

SUSTAINABLE MANAGEMENT PLAN



PROPOSED MIXED USE
DEVELOPMENT

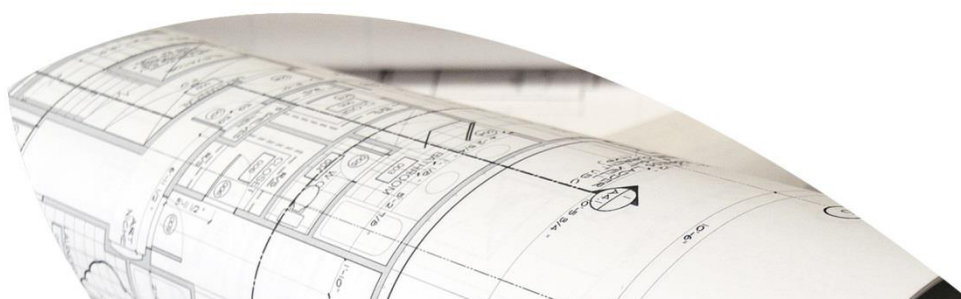
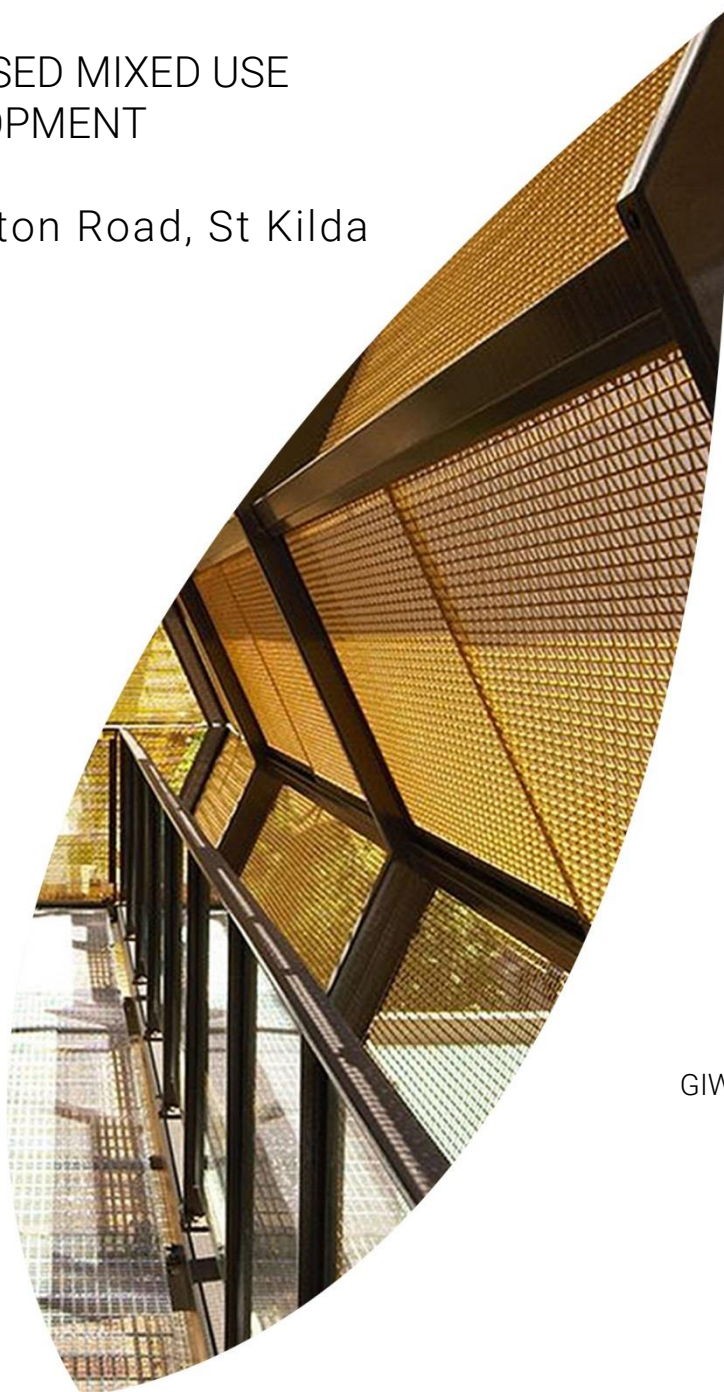
1 Brighton Road, St Kilda

GIW19200
Revision F

Prepared for:
Twenty20 Property
Group Pty Ltd

30 July 2025

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Revision History


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Introduction

Project Information

GIW Environmental Solutions Pty Ltd ("GIW") has been engaged by Twenty20 Property Group Pty Ltd to provide Environmentally Sustainable Design (ESD) consulting services for the proposed mixed use development at 1 Brighton Road, St Kilda.

The proposed development will include 40 apartments and 2 retail tenancies constructed over 9 levels plus basement carpark and will consist of the following:

- 10 x 1 bedrooms apartments
- 21 x 2 bedroom apartments
- 9 x 3 bedroom apartments
- 315m² retail

This Sustainable Management Plan (SMP) has been prepared to inform City of Port Phillip of the proposed development's sustainability credentials and performance targets. The project team is committed to achieving a building solution which responds to City of Port Phillip Planning Scheme - Clause 15.01-2L-02 Environmentally Sustainable Development.

Location

The site located at 1 Brighton Road, St Kilda has an approximate surface area of 911m² and is currently vacant. Distance from the site to Melbourne CBD is approximately 6.7km.



Figure 1 - Pre-existing sites at 1 Brighton Road, St Kilda.

Built Environment Sustainability Scorecard (BESS)

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

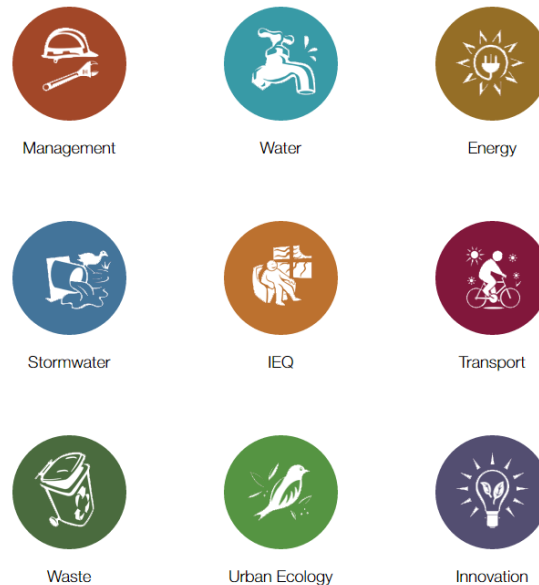


Figure 2 - BESS Environmental Categories (www.bess.net.au)

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

Responsibilities & Implementation

Twenty20 Property Group 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 and individual lot owners and or tenants will be responsible for the correct use of installed equipment and building systems in line with the provided Building User's Guide.

Sources of Information

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

- Bruce Henderson Architects – Job No. 40020 – TP-203 Rev G, TP-204 Rev B; TP-205 Rev I; TP-206 Rev H, TP-207 Rev G; TP-208-TP-210 Rev H; TP-211 Rev G, TP-212 Rev A, TP-213 Rev A, TP-214 Rev G; TP-301 Rev H, TP-302 Rev G; TP-401-TP-403 Rev G; TP-404 Rev D; TP-501-TP-502 Rev C.
- Municipal Association of Victoria - SDAPP Explained; Building Design for a Sustainable Future
- Built Environment Sustainability Scorecard (BESS)
- Green Star Design & As Built v1.1 Submission Guidelines
- CSIRO 1999, Urban Stormwater – Best Practise Environmental Management Guidelines
- City of Port Phillip - Planning Permit No. 665/2016

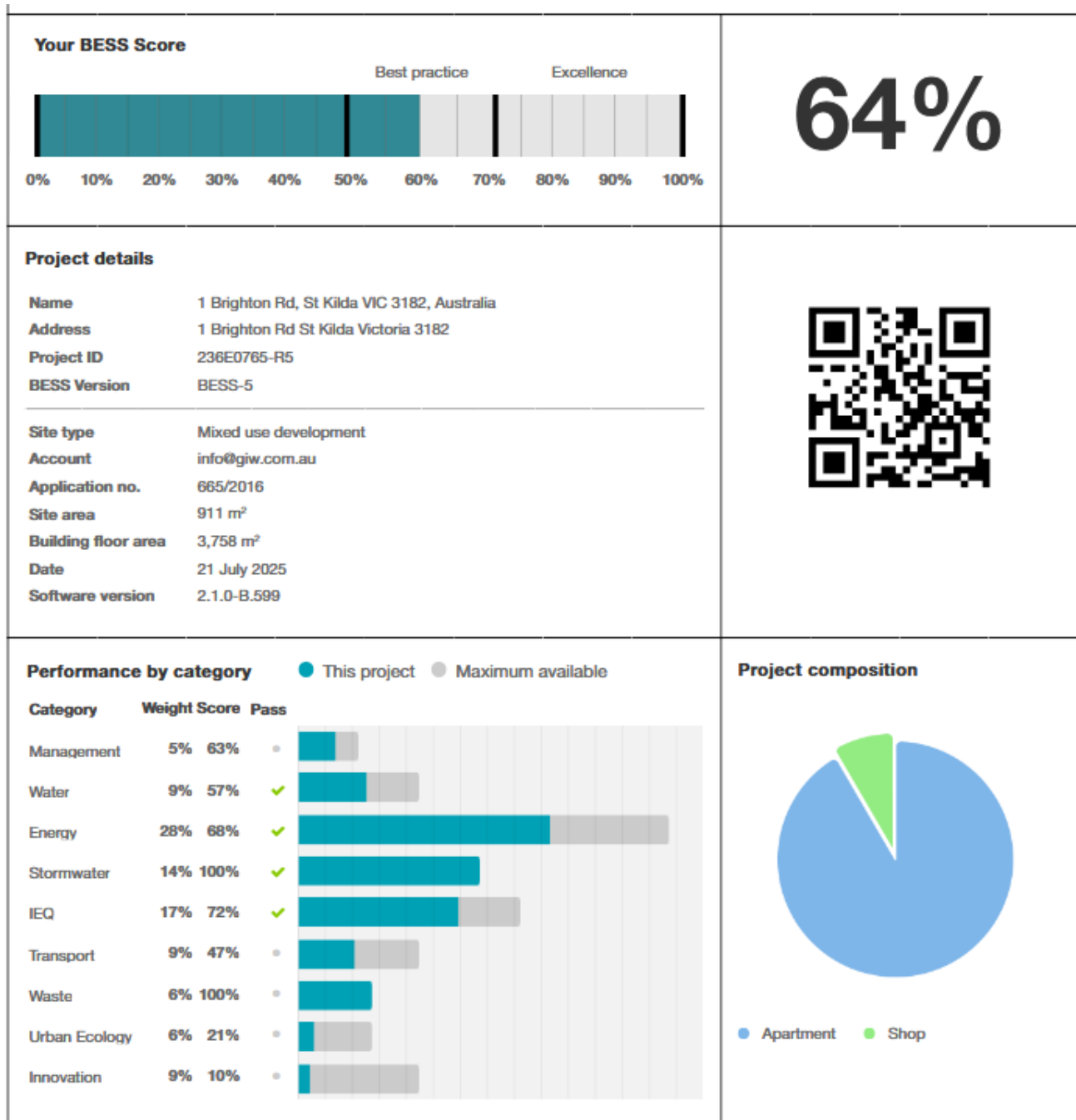
ESD Summary

The proposed mixed-use development at 1 Brighton Road, St Kilda will implement the following ESD initiatives:

1. The project achieves a total BESS score of 64% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%.
2. 68% (27 out of 40) of the development's apartments are naturally cross-ventilated.
3. The BESS built-in daylight calculator has been applied to demonstrate daylight compliance for the development. All living rooms and bedrooms achieve best practice daylight levels.
4. The non-residential areas are achieving a 2% DF to 47.2% of the nominated area.
5. 75% (30 out of 40) of apartments achieve at least 3 hours of sunlight.
6. The development is to achieve a 7.0 Star average NatHERS Energy Rating result.
7. The non-residential areas aim to reduce heating and cooling energy consumption 10% below the reference case (BCA Section J).
8. The development is to utilise individual instantaneous electric hot water units.
9. A 10kW Solar PV system is to be located on the roof of the proposed development.
10. Individual cold and hot water, electricity meters will be provided to the apartments, communal areas and retail spaces.
11. Water efficient fixtures are applied throughout.
12. A 15,000 litre rainwater tank will harvest rainwater from the upper and lower roof. This tank will be connected to all WCs.
13. A Melbourne STORM rating of 113% is achieved.
14. In total 32 bicycle spaces are to be provided for residents and employees.
15. 4 new and 10 existing bicycle spaces for residential visitors and visitors of the commercial tenancies are provided at ground floor.

BESS Performance

The project achieves a total BESS score of 64% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%. This figure represents a percentage improvement over a benchmark project. A score of 50% and higher equates to 'best practice' and is an effective pass of the BESS tool. A score of 70% and higher equates to BESS 'excellence' and exists as a higher benchmark in the tool.




ESD Assessment

Indoor Environment Quality

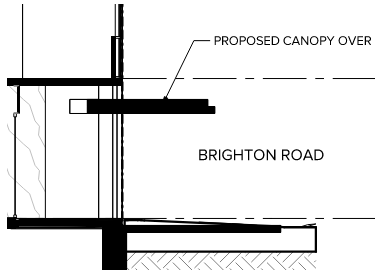
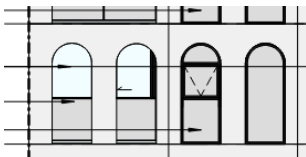
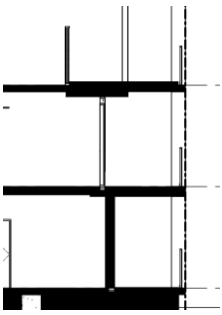
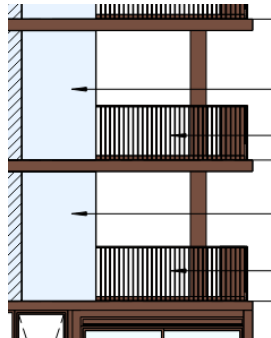
Council ESD objectives:

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

Council Best Practice Standard

Criteria	Development Provision
<p>Natural Ventilation</p> <p>At least 60% of a development's apartments should be naturally ventilated.</p>	<p>68% (27 out of 40) of the development's apartments are naturally cross-ventilated. Apartments are provided with windows on opposite or adjacent facades.</p>  <p>Typical natural cross-ventilated apartment</p>
<p>Daylight</p> <p>Daylight DTS Criteria</p>	<p>The BESS built-in daylight calculator has been applied to demonstrate daylight compliance for the development. All living rooms and bedrooms achieve best practice daylight levels.</p> <p>Refer Appendix E – BESS Assessment.</p> <p>Glass only VLT is to be in accordance with (or higher then) the VLTs outlined in the BESS built-in calculator inputs as follows:</p> <ul style="list-style-type: none"> - Clear Double: 0.71 - Grey Double: 0.32 - Dark Grey Double: 0.16 <p>The non-residential areas are achieving a 2% DF to 47.2% of the nominated area. As the retail areas will be provided with back of house areas for storage or food preparation, this is deemed an acceptable outcome. Refer Appendix A – Daylight Hand Calculations.</p> <p>90% of bedrooms have an external window. NIL internal bedrooms.</p>

Council Best Practice Standard

Criteria	Development Provision
<p>Winter Sunlight</p> <p>70% of dwellings receive at least 3 hours of direct sunlight in all living areas between 9am and 3pm in mid-winter.</p>	<p>75% (30 out of 40) of apartments achieve at least 3 hours of sunlight.</p>
<p>Thermal Comfort</p> <p>Appropriate external shading is provided to east, west and north facing living area and bedroom windows.</p>	<p>The development is provided with a comprehensive shading strategy:</p> <div data-bbox="639 864 1015 1133">  <p>PROPOSED CANOPY OVER BRIGHTON ROAD</p> </div> <p>North and east retail glazing will be shaded by a canopy overhead</p> <div data-bbox="676 1447 983 1603">  </div> <p>Northern corner on the north and east façade has deep in set windows and balconies are shaded by the arched facade</p> <div data-bbox="1155 842 1378 1155">  </div> <p>East, West and North facing recessed windows will be shaded by the overhanging balconies slab from the floor above.</p> <div data-bbox="1126 1357 1398 1693">  </div> <p>Level 6 and 7 west oriented windows will be shaded by the balcony above</p>
<p>Indoor Air Quality</p> <p>To reduce indoor pollutants and improve air quality</p>	<p>The development will incorporate low VOC paints, sealants and adhesives in line with table 13.1.1 of the Green Star Design & As-Built v1.3 Submission Guidelines.</p>

Council Best Practice Standard

Criteria	Development Provision
	The development will incorporate E1 or E0-grade engineered wood products (e.g. MDF, plywood and / or engineered-wood flooring).

Energy

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision					
Thermal Performance Rating	Demonstrate energy efficiencies beyond minimum BCA compliance benchmarks (e.g. 10% or + 1 star).	The National Construction Code (NCC) Class 2 – Sole Occupancy Unit(s) residential building component is to be designed in accordance with NCC Section J (2016) NatHERS requirements. The residential units must achieve an average 7.0 Star rating, with no unit achieving below 5 Stars.					
		The apartments are currently achieving a 7.2 Star average. This represents > 10% improvement on minimum NCC compliance benchmarks. The below sample ratings demonstrate the developments ability to achieve this average. Refer Appendix B for Preliminary FirstRate Certificates.					
		Apartment No.	ACE Total MJ/M2	ACE Heating	ACE Cooling	ACE NCFA	Star Rating
		1.06	79.9	55.5	24.4	65.1	7.1
		2.07	66.3	48.3	18	74.1	7.6
		3.03	48.9	30.9	18	59	8.2
		4.01	100.9	70.8	30.1	61.8	6.4
		5.05	72.1	39.5	32.6	63.1	7.4
		6.01	98.4	70.1	28.3	126.4	6.4
		Average	77.8	52.5	25.2	74.9	7.2
		*Apartments are assessed using FirstRate5 v5.3.2					
Construction assumptions for preliminary FirstRate ratings are listed below. Note, these assumptions are based on the sample of apartments assessed and may vary throughout the development. These assumptions are not to be relied upon for any other purpose beyond Town Planning assessment.							

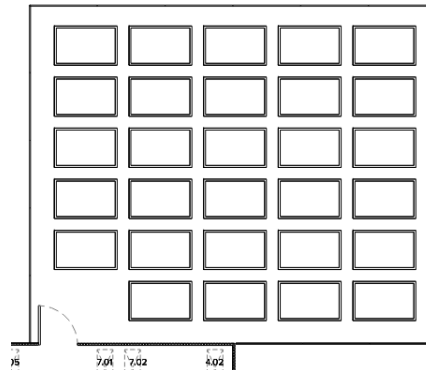
Council Best Practice Standard

Criteria	Development Provision		
	Element	Material	Insulation Value
	Floor	Concrete	R2.5
	External Walls	Fibre Cement, AAC Panel	R2.5
	Internal Walls	Plasterboard	R1.5
		Concrete Core wall	R1.5
	Roof	Concrete	R4 (Roof) R2.5(Terrace above)
	Fixed Windows	Aluminium framed, Argon filled, double glazed, clear	U-Value = 3.42 SHGC = 0.61
	Sliding Doors	Aluminium framed, Argon filled, double glazed, clear	U-Value = 3.81 SHGC = 0.55
	Awning Windows	Aluminium framed, Argon filled, double glazed, clear	U-Value = 4.89 SHGC = 0.46
	Glazed doors	Aluminium framed, Argon filled, double glazed, clear	U-Value = 3.60 SHGC = 0.44
	Fixed Windows	Aluminium framed, Argon filled, double glazed, dark grey	U-Value = 3.54 SHGC = 0.39
	Awning Windows	Aluminium framed, Argon filled, double glazed, dark grey	U-Value = 4.88 SHGC = 0.3
	Fixed Windows	Aluminium framed, Argon filled, double glazed, mid grey	U-Value = 3.42 SHGC = 0.39

Council Best Practice Standard

Criteria		Development Provision
		<p>Sliding Doors Aluminium framed, Argon filled, double glazed, mid grey U-Value = 3.33 SHGC = 0.46</p> <hr/> <p>Awning Windows Aluminium framed, Argon filled, double glazed, mid grey U-Value = 4.75 SHGC = 0.31</p> <p>The non-residential areas aim to reduce heating and cooling energy consumption 10% below the reference case (BCA Section J). Refer Appendix C – Preliminary Energy Modelling.</p>
	Hot Water System	<p>Install energy efficient (high star rating) HWS</p> <p>The development is to utilise individual instantaneous electric hot water units.</p>
	Peak Energy Demand	<p>Demonstrate Instantaneous (peak-hour) demand has been reduced by >25%</p> <p>High performance thermal envelope in conjunction with high efficiency HVAC systems and lighting systems reduce energy demand at peak times.</p>
Efficient HVAC Systems	Specify energy efficient (high star rating) heating and cooling systems.	<p>When outdoor conditions are not conducive to natural ventilation, air conditioning will be used. Inverter split system units are to be installed and sized to maintain conditions of the main living space of each apartment. The efficiency of the air conditioning system is to be within 1 star rating of best available under MEPS Post-October 2019 measurement standard.</p> <p>The retail areas will be provided with VRV air-to-air heat pump units with a COP of 3.5 or equivalent system.</p>
	Carpark ventilation is either fully naturally ventilated or uses CO monitoring to control the operation of the ventilation fans	<p>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.</p> <p>The mechanical services engineer is responsible for the design and specification of the system. The contractor is to procure and install the specified system.</p> <p>Maintenance requirements of the CO sensor system are to be</p>

