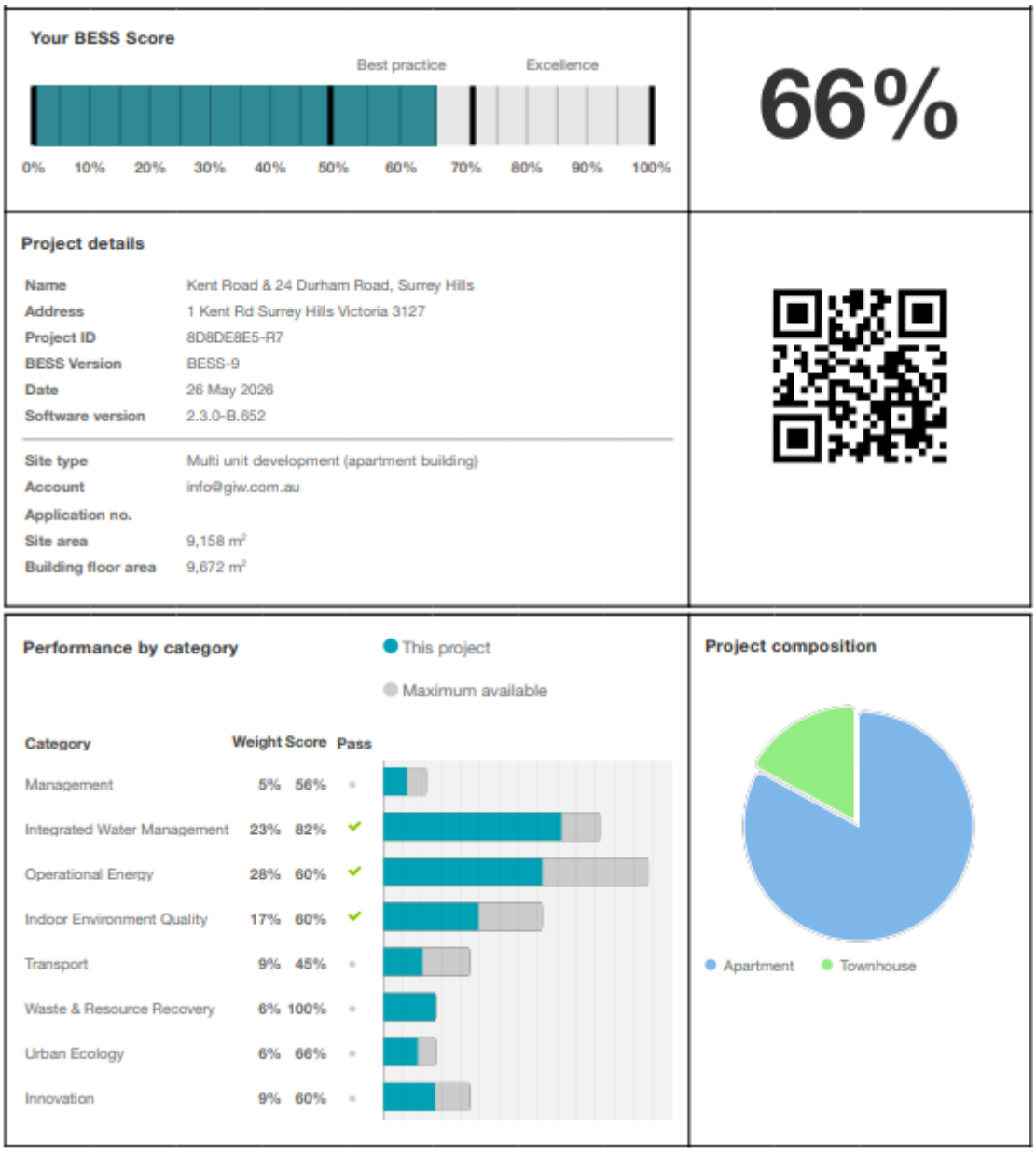
2. ESD Summary

The proposed multi-dwelling development at 1 Kent Road & 24 Durham Road, Surrey Hills will implement the following ESD initiatives:

1. The project achieves a total BESS score of 66% with no mandatory category (IEQ, Operational Energy, IWM) below 50%.
2. 80% (50 out of 65) of the development's apartments are naturally cross-ventilated.
3. The BESS built-in daylight calculator has been used to demonstrate daylight compliance for living areas and bedrooms. The summary result is as follows:
    - 86% of living floor area achieves >90% above DF 1
    - 98% of bedroom floor area achieves >90% above DF0.5
4. 43% (28 out of 65) of apartments achieve at least 3 hours of sunlight.
5. The development is provided with a comprehensive shading strategy.
6. The development is to achieve a 7.0 Star average NatHERS Energy Rating result.
7. The development is to utilise heat pump hot water systems.
8. A 15W Solar PV system is to be located on the new roofs (building A and B) of the proposed development.
9. Individual cold water, electricity meters will be provided to the dwellings and communal areas.
10. Water efficient fittings and fixtures are applied throughout.
11. A 35,000-litre rainwater tank will harvest rainwater from all new roof areas (excluding heritage roof) and large upper-level terraces. This tank will be connected to landscape irrigation.
12. Landscape irrigation demand will be connected to the rainwater tank.
13. In total 16 bicycle spaces are to be provided for residential visitors.
14. 1,083m2 of communal space will be provided at both ground level and Level 1.

3. BESS Performance

The project achieves a total BESS score of 66% with no mandatory category (IEQ, Operational Energy, IWM) 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.



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

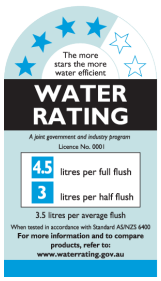
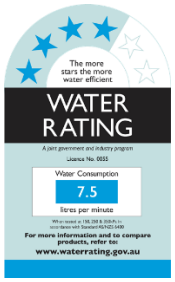
Criteria		Construction and Building Management Actions
Pre-Application Meeting	To ensure appropriate sustainable design principles and strategies are considered from the preliminary design stage of each development.	GIW has been actively involved in the preliminary design stage but has not been involved in a pre-application meeting with Council or DTP.
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 commercial 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

Integrated Water Management

Council ESD objectives:

- To reduce total operating potable water.
- To encourage the appropriate use of alternative water sources (including greywater, rainwater and stormwater).
- To incorporate best practice water sensitive urban design to improve the quality of stormwater runoff and reduce impacts on water systems and water bodies.

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 *Urban stormwater management guidance* (EPA Publication 1739.1, 2021). As per City of Boroondara Planning Scheme - Clause 57.05-1 Permeability and stormwater management objectives, the development is required to achieve a compliant MUSIC. A compliant MUSIC result is achieved via the following: • Rainwater collection off all new roof areas (excluding heritage roof), and large upper-level terraces is to be directed into a total 35,000 litre rainwater tank connected to landscape irrigation. • Prior to the LPOD an Atlan Vortceptor to be installed to filter the rainwater before entering the stormwater system Refer Appendix A – WSUD Response.
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 35,000-litre rainwater tank will harvest rainwater from all new roof areas (excluding heritage roof) and large upper-level terraces. This tank will be connected to landscape irrigation. It is estimated that this will save more than 622kL of potable water

Council Best Practice Standard

Criteria		Development Provision
		every year and meet 35.0% 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.	Landscape irrigation demand will be connected to the rainwater tank.
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 the residential areas within the development.

Operational Energy

Council ESD objectives:

- To reduce both energy use and energy peak demand through design measures.

Council Best Practice Standard

Criteria		Development Provision
Thermal Performance Rating - 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 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 apartments must 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:

Climate Zone	Heating load limits (MJ/m2)	Cooling load limits (MJ/m2)
62 Moorabbin	Maximum: 91	Maximum: 21 (BADS)

The apartments are currently achieving a 7.2 Star average. The below sample ratings demonstrate the developments ability to achieve these requirements. Refer Appendix B for Preliminary FirstRate5 Certificates.

Apartment No.	ACE Total MJ/M2	ACE Heating MJ/M2	ACE Cooling MJ/M2	ACE NCFA	Star Rating
A.LG.01	63.5	51.3	12.2	110.0	7.8
A.LG.12	85.1	81.8	3.3	134.3	6.9
B.GF.03	59.1	43.3	15.8	125.4	7.9
A.01.03	71.5	60.5	11.0	73.5	7.5
A.02.01	99.6	82.2	17.4	228.6	6.4
A.02.02	91.8	71.1	20.7	196.2	6.8
B.02.09	65.6	51.6	14.0	120.1	7.7
B.03.02	93.6	73.1	20.5	176.0	6.7
Average	**78.7**	**64.4**	**14.4**	**145.5**	**7.2**

*Apartments are assessed using FirstRate5 v5.5.5

Note that the results for the penthouse units is reliant on the

Council Best Practice Standard

Criteria	Development Provision

introduction of additional spandrel sections and window operability. This will be applied to all similar units.

The duplexes are aiming to achieve BCA compliance in accordance with Practice Note EE02 – Applying BCA energy efficiency measure to existing Class to 2 to 9 buildings, which allows for concessions where full prescriptive energy efficiency upgrades are not feasible.

Regulation 233, which applies to alterations and extensions provides the Relevant Building Surveyor (RBS) with discretion to accept partial compliance where full compliance is not reasonably achievable due to the heritage characteristics of the development.

The duplexes' existing double and triple brick construction provides inherent thermal mass and roof insulation will be installed as the primary thermal upgrade.

Construction assumptions for the new build (building A and B) preliminary FirstRate5 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	Thermal Performance Value
Floor (exposed below/carpark and above)	Concrete	R2.3
External Walls	Concrete	R2.5
	Spandrel	R2.5
Internal Walls	Lightweight	R1.8
Roof (Penthouses)	Concrete	R4.6 (applied above the slab)
Fixed Windows	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 2.71 Total System SHGC: 0.58 ±5%

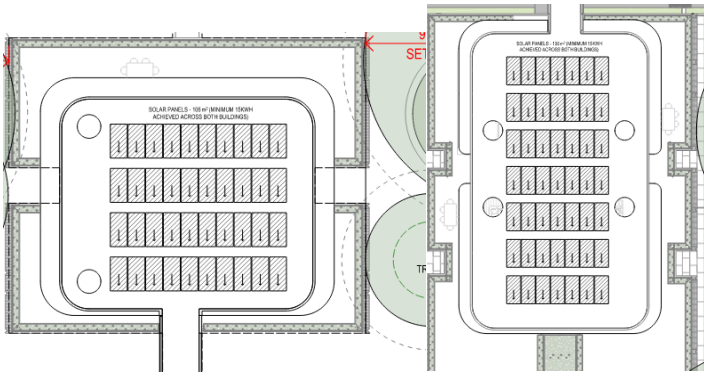
Council Best Practice Standard

Criteria		Development Provision		
		Awning Windows	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 4.42 Total System SHGC: 0.40±5%
		Sliding Windows	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 3.19 Total System SHGC: 0.48 ±5%
		Fixed Windows (A.02.01 only)	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 2.71 Total System SHGC: 0.37 ±5%
		Awning Windows (A.02.01 only)	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 4.4 Total System SHGC: 0.29±5%
		Sliding Windows (A.02.01 only)	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 3.81 Total System SHGC: 0.31 ±5%
		Skylights	Aluminium frame, double glazed, argon filled, low-e, clear.	Total System U-Value: 2.53 Total System SHGC: 0.21 ±5%
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. Duplexes are to be provided with hydronic heating and split system cooling.		
Hot Water System	To ensure the efficient use of energy and to reduce consumption and greenhouse	The development is to utilise heat pump hot water systems		

Council Best Practice Standard

Criteria		Development Provision
	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	Communal clothes drying facilities will be provided at ground floor common area.
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).
Renewable Energy Systems - Solar	To encourage on-site renewable energy generation and reduce greenhouse	A 15W Solar PV system is to be located on the new roofs (building A and B) of the proposed development. The system is expected to generate approximately 20,102kWh per year.

Council Best Practice Standard

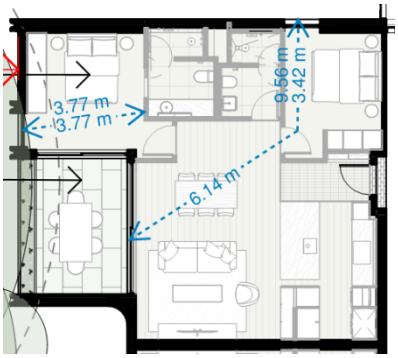
Criteria	Development Provision
emissions.	 Location Solar PV System Refer Appendix C – Renewable Energy

Indoor Environment Quality

Council ESD objectives:

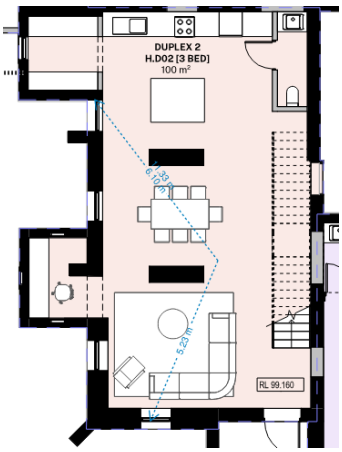
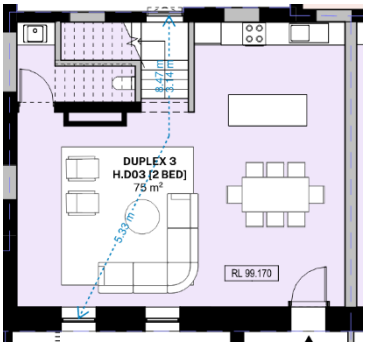
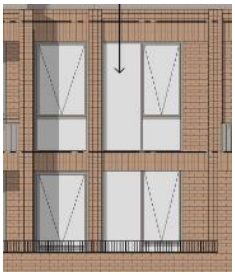
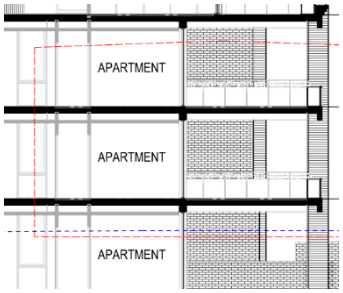
- To achieve a healthy indoor environment quality.
- To reduce indoor air pollutants by encouraging use of non-toxic materials.
- Minimise noise levels and noise transfer within and between buildings and associated external areas.

Council Best Practice Standard

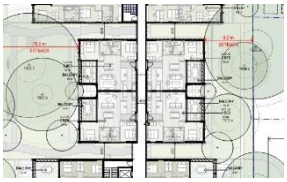
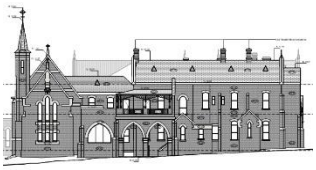
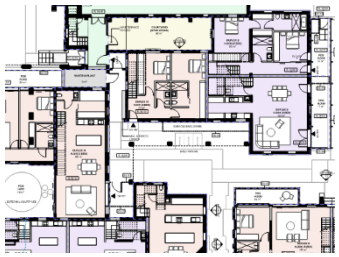
<table>
<tr><th>Criteria</th><th></th><th>Development Provision</th></tr>
<tr><td>Daylight Access - Residential</td><td>To provide a high level of amenity and energy efficiency through design for natural light.</td><td>The BESS built-in daylight calculator has been used to demonstrate daylight compliance for living areas and bedrooms. The summary result is as follows:
<table><tr><th>% of living areas achieving the BESS best practice daylight criteria</th><th>% of bedrooms achieving the BESS best practice daylight criteria</th></tr><tr><td>86%</td><td>98%</td></tr></table></td></tr>
<tr><td>Winter Sunlight</td><td>To provide a high level of amenity and reduce need for artificial heating in winter.</td><td>43% (28 out of 65) of apartments achieve at least 3 hours of sunlight.</td></tr>
<tr><td>Minimal Internal Bedrooms</td><td>90% of bedrooms have an external window.</td><td>NIL internal bedrooms.</td></tr>
<tr><td>Cross Flow Ventilation</td><td>To provide fresh air and passive cooling opportunities.</td><td>80% (50 out of 65) of the development’s apartments are naturally cross-ventilated. Apartments are provided with windows on opposite or adjacent facades.
 

Typical natural cross-ventilated apartment</td></tr>
</table>

Council Best Practice Standard

Criteria		Development Provision
		All of the development's duplexes are naturally cross ventilated with windows on opposite or adjacent facades.  Typical natural cross-ventilated duplexes with windows on adjacent side  Typical natural cross-ventilated duplexes with windows on opposite sides
Thermal Comfort	To provide comfortable indoor spaces and reduce energy needed for heating and cooling.	The development is provided with a comprehensive shading strategy:  East and west oriented perimeter windows are generally shading by vertical elements (excluding penthouse levels)  Recessed living areas windows are shaded by the terrace above in.

Council Best Practice Standard

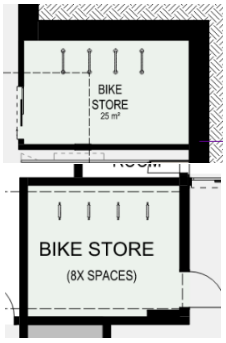
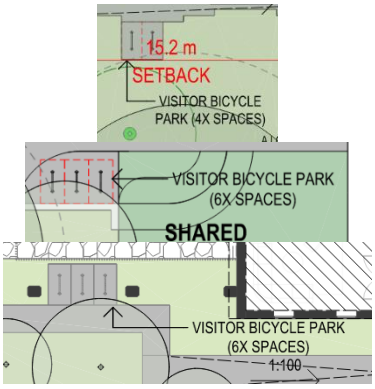
Criteria	Development Provision
	 Windows facing the inter-building setbacks are shaded by the built form in both Middlesex and Durham residence.
	 Large sliding doors to ground floor north facing windows in Durham residence are shaded by arbour shading structure
	 Windows to the penthouse units are shaded by a 1.3 m canopy at the Middlesex Residence and a 0.95 m canopy at the Durham Residence for north, east and west facing windows.
	 Duplexes heritage windows are sized to limit solar heat gain during peak summer periods.
	 Duplexes windows facing the light courtyard are shaded by the heritage-built form.