Council Best Practice Standard

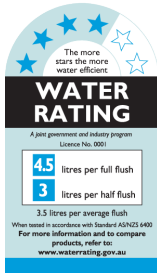

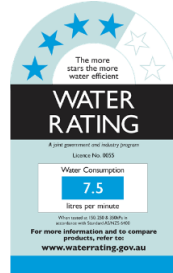

Criteria		Development Provision
		included in the O&M manual.
Efficient Lighting	Maximum illumination power density (W/m ²) in at least 90% of the relevant Building Class is at least 20% lower than required by current BCA requirements	<p>Lighting for the residential and non-residential development is to be LED types. High efficiency fluorescent T5 type lighting will be provided to the carpark and services areas only.</p> <p>Lighting power density shall be as follows:</p> <ul style="list-style-type: none"> • Dwellings: No greater than average 4W/m² • Veranda/balcony/terrace: No greater than average 4W/m² • Back of house and indoor car parks: No greater than average 5W/m² • Retail: No greater than average 18W/m² <p>All common area, external and carpark lighting is to be controlled with daylight, motion sensors or timers (whichever is deemed appropriate).</p>
Renewable Electricity Generation	Solar power system provides 5% of the building's energy consumption.	<p>A 10kW Solar PV system is to be located on the roof of the proposed development. The system is expected to generate approximately 14,46kWh and will be provide 31% of common area lighting and power.</p> <div data-bbox="817 1240 1244 1608" data-label="Diagram">  </div> <p>Location Solar PV System</p> <p>Refer Appendix D – Renewable Energy</p>

Water

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Potable Water Reduction	>25% potable water reduction.	<div> <div>WELS 4 Star - Toilets</div>  </div> <div> <div>WELS 5 Star - Taps</div>  </div> <div> <div>WELS 4 Star - Showerhead</div>  </div> <div> <div>WELS 5 Star - Dishwasher</div>  </div>
Rainwater Collection & Reuse	25-75% reduction of potable water demand due to rainwater collection and reuse systems.	<p>A 15,000 litre rainwater tank will harvest rainwater from the upper and lower roof. This tank will be connected to all WCs. It is estimated that this will save more than 197kL of potable water every year and meet 37.5% of the demand in these areas.</p> <p>Stormwater drainage mechanism is to be determined by the hydraulics services engineer at the design development phase.</p> <p>Refer Appendix E – WSUD Response</p>
Water Metering	The installation of separate water meters in individual dwellings.	The apartments and commercial tenancies are to have individual cold and hot water meters. This measure is aimed at encouraging user awareness and accountability and it is likely to lead to more responsible water use.
Landscape Irrigation	Are water efficiency principles used for landscaped areas.	The majority of landscaping is to be native vegetation.
Building Systems Water	Where applicable, have measures	>80% of the fire test water will be reused on-site OR no potable water will be expelled during testing.

Council Best Practice Standard

Criteria	Development Provision
Use Reduction	<div> <div> <p>been taken to reduce potable water consumption by >80% in the buildings air-conditioning chillers and when testing fire safety systems.</p> </div> <div> <p>All HVAC systems will be air cooled.</p> </div> </div>

Stormwater

Council ESD objectives:

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

Council Best Practice Standard

Criteria	Development Provision
<p>STORM Rating</p> <p>Exceed Victoria's best practice standards by achieving a MUSIC / STORM rating of at least 100% or equivalent modelling results.</p>	<p>The Melbourne Water - Stormwater Treatment Objective Relative Measure (STORM) tool has been applied to determine performance relative to Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999). As per City of Port Phillip Planning Scheme - Clause 22.18 Stormwater Management (Water Sensitive Urban Design), the development is required to achieve a STORM rating of 100% or greater.</p> <p>A Melbourne STORM rating of 113% is achieved via the following:</p> <ul style="list-style-type: none"> • Rainwater is to be collected from the upper and lower roof and directed into the 15,000 litre rainwater tank. All WC's are to be connected to the rainwater tank. <p>Refer Appendix E – WSUD Response.</p>

Transport

Council ESD objectives:

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

Council Best Practice Standard

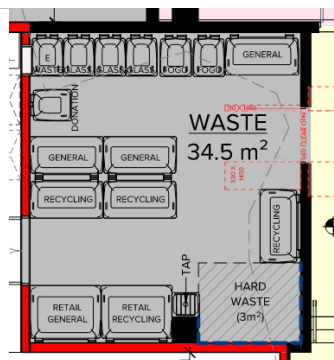
Criteria		Development Provision
Bicycle Facilities	For residential developments, provide at least one secure bicycle parking space per dwelling for residents and one bicycle space per 4 dwellings for visitors	<p>In total 32 bicycle spaces are to be provided for residents and employees. This will provide a ratio of approximately 0.8 resident bicycle space for every 1 apartment(s).</p> <p>4 new and 10 existing bicycle spaces for residential visitors and visitors of the commercial tenancies are provided at ground floor.</p>
End Of Trip Facilities	Provide accessible showers (1 per 10 bicycles spaces), changing facilities and one secure locker per bicycle space in the changing facilities.	An accessible WC and shower, change area and 5 lockers will be provided at ground floor.
Electric Vehicle Charging	Provide facilities for charging of electric vehicles.	<p>1 parking space has been nominated for EV charging, with appropriate signage and charging infrastructure installed.</p> <p>6 electric bicycle charging points will be incorporated into the design.</p>

Waste Management

Council ESD objectives:

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

Council Best Practice Standard

Criteria	Development Provision	
Construction Waste Management	Adopt a recycling target of at least 70% for all demolition and construction waste (by mass.)	The contractor will implement a waste management plan to ensure that at least 80% of demolition and construction waste (by mass) is recycled. The waste management plan will be developed in accordance with the MBAV Guidelines.
	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used.	None of the existing structure is re-used.
Operational Waste Management	Are the recycling facilities at least as convenient for occupants as facilities for general waste.	 <p>Separate general, recycling, cardboard, green and glass waste storage will be provided at ground floor.</p>
	Are facilities provided for on-site management of food and garden waste.	Green waste storage is provided at ground floor bin room.

Urban Ecology

Council ESD objectives:

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

Council Best Practice Standard

Criteria	Development Provision	
Ecological Value	Enhance the ecological value of your site through the protection of existing vegetation.	The proposed site is currently vacant. Redeveloping the site will not only reduce the burden on previously undeveloped sites and greenfield urban sprawl, but also provides regeneration to the location and help to create a more socially cohesive and environmentally friendly residential community.
Vegetation	Provide additional vegetation that serves the amenity and environmental performance of the development.	Planter boxes are to be located on Levels 2,3 6, 7 and 8.
	Is there a tap and floor waste on every balcony / in every courtyard	Balconies or private open space have been provided with a tap allowing residents to cultivate their own gardens.
Communal Spaces	Common space: -1m ² for each of the first 50 occupants - Additional 0.5m ² for each occupant between 51 and 250 - Additional 0.25m ² for each occupant above 251	NIL

Management

Council ESD objectives:

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

Construction and Building Management Actions

Metering	<p>Electricity and cold / hot water metering are to be provided to each individual apartment, commercial tenancy and retail spaces. This measure is aimed at encouraging user awareness and accountability and it is likely to lead to more responsible energy use.</p> <p>Lighting and general power to common areas is to be separately metered to quantify energy used for common areas spaces.</p>
Building Tuning	<p>Provision of comprehensive pre-commissioning, quality monitoring and building tuning for all building services in accordance with CIBSE and ASHRAE (for mechanical systems) guidelines will be the responsibility of the development team. This is in line with the Green Star Design & As-Built tool credit criteria 'Building Commissioning' and 'Building System Tuning'.</p>
Building User's Guide	<p>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:</p> <ul style="list-style-type: none"> • Energy and Environmental Strategy • Options for purchasing a ≥3 Star Washing Machine • Monitoring and Targeting • Building Services • Transport Facilities • Materials and Waste Policy • Expansion/Re-fit Considerations • References and Further Information
ISO14001 Accreditation Builder	<p>ISO14001 Accreditation will be positively weighted as part of the selection criteria.</p>
Construction Management Plan	<p>A site specific Environmental Management Plan in accordance with Section 3 of the NSW Environmental Management System guidelines 2007 will be implemented for the development.</p> <p>This is in line with the Green Star Design & As-Built tool credit criteria for 'Environmental Management Plan'.</p>

Appendices

Appendix A: Daylight Hand Calculations

The BESS tool notes under 1.4 Daylight Access – Non-residential state that the Green Star Hand Calculation Method is an acceptable method of demonstrating compliance with this credit.

The Green Star – Daylight and Views Hand Calculation Guide defines the zone of compliance as follows:

$$\begin{aligned}
 h &= \text{height of the window head above desktop} - \text{table top level (700mm)} \\
 \text{Depth of the zone of Compliance} &= h * 2 \\
 \text{Width of the zone of compliance} &= \text{width of glazing} = w \\
 \text{Zone of compliance} &= h * 2 * w
 \end{aligned}$$

The daylight assessment includes all retail areas at ground floor. The below table and figures demonstrate the results.

Area	Total Area (m2)	Area of compliance (m2)	Percentage of compliance (%)
Retail 1	156.4	64.6	41
Retail 2	159	84.2	53
Total	315.4	148.8	47.2

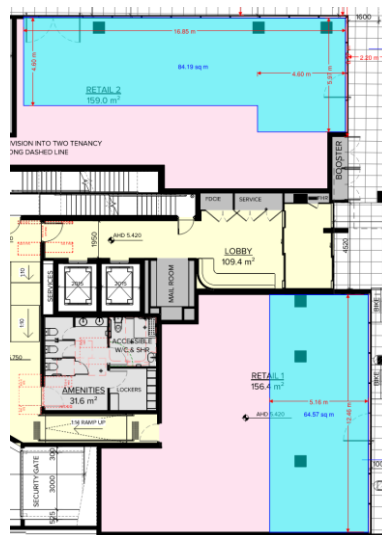


Figure 3: Daylight Hand Calculations GF Retail

Based on this analysis we deem that 47.2% of the retail area will achieve a DF2.

Appendix B: Preliminary FirstRate Certificates

Nationwide House Energy Rating Scheme

NatHERS Certificate

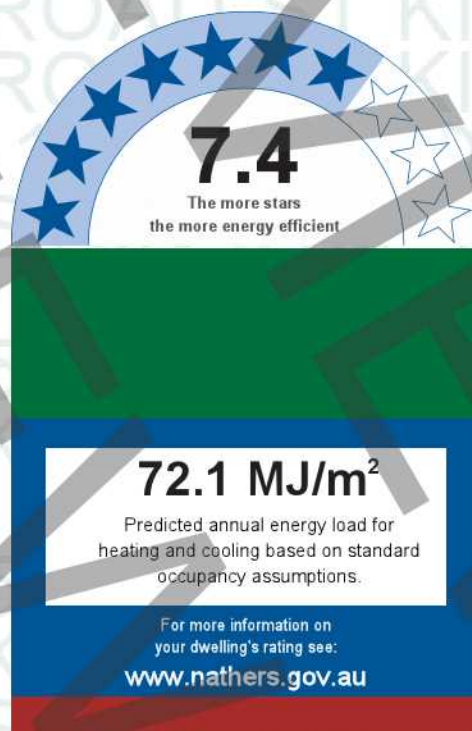
Generated on 21 Jul 2025 using FirstRate5: 5.3.2b (3.21)

Property

Address 5.05, 1 Brighton Road, St Kilda, VIC, 3182
Lot/DP -
NCC Class* Class 2
Type New Home

Plans

Main plan 24.06.20
Prepared by YC



Construction and environment

Assessed floor area (m²)*		Exposure type
Conditioned*	63.1	protected
Unconditioned*	3.8	NatHERS climate zone
Total	66.9	21 Melbourne RO
Garage	-	

Thermal performance

Heating	Cooling
39.5	32.6
MJ/m²	MJ/m²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.



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	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.FR5.com.au.



National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate Check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page?
Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

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-061-04 A	Capral 50 Series Awning in 400 Series DG 6-12Ar-6	4.88	0.45	0.43	0.47
CAP-051-04 A	Capral 35 Awning in 400 Frame DG 6/12Ar/6	4.89	0.46	0.44	0.48
CAP-057-09 A	Capral 900 Sliding Door DG 6/12Ar/6	3.81	0.55	0.52	0.58

Window and glazed door *Schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
MasterBed	CAP-061-04 A	Master AW	2900	1210	awning	60.0	ENE	No
Bed1	CAP-051-04 A	Bed1 AW	2900	2914	awning	20.0	ENE	No

* Refer to glossary.

Kit/Liv	CAP-057-09 A	Kit/Liv SD	2900	3250	awning	45.0	ENE	No
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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)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
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	1BRGHTRD - Fibre Cement	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7);Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7)	No
3	1BRGHTRD - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
4	1BRGHTRD - Lightweight Rendered	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall schedule

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
MasterBed	1	2900	1358	ENE	0	Yes
MasterBed	2	2900	5181	NNW	0	No
Bed1	1	2900	2742	SSE	3640	Yes
Bed1	1	2900	3025	ENE	212	Yes
Bed1	1	2900	2577	NNW	0	Yes
Kit/Liv	3	2900	2010	WSW	0	No
Kit/Liv	2	2900	2408	WSW	0	No
Kit/Liv	2	2900	6194	SSE	0	No
Kit/Liv	4	2900	1491	SSE	0	Yes
Kit/Liv	1	2900	3462	ENE	2921	Yes
Kit/Liv	3	2900	162	NNW	0	No
Bath	3	2900	1672	WSW	0	No
ENS	2	2900	2029	NNW	0	No
ENS	2	2900	190	NNW	0	Yes
ENS	3	2900	1729	WSW	0	No

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
1	1BRGHTRD - Fibre Cement	4.5	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)
2	FR5 - Internal Plasterboard Stud Wall	46.9	

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
MasterBed	FR5 - 200mm concrete slab	13.7	Enclosed	R0.0	Carpet
Bed1	FR5 - 200mm concrete slab	8.4	Enclosed	R0.0	Carpet
Bed1	FR5 - 200mm concrete slab	4.4	Enclosed	R0.0	Carpet
Kit/Liv	FR5 - 200mm concrete slab	26.5	Enclosed	R0.0	Timber
Kit/Liv	FR5 - 200mm concrete slab	6.1	Enclosed	R0.0	Tiles
Bath	FR5 - 200mm concrete slab	3.8	Enclosed	R0.0	Tiles
ENS	FR5 - 200mm concrete slab	3.9	Enclosed	R0.0	Tiles

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bed1	Plasterboard	R2.5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
MasterBed	6	Downlights	80	Sealed
Bed1	4	Downlights	80	Sealed

NatHERS Certificate

7.4 Star Rating as of 21 Jul 2025

Kit/Liv	10	Downlights	80	Sealed
Kit/Liv	3	Downlights	80	Unsealed
Kit/Liv	1	Exhaust Fans	200	Sealed
Bath	1	Exhaust Fans	200	Sealed
Bath	2	Downlights	80	Sealed
ENS	2	Downlights	80	Sealed
ENS	1	Exhaust Fans	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.2	Light

Explanatory Notes

About this report

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While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, rangehoods, 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.
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.
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.

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country.

Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

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

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 .
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
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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.
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).

Nationwide House Energy Rating Scheme

NatHERS Certificate

Generated on 21 Jul 2025 using FirstRate5: 5.3.2b (3.21)

Property

Address 4.01, 1 Brighton Road, St Kilda, VIC, 3182
Lot/DP -
NCC Class* Class 2
Type New Home

Plans

Main plan 24.06.20
Prepared by YC

Construction and environment

Assessed floor area (m²)*		Exposure type
Conditioned*	61.8	protected
Unconditioned*	5.8	NatHERS climate zone
Total	67.6	21 Melbourne RO
Garage	-	



Accredited assessor

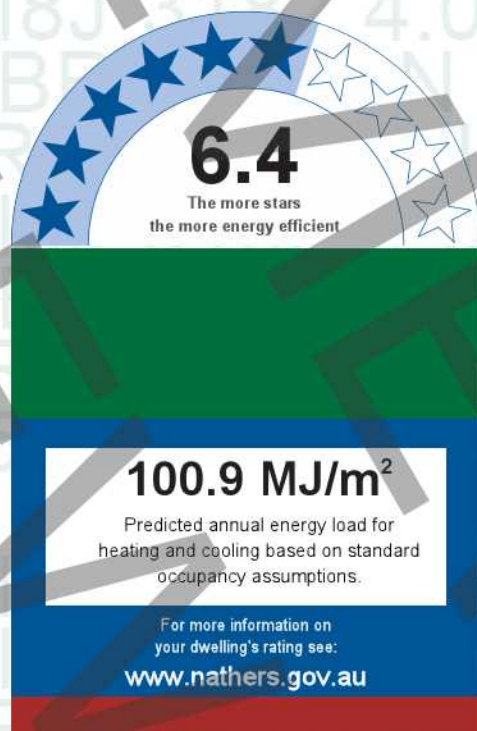
Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

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Thermal performance

Heating	Cooling
70.8	30.1
MJ/m²	MJ/m²

About the rating

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Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

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Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

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-057-09 A	Capral 900 Sliding Door DG 6/12Ar/6	3.81	0.55	0.52	0.58
CAP-051-04 A	Capral 35 Awning in 400 Frame DG 6/12Ar/6	4.89	0.46	0.44	0.48
CAP-051-05 A	Capral 35 Awning in 400 Frame DG 6Gy/12Ar/6	4.75	0.31	0.29	0.33
CAP-041-37 A	Capral 425 Fixed Window DG 6Gy/12Ar/6	3.42	0.39	0.37	0.41

Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kit/Liv	CAP-057-09 A	Liv/Kit SD	2900	4300	sliding	45.0	WSW	No

* Refer to glossary.

Bed1	CAP-051-04 A	Bed1 AW	2900	1110	awning	60.0	SSE	No
MasterBed	CAP-051-05 A	Master AW	2900	1260	awning	30.0	WSW	No
MasterBed	CAP-041-37 A	Opening 43	2900	1300	fixed	0.0	WSW	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)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
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	1BRGHTRD - Fibre Cement	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
2	1BRGHTRD - Concrete Int	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7);Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7)	No

* Refer to glossary.

4	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m ³) (R1.7); Glass fibre batt (k = 0.044 density = 12 kg/m ³) (R1.7)	No
5	1BRGHTRD - Lightweight Rendered	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kit/Liv	1	2900	5530	WSW	2450	Yes
Kit/Liv	2	2900	2778	ENE	0	No
Kit/Liv	3	2900	4498	NNW	0	No
Kit/Liv	1	2900	2124	NNW	0	Yes
Bath	4	2900	2861	ENE	0	No
Bath	2	2900	358	NNW	0	No
Bed1	5	2900	3037	SSE	0	Yes
Bed1	4	2900	3760	ENE	0	No
ENS	5	2900	1488	SSE	0	Yes
MasterBed	5	2900	4101	WSW	0	No
MasterBed	5	2900	3054	SSE	0	Yes
MasterBed	5	2900	681	NNW	5516	Yes

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	50.9	
2	1BRGHTRD - Concrete Int	5.7	Glass fibre batt: R2.5 (R2.5)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kit/Liv	FR5 - 200mm concrete slab	18.6	Enclosed	R0.0	Timber
Kit/Liv	FR5 - 200mm concrete slab	14.9	Enclosed	R0.0	Tiles
Bath	FR5 - 200mm concrete slab	5.8	Enclosed	R0.0	Tiles
Bed1	FR5 - 200mm concrete slab	5.7	Enclosed	R0.0	Carpet
Bed1	FR5 - 200mm concrete slab	5.6	Enclosed	R0.0	Carpet
ENS	FR5 - 200mm concrete slab	1.3	Enclosed	R0.0	Tiles
ENS	FR5 - 200mm concrete slab	3.3	Enclosed	R0.0	Carpet
MasterBed	FR5 - 200mm concrete slab	4.7	Enclosed	R0.0	Carpet
MasterBed	FR5 - 200mm concrete slab	7.8	Enclosed	R0.0	Carpet

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
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* Refer to glossary.

NatHERS Certificate

6.4 Star Rating as of 21 Jul 2025

Bed1	Plasterboard	R4.0	Yes
ENS	Plasterboard	R4.0	Yes
MasterBed	Plasterboard	R4.0	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kit/Liv	11	Downlights	80	Sealed
Kit/Liv	1	Exhaust Fans	200	Sealed
Bath	2	Downlights	80	Sealed
Bath	1	Exhaust Fans	200	Sealed
Bed1	4	Downlights	80	Sealed
ENS	1	Exhaust Fans	200	Sealed
ENS	2	Downlights	80	Sealed
MasterBed	5	Downlights	80	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorbance	Roof shade
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium
Framed:Flat - Flat Framed (Metal Deck)	1.3	0.2	Light

* Refer to glossary.

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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.

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

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 .
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
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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.
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).