Transport

Council ESD objectives:

- To promote the use of walking, cycling and public transport, in that order; and minimise car dependency.
- To promote the use of low emissions vehicle technologies and supporting infrastructure.

Council Best Practice Standard

Criteria		Development Provision	
Bicycle Parking – Residential & Residential Visitors	To encourage and recognise initiatives that facilitate cycling.		
		In total 16 bicycle spaces are to be provided for residents.	In total 16 bicycle spaces are to be provided for residential visitors. This will provide a ratio of approximately 1 visitor bicycle space for every 5 dwelling.
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. 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. 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	

Council Best Practice Standard

Criteria		Development Provision
		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.	Nil.

Materials

ESD objectives:

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

Council Best Practice Standard

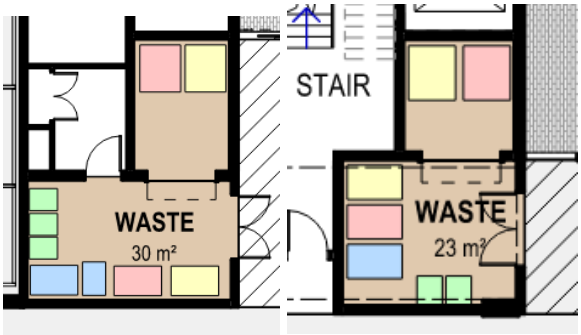
Criteria		Development Provision
Embodied Energy	Limited use of high embodied energy metals and materials, especially in a design with intended high churn (e.g. retail)	The design will seek to limit the use of high embodied energy metal finishes. Concrete mixes used within the project will seek to reduce Portland cement and aggregate content where deemed appropriate by the structural engineer.
Structural and Reinforcing Steel	Commitment to source structural and reinforcing steel from a responsible steel maker	The building's structural 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 ISO14001 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 & Resource Recovery

Council ESD objectives:

- To promote waste avoidance, reuse and recycling during the design, construction and operation stages of development.
- To encourage use of durable and reuseable building materials.
- To ensure sufficient space is allocated for future change in waste management needs, including (where possible) composting and green waste facilities.

Council Best Practice Standard

Criteria		Development Provision
Building Re-use	To ensure waste avoidance, reuse and recycling during the design.	At least 30% of the existing structure is re-used.
Construction and Demolition Waste	To reduce construction waste going to landfill	At least 90% 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 waste 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 the basement waste room. Kitchen joinery is to provide appropriate spatial allowance for food and organics, general and recycling waste collection.

Urban Ecology

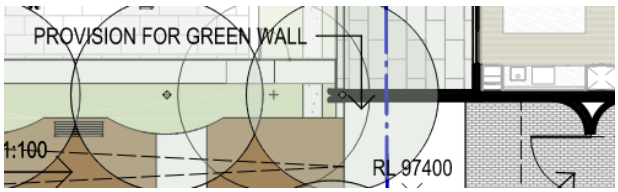
Council ESD objectives:

- To protect and enhance biodiversity.
- To reduce urban heat island effects.
- To encourage the provision of space for productive gardens, particularly in larger residential developments.

Council Best Practice Standard

Criteria		Development Provision
Communal Space	To encourage and recognise initiatives that facilitate interaction between building occupants.	1,083m^2 of communal space will be provided at both ground level and Level 1. Communal space will include the following amenities: shared gardens, resident garden, lounge and amenity spaces  Communal space will be provided at lower ground, ground and level 1.
Vegetation	To encourage and recognise the use of vegetation and landscaping	Planter boxes are to be located all apartment POS. Landscaped area is to be located ground level. The total canopy coverage is 26% of the site area.

Council Best Practice Standard

Criteria		Development Provision
	within and around developments.	Total deep soil coverage is 28% 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.  Green wall on building B
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.	Nil.
Heat Island Effect	To reduce the contribution of the project site to the 'heat island effect	Roofs are to have a Solar Reflectance Index (SRI) of minimum 60. Unshaded hard-scaping elements are to have a 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
Recycles /reused /repurposed materials	To minimise waste reduction through reuse and recycle	The development will use recycled bricks in footpaths and planters.
ESD As-built verification	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.
Airtightness testing	To ensure that the apartments do not have uncontrolled air filtration	Air tightness testing for a sample (20%) of new apartments will be undertaken for the development. The testing should achieve an air leakage rate of no more than 10m3 /hr.m2 at 50 Pascals tested in accordance with AS/NZS ISO 9972 Method 1, National Construction Code (NCC) 2022 – J1V4 Verification of building envelope sealing.
Green Factor Tool	To prioritise the types of greening that will provide benefit to the public and the environment.	Melbourne City Council GreenFactor Tool Assessment achieving a target of 0.55 score has been prepared by the landscape architect. Refer landscape documentation for assessment.
Community Development Program	To build social cohesion by encouraging residents to connect and form relationships	A community development program will be introduced and funded for the first 12 months. Examples of initiatives include: • Shared Facebook or communication platform for residents to share, exchange, communicate and organise. • Monthly drinks

Council Best Practice Standard

Criteria	Development Provision
	• Workshops or other organised learning events related to communal areas and social tenancy i.e. gardening / yoga / cooking etc. • Flexible common area designed for programmed activities — e.g., photography, painting, Adobe workshops, tax tips, wellness, bike maintenance sessions — delivered through a rotating Skill-Share Calendar with local creatives and educators

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. The site achieves a permeable area >20% of the site area as per the City of Boroondara Planning Scheme - Clause 57.05-1 requirements.

* The heritage roof is excluded from the WSUD assessment area given that no works are proposed to this building element.

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

Weather File

Rainfall Station	Time Step
Dandenong	6 minutes

Demand Inputs

The 35,000 litre rainwater tanks are to be connected to landscape irrigation with a total annual demand of 2,452kL/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 new roof areas (excluding heritage roof), and large upper-level terraces is to be directed into a total 35,000 litre rainwater tank connected to landscape irrigation.
- Prior to the LPOD an Atlan Vortceptor 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.

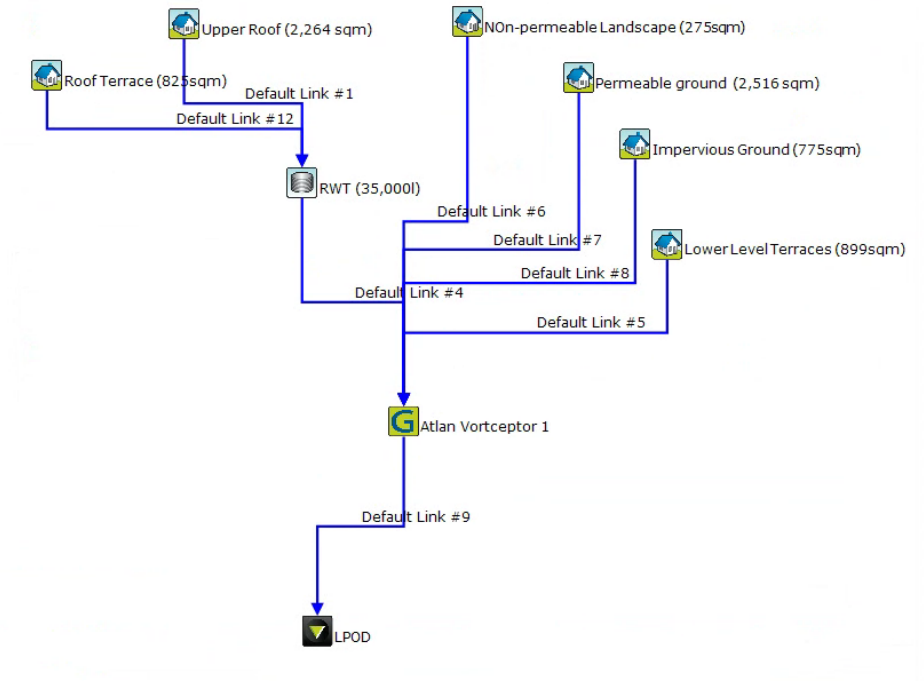


Figure 2 – MUSIC Model

	CSIRO performance objectives (reduction %)	1 Kent Rd, Surrey Hills (reduction %)
Suspended Solids	80%	93.39%
Total Nitrogen	45%	66.02%
Total Phosphorus	45%	88.52%
Gross Pollutants	70%	99.48%

Table 1 - Stormwater quality performance objectives

WSUD Strategy

The development will include the provision of a 35,000-litre rainwater tank. The rainwater tank is to be connected to all landscape irrigation. All stormwater will be directed into an Atlan Vortceptor IVR.025 – 0.026 (26L/s) for tertiary treatment prior to discharge into LPOD.

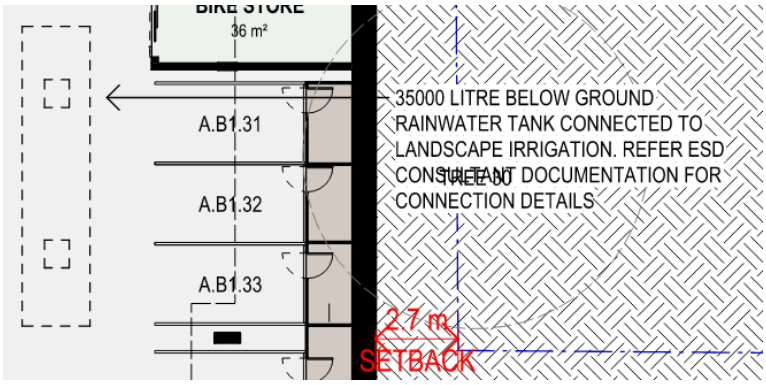


Figure 3 – Location Rainwater Tank

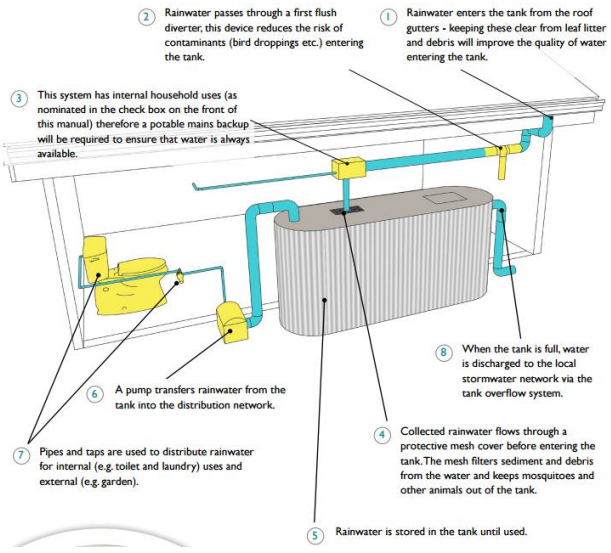


Figure 4 – Cross-section Tank (City of Port Phillip)

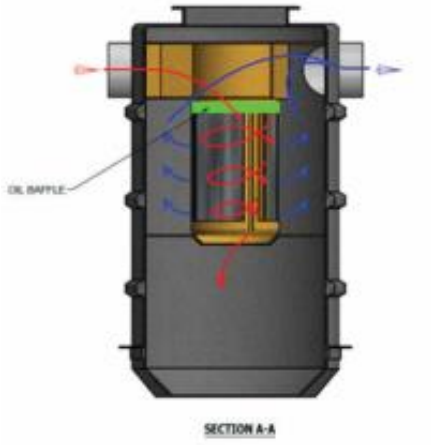


Figure 5 – Atlan Vortceptor IVR.025

Rainwater Reuse

Inputs

Catchment Area	3089 sqm
Number of Bedrooms	0
Bin Washout	No
Irrigation Area	2345 sqm
Tank Capacity	35,000 Litre

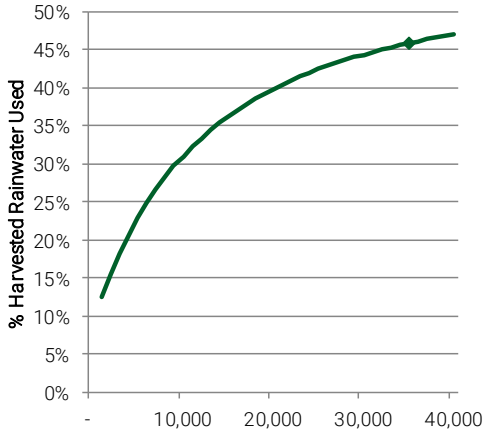
Outputs

% Served by Rainwater	35.0%
% Harvested Rainwater Used	72.6%
Total Potable Water Saved	622,736 Litre

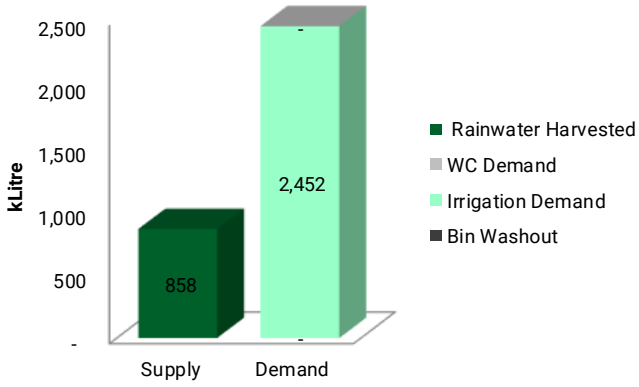
Rainwater Balance (Monthly Averages)

Month	Rainwater Harvested (L)	Irrigation Demand (L)	WC Demand (L)	Bin Washout (L)
Jan	59,338	362,814	0	0
Feb	71,237	328,665	0	0
Mar	59,746	168,594	0	0
Apr	70,020	161,398	0	0
May	67,766	166,538	0	0
Jun	64,201	75,889	0	0
Jul	52,381	77,321	0	0
Aug	63,911	77,321	0	0
Sep	84,234	221,830	0	0
Oct	82,517	226,015	0	0
Nov	104,381	220,435	0	0
Dec	78,097	365,622	0	0
Total	857,828	2,452,442	0	0
Equivalent STORM tool		336		0

Tank Sizing



Supply-Demand



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 Vorteceptor operates effectively:

Item	Description	Maintenance Interval
Atlan Vorteceptor	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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	A.LG.01, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 08.12.2025
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	110	suburban
Unconditioned*	3.8	**NatHERS climate zone**
Total	113.8	62 Moorabbin Airport
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

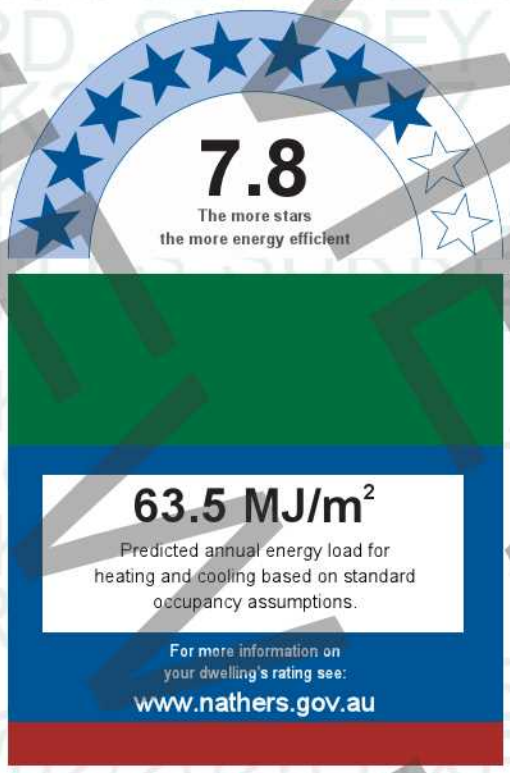
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	51.3	12.2
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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]
B1 basement- Building A	basementCarPark	2293.1
Kitchen/Living	kitchen	37.7
Entry/ passage	dayTime	23
Study	dayTime	8.4
Ensuite 1	nightTime	5.1
Laundry	unconditioned	3.8
Ensuite	nightTime	3
Bed 2 entry	dayTime	2.7
Bedroom 2	bedroom	13.1
Bedroom 1 entry	dayTime	5.1
Bedroom 1	bedroom	8.9
Pantry	dayTime	3.5

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-057-13 A	Capral 900 Sliding Door DG 6EA/12Ar/6	3.19	0.48	0.46	0.5
CAP-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	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*
Kitchen/Living	CAP-057-13 A	Opening 14	2920	4000	sliding	45.0	N	No
Kitchen/Living	CAP-061-06 A	Opening 15	2920	1200	awning	60.0	N	No
Kitchen/Living	CAP-061-06 A	Opening 12	2920	1200	awning	60.0	W	No
Entry/ passage	CAP-061-06 A	Opening 13	2920	1200	awning	60.0	W	No
Study	CAP-061-06 A	Opening 18	2920	1200	awning	60.0	N	No
Bedroom 2	CAP-061-06 A	Opening 16	2920	1200	awning	60.0	N	No

*Refer to glossary.

Bedroom 1	CAP-057-13 A	Opening 17	2920	2480	sliding	45.0	N	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 Kent Road - External Concrete Retaining Wall	0.5	Medium		No
2	1 Kent Road - Externall Concrete Wall	0.5	Medium		No
3	1 Kent Road - Externall Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
4	1 Kent Road - Internal Plasterboard/Intertenancy	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

*Refer to glossary.