Nationwide House Energy Rating Scheme

NatHERS Certificate

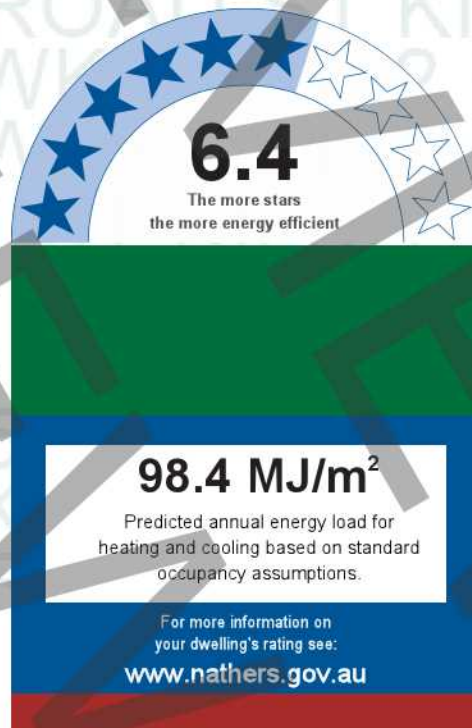
Generated on 21 Jul 2025 using FirstRate5: 5.3.2b (3.21)

Property

Address 6.01, 1 Brighton Road, St Kilda, VIC, 3182
Lot/DP -
NCC Class* Class 2
Type New Home

Plans

Main plan 24.06.20
Prepared by YC



Construction and environment

Assessed floor area (m²)*		Exposure type
Conditioned*	126.4	protected
Unconditioned*	3.5	NatHERS climate zone
Total	129.9	21 Melbourne RO
Garage	-	

Thermal performance

Heating	Cooling
70.1	28.3
MJ/m²	MJ/m²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.FR5.com.au.



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	Declaration completed: no conflicts

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate Check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page?
Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
CAP-055-35 A	Capral 419 Flushline Fixed Window DG 6/12Ar/6	3.42	0.61	0.58	0.64
CAP-051-04 A	Capral 35 Awning in 400 Frame DG 6/12Ar/6	4.89	0.46	0.44	0.48
CAP-041-03 A	Capral 425 Fixed Window DG 6Gy/12/6	3.54	0.39	0.37	0.41
CAP-057-09 A	Capral 900 Sliding Door DG 6/12Ar/6	3.81	0.55	0.52	0.58

Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bed2	CAP-055-35 A	Bed2 FW	2740	1520	fixed	0.0	ENE	No

* Refer to glossary.

NatHERS Certificate

6.4 Star Rating as of 21 Jul 2025

Bed2	CAP-051-04 A	Opening 74	2100	1018	awning	60.0	ENE	No
Kit/Liv	CAP-041-03 A	Opening 68	2000	953	casement	60.0	ENE	No
Kit/Liv	CAP-055-35 A	Opening 71	2100	1086	fixed	0.0	ENE	No
Kit/Liv	CAP-057-09 A	Kit/Liv SD	2740	2461	sliding	45.0	ENE	No
Kit/Liv	CAP-055-35 A	Opening 72	2100	3345	fixed	0.0	ENE	No
Kit/Liv	CAP-055-35 A	Opening 69	2100	870	fixed	0.0	NNW	No
Kit/Liv	CAP-057-09 A	Opening 70	2100	3132	sliding	45.0	NNW	No
Bed1	CAP-057-09 A	Bed1 SD	2740	3251	sliding	45.0	ENE	No
Master	CAP-055-35 A	Master SD	2740	1312	fixed	0.0	SSE	No
Master	CAP-051-04 A	Opening 75	2100	1245	awning	30.0	SSE	No
WIR	CAP-051-04 A	Opening 67	2500	977	awning	25.0	SSE	No
ENS	CAP-055-35 A	Opening 66	1460	1959	fixed	0.0	WSW	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)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall type

* Refer to glossary.

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	1BRGHTRD - Lightweight Rendered	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
2	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7); Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7)	No
3	1BRGHTRD - Fibre Cement	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
4	FR5 - Internal Plasterboard Stud Wall	0.5	Medium		No
5	1BRGHTRD - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bed2	1	2830	1859	SSE	0	Yes
Bed2	1	2830	2911	ENE	0	Yes
Bed2	1	2830	1943	NNW	0	No
Bed2	1	2830	396	ENE	0	No
Kit/Liv	2	2830	9471	WSW	0	No
Kit/Liv	3	2830	1196	ENE	0	Yes
Kit/Liv	3	2830	5075	ENE	2072	Yes
Kit/Liv	3	2830	3400	ENE	2072	Yes
Kit/Liv	3	2830	934	NNW	3385	Yes
Kit/Liv	3	2830	3943	NNW	3387	Yes
Bed1	1	2830	3061	SSE	0	Yes
Bed1	1	2830	3595	ENE	1900	Yes
Bath	1	2830	1568	SSE	0	Yes
Master	4	2830	364	WSW	0	Yes
Master	1	2830	4166	SSE	0	Yes
Master	2	2830	1175	NNW	0	No
Master	2	2830	1672	WSW	0	No
WIR	1	2830	4650	SSE	0	No
WIR	2	2830	4729	NNW	0	No
ENS	1	2830	3043	WSW	0	No
ENS	1	2830	1960	WSW	600	Yes
ENS	1	2830	2357	SSE	0	No
ENS	2	2830	3036	ENE	0	No
ENS	2	2830	2220	NNW	0	No
Laundry	2	2830	1646	WSW	0	No
Circ	5	2830	1194	WSW	0	No

Circ	2	2830	3098	NNW	0	No
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Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	92.7	
2	1BRGHTRD - Fibre Cement	1.4	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed2	FR5 - 200mm concrete slab	0.1	Elevated	R2.5	Carpet
Bed2	FR5 - 200mm concrete slab	15.9	Enclosed	R0.0	Carpet
Kit/Liv	FR5 - 200mm concrete slab	45.9	Enclosed	R0.0	Timber
Kit/Liv	FR5 - 200mm concrete slab	0.6	Elevated	R2.5	Timber
Bed1	FR5 - 200mm concrete slab	2.4	Elevated	R2.5	Carpet
Bed1	FR5 - 200mm concrete slab	9	Enclosed	R0.0	Carpet
Bath	FR5 - 200mm concrete slab	3.5	Enclosed	R0.0	Carpet
Master	FR5 - 200mm concrete slab	7.7	Enclosed	R0.0	Carpet
Master	FR5 - 200mm concrete slab	8.3	Enclosed	R0.0	Carpet
WIR	FR5 - 200mm concrete slab	9.4	Enclosed	R0.0	Carpet
ENS	FR5 - 200mm concrete slab	11.4	Enclosed	R0.0	Tiles
Laundry	FR5 - 200mm concrete slab	5	Enclosed	R0.0	Timber
Circ	FR5 - 200mm concrete slab	10.7	Enclosed	R0.0	Timber

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Bed2	4	Downlights	80	Sealed
Kit/Liv	1	Exhaust Fans	200	Sealed
Kit/Liv	19	Downlights	80	Sealed
Bed1	5	Downlights	0	Sealed
Bath	2	Downlights	80	Sealed
Bath	1	Exhaust Fans	250	Sealed
Master	5	Downlights	80	Sealed
WIR	2	Downlights	80	Sealed
ENS	3	Downlights	80	Sealed
ENS	1	Exhaust Fans	250	Sealed
Laundry	2	Downlights	80	Sealed
Laundry	1	Exhaust Fans	250	Sealed

* Refer to glossary.

Circ	4	Downlights	80	Sealed
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Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.2	Light
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium

Explanatory Notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, rangehoods, 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.
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Nationwide House Energy Rating Scheme

NatHERS Certificate

Generated on 21 Jul 2025 using FirstRate5: 5.3.2b (3.21)

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Type New Home

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Prepared by YC

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Accredited assessor

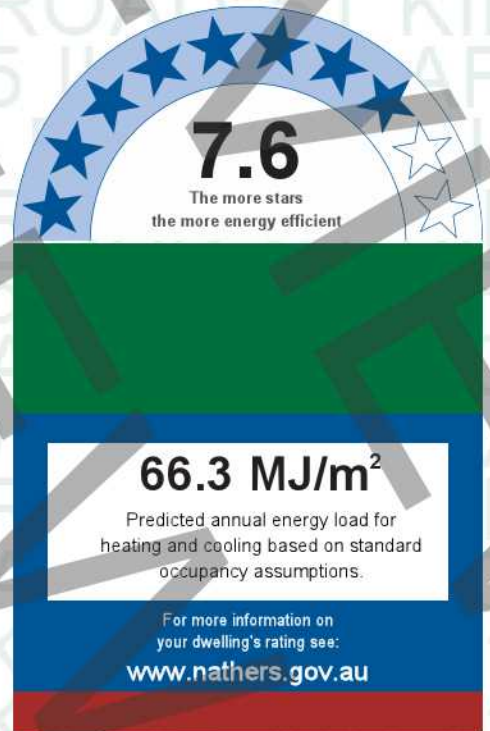
Name	Gary Wertheimer
Business name	GIW Environmental Solutions
Email	gary@giw.com.au
Phone	0390445111
Accreditation No.	DMN/10/2024
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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Thermal performance

Heating	Cooling
48.3	18
MJ/m²	MJ/m²

About the rating

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Additional Notes

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

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CAP-051-04 A	Capral 35 Awning in 400 Frame DG 6/12Ar/6	4.89	0.46	0.44	0.48
CAP-048-06 A	200 Hinged Door into 400 Narrowline DG 6EA-12Ar-6	3.6	0.44	0.42	0.46

Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living 2	CAP-041-35 A	Opening 25	2750	1340	fixed	0.0	ENE	No
Kitchen/Living 2	CAP-051-04 A	Opening 35	2750	1052	awning	60.0	ENE	No

* Refer to glossary.

Kitchen/Living 2	CAP-048-06 A	Opening 36	2750	1032	casement	90.0	ENE	No
Master	CAP-041-35 A	Opening 38	2750	921	fixed	0.0	SSE	No
Master	CAP-051-04 A	Opening 39	2750	908	awning	60.0	SSE	No
Master	CAP-041-35 A	Opening 40	2750	988	fixed	0.0	SSE	No
Master bed	CAP-041-35 A	Opening 26	2750	2081	fixed	0.0	ENE	No
Master bed	CAP-051-04 A	Opening 37	2750	954	awning	60.0	ENE	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)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
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	1BRGHTRD - Lightweight Rendered	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
2	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7); Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7)	No

3	1BRGHTRD - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
4	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.5)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living 2	1	2800	3547	ENE	2435	Yes
Kitchen/Living 2	2	2800	2206	NNW	0	No
Kitchen/Living 2	2	2800	784	WSW	0	No
Kitchen/Living 2	2	2800	5602	NNW	0	No
Kitchen/Living 2	2	2800	1035	ENE	0	No
Kitchen/Living 2	3	2800	1767	NNW	0	No
Kitchen/Living 2	2	2800	1633	WSW	0	No
Kitchen/Living 2	2	2800	994	NNW	0	No
Kitchen/Living 2	2	2800	791	WSW	0	No
Master	2	2800	3465	WSW	0	No
Master	1	2800	2955	SSE	0	Yes
WC	2	2800	3011	WSW	0	No
WC	3	2800	2018	ENE	0	No
WC	4	2800	1571	NNW	0	No
Ensuite	1	2800	3055	SSE	0	Yes
Master bed	1	2800	6096	SSE	0	Yes
Master bed	1	2800	3145	ENE	2441	Yes

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	57.9	

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living 2	FR5 - 200mm concrete slab	37.3	Enclosed	R0.0	Timber
Master	FR5 - 200mm concrete slab	7.7	Enclosed	R0.0	Carpet
Master	FR5 - 200mm concrete slab	2.5	Enclosed	R0.0	Carpet
WC	FR5 - 200mm concrete slab	4.8	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	7.9	Enclosed	R0.0	Tiles
Master bed	FR5 - 200mm concrete slab	3.1	Enclosed	R0.0	Carpet
Master bed	FR5 - 200mm concrete slab	15.7	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Master	Plasterboard	R2.5	No
Ensuite	Plasterboard	R2.5	No
Master bed	Plasterboard	R2.5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living 2	1	Exhaust Fans	200	Sealed
Kitchen/Living 2	16	Downlights	80	Sealed
Master	4	Downlights	80	Sealed
WC	1	Exhaust Fans	200	Sealed
WC	2	Downlights	80	Sealed
Ensuite	1	Exhaust Fans	200	Sealed
Ensuite	3	Downlights	80	Sealed
Master bed	8	Downlights	80	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab: Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium

Explanatory Notes

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While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, rangehoods, 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.
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.
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.

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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 .
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
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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.
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).

Nationwide House Energy Rating Scheme

NatHERS Certificate

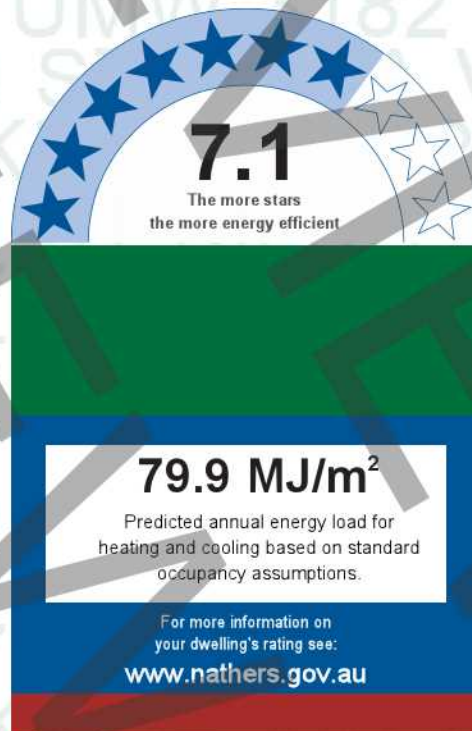
Generated on 21 Jul 2025 using FirstRate5: 5.3.2b (3.21)

Property

Address 1.07, 1 Brighton Road, St Kilda, VIC, 3182
Lot/DP -
NCC Class* Class 2
Type New Home

Plans

Main plan 24.06.20
Prepared by YC



Construction and environment

Assessed floor area (m²)*		Exposure type
Conditioned*	60.4	protected
Unconditioned*	4.7	NatHERS climate zone
Total	65.1	21 Melbourne RO
Garage	-	

Thermal performance

Heating	Cooling
55.5	24.4
MJ/m²	MJ/m²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.



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	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.FR5.com.au.



National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate Check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page?
Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

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-061-05 A	Capral 50 Series Awning in 400 Series DG 6Gy-12Ar-6	4.88	0.3	0.28	0.32
CAP-041-03 A	Capral 425 Fixed Window DG 6Gy/12/6	3.54	0.39	0.37	0.41
CAP-048-06 A	200 Hinged Door into 400 Narrowline DG 6EA-12Ar-6	3.6	0.44	0.42	0.46
CAP-057-09 A	Capral 900 Sliding Door DG 6/12Ar/6	3.81	0.55	0.52	0.58

Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
WC	CAP-061-05 A	Opening 19	2450	968	awning	25.0	ENE	No

* Refer to glossary.

Ensuiite	CAP-061-05 A	Opening 20	2600	948	awning	60.0	ENE	No
Ensuiite	CAP-041-03 A	Opening 23	2000	719	fixed	0.0	ENE	No
Ensuiite	CAP-041-03 A	Opening 25	2000	235	fixed	0.0	ENE	No
Living/kitchen	CAP-048-06 A	Opening 22	2750	948	casement	90.0	ENE	No
Living/kitchen	CAP-041-03 A	Opening 15	2450	974	fixed	0.0	NNW	No
Living/kitchen	CAP-061-05 A	Opening 16	2450	1001	awning	25.0	NNW	No
Bed	CAP-061-05 A	Opening 17	2450	948	awning	25.0	ENE	No
Bed	CAP-061-05 A	Opening 18	2450	962	awning	25.0	ENE	No
Bed	CAP-041-03 A	Opening 24	2000	345	fixed	0.0	ENE	No
Bed	CAP-057-09 A	Opening 21	2750	2804	sliding	45.0	NNW	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)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Skylight shaft reflectance
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	FR5 - Brick Veneer	0.5	Medium		No

* Refer to glossary.

2	1BRGHTRD - Fibre Cement	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m ³) (R2.5)	No
3	1BRGHTRD - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m ³) (R2.5)	No
4	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m ³) (R1.7); Glass fibre batt (k = 0.044 density = 12 kg/m ³) (R1.7)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
WC	1	2900	789	SSE	0	No
WC	2	2900	2402	SSE	0	No
WC	2	2900	1477	ENE	143	No
Ensuite	2	2900	2379	ENE	215	No
Living/kitchen	3	2900	2363	WSW	0	No
Living/kitchen	3	2900	2489	SSE	0	No
Living/kitchen	4	2900	1717	SSE	0	No
Living/kitchen	2	2900	3125	ENE	3429	Yes
Living/kitchen	2	2900	3258	NNW	156	No
Living/kitchen	2	2900	1518	WSW	0	Yes
Living/kitchen	4	2900	7629	WSW	0	Yes
Living/kitchen	4	2900	989	NNW	0	Yes
Bed	2	2900	4220	ENE	180	No
Bed	2	2900	3164	NNW	3282	Yes

Internal wall *type*

Wall ID	Wall type	Area (m ²)	Bulk insulation
1	FR5 - Brick Veneer	41.4	

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
WC	FR5 - 200mm concrete slab	4.1	Elevated	R2.5	Tiles
WC	FR5 - 200mm concrete slab	0.6	Enclosed	R0.0	Tiles
Ensuite	FR5 - 200mm concrete slab	5.8	Elevated	R2.5	Tiles
Ensuite	FR5 - 200mm concrete slab	1	Enclosed	R0.0	Tiles
Living/kitchen	FR5 - 200mm concrete slab	6.2	Elevated	R2.5	Timber
Living/kitchen	FR5 - 200mm concrete slab	34.1	Enclosed	R0.0	Timber
Bed	FR5 - 200mm concrete slab	8.1	Elevated	R2.5	Carpet
Bed	FR5 - 200mm concrete slab	5.2	Enclosed	R0.0	Carpet

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
WC	2	Downlights	80	Sealed
WC	1	Exhaust Fans	250	Sealed
Ensuite	3	Downlights	80	Sealed
Ensuite	1	Exhaust Fans	250	Sealed
Living/kitchen	16	Downlights	80	Sealed
Living/kitchen	1	Exhaust Fans	250	Sealed
Bed	6	Downlights	0	Unsealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium

Explanatory Notes

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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.
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Nationwide House Energy Rating Scheme

NatHERS Certificate

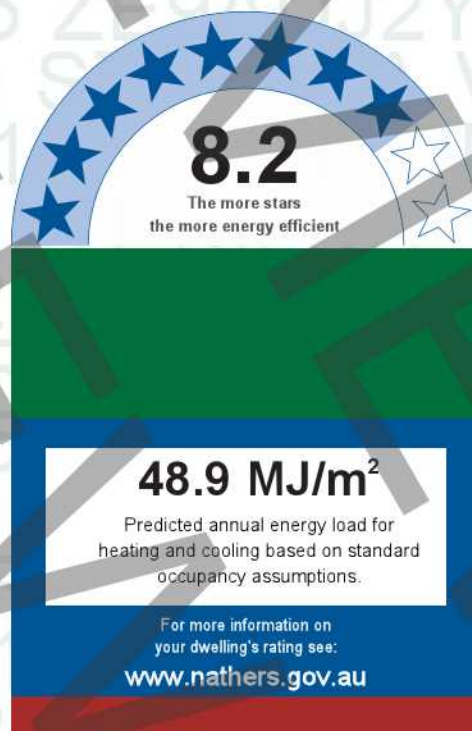
Generated on 21 Jul 2025 using FirstRate5: 5.3.2b (3.21)

Property

Address 3.03, 1 Brighton Road, St Kilda, VIC, 3182
Lot/DP -
NCC Class* Class 2
Type New Home

Plans

Main plan 24.06.20
Prepared by YC



Construction and environment

Assessed floor area (m²)*	Exposure type
Conditioned* 59	protected
Unconditioned* 3.6	NatHERS climate zone
Total 62.6	21 Melbourne RO
Garage -	

Thermal performance

Heating	Cooling
30.9	18
MJ/m ²	MJ/m ²

About the rating

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Verification

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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	Declaration completed: no conflicts

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate Check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page?
Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

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-061-04 A	Capral 50 Series Awning in 400 Series DG 6-12Ar-6	4.88	0.45	0.43	0.47
CAP-041-03 A	Capral 425 Fixed Window DG 6Gy/12/6	3.54	0.39	0.37	0.41
CAP-061-05 A	Capral 50 Series Awning in 400 Series DG 6Gy-12Ar-6	4.88	0.3	0.28	0.32
CAP-057-09 A	Capral 900 Sliding Door DG 6/12Ar/6	3.81	0.55	0.52	0.58

Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
MasterBed	CAP-061-04 A	Master AW	2900	1200	awning	60.0	NNW	No

* Refer to glossary.

Bed1	CAP-041-03 A	Bed1 FW	2000	758	fixed	0.0	NNW	No
Bed1	CAP-061-05 A	Bed1 AW	2000	963	awning	60.0	NNW	No
Bed1	CAP-041-03 A	Opening 35	2000	663	fixed	0.0	NNW	No
Kit/Liv	CAP-057-09 A	Kit/Liv SD	2900	3300	sliding	45.0	NNW	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)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
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	1BRGHTRD - Internal Party Wall	0.5	Medium	Glass fibre batt: R1.5 (R1.5);Glass fibre batt: R1.5 (R1.5)	No
2	1BRGHTRD - Fibre Cement	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No
3	1BRGHTRD - Plasterboard Int	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.5)	No

* Refer to glossary.