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
B1 basement- Building A	1	2800	11601	S	0	No
B1 basement- Building A	1	2800	22576	W	0	No
B1 basement- Building A	1	2800	12046	N	0	No
B1 basement- Building A	1	2800	29464	W	0	No
B1 basement- Building A	1	2800	40160	S	0	No
B1 basement- Building A	1	2800	32320	E	0	No
B1 basement- Building A	1	2800	4924	N	0	No
B1 basement- Building A	1	2800	19730	E	0	No
B1 basement- Building A	1	2800	4793	S	0	No
B1 basement- Building A	1	2800	16195	E	0	No
B1 basement- Building A	1	2800	39740	N	0	No
B1 basement- Building A	2	2800	4935	W	0	No
B1 basement- Building A	2	2800	9573	S	0	No
B1 basement- Building A	2	2800	7487	W	0	No
B1 basement- Building A	2	2800	9398	N	0	No
B1 basement- Building A	1	2800	3827	W	0	No
Kitchen/Living	3	3200	3324	S	6887	Yes
Kitchen/Living	3	3200	8918	N	0	Yes
Kitchen/Living	3	3200	1846	W	0	Yes
Kitchen/Living	3	3200	1331	W	0	Yes
Kitchen/Living	3	3200	1063	W	0	Yes
Entry/ passage	4	3200	2031	S	0	No
Entry/ passage	4	3200	1098	E	0	No
Entry/ passage	3	3200	3431	W	3429	Yes
Entry/ passage	4	3200	12218	S	0	No
Entry/ passage	4	3200	391	E	0	No
Study	4	3200	4634	E	0	No
Study	3	3200	1821	N	0	Yes
Bedroom 2	3	3200	3472	N	0	Yes
Bedroom 1	3	3200	1456	E	0	Yes
Bedroom 1	3	3200	3000	N	0	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	150.4	

*Refer to glossary.

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
B1 basement- Building A	FR5 - 200mm concrete slab	2293.1	Enclosed	R0.0	none
Kitchen/Living	FR5 - 200mm concrete slab	21.2	Enclosed	R2.3	Timber
Kitchen/Living	FR5 - 200mm concrete slab	2.9	Enclosed	R2.3	Timber
Kitchen/Living	FR5 - 200mm concrete slab	13.7	Enclosed	R2.3	Timber
Entry/ passage	FR5 - 200mm concrete slab	7.5	Elevated	R2.3	Timber
Entry/ passage	FR5 - 200mm concrete slab	15.5	Enclosed	R2.3	Timber
Study	FR5 - 200mm concrete slab	8.4	Enclosed	R2.3	Carpet
Ensuite 1	FR5 - 200mm concrete slab	5.1	Enclosed	R2.3	Tiles
Laundry	FR5 - 200mm concrete slab	0.8	Enclosed	R2.3	Timber
Laundry	FR5 - 200mm concrete slab	3.1	Elevated	R2.3	Timber
Ensuite	FR5 - 200mm concrete slab	3	Enclosed	R2.3	Tiles
Bed 2 entry	FR5 - 200mm concrete slab	2.7	Enclosed	R2.3	Carpet
Bedroom 2	FR5 - 200mm concrete slab	13.1	Enclosed	R2.3	Carpet
Bedroom 1 entry	FR5 - 200mm concrete slab	5.1	Enclosed	R2.3	Timber
Bedroom 1	FR5 - 200mm concrete slab	8.9	Enclosed	R2.3	Carpet
Pantry	FR5 - 200mm concrete slab	3.5	Enclosed	R2.3	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
B1 basement- Building A	FR5 - 200mm concrete slab	R2.3	No
B1 basement- Building A	Plasterboard	R0.0	No
Kitchen/Living	Plasterboard	R2.3	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Entry/ passage	8	Downlights	80	80	Sealed
Study	3	Downlights	80	80	Sealed
Ensuite 1	2	Downlights	80	80	Sealed
Ensuite 1	1	Exhaust Fans	250	250	Sealed
Laundry	2	Downlights	80	80	Sealed
Ensuite	2	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed

*Refer to glossary.

Bed 2 entry	2	Downlights	80	80	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
Bedroom 1 entry	2	Downlights	80	80	Sealed
Bedroom 1	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*

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.			

*Refer to glossary.

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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	A.LG.12, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 08.12.2025
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	134.3	suburban
Unconditioned*	4.5	**NatHERS climate zone**
Total	138.8	62 Moorabbin Airport
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	81.8	3.3
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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]
B1 basement- Building A	basementCarPark	2260.4
Laundry	dayTime	4.5
Storage	dayTime	2.3
Bathroom 1	unconditioned	4.5
Entry/ Passage	dayTime	14.9
Bedroom 1	bedroom	13.5
Bedroom 2	bedroom	8.6
WIR 1	nightTime	5.3
Pantry	dayTime	6.3
Ensuite	nightTime	9.3
WIR 2	nightTime	5
Bedroom 3	bedroom	15.1
Kitchen/Living 1	kitchen	49.4

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-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	0.4	0.38	0.42
CAP-055-52 A	Capral 419 Flushline Fixed Window DG 6/12Ar/6EA	2.71	0.58	0.55	0.61
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-061-06 A	Opening 33	2920	1000	awning	60.0	S	No
Bedroom 1	CAP-055-52 A	Opening 37	2920	1400	fixed	0.0	S	No
WIR 1	CAP-061-06 A	Opening 32	2920	1200	awning	60.0	S	No
Bedroom 3	CAP-057-13 A	Opening 35	2920	2480	sliding	45.0	S	No

*Refer to glossary.

Bedroom 3	CAP-061-06 A	Opening 34	2920	1200	awning	60.0	E	No
Kitchen/Living 1	CAP-061-06 A	Opening 19	2920	900	awning	60.0	S	No
Kitchen/Living 1	CAP-057-13 A	Opening 20	2920	3180	sliding	45.0	E	No
Kitchen/Living 1	CAP-061-06 A	Opening 36	2920	1200	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
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 Kent Road - External Concrete Retaining Wall	0.5	Medium		No
2	1 Kent Road - Externall Concrete Wall	0.5	Medium		No

*Refer to glossary.

3	1 Kent Road - Internal Plasterboard/Intertenancy	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
4	1 Kent Road - Externall Concrete 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)
B1 basement- Building A	1	2800	11738	S	0	No
B1 basement- Building A	1	2800	22576	W	0	No
B1 basement- Building A	1	2800	12046	N	0	No
B1 basement- Building A	1	2800	29464	W	0	No
B1 basement- Building A	1	2800	40160	S	0	No
B1 basement- Building A	1	2800	32320	E	0	No
B1 basement- Building A	1	2800	4924	N	0	No
B1 basement- Building A	1	2800	19730	E	0	No
B1 basement- Building A	1	2800	4793	S	0	No
B1 basement- Building A	1	2800	16195	E	0	No
B1 basement- Building A	1	2800	32892	N	0	No
B1 basement- Building A	2	2800	4824	W	0	No
B1 basement- Building A	2	2800	2725	S	0	No
B1 basement- Building A	2	2800	7487	W	0	No
B1 basement- Building A	2	2800	9554	N	0	No
B1 basement- Building A	1	2800	3964	W	0	No
Laundry	3	3200	355	N	0	No
Laundry	3	3200	334	E	0	No
Laundry	3	3200	2211	N	0	No
Laundry	3	3200	1804	W	0	No
Storage	3	3200	359	W	0	No
Storage	3	3200	1616	E	0	No
Storage	3	3200	1459	N	0	No
Bathroom 1	3	3200	1741	W	0	No
Entry/ Passage	3	3200	1128	N	0	No
Entry/ Passage	3	3200	1806	W	0	No
Bedroom 1	4	3200	1410	S	1354	Yes
Bedroom 1	4	3200	2487	S	3864	Yes
Bedroom 1	3	3200	4213	W	0	No
WIR 1	4	3200	1554	W	8200	Yes

*Refer to glossary.

WIR 1	4	3200	2003	S	0	Yes
Pantry	3	3200	1858	N	0	No
Ensuite	3	3200	3523	N	0	No
WIR 2	3	3200	2227	N	0	No
Bedroom 3	4	3200	3416	S	6091	Yes
Bedroom 3	4	3200	3570	E	0	Yes
Bedroom 3	3	3200	3405	N	0	No
Kitchen/Living 1	4	3200	2631	S	0	Yes
Kitchen/Living 1	4	3200	407	S	0	Yes
Kitchen/Living 1	4	3200	4273	S	0	Yes
Kitchen/Living 1	4	3200	5968	E	3382	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	166.1	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
B1 basement- Building A	FR5 - 200mm concrete slab	2260.4	Enclosed	R0.0	none
Laundry	FR5 - 200mm concrete slab	3.1	Enclosed	R2.3	Timber
Laundry	FR5 - 200mm concrete slab	1.4	Enclosed	R2.3	Timber
Storage	FR5 - 200mm concrete slab	2.3	Enclosed	R2.3	Timber
Bathroom 1	FR5 - 200mm concrete slab	4.5	Enclosed	R2.3	Tiles
Entry/ Passage	FR5 - 200mm concrete slab	0.7	Enclosed	R2.3	Timber
Entry/ Passage	FR5 - 200mm concrete slab	14.2	Enclosed	R2.3	Timber
Bedroom 1	FR5 - 200mm concrete slab	11.7	Enclosed	R2.3	Carpet
Bedroom 1	FR5 - 200mm concrete slab	1.8	Enclosed	R2.3	Carpet
Bedroom 2	FR5 - 200mm concrete slab	8.6	Enclosed	R2.3	Carpet
WIR 1	FR5 - 200mm concrete slab	5.3	Enclosed	R2.3	Carpet
Pantry	FR5 - 200mm concrete slab	6.3	Enclosed	R2.3	Timber
Ensuite	FR5 - 200mm concrete slab	9.3	Enclosed	R2.3	Tiles
WIR 2	FR5 - 200mm concrete slab	5	Enclosed	R2.3	Carpet
Bedroom 3	FR5 - 200mm concrete slab	15.1	Enclosed	R2.3	Carpet
Kitchen/Living 1	FR5 - 200mm concrete slab	49.4	Enclosed	R2.3	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
B1 basement- Building A	FR5 - 200mm concrete slab	R2.3	No

*Refer to glossary.

B1 basement- Building A	Plasterboard	R0.0	No
Bedroom 1	Plasterboard	R2.3	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Storage	1	Downlights	80	80	Sealed
Bathroom 1	2	Downlights	80	80	Sealed
Bathroom 1	1	Exhaust Fans	250	250	Sealed
Entry/ Passage	4	Downlights	80	80	Sealed
Bedroom 1	5	Downlights	80	80	Sealed
Bedroom 2	3	Downlights	80	80	Sealed
WIR 1	1	Downlights	80	80	Sealed
Pantry	2	Downlights	80	80	Sealed
Ensuite	3	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR 2	1	Downlights	80	80	Sealed
Bedroom 3	5	Downlights	80	80	Sealed
Kitchen/Living 1	20	Downlights	80	80	Sealed
Kitchen/Living 1	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.	

*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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	A.01.03, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 08.12.2025
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	73.5	suburban
Unconditioned*	4.6	**NatHERS climate zone**
Total	78.1	62 Moorabbin Airport
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

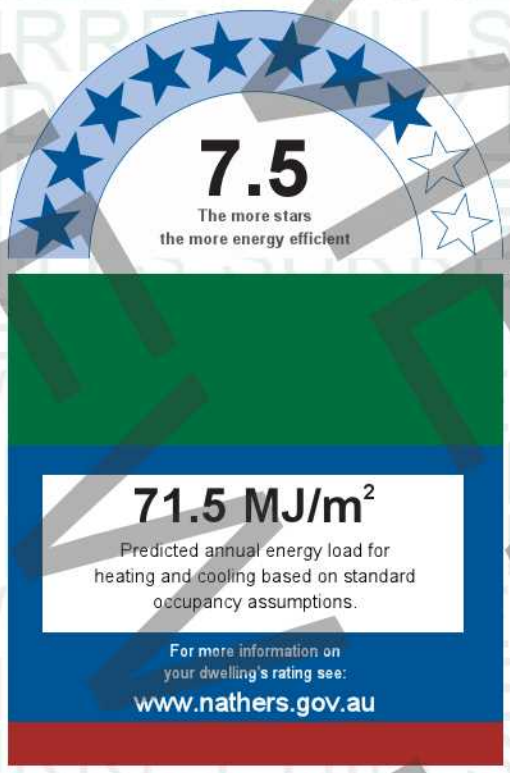
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	60.5	11
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	N
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	10.7
Bathroom	unconditioned	4.6
Ensuite	nightTime	5
Bedroom 2	bedroom	10.7
Bedroom 2 entry	dayTime	4.2
Passage	dayTime	1.7
Kitchen/Living	kitchen	38.3
Pantry	dayTime	2.8

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-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	0.4	0.38	0.42
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-061-06 A	Opening 21	2920	1000	awning	60.0	S	No
Bedroom 2	CAP-057-13 A	Opening 30	2920	2780	sliding	45.0	N	No
Bedroom 2	CAP-061-06 A	Opening 19	2920	1000	awning	60.0	W	No
Kitchen/Living	CAP-057-13 A	Opening 20	2920	4150	sliding	45.0	W	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 Kent Road - Externall Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1 Kent Road - Internal Plasterboard/Intertenancy	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 1	1	3200	1971	S	0	Yes
Bedroom 1	2	3200	964	S	0	No
Bedroom 1	2	3200	3665	E	0	No
Bedroom 1	2	3200	182	N	0	No
Bathroom	1	3200	1791	S	0	Yes
Ensuite	1	3200	2581	S	0	Yes

*Refer to glossary.

Bedroom 2	1	3200	2899	N	4363	Yes
Bedroom 2	1	3200	1225	W	0	Yes
Bedroom 2	1	3200	2451	W	0	Yes
Bedroom 2	1	3200	2899	S	0	Yes
Bedroom 2 entry	1	3200	154	N	0	Yes
Kitchen/Living	2	3200	4345	E	0	No
Kitchen/Living	2	3200	4800	N	0	No
Kitchen/Living	1	3200	1400	W	0	Yes
Kitchen/Living	1	3200	4280	W	3438	Yes
Pantry	2	3200	1199	E	0	No
Pantry	2	3200	2388	N	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	81.3	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	FR5 - 200mm concrete slab	8.2	Enclosed	R0.0	Carpet
Bedroom 1	FR5 - 200mm concrete slab	2.5	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	2.4	Enclosed	R0.0	Tiles
Bathroom	FR5 - 200mm concrete slab	2.2	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	1.8	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	3.3	Enclosed	R0.0	Tiles
Bedroom 2	FR5 - 200mm concrete slab	10.7	Enclosed	R0.0	Carpet
Bedroom 2 entry	FR5 - 200mm concrete slab	4	Enclosed	R0.0	Carpet
Bedroom 2 entry	FR5 - 200mm concrete slab	0.2	Enclosed	R0.0	Carpet
Passage	FR5 - 200mm concrete slab	1.7	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	38.3	Enclosed	R0.0	Timber
Pantry	FR5 - 200mm concrete slab	2.8	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bedroom 1	Plasterboard	R2.3	No
Bathroom	Plasterboard	R2.3	No
Ensuite	Plasterboard	R2.3	No
Bedroom 2	Plasterboard	R2.3	No

Ceiling *penetrations**

*Refer to glossary.

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bedroom 1	4	Downlights	80	80	Sealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Ensuite	2	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
Bedroom 2	4	Downlights	80	80	Sealed
Bedroom 2 entry	1	Downlights	80	80	Sealed
Passage	1	Downlights	80	80	Sealed
Kitchen/Living	16	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Pantry	1	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]
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

*Refer to glossary.

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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	A. 02.01, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors	
Type	New Home

Plans

Main plan	131135 / 08.12.2025
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	228.6	suburban
Unconditioned*	3.4	**NatHERS climate zone**
Total	232	62 Moorabbin Airport
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

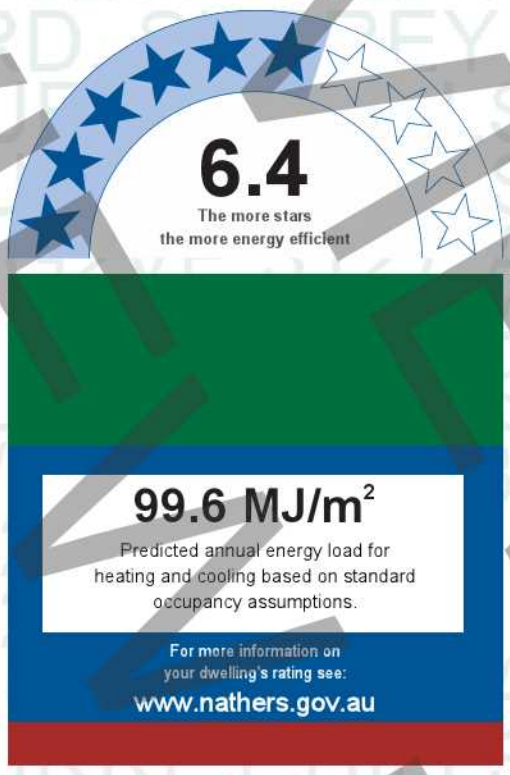
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	82.2	17.4
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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 passage	dayTime	28.7
Passage 1	dayTime	4.9
Passage 2	dayTime	2.2
Bedroom 1	bedroom	13.3
Pantry	dayTime	7.2
Living 21	living	17.6
Bedroom 2	bedroom	12.6
Bathroom	dayTime	9.2
Ensuite	nightTime	8.7
WIR	nightTime	8.5
M Bedroom	bedroom	25.4
Powder rm	unconditioned	3.4
Laundry	dayTime	5.6
Kitchen/Living	kitchen	84.8

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-061-07 A	Capral 50 Series Awning in 400 Series DG 6SE-12-6EA	4.4	0.29	0.28	0.3
CAP-057-12 A	Capral 900 Sliding Door DG 6AB/12Ar/6	3.81	0.31	0.29	0.33
CAP-055-49 A	Capral 419 Flushline Fixed Window DG 638CPGn/12Ar/6	2.7	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*
Entry passage	CAP-061-07 A	Opening 67	3150	1553	awning	60.0	N	No
Bedroom 1	CAP-057-12 A	Opening 60	3150	1500	sliding	45.0	S	No
Pantry	CAP-061-07 A	Opening 89	3150	995	awning	60.0	S	No

*Refer to glossary.