4 1BRGHTRD - Internal Party Wall

0.5

Medium

Glass fibre batt (k = 0.044
density = 12 kg/m³)
(R1.7); Glass fibre batt (k =
0.044 density = 12 kg/m³)
(R1.7)

No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
MasterBed	1	2900	5500	WSW	0	No
MasterBed	2	2900	1264	NNW	0	Yes
Bed1	2	2900	1547	ENE	3649	Yes
Bed1	2	2900	1105	ENE	0	Yes
Bed1	2	2900	3009	NNW	0	No
Bed1	2	2900	1524	WSW	0	Yes
Kit/Liv	3	2900	1875	SSE	0	No
Kit/Liv	1	2900	330	ENE	0	No
Kit/Liv	1	2900	3064	SSE	0	No
Kit/Liv	1	2900	6654	ENE	0	No
Kit/Liv	2	2900	3534	NNW	2663	Yes
Bath	4	2900	1389	SSE	0	No
ENS	1	2900	2532	WSW	0	No
ENS	1	2900	1544	SSE	0	No

Internal wall *type*

Wall ID	Wall type	Area (m ²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	49.9	

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
MasterBed	FR5 - 200mm concrete slab	12.6	Enclosed	R0.0	Carpet
Bed1	FR5 - 200mm concrete slab	10.6	Enclosed	R0.0	Carpet
Kit/Liv	FR5 - 200mm concrete slab	23.6	Enclosed	R0.0	Timber
Kit/Liv	FR5 - 200mm concrete slab	8.2	Enclosed	R0.0	Tiles
Bath	FR5 - 200mm concrete slab	3.6	Enclosed	R0.0	Tiles
ENS	FR5 - 200mm concrete slab	3.9	Enclosed	R0.0	Tiles

Ceiling *type*

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

Ceiling *penetrations**

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
MasterBed	6	Downlights	80	Sealed
Bed1	4	Downlights	80	Sealed
Kit/Liv	11	Downlights	80	Sealed
Kit/Liv	1	Exhaust Fans	200	Sealed
Bath	1	Exhaust Fans	200	Sealed
Bath	2	Downlights	80	Sealed
ENS	2	Downlights	80	Sealed
ENS	1	Exhaust Fans	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium

Explanatory Notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, rangehoods, 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.
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.
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.

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country.

Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

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

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 .
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
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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.
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).

Appendix C: Preliminary Energy Modelling

Scope of Modelling

The proposed development is located in Climate Zone 6 and is classified as a Class 6 Retail Building under the National Construction Code (NCC) 2016.

The NCC states that alternative solution: Verification Method JV3 may be applied as a viable Assessment Method to demonstrate achievement of the Performance Requirements JP1 & JP3. The services documentation is to be certified by the projects RBP.

JV3 modelling simulates predicted annual energy consumption for three building Models as follows:

- Model 1: Simulates the building with full DTS compliance and is known as the 'Reference Building';
- Model 2: Simulates the building as it has been depicted in the contract documentation, and is known as the 'proposed building';
- Model 3: Simulates the architecture as depicted in the contract documentation with services modelled as DTS compliant.

To determine a compliant result for the proposed building, the predicted annual energy consumption of Models 2 and 3 is to be less than that of Model 1.

JV3 Compliance Requirements

The following thermal performance requirements form the basis of the preliminary JV3 Compliance Modelling.

Glazing	Thermal Performance	Recommended Product
Fixed Windows	Total System U-value ≤ 3.50 Total System SHGC = $0.64 \pm 10\%$	Aluminium Frame, Double Glazed, Clear
Casement Doors	Total System U-value ≤ 4.2 Total System SHGC = $0.49 \pm 10\%$	Aluminium Frame, Double Glazed, Clear

Walls	Thermal Performance (Added Insulation Value)	Recommended Product
Ext. Wall – Concrete Block	R2.5 Bulk Insulation	Bradford Gold Hi-performance Wall batts 90mm thick R2.5
Int. Wall – Concrete wall adjacent to lift shaft / stairwells / Unconditioned residential lobbies	R2.0 Bulk Insulation	Bradford Gold Hi-performance Wall batts 75mm thick R2.0
Roofs	Thermal Performance	Recommended Product
Concrete slab where exposed above	R4.0 Insulation Value	Kingspan K10FM soffit board 80mm thick R4.0
Floors	Thermal Performance	Recommended Product
Concrete Slab on Ground	NIL	NIL
Suspended concrete slab where exposed / unconditioned below	R1.9 Insulation Value	Kingspan K10FM soffit board 40mm thick R1.9

Modelling Software

Simulation Package Software	DesignBuilder
Weather Data	Representative Meteorological Year (RMY) file for Melbourne

Reference Building Input Data

The following tables list the building thermal performance values applied within the Reference Model:

Walls	Description	Total R-Value
External Walls	Concrete Blockwork wall	R2.8
Internal Walls where adjacent to unconditioned	Precast Concrete wall	R1.8
Roof	Concrete Slab	R3.2
Floor (Suspended)	Suspended Concrete Slab	R2.0
Floor (on Ground)	Concrete slab on ground	R0.5
Infiltration	1 Air Change per Hour (ac/h) for perimeter zones when plant is operating.	

The following table lists the glazing performance values required by the Reference Model:

Glazing by Orientation	Total System U-value	SHGC
Ground Floor		
North East	5.8	0.44
North West	5.8	0.15

Building Services Inputs

The services have been modelled in accordance with the table below:

Services	Reference Building Services	Proposed Building Services
Artificial lighting	NCC 2016 Section J Part J6.2 - Table 6.2b – Maximum Power Illumination Densities.	20% reduction compared to NCC requirements.
Cooling – Spaces conditioned	Retail areas are assumed to be conditioned.	Per Reference Building
Heating – Spaces conditioned	Retail areas are assumed to be conditioned.	Per Reference Building
Cooling – System type	VRV units specified modelled as air-to-air heat pump units with COP of 3.1 (per minimum MEPS requirements for split systems).	VRV units specified modelled as air-to-air heat pump units with COP of 3.5.
Heating – System type	VRV units specified modelled as air-to-air heat pump units with COP of 3.1 (per minimum MEPS requirements for split systems).	VRV units specified modelled as air-to-air heat pump units with COP of 3.5.
Services Operating Profile	Per NCC Section J – Specification JV Table 2c . These profiles are modified in some instances to better represent the usage of certain spaces.	Per Reference Building
Heating and Cooling Setpoints	Cooling - 24°C Heating - 21°C	Per Reference Building
Airflow rates	Modelled in accordance with AS1668	Modelled in accordance with AS1668

Activity Profiles

All zones include an activity profile which model occupancy, appliance and equipment, and associated operation profiles. The heat gains from these sources must be accounted for within the modelling. The same profiles are applied in all models per the requirements of Verification Method JV3. These can be summarised as follows:

Activity Profile Item	All Models
Occupant Density	Occupant density is per NCC Section D – Part D1.13 and AS1668.2-2012.
Occupancy Schedule	Per NCC Section J – Specification JV Table 2c . These profiles are modified in some instances to better represent the usage of certain spaces.
Occupancy Heat Gains	Per NCC Section J – Specification JV Table 2j.
Appliance Heat Gains	Per NCC Section J – Specification JV Table 2h where applicable. Custom heat gains have been calculated as required.
Appliance Schedule	Per NCC Section J – Specification JV Table 2c . These profiles are modified in some instances to better represent the usage of certain spaces.

Results

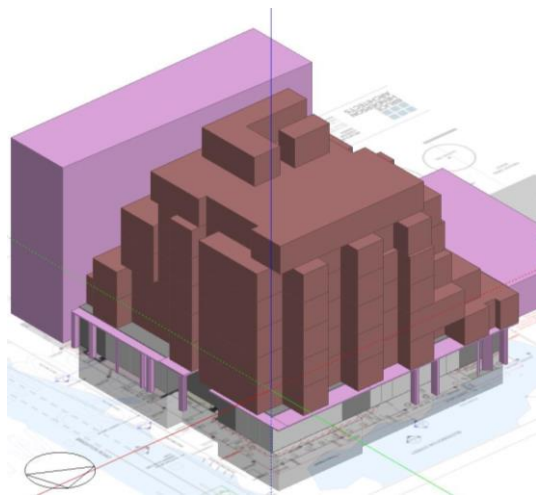
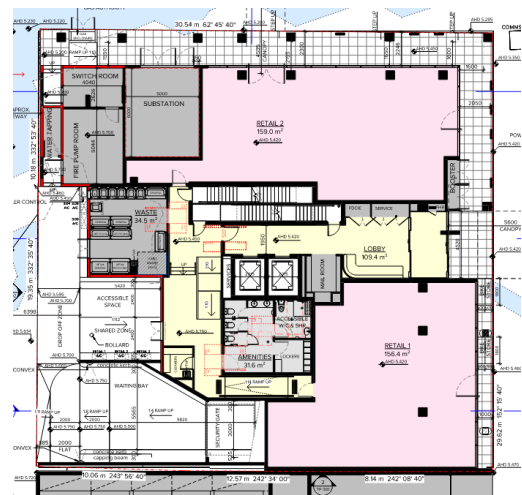


Figure 1 – Model of proposed building for energy simulations



The results below show that the Proposed Building Fabric and Services (Models 2 and 3) use less energy than the Reference Building (Model 1). This result indicates that the Proposed Building achieves Section J Performance Requirements JP1 and JP3.

	Model 1 – Reference Building (kWh/Annum)	Model 2 - Proposed Building with Proposed Services (kWh/Annum)	Model 3 - Proposed Building with Reference Services (kWh/Annum)
Lighting	35,387	28,254	35,318
Heating (Electricity)	9,516	7,316	7,572
Cooling (Electricity)	1,673	1,593	2,034
TOTAL	46,576	37,163	44,924
MJ/yr/m ²	499.17	398.29	481.47
Percentage Heating & Cooling Improvement over Reference Building		20%	4%

Appendix D: Renewable Energy

Solar PV

Inputs Solar PV

Peak Wattage of System	10.0 kWp
Azimuth	0 degrees
Inclination	30 degrees

Outputs Solar PV

Electricity Produced per Year	14,416 kWh
No. Panels Required	32
Total Roof Area Required	66 sqm
Annual Carbon Savings	16,146 kg CO ₂

Economic Output

Cost of System	15,000 \$
Annual Savings	2,883 \$
Simple Payback	5 Years

Annual Common Area Demand

Annual Demand Class 2 Non-Residential Areas	18,318 kWh/year
Annual Demand Carpark / Services	28,049 kWh/year
Total Annual Demand	46,367 kWh/year

Demand / Supply

Contribution Solar PV to Communal Area Power	31%
--	-----

STORM Rating Report

A STORM rating of $\geq 100\%$ can be achieved by implementing the following initiatives:

- Rainwater collection off the upper and lower roof directed into a 15,000 litre rainwater tank connected to all WC's.

Melbourne Water has developed the Stormwater Treatment Objective- Relative Measure (STORM) Calculator as a method of simplifying the analysis of stormwater treatment methods. The STORM Calculator displays the amount of treatment that is required to meet best practice targets, using WSUD treatment measures.

The best practice standards have been set out 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.