Living 21	CAP-061-07 A	Opening 78	3150	883	awning	60.0	S	No
Living 21	CAP-055-49 A	Opening 76	3150	1003	fixed	0.0	SE	No
Living 21	CAP-057-12 A	Opening 59	3150	2160	sliding	45.0	E	No
Bedroom 2	CAP-055-49 A	Opening 92	3150	1200	fixed	0.0	E	No
M Bedroom	CAP-061-07 A	Opening 73	3150	1229	awning	60.0	E	No
M Bedroom	CAP-055-49 A	Opening 72	3150	1099	fixed	0.0	E	No
M Bedroom	CAP-055-49 A	Opening 71	3150	826	fixed	0.0	NE	No
M Bedroom	CAP-055-49 A	Opening 70	3150	1016	fixed	0.0	NE	No
M Bedroom	CAP-055-49 A	Opening 69	3150	1180	fixed	0.0	N	No
M Bedroom	CAP-057-12 A	Opening 58	3150	2850	sliding	45.0	N	No
Kitchen/Living	CAP-057-12 A	Opening 57	3150	2450	sliding	45.0	N	No
Kitchen/Living	CAP-055-49 A	Opening 66	3150	1138	fixed	0.0	N	No
Kitchen/Living	CAP-055-49 A	Opening 65	3150	1216	fixed	0.0	N	No
Kitchen/Living	CAP-055-49 A	Opening 64	3150	953	fixed	0.0	N	No
Kitchen/Living	CAP-055-49 A	Opening 63	3150	1017	fixed	0.0	NW	No
Kitchen/Living	CAP-055-49 A	Opening 62	3150	1120	fixed	0.0	NW	No
Kitchen/Living	CAP-055-49 A	Opening 42	3150	1237	fixed	0.0	W	No
Kitchen/Living	CAP-061-07 A	Opening 90	3150	1237	awning	60.0	W	No
Kitchen/Living	CAP-055-49 A	Opening 91	3150	1237	fixed	0.0	W	No
Kitchen/Living	CAP-057-12 A	Opening 61	3150	2600	sliding	45.0	W	No
Kitchen/Living	CAP-055-49 A	Opening 82	3150	1005	fixed	0.0	W	No
Kitchen/Living	CAP-055-49 A	Opening 83	3150	932	fixed	0.0	W	No
Kitchen/Living	CAP-055-49 A	Opening 84	3150	882	fixed	0.0	W	No
Kitchen/Living	CAP-061-07 A	Opening 87	3150	1082	awning	60.0	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					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
Velux:VEL-010-01 W	VELUX VS - Ventilating Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.53	0.21	0.2	0.22

Roof window* *schedule*

*Refer to glossary.

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	Velux:VEL-010-01 W	Element 1	0.0	1.8	0	N	None	None
Kitchen/Living	Velux:VEL-010-01 W	Element 2	0.0	1.8	0	N	None	None

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 Kent Road - Externall Concrete Wall	0.6	Dark	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1 Kent Road - Metal cladding	0.6	Dark	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)
Entry passage	1	3520	2604	S	0	Yes
Entry passage	1	3520	1115	E	0	Yes
Entry passage	2	3520	586	S	0	Yes
Entry passage	1	3520	1616	N	962	Yes
Entry passage	1	3520	951	W	0	Yes
Bedroom 1	1	3520	896	S	135	Yes
Bedroom 1	1	3520	1578	S	110	Yes
Bedroom 1	1	3520	881	S	0	Yes
Pantry	1	3520	1032	S	0	Yes
Living 21	1	3520	1683	S	138	Yes

*Refer to glossary.

Living 21	1	3520	1025	S	504	Yes
Living 21	1	3520	885	SE	826	Yes
Living 21	1	3520	1089	SE	1145	Yes
Living 21	1	3520	3278	E	1152	Yes
Bedroom 2	1	3520	1244	E	1184	Yes
Bedroom 2	2	3520	1693	E	1398	Yes
WIR	1	3520	1156	E	1383	Yes
WIR	1	3520	1117	E	1265	Yes
M Bedroom	1	3520	1455	E	1157	Yes
M Bedroom	1	3520	1150	E	1433	Yes
M Bedroom	1	3520	854	NE	1508	Yes
M Bedroom	1	3520	1073	NE	1258	Yes
M Bedroom	1	3520	1210	N	1028	Yes
M Bedroom	1	3520	3052	N	1009	Yes
M Bedroom	1	3520	1455	N	1003	Yes
Kitchen/Living	1	3520	371	N	901	Yes
Kitchen/Living	1	3520	2565	N	901	Yes
Kitchen/Living	1	3520	1181	N	0	Yes
Kitchen/Living	1	3520	1324	N	1001	Yes
Kitchen/Living	1	3520	997	N	1227	Yes
Kitchen/Living	1	3520	1059	NW	1425	Yes
Kitchen/Living	1	3520	1175	NW	1296	Yes
Kitchen/Living	1	3520	1340	W	1196	Yes
Kitchen/Living	1	3520	1365	W	1030	Yes
Kitchen/Living	1	3520	2450	W	1030	Yes
Kitchen/Living	1	3520	1303	W	1030	Yes
Kitchen/Living	1	3520	2596	W	1030	Yes
Kitchen/Living	1	3520	1087	W	1030	Yes
Kitchen/Living	1	3520	974	W	1093	Yes
Kitchen/Living	1	3520	962	W	1016	Yes
Kitchen/Living	1	3520	1087	SW	583	Yes
Kitchen/Living	1	3520	1212	S	264	Yes
Kitchen/Living	1	3520	1214	S	0	Yes
Kitchen/Living	1	3520	1283	S	0	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	289.2	

Floor *type*

*Refer to glossary.

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry passage	FR5 - 200mm concrete slab	28.7	Enclosed	R0.0	Timber
Passage 1	FR5 - 200mm concrete slab	4.9	Enclosed	R0.0	Timber
Passage 2	FR5 - 200mm concrete slab	2.2	Enclosed	R0.0	Timber
Bedroom 1	FR5 - 200mm concrete slab	13.3	Enclosed	R0.0	Carpet
Pantry	FR5 - 200mm concrete slab	7.2	Enclosed	R0.0	Timber
Living 21	FR5 - 200mm concrete slab	17.6	Enclosed	R0.0	Timber
Bedroom 2	FR5 - 200mm concrete slab	12.6	Enclosed	R0.0	Carpet
Bathroom	FR5 - 200mm concrete slab	9.2	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	8.7	Enclosed	R0.0	Tiles
WIR	FR5 - 200mm concrete slab	8.5	Enclosed	R0.0	Carpet
M Bedroom	FR5 - 200mm concrete slab	25.4	Enclosed	R0.0	Carpet
Powder rm	FR5 - 200mm concrete slab	3.4	Enclosed	R0.0	Tiles
Laundry	FR5 - 200mm concrete slab	5.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 200mm concrete slab	84.8	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Entry passage	Plasterboard	R4.6	No
Passage 1	Plasterboard	R4.6	No
Passage 2	Plasterboard	R4.6	No
Bedroom 1	Plasterboard	R4.6	No
Pantry	Plasterboard	R4.6	No
Living 21	Plasterboard	R4.6	No
Bedroom 2	Plasterboard	R4.6	No
Bathroom	Plasterboard	R4.6	No
Ensuite	Plasterboard	R4.6	No
WIR	Plasterboard	R4.6	No
M Bedroom	Plasterboard	R4.6	No
Powder rm	Plasterboard	R4.6	No
Laundry	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Entry passage	8	Downlights	80	80	Sealed
Passage 1	2	Downlights	80	80	Sealed
Passage 2	1	Downlights	80	80	Sealed

*Refer to glossary.

Bedroom 1	4	Downlights	80	80	Sealed
Pantry	2	Downlights	80	80	Sealed
Living 21	6	Downlights	80	80	Sealed
Bedroom 2	4	Downlights	80	80	Sealed
Bathroom	4	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Ensuite	3	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR	3	Downlights	80	80	Sealed
M Bedroom	9	Downlights	80	80	Sealed
Powder rm	2	Downlights	80	80	Sealed
Powder rm	1	Exhaust Fans	250	250	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Kitchen/Living	20	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]
SlabExt:Slab - Suspended Slab - External Insul : 200mm: 200mm Suspended Slab - External Insul	0.0	0.4	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

*Refer to glossary.

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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	A.02.02, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 05.02.2026
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	196.2	suburban
Unconditioned*	2.8	**NatHERS climate zone**
Total	199	62 Moorabbin Airport
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	71.1	20.7
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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	dayTime	12
Ensuite	nightTime	11.5
M Bedroom	bedroom	15.1
Pwdr rm	unconditioned	2.8
Laundry	dayTime	4
Bathrm 1	dayTime	5.9
Bedroom 1	bedroom	11.6
Pantry	dayTime	11.5
Bedroom 2	bedroom	16.4
Kitchen/Living	kitchen	39.4
Hallway	dayTime	9.7
Living	living	38.2
Entry/study	dayTime	17.7
Storage	dayTime	3.7

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-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-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	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*
M Bedroom	CAP-057-13 A	Opening 73	3000	2500	sliding	45.0	N	No
Bedroom 1	CAP-057-13 A	Opening 99	3000	2500	sliding	45.0	S	No
Pantry	CAP-055-52 A	Opening 97	3000	1077	fixed	0.0	S	No

*Refer to glossary.

Bedroom 2	CAP-061-06 A	Opening 98	3000	1100	awning	60.0	S	No
Bedroom 2	CAP-055-52 A	Opening 100	3000	637	fixed	0.0	S	No
Kitchen/Living	CAP-057-13 A	Opening 88	3000	2400	sliding	45.0	W	No
Kitchen/Living	CAP-055-52 A	Opening 91	3000	939	fixed	0.0	W	No
Kitchen/Living	CAP-055-52 A	Opening 92	3000	815	fixed	0.0	SW	No
Kitchen/Living	CAP-055-52 A	Opening 93	3000	907	fixed	0.0	SW	No
Kitchen/Living	CAP-061-06 A	Opening 94	3000	1318	awning	60.0	S	No
Kitchen/Living	CAP-055-52 A	Opening 95	3000	1318	fixed	0.0	S	No
Kitchen/Living	CAP-057-13 A	Opening 87	3000	2300	sliding	45.0	N	No
Living	CAP-061-06 A	Opening 57	3150	951	awning	60.0	N	No
Living	CAP-055-52 A	Opening 80	3000	953	fixed	0.0	N	No
Living	CAP-055-52 A	Opening 81	3000	950	fixed	0.0	NW	No
Living	CAP-055-52 A	Opening 82	3000	950	fixed	0.0	NW	No
Living	CAP-057-13 A	Opening 75	3000	2600	sliding	45.0	W	No
Living	CAP-057-13 A	Opening 85	3000	2300	sliding	45.0	S	No
Entry/study	CAP-057-13 A	Opening 86	3000	2950	sliding	66.0	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
Velux:VEL-010-01 W	VELUX VS - Ventilating Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.53	0.21	0.2	0.22

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	Velux:VEL-010-01 W	Element 1	0.0	1.8	0	N	None	None
Living	Velux:VEL-010-01 W	Element 4	0.0	1.2	0	N	None	None

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 Kent Road - Internal Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
2	1 Kent Road - Externall Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
3	1 Kent Road - Internal Plasterboard/Intertenancy	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)
WIR	1	3520	2394	E	0	No
Ensuite	1	3520	2820	E	0	No
M Bedroom	1	3520	3066	E	0	No
M Bedroom	2	3520	1124	N	1134	Yes
M Bedroom	2	3520	1220	N	1134	Yes
M Bedroom	2	3520	2543	N	1134	Yes
Laundry	3	3520	1401	N	0	No
Bathrm 1	3	3520	2307	E	0	No
Bathrm 1	3	3520	2593	N	0	No
Bedroom 1	2	3520	2996	S	167	Yes
Bedroom 1	3	3520	3864	E	0	No
Pantry	2	3520	549	S	198	Yes
Pantry	2	3520	1294	S	198	Yes
Bedroom 2	2	3520	1217	S	86	Yes
Bedroom 2	2	3520	715	S	86	Yes
Bedroom 2	2	3520	1216	E	287	Yes

*Refer to glossary.

Bedroom 2	2	3520	807	SE	284	Yes
Bedroom 2	2	3520	869	S	278	Yes
Kitchen/Living	2	3520	523	W	1138	Yes
Kitchen/Living	2	3520	1224	W	1138	Yes
Kitchen/Living	2	3520	2482	W	1138	Yes
Kitchen/Living	2	3520	1155	W	1138	Yes
Kitchen/Living	2	3520	1006	W	1292	Yes
Kitchen/Living	2	3520	909	SW	901	Yes
Kitchen/Living	2	3520	990	SW	500	Yes
Kitchen/Living	2	3520	1443	S	69	Yes
Kitchen/Living	2	3520	1496	S	122	Yes
Kitchen/Living	2	3520	731	S	122	Yes
Kitchen/Living	2	3520	2690	N	4799	Yes
Hallway	3	3520	1173	E	0	No
Living	2	3520	846	N	1163	Yes
Living	2	3520	1024	N	1167	Yes
Living	2	3520	998	N	1167	Yes
Living	2	3520	954	N	1362	Yes
Living	2	3520	952	NW	1555	Yes
Living	2	3520	990	NW	1413	Yes
Living	2	3520	1211	W	1241	Yes
Living	2	3520	2672	W	1145	Yes
Living	2	3520	1238	W	1260	Yes
Living	2	3520	471	W	1227	Yes
Living	2	3520	2478	S	4657	Yes
Living	2	3520	712	SW	4788	Yes
Living	2	3520	587	W	2934	Yes
Entry/study	2	3520	3662	W	2735	Yes
Entry/study	2	3520	460	NW	0	Yes
Entry/study	3	3520	1578	E	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	254.3	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
WIR	FR5 - 200mm concrete slab	12	Enclosed	R0.0	Carpet
Ensuite	FR5 - 200mm concrete slab	11.5	Enclosed	R0.0	Tiles

*Refer to glossary.

M Bedroom	FR5 - 200mm concrete slab	15.1	Enclosed	R0.0	Carpet
Pwdr rm	FR5 - 200mm concrete slab	2.8	Enclosed	R0.0	Tiles
Laundry	FR5 - 200mm concrete slab	4	Enclosed	R0.0	Tiles
Bathrm 1	FR5 - 200mm concrete slab	5.9	Enclosed	R0.0	Tiles
Bedroom 1	FR5 - 200mm concrete slab	10	Enclosed	R0.0	Carpet
Bedroom 1	FR5 - 200mm concrete slab	1.6	Elevated	R2.3	Carpet
Pantry	FR5 - 200mm concrete slab	11.5	Enclosed	R0.0	Timber
Bedroom 2	FR5 - 200mm concrete slab	0.5	Elevated	R2.3	Carpet
Bedroom 2	FR5 - 200mm concrete slab	15.8	Enclosed	R0.0	Carpet
Kitchen/Living	FR5 - 200mm concrete slab	39.4	Enclosed	R0.0	Timber
Hallway	FR5 - 200mm concrete slab	9.7	Enclosed	R0.0	Timber
Living	FR5 - 200mm concrete slab	2.6	Elevated	R2.3	Timber
Living	FR5 - 200mm concrete slab	35.6	Enclosed	R0.0	Timber
Entry/study	FR5 - 200mm concrete slab	17.7	Enclosed	R0.0	Timber
Storage	FR5 - 200mm concrete slab	3.7	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
WIR	Plasterboard	R4.6	No
Ensuite	Plasterboard	R4.6	No
M Bedroom	Plasterboard	R4.6	No
Pwdr rm	Plasterboard	R4.6	No
Laundry	Plasterboard	R4.6	No
Bathrm 1	Plasterboard	R4.6	No
Bedroom 1	Plasterboard	R4.6	No
Bedroom 1	Plasterboard	R4.6	No
Pantry	Plasterboard	R4.6	No
Bedroom 2	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No
Hallway	Plasterboard	R4.6	No
Living	Plasterboard	R4.6	No
Living	Plasterboard	R4.6	No
Entry/study	Plasterboard	R4.6	No
Storage	Plasterboard	R4.6	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
WIR	4	Downlights	80	80	Sealed

*Refer to glossary.

Ensuite	4	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
M Bedroom	7	Downlights	80	80	Sealed
Pwdr rm	1	Downlights	80	80	Sealed
Pwdr rm	1	Exhaust Fans	250	250	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bathrm 1	2	Downlights	80	80	Sealed
Bathrm 1	1	Exhaust Fans	250	250	Sealed
Bedroom 1	4	Downlights	80	80	Sealed
Pantry	2	Downlights	80	80	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
Kitchen/Living	16	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Hallway	4	Downlights	80	80	Sealed
Living	18	Downlights	80	80	Sealed
Entry/study	6	Downlights	80	80	Sealed
Storage	1	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]
SlabExt:Slab - Suspended Slab - External Insul : 200mm: 200mm Suspended Slab - External Insul	0.0	0.4	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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	B.GF.03, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 08.12.2025
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	125.4	suburban
Unconditioned*	3.2	**NatHERS climate zone**
Total	128.6	62 Moorabbin Airport
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	15.8
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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]
LG Basement	basementCarPark	2146.1
Laundry	dayTime	4.5
Bathroom 1	unconditioned	3.2
Entry	dayTime	5.5
Ensuite	nightTime	10.3
WIR	dayTime	7.2
Bedroom 1	bedroom	12.9
Bedroom 2	bedroom	12.5
Bedroom 3	bedroom	12.2
Kitchen/Living	kitchen	39.1
Entry/ Passage	dayTime	9.6
Pantry	dayTime	6.3
Bathroom	dayTime	5.4

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
CAP-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	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 1	CAP-057-13 A	Opening 34	2920	1713	sliding	45.0	N	No
Bedroom 2	CAP-061-06 A	Opening 35	2920	1000	awning	60.0	N	No
Bedroom 3	CAP-061-06 A	Opening 20	2920	1200	awning	60.0	N	No
Kitchen/Living	CAP-057-13 A	Opening 31	2920	3868	sliding	45.0	E	No
Kitchen/Living	CAP-057-13 A	Opening 38	2920	3847	sliding	45.0	E	No

*Refer to glossary.

Kitchen/Living	CAP-057-13 A	Opening 19	2920	2350	sliding	45.0	N	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 Kent Road - External Concrete Retaining Wall	0.5	Medium		No
2	1 Kent Road - Internal Plasterboard/Intertenancy	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
3	1 Kent Road - Externall Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

*Refer to glossary.

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
LG Basement	1	2400	40440	W	0	No
LG Basement	1	2400	15400	S	0	No
LG Basement	1	2400	16640	W	0	No
LG Basement	1	2400	26760	S	0	No
LG Basement	1	2400	57000	E	0	No
LG Basement	1	2400	42040	N	0	No
Laundry	2	3200	1865	S	0	No
Laundry	2	3200	255	E	0	No
Entry	2	3200	1406	S	0	No
Ensuite	2	3200	3217	S	0	No
Ensuite	2	3200	3248	W	0	No
WIR	2	3200	2276	W	0	No
Bedroom 1	3	3200	3129	N	0	Yes
Bedroom 1	2	3200	4104	W	0	No
Bedroom 2	3	3200	3057	N	0	Yes
Bedroom 3	3	3200	2962	N	0	Yes
Kitchen/Living	3	3200	1525	S	0	Yes
Kitchen/Living	3	3200	4064	E	0	Yes
Kitchen/Living	3	3200	3928	E	0	Yes
Kitchen/Living	3	3200	4626	N	0	Yes
Pantry	2	3200	3366	S	0	No
Pantry	3	3200	1737	E	0	Yes
Pantry	2	3200	382	S	0	No
Pantry	2	3200	387	W	0	No
Bathroom	2	3200	1931	S	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	172	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
LG Basement	FR5 - 200mm concrete slab	2146.1	Enclosed	R0.0	none
Laundry	FR5 - 200mm concrete slab	4.5	Enclosed	R2.3	Timber
Bathroom 1	FR5 - 200mm concrete slab	3.2	Enclosed	R2.3	Tiles

*Refer to glossary.

Entry	FR5 - 200mm concrete slab	5.5	Enclosed	R2.3	Timber
Ensuite	FR5 - 200mm concrete slab	10.3	Enclosed	R2.3	Tiles
WIR	FR5 - 200mm concrete slab	7.2	Enclosed	R2.3	Carpet
Bedroom 1	FR5 - 200mm concrete slab	4.2	Enclosed	R2.3	Carpet
Bedroom 1	FR5 - 200mm concrete slab	8.6	Enclosed	R2.3	Carpet
Bedroom 2	FR5 - 200mm concrete slab	12.5	Enclosed	R2.3	Carpet
Bedroom 3	FR5 - 200mm concrete slab	12.2	Enclosed	R2.3	Carpet
Kitchen/Living	FR5 - 200mm concrete slab	11.6	Enclosed	R2.3	Timber
Kitchen/Living	FR5 - 200mm concrete slab	27.5	Enclosed	R2.3	Timber
Entry/ Passage	FR5 - 200mm concrete slab	9.6	Enclosed	R2.3	Timber
Pantry	FR5 - 200mm concrete slab	6.3	Enclosed	R2.3	Timber
Bathroom	FR5 - 200mm concrete slab	5.4	Enclosed	R2.3	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
LG Basement	FR5 - 200mm concrete slab	R2.3	No
LG Basement	Plasterboard	R0.0	No
Bedroom 1	Plasterboard	R2.3	No
Kitchen/Living	Plasterboard	R2.3	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bathroom 1	3	Downlights	80	80	Sealed
Bathroom 1	1	Exhaust Fans	250	250	Sealed
Entry	1	Downlights	80	80	Sealed
Ensuite	4	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR	2	Downlights	80	80	Sealed
Bedroom 1	5	Downlights	80	80	Sealed
Bedroom 2	5	Downlights	80	80	Sealed
Bedroom 3	5	Downlights	80	80	Sealed
Kitchen/Living	16	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Entry/ Passage	5	Downlights	80	80	Sealed
Pantry	3	Downlights	80	80	Sealed
Bathroom	3	Downlights	80	80	Sealed

*Refer to glossary.

Bathroom	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.

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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	B. 02.09, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 08.12.2025
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	120.1	suburban
Unconditioned*	3.1	**NatHERS climate zone**
Total	123.2	62 Moorabbin Airport
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

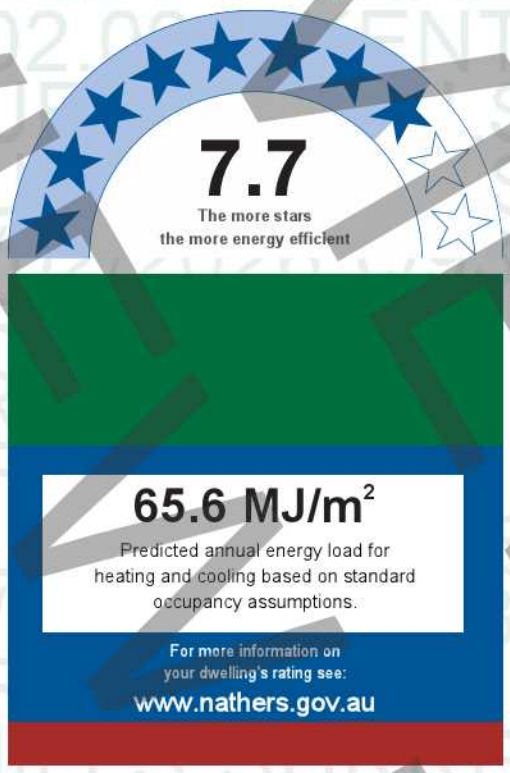
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	51.6	14
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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]
Bathroom	dayTime	6.1
Bed 2 entry	dayTime	6.4
Bedroom 2	bedroom	9.4
Laundry	unconditioned	3.1
Ensuite	nightTime	9.8
WIR	dayTime	9
M Bedroom	bedroom	13.5
Kitchen/Living	kitchen	48.3
Passage	dayTime	3.7
Bedroom 1	bedroom	13.8

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-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	0.4	0.38	0.42
CAP-055-52 A	Capral 419 Flushline Fixed Window DG 6/12Ar/6EA	2.71	0.58	0.55	0.61
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-061-06 A	Opening 38	2920	1000	awning	60.0	E	No
Bedroom 2	CAP-055-52 A	Opening 39	2920	1000	fixed	0.0	E	No
WIR	CAP-055-52 A	Opening 43	2920	1200	fixed	0.0	N	No
M Bedroom	CAP-057-13 A	Opening 51	2920	1800	sliding	45.0	S	No
M Bedroom	CAP-055-52 A	Opening 54	2920	1000	fixed	0.0	E	No
M Bedroom	CAP-061-06 A	Opening 55	2920	1000	awning	60.0	E	No
Kitchen/Living	CAP-057-13 A	Opening 52	2920	1800	sliding	45.0	E	No

*Refer to glossary.

Kitchen/Living	CAP-057-13 A	Opening 53	2920	3200	sliding	45.0	E	No
Bedroom 1	CAP-061-06 A	Opening 50	2920	1440	awning	60.0	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 Kent Road - Internal Plasterboard/Intertenancy	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
2	1 Kent Road - Externall Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (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)
Bathroom	1	3200	2135	S	0	No
Bathroom	1	3200	2933	W	0	No
Bed 2 entry	1	3200	4150	S	0	No
Bedroom 2	1	3200	3216	S	0	No
Bedroom 2	2	3200	2952	E	0	Yes
Bedroom 2	2	3200	1552	N	0	Yes
Laundry	1	3200	1536	W	0	No
Ensuite	2	3200	2012	N	0	Yes
Ensuite	1	3200	865	N	0	No
Ensuite	1	3200	3398	W	0	No
WIR	2	3200	2626	N	0	Yes
M Bedroom	2	3200	2430	S	0	Yes
M Bedroom	2	3200	3493	E	0	Yes
M Bedroom	2	3200	3885	N	0	Yes
Kitchen/Living	2	3200	6513	E	2660	Yes
Kitchen/Living	1	3200	4620	W	0	No
Kitchen/Living	1	3200	404	S	0	No
Kitchen/Living	1	3200	1975	W	0	No
Kitchen/Living	1	3200	310	N	0	No
Kitchen/Living	1	3200	424	W	0	No
Bedroom 1	2	3200	1531	E	0	Yes
Bedroom 1	2	3200	968	N	6706	Yes
Bedroom 1	2	3200	563	E	2718	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	126.3	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bathroom	FR5 - 200mm concrete slab	6.1	Enclosed	R0.0	Tiles
Bed 2 entry	FR5 - 200mm concrete slab	6.4	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 200mm concrete slab	9.4	Enclosed	R0.0	Carpet
Laundry	FR5 - 200mm concrete slab	3.1	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	9.8	Enclosed	R0.0	Tiles
WIR	FR5 - 200mm concrete slab	9	Enclosed	R0.0	Carpet
M Bedroom	FR5 - 200mm concrete slab	13.5	Enclosed	R0.0	Carpet

*Refer to glossary.

Kitchen/Living	FR5 - 200mm concrete slab	48.3	Enclosed	R0.0	Timber
Passage	FR5 - 200mm concrete slab	3.7	Enclosed	R0.0	Timber
Bedroom 1	FR5 - 200mm concrete slab	13.8	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Bedroom 2	Plasterboard	R2.3	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Bathroom	2	Downlights	80	80	Sealed
Bathroom	1	Exhaust Fans	250	250	Sealed
Bed 2 entry	3	Downlights	80	80	Sealed
Bedroom 2	4	Downlights	80	80	Sealed
Laundry	1	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Ensuite	4	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR	3	Downlights	80	80	Sealed
M Bedroom	5	Downlights	80	80	Sealed
Kitchen/Living	19	Downlights	80	80	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Passage	2	Downlights	80	80	Sealed
Bedroom 1	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]
No Data Available				

*Refer to glossary.

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

Generated on 13 Feb 2026 using FirstRate5: 5.5.5a (3.22)

Property

Address	B.03.02, 1 Kent Rd, Surrey Hills, Surrey Hills, VIC, 3127
Lot/DP	-
NCC Class*	Class 2
Floor/all Floors Type	New Home

Plans

Main plan	131135 / 05.02.2026
Prepared by	Woods Bagot

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	176	open
Unconditioned*	3.6	**NatHERS climate zone**
Total	179.6	62 Moorabbin Airport
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	73.1	20.5
Load limits	91	28

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	Y
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]
Pantry	dayTime	8.1
Laundry	dayTime	7.1
Pwdr rm	unconditioned	3.6
Ensuite	nightTime	9.5
WIR	dayTime	7.4
Bath 1	dayTime	6
Study	dayTime	2.6
Bedroom 1	bedroom	12.5
Bedroom 2	bedroom	15.3
M Bedroom	bedroom	16.2
Entry hallway	dayTime	13.9
Hallway 2	dayTime	4.3
Kitchen/Living	kitchen	73.3

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-061-06 A	Capral 50 Series Awning in 400 Series DG 6EA-12Ar-6	4.42	0.4	0.38	0.42
CAP-055-52 A	Capral 419 Flushline Fixed Window DG 6/12Ar/6EA	2.71	0.58	0.55	0.61
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*
Pantry	CAP-061-06 A	Opening 22	3150	1144	awning	60.0	N	No
Bedroom 1	CAP-061-06 A	Opening 20	3150	1400	awning	60.0	S	No
Bedroom 2	CAP-055-52 A	Opening 19	3150	1350	fixed	0.0	S	No
Bedroom 2	CAP-061-06 A	Opening 38	3150	1370	awning	60.0	S	No

*Refer to glossary.

M Bedroom	CAP-057-13 A	Opening 18	3150	2401	sliding	45.0	S	No
Kitchen/Living	CAP-057-13 A	Opening 24	3150	2660	sliding	45.0	N	No
Kitchen/Living	CAP-055-52 A	Opening 25	3150	1290	fixed	0.0	N	No
Kitchen/Living	CAP-055-52 A	Opening 26	3150	986	fixed	0.0	N	No
Kitchen/Living	CAP-055-52 A	Opening 27	3150	977	fixed	0.0	NW	No
Kitchen/Living	CAP-055-52 A	Opening 28	3150	977	fixed	0.0	NW	No
Kitchen/Living	CAP-057-13 A	Opening 13	3150	1700	sliding	45.0	W	No
Kitchen/Living	CAP-057-13 A	Opening 17	3150	3000	sliding	45.0	W	No
Kitchen/Living	CAP-057-13 A	Opening 29	3150	2840	sliding	45.0	W	No
Kitchen/Living	CAP-055-52 A	Opening 30	3150	1397	fixed	0.0	W	No
Kitchen/Living	CAP-055-52 A	Opening 31	3150	1019	fixed	0.0	W	No
Kitchen/Living	CAP-055-52 A	Opening 32	3150	977	fixed	0.0	SW	No
Kitchen/Living	CAP-055-52 A	Opening 33	3150	977	fixed	0.0	SW	No
Kitchen/Living	CAP-061-06 A	Opening 34	3150	977	awning	60.0	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					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
Velux:VEL-010-01 W	VELUX VS - Ventilating Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.53	0.21	0.2	0.22

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	Velux:VEL-010-01 W	Element 1	0.0	1.8	0	N	None	None
Kitchen/Living	Velux:VEL-010-01 W	Element 2	0.0	1.8	0	N	None	None

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

*Refer to glossary.

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 Kent Road - Internal Plasterboard/Intertenancy	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No
2	1 Kent Road - Externall Concrete Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
3	1 Kent Road - Internal Concrete Wall	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)
Pantry	1	3200	2601	E	0	No
Pantry	2	3200	933	N	761	Yes
Pantry	2	3200	1185	N	761	Yes
Pantry	2	3200	1010	N	761	Yes
Laundry	1	3200	1615	E	0	No
Pwdr rm	1	3200	1768	E	0	No
Study	3	3200	1575	E	0	No
Bedroom 1	2	3200	1535	S	357	Yes
Bedroom 1	2	3200	1347	S	357	Yes
Bedroom 1	3	3200	3247	E	0	No
Bedroom 1	3	3200	1191	N	0	No
Bedroom 1	3	3200	1844	E	0	No
Bedroom 2	2	3200	2789	S	319	Yes
Bedroom 2	2	3200	1323	S	319	Yes
M Bedroom	2	3200	1067	S	404	Yes
M Bedroom	2	3200	2345	S	0	Yes
M Bedroom	2	3200	969	S	404	Yes
Entry hallway	1	3200	1683	E	0	No

*Refer to glossary.

Entry hallway	1	3200	6699	N	0	No
Kitchen/Living	2	3200	2660	N	776	Yes
Kitchen/Living	2	3200	1305	N	776	Yes
Kitchen/Living	2	3200	988	N	831	Yes
Kitchen/Living	2	3200	979	NW	889	Yes
Kitchen/Living	2	3200	1033	NW	961	Yes
Kitchen/Living	2	3200	1771	W	1004	Yes
Kitchen/Living	2	3200	567	W	0	Yes
Kitchen/Living	2	3200	1768	S	3323	Yes
Kitchen/Living	2	3200	586	SW	0	Yes
Kitchen/Living	2	3200	3189	W	2366	Yes
Kitchen/Living	2	3200	721	NW	0	Yes
Kitchen/Living	2	3200	1811	N	3331	Yes
Kitchen/Living	2	3200	430	W	0	Yes
Kitchen/Living	2	3200	3057	W	751	Yes
Kitchen/Living	2	3200	1399	W	751	Yes
Kitchen/Living	2	3200	1021	W	857	Yes
Kitchen/Living	2	3200	979	SW	658	Yes
Kitchen/Living	2	3200	1034	SW	343	Yes
Kitchen/Living	2	3200	1054	S	309	Yes
Kitchen/Living	2	3200	1156	S	309	Yes
Kitchen/Living	2	3200	1079	S	309	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	207	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Pantry	FR5 - 200mm concrete slab	8.1	Enclosed	R0.0	Timber
Laundry	FR5 - 200mm concrete slab	7.1	Enclosed	R0.0	Tiles
Pwdr rm	FR5 - 200mm concrete slab	3.6	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	9.5	Enclosed	R0.0	Tiles
WIR	FR5 - 200mm concrete slab	7.4	Enclosed	R0.0	Carpet
Bath 1	FR5 - 200mm concrete slab	6	Enclosed	R0.0	Tiles
Study	FR5 - 200mm concrete slab	2.6	Enclosed	R0.0	Timber
Bedroom 1	FR5 - 200mm concrete slab	12.5	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 200mm concrete slab	12.1	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 200mm concrete slab	3.2	Elevated	R2.3	Carpet

*Refer to glossary.

M Bedroom	FR5 - 200mm concrete slab	0.2	Elevated	R2.3	Carpet
M Bedroom	FR5 - 200mm concrete slab	16.1	Enclosed	R0.0	Carpet
Entry hallway	FR5 - 200mm concrete slab	13.9	Enclosed	R0.0	Timber
Hallway 2	FR5 - 200mm concrete slab	4.3	Enclosed	R0.0	Timber
Kitchen/Living	FR5 - 200mm concrete slab	73.3	Enclosed	R0.0	Timber

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Pantry	Plasterboard	R4.6	No
Laundry	Plasterboard	R4.6	No
Pwdr rm	Plasterboard	R4.6	No
Ensuite	Plasterboard	R4.6	No
WIR	Plasterboard	R4.6	No
Bath 1	Plasterboard	R4.6	No
Study	Plasterboard	R4.6	No
Bedroom 1	Plasterboard	R4.6	No
Bedroom 2	Plasterboard	R4.6	No
Bedroom 2	Plasterboard	R4.6	No
M Bedroom	Plasterboard	R4.6	No
Entry hallway	Plasterboard	R4.6	No
Hallway 2	Plasterboard	R4.6	No
Kitchen/Living	Plasterboard	R4.6	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Pantry	2	Downlights	80	80	Sealed
Laundry	2	Downlights	80	80	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Pwdr rm	1	Downlights	80	80	Sealed
Pwdr rm	1	Exhaust Fans	250	250	Sealed
Ensuite	3	Downlights	80	80	Sealed
Ensuite	1	Exhaust Fans	250	250	Sealed
WIR	2	Downlights	80	80	Sealed
Bath 1	2	Downlights	80	80	Sealed
Bath 1	1	Exhaust Fans	250	250	Sealed
Study	1	Downlights	80	80	Sealed
Bedroom 1	4	Downlights	80	80	Sealed
Bedroom 2	6	Downlights	80	80	Sealed

*Refer to glossary.

M Bedroom	6	Downlights	80	80	Sealed
Entry hallway	4	Downlights	80	80	Sealed
Hallway 2	2	Downlights	80	80	Sealed
Kitchen/Living	28	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]
SlabExt:Slab - Suspended Slab - External Insul : 250mm: 250mm 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.			

*Refer to glossary.

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: Renewable Energy

Inputs Solar PV

Peak Wattage of System	15.0 kWp
Azimuth	0 degrees
Inclination	10 degrees

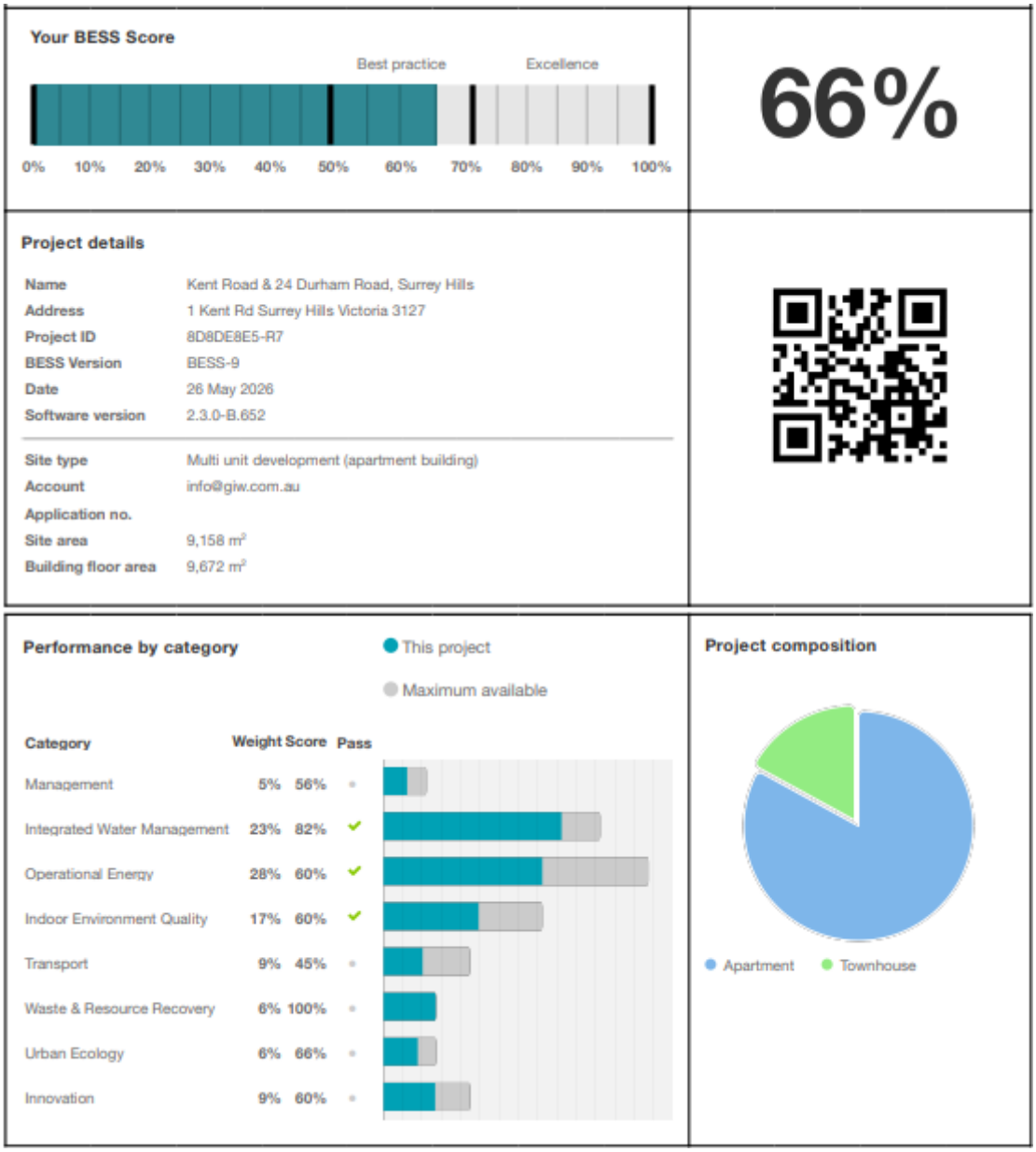
Outputs Solar PV

Electricity Produced per Year	20102 kWh
No. Panels Required	88
Total Roof Area Required	161 sqm
Annual Carbon Savings	22514 kg CO2

Economic Output

Cost of System	22500.0 $
Annual Savings	4020 $
Simple Payback	5.6 Years

Appendix D: BESS Assessment



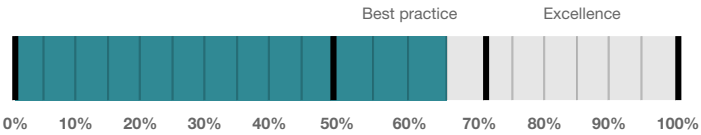
BESS Report

Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 1 Kent Rd Surrey Hills Victoria 3127. 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 Boroondara 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

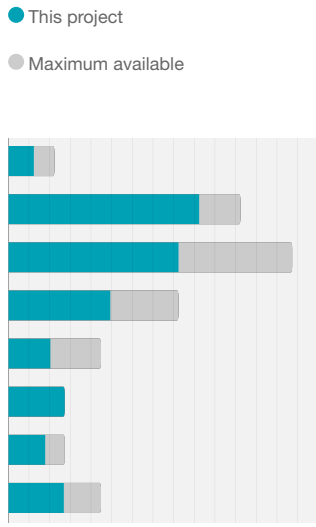


66%

Project details

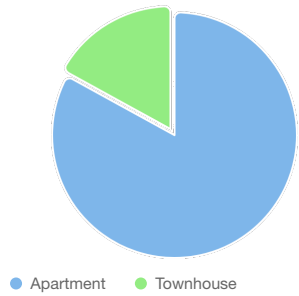
Name	Kent Road & 24 Durham Road, Surrey Hills
Address	1 Kent Rd Surrey Hills Victoria 3127
Project ID	8D8DE8E5-R7
BESS Version	BESS-9
Date	26 May 2026
Software version	2.3.0-B.652
Site type	Multi unit development (apartment building)
Account	info@giw.com.au
Application no.	
Site area	9,158 m^2
Building floor area	9,672 m^2

Performance by category



Category	Weight	Score	Pass
Management	5%	56%	
Integrated Water Management	23%	82%	✓
Operational Energy	28%	60%	✓
Indoor Environment Quality	17%	60%	✓
Transport	9%	45%	
Waste & Resource Recovery	6%	100%	
Urban Ecology	6%	66%	
Innovation	9%	60%	

Project composition



Buildings

Name	Height	Footprint	% of total footprint
1 Kent	5	4,870 m²	100%

Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	Building	% of total area
Townhouse				
Nuns Quarters - Duplex 6 and 7	2	141 m²	1 Kent	2%
St Joseph - Duplex 1	1	217 m²	1 Kent	2%
St Joseph - Duplex 11	1	159 m²	1 Kent	1%
St Joseph - Duplex 10	1	132 m²	1 Kent	1%
St Joseph - Duplex 9	1	148 m²	1 Kent	1%
St Joseph - Duplex 8	1	132 m²	1 Kent	1%
St Joseph - Duplex 5	1	148 m²	1 Kent	1%
St Joseph - Duplex 4	1	132 m²	1 Kent	1%
St Joseph - Duplex 3	1	130 m²	1 Kent	1%
St Joseph - Duplex 2	1	167 m²	1 Kent	1%
Total	**11**	**1,647 m²**	**17%**	
Apartment				
Middlesex Residence - 2 Bed GF.05 - GF.08, A01.01-A01.04 - G & L1	8	93.0 m²	1 Kent	7%

Middlesex Residence - 3 Bed GF.09, GF.10, A01.05 & A01.06 - G & L1	4	156 m²	1 Kent	6%
Durham Residence - 3 Bed B1.08, & B1.09, B2.08, B2.09 - L1 & 2	4	141 m²	1 Kent	5%
Middlesex Residence - 2 Bed GF11 & G12 , A1.07 & 1.09 A- G	4	122 m²	1 Kent	5%
Durham Residence - 3 Bed B1.01, B1.04, B2.01 & B2.04 - L1 & 2	4	99.0 m²	1 Kent	4%
Middlesex Residence - Penthouse A2.02 & A2.03 - L2	2	221 m²	1 Kent	4%
Durham Residence - 3 Bedroom B2.10 & B2.11	2	151 m²	1 Kent	3%
Durham Residence - Pent House B303 & B303	2	165 m²	1 Kent	3%
Middlesex Residence - 3 Bed , LG09 & LG10	2	156 m²	1 Kent	3%
Middlesex Residence - 3 Bed LG.11-LG12	2	163 m²	1 Kent	3%
Durham Residence - 2 Bed B1.02, B1.03, B2.02, B2.03 - L1 & 2	4	92.0 m²	1 Kent	3%
Middlesex Residence - 2 Bed LG.05, LG.06, LG.07 & LG.08	4	93.0 m²	1 Kent	3%
Durham Residence - 1 Bed B1.06 & B1.07 B2.06 & B2.07 - L1 & 2	4	54.0 m²	1 Kent	2%
Durham Residence - Pent House B302	1	203 m²	1 Kent	2%
Durham Residence - 2 Bed B1.05 & B2.05- L1 & 2	2	112 m²	1 Kent	2%
Durham Residence - 3 Bed BGF01 & BGF03 -G	2	145 m²	1 Kent	2%
Middlesex Residence - Penthouse A2.01- L2	1	252 m²	1 Kent	2%
Middlesex Residence - 3 Bed GF.01 & GF.02	2	132 m²	1 Kent	2%
Middlesex Residence - 2 Bed GF04	1	106 m²	1 Kent	1%
Middlesex Residence - 2 Bed LG04	1	106 m²	1 Kent	1%
Middlesex Residence - 2 Bed LG01	1	136 m²	1 Kent	1%
Durham Residence - Pent House B301	1	166 m²	1 Kent	1%
Durham Residence - 3 Bed B1.10 - L1	1	159 m²	1 Kent	1%
Durham Residence - 2 Bed BGF02 -G	1	111 m²	1 Kent	1%
Middlesex Residence - 2 Bed GF.03	1	121 m²	1 Kent	1%
Middlesex Residence - 2 Bed LG.03	1	129 m²	1 Kent	1%
Middlesex Residence - 3 Bed LG.02	1	132 m²	1 Kent	1%
Durham Residence - 1 Bed BGF04 -G	1	69.0 m²	1 Kent	< 1%
Middlesex Residence - 1 Bed A01.08	1	73.0 m²	1 Kent	< 1%
Total	**65**	**8,025 m²**	**82%**	

Supporting Evidence

Shown on Floor Plans

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

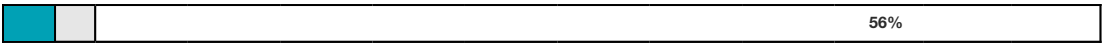
Credit	Requirement	Response	Status
Management 3.3	Annotation: Sub-meters to be provided to all major common area services (list each)		-
Integrated Water Management 2.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)		-
Integrated Water Management 3.1	Annotation: Water efficient garden details		-
Operational Energy 3.1	Carpark with natural ventilation or CO monitoring system		-
Operational Energy 3.3	Annotation: External lighting controlled by motion sensors		-
Operational Energy 3.4	Location of clothes line (if proposed)		-
Operational Energy 4.2	Location and size of solar photovoltaic system		-
Indoor Environment Quality 1.1	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
Indoor Environment Quality 1.2	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
Indoor Environment Quality 2.1	Dwellings meeting the requirements for being 'naturally ventilated'		-
Indoor Environment Quality 2.2	Annotation: Dwellings designed for 'natural cross flow ventilation' (If not all dwellings, include a list of compliant dwellings)		-
Indoor Environment Quality 3.1	Annotation: Glazing specification (U-value, SHGC)		-
Transport 1.2	Location of residential visitor bicycle parking spaces		-
Transport 2.1	Location of electric vehicle charging infrastructure		-
Waste & Resource Recovery 2.1	Location of food and garden waste facilities		-
Waste & Resource Recovery 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 2.3	Location and size of green facade		-
Urban Ecology 2.4	Location of taps and floor waste on balconies / courtyards		-

Supporting Documentation

Credit	Requirement	Response	Status
Management 2.2	Preliminary NatHERS assessments		-
Integrated Water Management 2.1	STORM report or MUSIC model		-
Operational Energy 3.1	Details of either the fully natural carpark ventilation or CO monitoring system proposed		-
Operational Energy 3.5	Average lighting power density and lighting type(s) to be used		-
Operational Energy 3.6	Average lighting power density and lighting type(s) to be used		-
Operational Energy 4.2	Specifications of the solar photovoltaic system(s)		-
Indoor Environment Quality 1.1	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
Indoor Environment Quality 1.2	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
Indoor Environment Quality 2.1	A list of naturally ventilated dwellings		-
Indoor Environment Quality 2.2	A list of dwellings with natural cross flow ventilation		-
Indoor Environment Quality 3.1	Reference to floor plans or energy modelling showing the glazing specification (U-value and Solar Heat Gain Coefficient, SHGC)		-
Waste & Resource Recovery 1.1	Details regarding how the existing building is being reused on-site		-

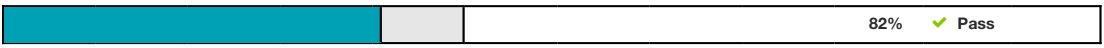
Credit summary

Management Overall contribution 4.5%



	56%	
1.1 Pre-Application Meeting	0%	
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	82%	
3.1 Metering - Residential	100%	
3.3 Metering - Common Areas	100%	
4.1 Building Users Guide	100%	

IWM Overall contribution 22.5%



	82%	✔ **Pass**
1.1 Potable Water Use	45%	✔ Achieved
2.1 Stormwater Treatment	100%	✔ Achieved
3.1 Water Efficient Landscaping	100%	
4.1 Building Systems Water Use	100%	

Operational Energy Overall contribution 27.5%

	Minimum required 50% **60%**	✔ **Pass**
1.2 Thermal Performance Rating - Residential	0%	✔ Achieved
2.1 Greenhouse Gas Emissions	0%	
2.6 Electrification	100%	
2.7 Energy consumption	100%	
3.1 Carpark Ventilation	100%	
3.3 External Lighting	100%	
3.4 Clothes Drying	59%	
3.5 Internal Lighting - Houses and Townhouses	100%	
3.6 Internal Lighting - Apartments	100%	
4.2 Renewable Energy Systems - Solar	100%	
4.4 Renewable Energy Systems - Other	N/A	✧ Scoped Out
	No other (non-solar PV) renewable energy is in use.	
4.5 Solar PV - Houses and Townhouses	0%	

IEQ Overall contribution 16.5%

	Minimum required 50%	60%	✔ Pass
1.1 Daylight Access - Living Areas		66%	
1.2 Daylight Access - Bedrooms		66%	
1.3 Winter Sunlight		0%	
2.1 Ventilation - Natural - Apartments		66%	
2.2 Cross Flow Ventilation		100%	
3.1 Thermal comfort - Double Glazing		100%	
3.2 Thermal Comfort - External Shading		0%	
3.3 Thermal Comfort - Orientation		0%	

Transport Overall contribution 9.0%

	45%	
1.1 Bicycle Parking - Residential	0%	
1.2 Bicycle Parking - Residential Visitor	100%	
1.3 Bicycle Parking - Convenience Residential	0%	⊘ Disabled
	Credit 1.1 must be achieved first.	
2.1 Electric Vehicle Infrastructure	100%	
2.2 Car Share Scheme	0%	
2.3 Motorbikes / Mopeds	0%	

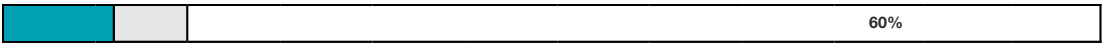
Waste & Resource Recovery Overall contribution 5.5%

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

Urban Ecology Overall contribution 5.5%

	66%
1.1 Communal Spaces	100%
2.1 Vegetation	75%
2.2 Green Roofs	0%
2.3 Green Walls and Facades	100%
2.4 Balconies, Courtyards & Roof terraces	100%
3.1 Food Production - Residential	0%

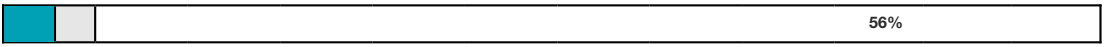
Innovation Overall contribution 9.0%



1.1 Innovation	60%

Credit breakdown

Management Overall contribution 4.5%



1.1 Pre-Application Meeting	0%
Score Contribution	This credit contributes 39.2% 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	No
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	82%
Score Contribution	This credit contributes 26.1% towards the category score.
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?
Question	Criteria Achieved ?
Townhouse	No
Apartment	Yes
3.1 Metering - Residential	100%
Score Contribution	This credit contributes 10.8% towards the category score.
Criteria	Have utility meters been provided for all individual dwellings?
Question	Criteria Achieved ?
Apartment	Yes
3.3 Metering - Common Areas	100%
Score Contribution	This credit contributes 10.8% towards the category score.
Criteria	Have all major common area services been separately submetered?
Question	Criteria Achieved ?
Apartment	Yes
4.1 Building Users Guide	100%
Score Contribution	This credit contributes 13.1% towards the category score.
Criteria	Will a building users guide be produced and issued to occupants?
Question	Criteria Achieved ?
Project	Yes

IWM Overall contribution 22.5%

		82%	✔ Pass

Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No

Stormwater profile

Which stormwater modelling software are you using?:	MUSIC or other modelling software
STORM score achieved:	-
Flow:	33 %
Total Suspended Solids:	93 %
Total Phosphorus:	89 %
Total Nitrogen:	66 %

Rainwater tank profile

What is the total roof area connected to the rainwater tank?:	
Rainwater Tank 1	2,925 m^2
	-
Tank Size:	
Rainwater Tank 1	35,000 Litres
	-
Irrigation area connected to tank:	
Rainwater Tank 1	2,375 m^2
	-
Is connected irrigation area a water efficient garden?:	
Rainwater Tank 1	Yes
	-
Other external water demand connected to tank?:	
Rainwater Tank 1	0.0 Litres/Day
	-

Fixtures, fittings & connections profile

Building: All	1 Kent
Showerhead: All	4 Star WELS (>= 6.0 but <= 7.5)

Bath:	
Middlesex Residence - 3 Bed LG.02 Middlesex Residence - 2 Bed LG.05, LG.06, LG.07 & LG.08 Middlesex Residence - 3 Bed GF.01 & GF.02 Middlesex Residence - 2 Bed GF.05 - GF.08, A01.01-A01.04 - G & L1 Middlesex Residence - 1 Bed A01.08 Middlesex Residence - Penthouse A2.01- L2 Middlesex Residence - Penthouse A2.02 & A2.03 - L2 Durham Residence - 3 Bed BGF01 & BGF03 -G Durham Residence - 2 Bed BGF02 -G Durham Residence - 1 Bed BGF04 -G Durham Residence - 3 Bed B1.01, B1.04, B2.01 & B2.04 - L1 & 2 Durham Residence - 2 Bed B1.02, B1.03, B2.02, B2.03 - L1 & 2 Durham Residence - 2 Bed B1.05 & B2.05- L1 & 2 Durham Residence - Pent House B301 Durham Residence - Pent House B302 St Joseph - Duplex 1 St Joseph - Duplex 2 St Joseph - Duplex 3 St Joseph - Duplex 4 St Joseph - Duplex 5 Nuns Quarters - Duplex 6 and 7 St Joseph - Duplex 8 St Joseph - Duplex 9 St Joseph - Duplex 10 St Joseph - Duplex 11 Middlesex Residence - 2 Bed LG01 Middlesex Residence - 2 Bed LG04 Middlesex Residence - 2 Bed GF04 Middlesex Residence - 2 Bed GF11 & G12 , A1.07 & 1.09 A- G Durham Residence - 1 Bed B1.06 & B1.07 B2.06 & B2.07 - L1 & 2 Durham Residence - 3 Bed B1.08, & B1.09, B2.08, B2.09 - L1 & 2 Durham Residence - Pent House B303 & B303	Scope out
Middlesex Residence - 2 Bed LG.03 Middlesex Residence - 2 Bed GF.03 Middlesex Residence - 3 Bed GF.09, GF.10, A01.05 & A01.06 - G & L1 Durham Residence - 3 Bed B1.10 - L1 Middlesex Residence - 3 Bed LG.11-LG12 Middlesex Residence - 3 Bed , LG09 & LG10 Durham Residence - 3 Bedroom B2.10 & B2.11	Medium Sized Contemporary Bath
Kitchen Taps: All	>= 6 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: All	Occupant to Install
Which non-potable water source is the dwelling/space connected to?: All	-
Non-potable water source connected to Toilets: All	No
Non-potable water source connected to Laundry (washing machine): All	No
Non-potable water source connected to Hot Water System: All	No

1.1 Potable Water Use — 45% ✔ Achieved

Score Contribution	This credit contributes 31.2% 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	13611 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	10497 kL
Output	Proposed (including rainwater and recycled water use)
Project	9685 kL
Output	% Reduction in Potable Water Consumption
Project	28 %
Output	% of connected demand met by rainwater
Project	77 %
Output	How often does the tank overflow?
Project	Often
Output	Opportunity for additional rainwater connection
Project	5768 kL

2.1 Stormwater Treatment — 100% ✔ Achieved

Score Contribution	This credit contributes 56.2% towards the category score.
Criteria	Has best practice stormwater management been demonstrated?
Output	Flow
Project	33 %
Output	Min Suspended Solids reduction
Project	80 %
Output	Total Suspended Solids reduction
Project	93 %
Output	Min Phosphorus reduction
Project	45 %
Output	Total Phosphorus reduction
Project	89 %
Output	Min Nitrogen reduction
Project	45 %
Output	Total Nitrogen reduction
Project	66 %

3.1 Water Efficient Landscaping		100%
Score Contribution	This credit contributes 6.2% towards the category score.	
Criteria	Will water efficient landscaping be installed?	
Question	Criteria Achieved ?	
Project	Yes	

4.1 Building Systems Water Use		100%
Score Contribution	This credit contributes 6.2% 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	

Operational Energy Overall contribution 27.5%

		Minimum required 50%	**60%**	✔ **Pass**

Are you installing any renewable energy system(s) (other than solar photovoltaic)?:	No
Energy Supply:	All-electric
Solar Photovoltaic system profile	
System Size (lesser of inverter and panel capacity): Solar Photovoltaic system 1	15.0 kW peak
Orientation (which way is the system facing)?: Solar Photovoltaic system 1	North
Inclination (angle from horizontal): Solar Photovoltaic system 1	10.0 Angle (degrees)
Which Building Class does this apply to?: Solar Photovoltaic system 1	Apartment
Dwellings profile	
Building: All	1 Kent

Below the floor is:	
Middlesex Residence - 3 Bed LG.02	Ground or Carpark
Middlesex Residence - 2 Bed LG.03	
Middlesex Residence - 2 Bed LG.05, LG.06, LG.07 & LG.08	
Durham Residence - 3 Bed BGF01 & BGF03 -G	
Durham Residence - 2 Bed BGF02 -G	
Durham Residence - 1 Bed BGF04 -G	
Durham Residence - 3 Bed B1.01, B1.04, B2.01 & B2.04 - L1 & 2	
Durham Residence - 2 Bed B1.05 & B2.05- L1 & 2	
St Joseph - Duplex 1	
St Joseph - Duplex 2	
St Joseph - Duplex 3	
St Joseph - Duplex 4	
St Joseph - Duplex 5	
Nuns Quarters - Duplex 6 and 7	
St Joseph - Duplex 8	
St Joseph - Duplex 9	
St Joseph - Duplex 10	
St Joseph - Duplex 11	
Middlesex Residence - 2 Bed LG01	
Middlesex Residence - 2 Bed LG04	
Middlesex Residence - 3 Bed , LG09 & LG10	
Middlesex Residence - 3 Bed GF.01 & GF.02	Another Occupancy
Middlesex Residence - 2 Bed GF.03	
Middlesex Residence - 2 Bed GF.05 - GF.08, A01.01-A01.04 - G & L1	
Middlesex Residence - 3 Bed GF.09, GF.10, A01.05 & A01.06 - G & L1	
Middlesex Residence - 1 Bed A01.08	
Middlesex Residence - Penthouse A2.01- L2	
Middlesex Residence - Penthouse A2.02 & A2.03 - L2	
Durham Residence - 2 Bed B1.02, B1.03, B2.02, B2.03 - L1 & 2	
Durham Residence - 3 Bed B1.10 - L1	
Durham Residence - Pent House B301	
Durham Residence - Pent House B302	
Middlesex Residence - 3 Bed LG.11-LG12	
Middlesex Residence - 2 Bed GF04	
Middlesex Residence - 2 Bed GF11 & G12 , A1.07 & 1.09 A- G	
Durham Residence - 1 Bed B1.06 & B1.07 B2.06 & B2.07 - L1 & 2	
Durham Residence - 3 Bed B1.08, & B1.09, B2.08, B2.09 - L1 & 2	
Durham Residence - Pent House B303 & B303	
Durham Residence - 3 Bedroom B2.10 & B2.11	

Above the ceiling is:	
Middlesex Residence - 3 Bed LG.02	Another Occupancy
Middlesex Residence - 2 Bed LG.03	
Middlesex Residence - 2 Bed LG.05, LG.06, LG.07 & LG.08	
Middlesex Residence - 3 Bed GF.01 & GF.02	
Middlesex Residence - 2 Bed GF.03	
Middlesex Residence - 2 Bed GF.05 - GF.08, A01.01-A01.04 - G & L1	
Middlesex Residence - 3 Bed GF.09, GF.10, A01.05 & A01.06 - G & L1	
Middlesex Residence - 1 Bed A01.08	
Durham Residence - 3 Bed BGF01 & BGF03 -G	
Durham Residence - 2 Bed BGF02 -G	
Durham Residence - 1 Bed BGF04 -G	
Durham Residence - 3 Bed B1.01, B1.04, B2.01 & B2.04 - L1 & 2	
Durham Residence - 2 Bed B1.02, B1.03, B2.02, B2.03 - L1 & 2	
Durham Residence - 2 Bed B1.05 & B2.05- L1 & 2	
Durham Residence - 3 Bed B1.10 - L1	
Middlesex Residence - 2 Bed LG01	
Middlesex Residence - 3 Bed LG.11-LG12	
Middlesex Residence - 2 Bed LG04	
Middlesex Residence - 3 Bed , LG09 & LG10	
Middlesex Residence - 2 Bed GF04	
Middlesex Residence - 2 Bed GF11 & G12 , A1.07 & 1.09 A- G	
Durham Residence - 1 Bed B1.06 & B1.07 B2.06 & B2.07 - L1 & 2	
Durham Residence - 3 Bed B1.08, & B1.09, B2.08, B2.09 - L1 & 2	
Durham Residence - 3 Bedroom B2.10 & B2.11	
Middlesex Residence - Penthouse A2.01- L2	Outside
Middlesex Residence - Penthouse A2.02 & A2.03 - L2	
Durham Residence - Pent House B301	
Durham Residence - Pent House B302	
St Joseph - Duplex 1	
St Joseph - Duplex 2	
St Joseph - Duplex 3	
St Joseph - Duplex 4	
St Joseph - Duplex 5	
Nuns Quarters - Duplex 6 and 7	
St Joseph - Duplex 8	
St Joseph - Duplex 9	
St Joseph - Duplex 10	
St Joseph - Duplex 11	
Durham Residence - Pent House B303 & B303	

Exposed sides:	
Middlesex Residence - 3 Bed LG.02 Middlesex Residence - 2 Bed LG.03 Middlesex Residence - 2 Bed LG.05, LG.06, LG.07 & LG.08 Middlesex Residence - 3 Bed GF.01 & GF.02 Middlesex Residence - 2 Bed GF.03 Middlesex Residence - 2 Bed GF.05 - GF.08, A01.01-A01.04 - G & L1 Middlesex Residence - 3 Bed GF.09, GF.10, A01.05 & A01.06 - G & L1 Middlesex Residence - 1 Bed A01.08 Durham Residence - 3 Bed BGF01 & BGF03 -G Durham Residence - 2 Bed B1.05 & B2.05- L1 & 2 Durham Residence - 3 Bed B1.10 - L1 St Joseph - Duplex 1 St Joseph - Duplex 2 St Joseph - Duplex 8 St Joseph - Duplex 10 Middlesex Residence - 2 Bed LG01 Middlesex Residence - 3 Bed LG.11-LG12 Middlesex Residence - 2 Bed LG04 Middlesex Residence - 3 Bed , LG09 & LG10 Middlesex Residence - 2 Bed GF04 Middlesex Residence - 2 Bed GF11 & G12 , A1.07 & 1.09 A- G Durham Residence - 3 Bed B1.08, & B1.09, B2.08, B2.09 - L1 & 2 Durham Residence - Pent House B303 & B303 Durham Residence - 3 Bedroom B2.10 & B2.11	2
Middlesex Residence - Penthouse A2.01- L2 Durham Residence - Pent House B301 Durham Residence - Pent House B302	4
Middlesex Residence - Penthouse A2.02 & A2.03 - L2 Durham Residence - 3 Bed B1.01, B1.04, B2.01 & B2.04 - L1 & 2 St Joseph - Duplex 5 Nuns Quarters - Duplex 6 and 7 St Joseph - Duplex 9	3
Durham Residence - 2 Bed BGF02 -G Durham Residence - 1 Bed BGF04 -G Durham Residence - 2 Bed B1.02, B1.03, B2.02, B2.03 - L1 & 2 St Joseph - Duplex 3 St Joseph - Duplex 4 St Joseph - Duplex 11 Durham Residence - 1 Bed B1.06 & B1.07 B2.06 & B2.07 - L1 & 2	1
NatHERS Annual Energy Loads - Heat: All	91.0 MJ/sqm
NatHERS Annual Energy Loads - Cool: All	21.0 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 (2019 MEPS)
Type of Hot Water System: All	Electric Heat Pump Band 1
Is the hot water system shared by multiple dwellings?:	
Middlesex Residence - 3 Bed LG.02	Yes
Middlesex Residence - 2 Bed LG.03	
Middlesex Residence - 2 Bed LG.05, LG.06, LG.07 & LG.08	
Middlesex Residence - 3 Bed GF.01 & GF.02	
Middlesex Residence - 2 Bed GF.03	
Middlesex Residence - 2 Bed GF.05 - GF.08, A01.01-A01.04 - G & L1	
Middlesex Residence - 3 Bed GF.09, GF.10, A01.05 & A01.06 - G & L1	
Middlesex Residence - 1 Bed A01.08	
Middlesex Residence - Penthouse A2.01- L2	
Middlesex Residence - Penthouse A2.02 & A2.03 - L2	
Durham Residence - 3 Bed BGF01 & BGF03 -G	
Durham Residence - 2 Bed BGF02 -G	
Durham Residence - 1 Bed BGF04 -G	
Durham Residence - 3 Bed B1.01, B1.04, B2.01 & B2.04 - L1 & 2	
Durham Residence - 2 Bed B1.02, B1.03, B2.02, B2.03 - L1 & 2	
Durham Residence - 2 Bed B1.05 & B2.05- L1 & 2	
Durham Residence - 3 Bed B1.10 - L1	
Durham Residence - Pent House B301	
Durham Residence - Pent House B302	
St Joseph - Duplex 1	
St Joseph - Duplex 2	
St Joseph - Duplex 3	
St Joseph - Duplex 4	
St Joseph - Duplex 5	
Middlesex Residence - 2 Bed LG01	
Middlesex Residence - 3 Bed LG.11-LG12	
Middlesex Residence - 2 Bed LG04	
Middlesex Residence - 3 Bed , LG09 & LG10	
Middlesex Residence - 2 Bed GF04	
Middlesex Residence - 2 Bed GF11 & G12 , A1.07 & 1.09 A- G	
Durham Residence - 1 Bed B1.06 & B1.07 B2.06 & B2.07 - L1 & 2	
Durham Residence - 3 Bed B1.08, & B1.09, B2.08, B2.09 - L1 & 2	
Durham Residence - Pent House B303 & B303	
Durham Residence - 3 Bedroom B2.10 & B2.11	
Nuns Quarters - Duplex 6 and 7	N/A
St Joseph - Duplex 8	
St Joseph - Duplex 9	
St Joseph - Duplex 10	
St Joseph - Duplex 11	
% Contribution from solar hot water system: All	0 %
Clothes Line: All	Shared clothesline

Clothes Dryer: All	Occupant to install

1.2 Thermal Performance Rating - Residential	0%	✔ Achieved

Score Contribution	This credit contributes 17.5% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Townhouse	7.0 Stars
Apartment	7.0 Stars

2.1 Greenhouse Gas Emissions	0%

Score Contribution	This credit contributes 17.5% 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)
Townhouse	30,100 kg CO2
Apartment	154,174 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Townhouse	27,334 kg CO2
Apartment	149,890 kg CO2
Output	% Reduction in GHG Emissions
Townhouse	9 %
Apartment	2 %

2.6 Electrification	100%

Score Contribution	This credit contributes 17.5% 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 23.3% towards the category score.
Criteria	What is the % reduction in annual energy consumption against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Townhouse	268,615 MJ
Apartment	1,412,155 MJ
Output	Proposed Building with Proposed Services (Actual Building)
Townhouse	124,561 MJ
Apartment	683,041 MJ
Output	% Reduction in total energy
Townhouse	53 %
Apartment	51 %

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

3.3 External Lighting 100%

Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	Is the external lighting controlled by a motion detector?
Question	Criteria Achieved ?
Townhouse	Yes

3.4 Clothes Drying 59%

Score Contribution	This credit contributes 5.8% 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
Townhouse	6,242 kWh
Apartment	33,101 kWh
Output	Proposed
Townhouse	4,369 kWh
Apartment	23,170 kWh
Output	Improvement
Townhouse	30 %
Apartment	29 %

3.5 Internal Lighting - Houses and Townhouses 100%

Score Contribution	This credit contributes 0.5% towards the category score.
Criteria	Does the development achieve a maximum illumination power density of 4W/sqm or less?
Question	Criteria Achieved?
Townhouse	Yes

3.6 Internal Lighting - Apartments 100%

Score Contribution	This credit contributes 4.8% 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

4.2 Renewable Energy Systems - Solar 100%

Score Contribution	This credit contributes 4.8% 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	18,178 kWh
Output	% of Building's Energy
Apartment	9 %

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.

4.5 Solar PV - Houses and Townhouses 0%

Score Contribution	This credit contributes 1% towards the category score.
Criteria	What % of the estimated energy consumption of the building class it supplies does the solar power system provide?

IEQ Overall contribution 16.5%

		Minimum required 50%	**60%**	✔ **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?:	Use the built in calculation tools

Rooms

Room Designation:	
DTS Compliant Living B.02.01 living B.02.04, B.01.04 living B.02.07, B.01.07 living B.02.05, B.01.05 living B.01.06 living A.01.05, living A.LG.10 living B.GF.04 living BF.GF.03 living B.GF.01 living A.LG.02, A.LG.04 living A.LG.01, A.LG.03 living A.GF.01, A.GF.03 living A.GF.02, A.GF.04 living B.01.01 living B.02.06, living A.LG.09 living A.GF.09 living A.GF.10 living A.01.06, living	Living
DTS Compliant Bedrooms B.02.01 bedroom 2 B.01.06 bed 1 B.02.05, bed 2 B.01.08 Bed B.01.09 Bed A.LG.11, A. LG.12 Bed B.02.06, bed 1 B.01.06 bed 2 B.02.05, B.01.05, B.01.05 bed	Bedroom

Quantity:	
DTS Compliant Living	38
DTS Compliant Bedrooms	133
B.02.01 living B.02.01 bedroom 2 B.01.06 bed 1 B.02.05, bed 2 B.01.06 living B.01.08 Bed B.01.09 Bed A.01.05, living A.LG.10 living B.GF.04 living BF.GF.03 living B.GF.01 living B.01.01 living B.02.06, bed 1 B.01.05 bed B.02.06, living A.LG.09 living A.GF.09 living A.GF.10 living A.01.06, living	1
B.02.04, B.01.04 living B.02.07, B.01.07 living B.02.05, B.01.05 living A.LG.11, A. LG.12 Bed A.LG.02, A.LG.04 living A.LG.01, A.LG.03 living A.GF.01, A.GF.03 living A.GF.02, A.GF.04 living B.01.06 bed 2 B.02.05, B.01.05,	2

Auto-Pass:	
DTS Compliant Living	Yes
DTS Compliant Bedrooms	
B.02.01 living	No
B.02.01 bedroom 2	
B.02.04, B.01.04 living	
B.02.07, B.01.07 living	
B.01.06 bed 1	
B.02.05, bed 2	
B.02.05, B.01.05 living	
B.01.06 living	
B.01.08 Bed	
B.01.09 Bed	
A.01.05, living	
A.LG.10 living	
B.GF.04 living	
BF.GF.03 living	
B.GF.01 living	
A.LG.11, A. LG.12 Bed	
A.LG.02, A.LG.04 living	
A.LG.01, A.LG.03 living	
A.GF.01, A.GF.03 living	
A.GF.02, A.GF.04 living	
B.01.01 living	
B.02.06, bed 1	
B.01.06 bed 2	
B.02.05, B.01.05,	
B.01.05 bed	
B.02.06, living	
A.LG.09 living	
A.GF.09 living	
A.GF.10 living	
A.01.06, living	

Room Floor Area:	
DTS Compliant Living DTS Compliant Bedrooms	0.0 m²
B.02.01 living B.01.01 living	31.7 m²
B.02.01 bedroom 2	9.8 m²
B.02.04, B.01.04 living	33.9 m²
B.02.07, B.01.07 living	35.9 m²
B.01.06 bed 1 B.02.06, bed 1 B.01.06 bed 2 B.02.05, B.01.05,	12.1 m²
B.02.05, bed 2 B.01.05 bed	16.8 m²
B.02.05, B.01.05 living	40.8 m²
B.01.06 living B.02.06, living	26.0 m²
B.01.08 Bed	12.2 m²
B.01.09 Bed	12.4 m²
A.01.05, living A.LG.09 living A.GF.09 living	53.6 m²
A.LG.10 living A.GF.10 living A.01.06, living	52.8 m²
B.GF.04 living	39.3 m²
BF.GF.03 living	41.0 m²
B.GF.01 living	41.4 m²
A.LG.11, A. LG.12 Bed	14.4 m²
A.LG.02, A.LG.04 living	35.1 m²
A.LG.01, A.LG.03 living	38.6 m²
A.GF.01, A.GF.03 living	41.1 m²
A.GF.02, A.GF.04 living	39.1 m²

Vertical Angle:	
DTS Compliant Living DTS Compliant Bedrooms	0.0 Angle (degrees)
B.02.01 living B.02.05, bed 2	84.0 Angle (degrees)
B.02.01 bedroom 2 B.01.08 Bed B.01.09 Bed A.LG.01, A.LG.03 living	90.0 Angle (degrees)
B.02.04, B.01.04 living B.02.07, B.01.07 living A.01.05, living B.01.06 bed 2 B.02.05, B.01.05, A.LG.09 living A.01.06, living	86.0 Angle (degrees)
B.01.06 bed 1	24.0 Angle (degrees)
B.02.05, B.01.05 living	87.0 Angle (degrees)
B.01.06 living B.02.06, living	27.0 Angle (degrees)
A.LG.10 living A.GF.09 living	54.0 Angle (degrees)
B.GF.04 living BF.GF.03 living	63.0 Angle (degrees)
B.GF.01 living	55.0 Angle (degrees)
A.LG.11, A. LG.12 Bed	46.0 Angle (degrees)
A.LG.02, A.LG.04 living	14.0 Angle (degrees)
A.GF.01, A.GF.03 living	23.0 Angle (degrees)
A.GF.02, A.GF.04 living	21.8 Angle (degrees)
B.01.01 living	73.0 Angle (degrees)
B.02.06, bed 1	40.0 Angle (degrees)
B.01.05 bed	67.0 Angle (degrees)
A.GF.10 living	83.0 Angle (degrees)

Horizontal Angle:	
DTS Compliant Living DTS Compliant Bedrooms	0.0 Angle (degrees)
B.02.01 living B.01.01 living	92.0 Angle (degrees)
B.02.01 bedroom 2	60.0 Angle (degrees)
B.02.04, B.01.04 living	165 Angle (degrees)
B.02.07, B.01.07 living	166 Angle (degrees)
B.01.06 bed 1 B.02.06, bed 1	27.0 Angle (degrees)
B.02.05, bed 2 B.01.05 bed	93.0 Angle (degrees)
B.02.05, B.01.05 living	66.0 Angle (degrees)
B.01.06 living B.02.06, living	41.0 Angle (degrees)
B.01.08 Bed	46.5 Angle (degrees)
B.01.09 Bed	45.1 Angle (degrees)
A.01.05, living A.LG.09 living A.GF.09 living	140 Angle (degrees)
A.LG.10 living A.GF.10 living A.01.06, living	125 Angle (degrees)
B.GF.04 living	165 Angle (degrees)
BF.GF.03 living	163 Angle (degrees)
B.GF.01 living	12.0 Angle (degrees)
A.LG.11, A. LG.12 Bed	138 Angle (degrees)
A.LG.02, A.LG.04 living	60.0 Angle (degrees)
A.LG.01, A.LG.03 living	116 Angle (degrees)
A.GF.01, A.GF.03 living	60.6 Angle (degrees)
A.GF.02, A.GF.04 living	60.6 Angle (degrees)
B.01.06 bed 2 B.02.05, B.01.05,	81.0 Angle (degrees)

Window Area:	
DTS Compliant Living DTS Compliant Bedrooms	0.0 m²
B.02.01 living B.01.01 living	6.0 m²
B.02.01 bedroom 2	3.9 m²
B.02.04, B.01.04 living	8.2 m²
B.02.07, B.01.07 living	8.0 m²
B.01.06 bed 1 B.02.06, bed 1 B.01.06 bed 2 B.02.05, B.01.05,	3.1 m²
B.02.05, bed 2 B.01.05 bed	6.2 m²
B.02.05, B.01.05 living	26.0 m²
B.01.06 living B.02.06, living	10.9 m²
B.01.08 Bed B.01.09 Bed	6.3 m²
A.01.05, living A.LG.10 living A.LG.09 living A.GF.09 living A.GF.10 living A.01.06, living	7.6 m²
B.GF.04 living BF.GF.03 living	8.1 m²
B.GF.01 living	14.1 m²
A.LG.11, A. LG.12 Bed	3.5 m²
A.LG.02, A.LG.04 living	9.5 m²
A.LG.01, A.LG.03 living	7.0 m²
A.GF.01, A.GF.03 living	12.2 m²
A.GF.02, A.GF.04 living	10.9 m²

Window Orientation:	
DTS Compliant Living DTS Compliant Bedrooms	-
B.02.01 living B.02.01 bedroom 2 B.02.05, bed 2 B.01.08 Bed A.01.05, living B.GF.01 living A.LG.01, A.LG.03 living A.GF.01, A.GF.03 living B.01.01 living B.01.05 bed A.LG.09 living A.GF.09 living	West
B.02.04, B.01.04 living B.02.07, B.01.07 living B.01.09 Bed A.LG.10 living B.GF.04 living BF.GF.03 living A.LG.02, A.LG.04 living A.GF.02, A.GF.04 living A.GF.10 living A.01.06, living	East
B.01.06 bed 1 B.02.05, B.01.05 living B.01.06 living A.LG.11, A. LG.12 Bed B.02.06, bed 1 B.01.06 bed 2 B.02.05, B.01.05, B.02.06, living	South

Glass Type:	
DTS Compliant Living DTS Compliant Bedrooms	-
B.02.01 living B.02.01 bedroom 2 B.02.04, B.01.04 living B.02.07, B.01.07 living B.01.06 bed 1 B.02.05, bed 2 B.02.05, B.01.05 living B.01.06 living B.01.08 Bed B.01.09 Bed A.01.05, living A.LG.10 living B.GF.04 living BF.GF.03 living B.GF.01 living A.LG.11, A. LG.12 Bed A.LG.02, A.LG.04 living A.LG.01, A.LG.03 living A.GF.01, A.GF.03 living A.GF.02, A.GF.04 living B.01.01 living B.02.06, bed 1 B.01.06 bed 2 B.02.05, B.01.05, B.01.05 bed B.02.06, living A.LG.09 living A.GF.09 living A.GF.10 living A.01.06, living	Clear Low-E Double (VLT 0.73)

Daylight Criteria Achieved?:	
DTS Compliant Living DTS Compliant Bedrooms B.02.01 living B.02.01 bedroom 2 B.02.04, B.01.04 living B.02.07, B.01.07 living B.02.05, bed 2 B.02.05, B.01.05 living B.01.08 Bed B.01.09 Bed A.01.05, living A.LG.10 living B.GF.04 living BF.GF.03 living A.LG.11, A. LG.12 Bed A.LG.01, A.LG.03 living B.01.01 living B.01.06 bed 2 B.02.05, B.01.05, B.01.05 bed A.LG.09 living A.GF.09 living A.GF.10 living A.01.06, living	Yes
B.01.06 bed 1 B.01.06 living B.GF.01 living A.LG.02, A.LG.04 living A.GF.01, A.GF.03 living A.GF.02, A.GF.04 living B.02.06, bed 1 B.02.06, living	No

1.1 Daylight Access - Living Areas	66%
Score Contribution	This credit contributes 27.2% towards the category score.
Criteria	What % of living areas achieve the daylight criteria?
Output	Calculated percentage
Apartment	86 %

1.2 Daylight Access - Bedrooms	66%
Score Contribution	This credit contributes 27.2% towards the category score.
Criteria	What % of bedrooms achieve the daylight criteria?
Output	Calculated percentage
Apartment	98 %

1.3 Winter Sunlight	0%

Score Contribution	This credit contributes 9.1% 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

2.1 Ventilation - Natural - Apartments	66%

Score Contribution	This credit contributes 27.2% towards the category score.
Criteria	What % of dwellings are effectively naturally ventilated?
Question	Percentage Achieved?
Apartment	80 %

2.2 Cross Flow Ventilation	100%

Score Contribution	This credit contributes 1.9% towards the category score.
Criteria	Are all habitable rooms designed to achieve natural cross flow ventilation?
Question	Criteria Achieved ?
Townhouse	Yes

3.1 Thermal comfort - Double Glazing	100%

Score Contribution	This credit contributes 3.7% towards the category score.
Criteria	Is double glazing (or better) used to all habitable areas?
Question	Criteria Achieved ?
Townhouse	Yes

3.2 Thermal Comfort - External Shading	0%

Score Contribution	This credit contributes 1.9% towards the category score.
Criteria	Is appropriate external shading provided to east, west and north facing glazing?
Question	Criteria Achieved ?
Townhouse	No

3.3 Thermal Comfort - Orientation	0%

Score Contribution	This credit contributes 1.9% towards the category score.
Criteria	Are at least 50% of main living areas orientated to the north?
Question	Criteria Achieved ?
Townhouse	No

Transport Overall contribution 9.0%

45%

1.1 Bicycle Parking - Residential	0%
Score Contribution	This credit contributes 22.7% towards the category score.
Criteria	How many secure and undercover bicycle spaces are there for residents?
Question	Bicycle Spaces Provided ?
Townhouse	0
Apartment	16
Output	Min Bicycle Spaces Required
Apartment	65

1.2 Bicycle Parking - Residential Visitor	100%
Score Contribution	This credit contributes 22.7% towards the category score.
Criteria	How many secure bicycle spaces are there for visitors?
Question	Visitor Bicycle Spaces Provided ?
Townhouse	3
Apartment	13
Output	Min Visitor Bicycle Spaces Required
Townhouse	3
Apartment	13

1.3 Bicycle Parking - Convenience Residential	0% ⊘ Disabled
	Credit 1.1 must be achieved first.
This credit is disabled	Credit 1.1 must be achieved first.

2.1 Electric Vehicle Infrastructure	100%
Score Contribution	This credit contributes 22.7% 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 11.3% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Question	Criteria Achieved ?
Project	No

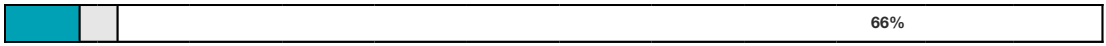
2.3 Motorbikes / Mopeds	0%
Score Contribution	This credit contributes 11.3% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	No

Waste & Resource Recovery **Overall contribution 5.5%**

	100%

1.1 Construction Waste - Building Re-Use		100%
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	Yes	
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%



1.1 Communal Spaces	100%
Score Contribution	This credit contributes 9.4% 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	1,083 m²
Output	Minimum Common Space Required
Apartment	110 m²

2.1 Vegetation	75%
Score Contribution	This credit contributes 45.3% 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	26 %

2.2 Green Roofs	0%
Score Contribution	This credit contributes 11.3% towards the category score.
Criteria	Does the development incorporate a green roof?
Question	Criteria Achieved ?
Project	No

2.3 Green Walls and Facades	100%
Score Contribution	This credit contributes 11.3% towards the category score.
Criteria	Does the development incorporate a green wall or green façade?
Question	Criteria Achieved ?
Project	Yes

2.4 Balconies, Courtyards & Roof terraces	100%
Score Contribution	This credit contributes 11.3% towards the category score.
Criteria	Is there a tap and floor waste on every balcony and courtyard (including any roof terraces)?
Question	Criteria Achieved ?
Townhouse	Yes
Apartment	Yes

3.1 Food Production - Residential	0%

Score Contribution	This credit contributes 11.3% towards the category score.
Criteria	What area of space per resident is dedicated to food production?
Question	Food Production Area
Townhouse	0.0 m^2
Apartment	0.0 m^2
Output	Min Food Production Area
Townhouse	9 m^2
Apartment	43 m^2

Innovation Overall contribution 9.0%

		60%

Project Initiatives	
Initiative:	
Recycles/reused/repurpused materials	O
ESD verification during construction	O
Air Tightness / Air permeability testing	3
GreenFactor Tool	O
90% construction and demo waste recycling.	O
Community Development Programs	O
Description:	
Recycles/reused/repurpused materials	Application of recycled bricks in footpaths and planters
ESD verification during construction	An ESD professional to 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 / Air permeability testing	Commitment to undertake Air Tightness / Air permeability testing.
GreenFactor Tool	Green Factor tool assessment to be undertaken by the Landscape Architect to demonstrate the achievement of a 0.55 score.
90% construction and demo waste recycling.	90% of demolition and construction waste is to be diverted from landfill
Community Development Programs	A community development program will be introduced and funded for the first 12 months
Points Targeted:	
Recycles/reused/repurpused materials	1
ESD verification during construction	1
Air Tightness / Air permeability testing	-
GreenFactor Tool	1
90% construction and demo waste recycling.	1
Community Development Programs	1
Points:	
Recycles/reused/repurpused materials	-
ESD verification during construction	-
Air Tightness / Air permeability testing	1
GreenFactor Tool	-
90% construction and demo waste recycling.	-
Community Development Programs	-

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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