The STORM Result is provided below:



STORM Rating Report

TransactionID: 0
Municipality: PORT PHILLIP
Rainfall Station: PORT PHILLIP
Address: 1 Brighton Rd
St Kilda
VIC 3168
Assessor: GIW
Development Type: Residential - Mixed Use
Allotment Site (m2): 911.00
STORM Rating %: 113

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Upper & Lower Roofs	620.00	Rainwater Tank	15,000.00	80	165.80	79.00
Impervious - Balconies	232.00	None	0.00	0	0.00	0.00
Impervious - Varandah	7.00	None	0.00	0	0.00	0.00
Impervious - GF	17.00	None	0.00	0	0.00	0.00
Impervious - Planter boxes	35.00	None	0.00	0	0.00	0.00

WSUD Strategy

The development will include the provision of a 15,000 litre rainwater tank and associated pump in the basement garage. The rainwater tank is to be connected to all WC's.

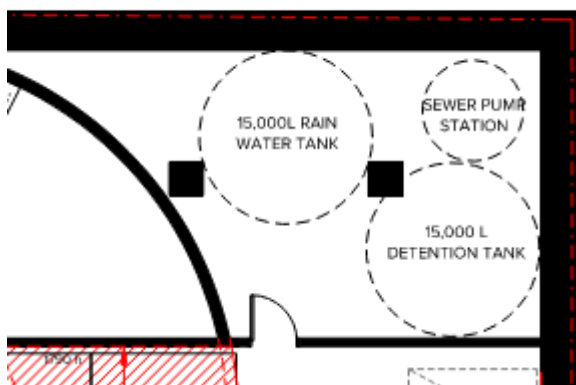


Figure 2 – Location Rainwater Tank

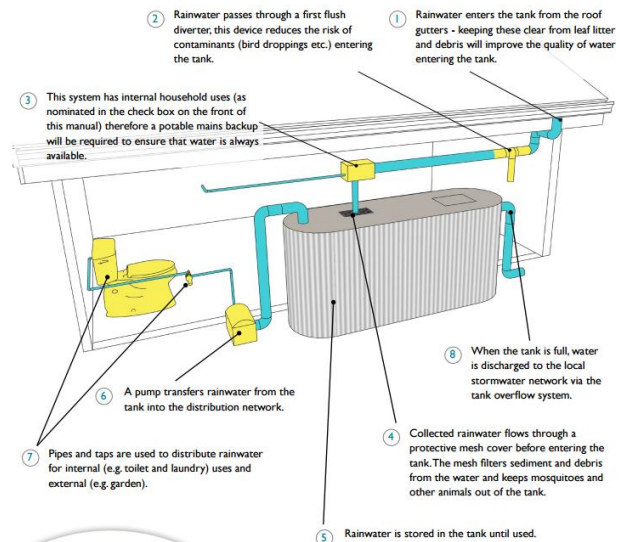


Figure 3 – Cross-section Tank
(City of Port Phillip)

Rainwater Reuse

Inputs

Catchment Area	620 sqm
Number of Bedrooms	79
Bin Washout	No
Irrigation Area	0 sqm
Tank Capacity	15,000 Litre

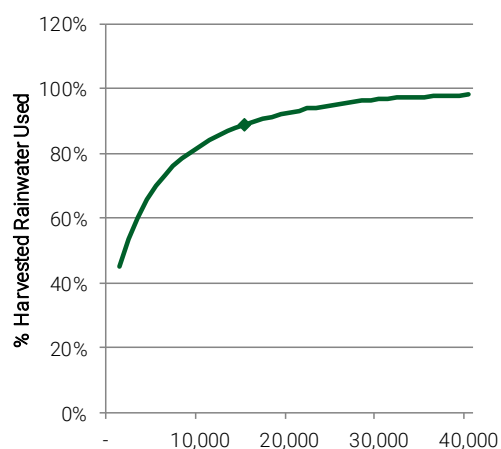
Outputs

% Served by Rainwater	37.5%
% Harvested Rainwater Used	91.2%
Total Potable Water Saved	197,086 Litre

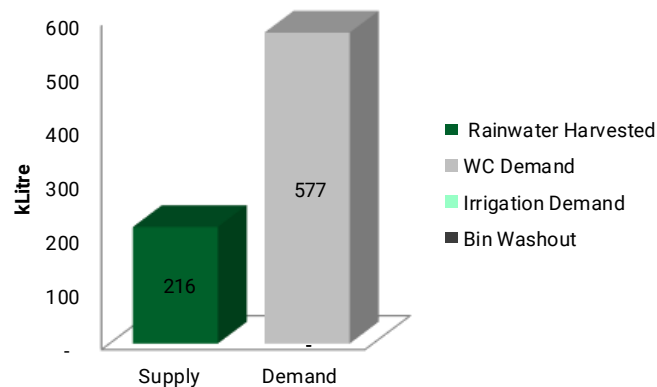
Rainwater Balance (Monthly Averages)

Month	Rainwater Harvested (L)	Irrigation Demand (L)	WC Demand (L)	Bin Washout (L)
Jan	14,084	0	48,980	0
Feb	17,599	0	44,240	0
Mar	16,004	0	48,980	0
Apr	18,761	0	47,400	0
May	17,174	0	48,980	0
Jun	18,554	0	47,400	0
Jul	13,824	0	48,980	0
Aug	17,776	0	48,980	0
Sep	18,468	0	47,400	0
Oct	19,171	0	48,980	0
Nov	25,927	0	47,400	0
Dec	18,846	0	48,980	0
Total	216,187	0	576,700	0
Equivalent STORM tool		0		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

Appendix F: BESS Assessment

BESS Report

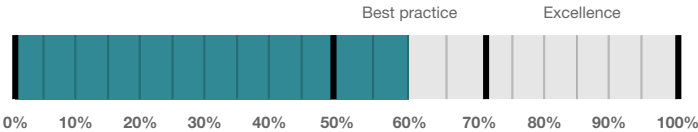
Built Environment Sustainability Scorecard



This BESS report outlines the sustainable design commitments of the proposed development at 1 Brighton Rd St Kilda Victoria 3182. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Port Phillip City Council.

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

Your BESS Score



64%

Project details

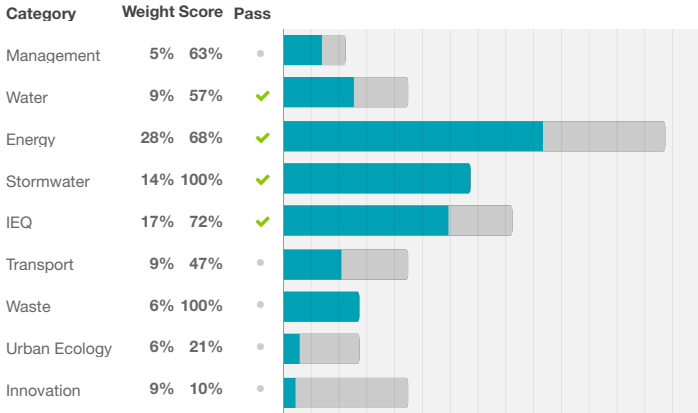
Name 1 Brighton Rd, St Kilda VIC 3182, Australia
Address 1 Brighton Rd St Kilda Victoria 3182
Project ID 236E0765-R5
BESS Version BESS-5

Site type Mixed use development
Account info@giw.com.au
Application no. 665/2016
Site area 911 m²
Building floor area 3,758 m²
Date 21 July 2025
Software version 2.1.0-B.599

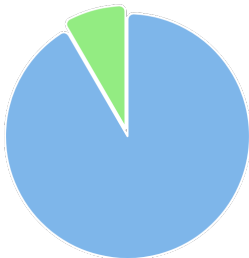


Performance by category

● This project ● Maximum available



Project composition



● Apartment ● Shop

Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	% of total area
Apartment			
6.01, 701, 801	3	149 m²	11%
6.02. 702, 802	3	125 m²	10%
3.02, 4.02, 5.02	3	93.3 m²	7%
3.05, 4.05, 5.05	3	75.9 m²	6%
3.04, 4.04, 5.04	3	77.3 m²	6%
3.03, 4.03, 5.03	3	73.3 m²	5%
1.07, 2.06	2	78.1 m²	4%
3.01, 4.01	2	70.0 m²	3%
3.06, 4.06	2	68.9 m²	3%
1.06, 2.05	2	75.1 m²	3%
1.05, 2.04	2	68.3 m²	3%
5.01	1	97.3 m²	2%
2.07	1	91.7 m²	2%
2.03	1	104 m²	2%
2.02	1	85.5 m²	2%
2.01	1	106 m²	2%
1.09, 1.10	2	43.8 m²	2%
1.01	1	76.3 m²	2%
1.08	1	72.8 m²	1%
1.04	1	73.6 m²	1%
1.03	1	75.1 m²	1%
1.02	1	69.6 m²	1%
Total	40	3,442 m²	91%

Non-Res Spaces

Name	Quantity	Area	% of total area
Shop			
Retail 2	1	159 m²	4%
Retail 1	1	156 m²	4%
Total	2	315 m²	8%

Supporting Evidence

Shown on Floor Plans

Credit	Requirement	Response	Status
Management 3.1	Individual utility meters annotated		-
Management 3.2	Individual utility meters annotated		-
Management 3.3	Common area submeters annotated		-
Water 3.1	Water efficient garden annotated		-
Energy 3.1	Carpark with natural ventilation or CO monitoring system		-
Energy 4.2	Floor plans showing location of photovoltaic panels as described.		-

Credit	Requirement	Response	Status
Stormwater 1.1	Location of any stormwater management systems used in STORM or MUSIC modelling (e.g. Rainwater tanks, raingarden, buffer strips)		-
IEQ 1.1	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.2	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.3	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.5	Floor plans with compliant bedrooms marked		-
IEQ 2.1	Dwellings meeting the requirements for being 'naturally ventilated'		-
Transport 1.2	All nominated residential visitor bicycle parking spaces		-
Transport 1.4	All nominated non-residential bicycle parking spaces		-
Transport 1.5	All nominated non-residential visitor bicycle parking spaces		-
Transport 1.6	Showers, change rooms and lockers as nominated		-
Transport 2.1	Location of electric vehicle charging infrastructure		-
Waste 2.1	Location of food and garden waste facilities		-
Waste 2.2	Location of recycling facilities		-
Urban Ecology 2.1	Vegetated areas		-
Urban Ecology 2.4	Taps and floor waste on balconies / courtyards		-

Supporting Documentation

Credit	Requirement	Response	Status
Management 2.2	Preliminary NatHERS assessments		-
Management 2.3	Preliminary modelling report		-
Management 2.4	Section J glazing assessment		-
Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Energy 3.1	Provide a written explanation of either the fully natural carpark ventilation or carbon monoxide monitoring, describing how these systems will work, what systems are required for them to be fully integrated and who will be responsible for their implementation throughout the design, procurement and operational phases of the building life.		-
Energy 3.6	Provide a written description of the average lighting power density to be installed in the development and specify the lighting type(s) to be used.		-
Energy 3.7	Provide a written description of the average lighting power density to be installed in the development and specify the lighting type(s) to be used.		-
Energy 4.2	Specifications of the solar photovoltaic system(s).		-
Stormwater 1.1	STORM report or MUSIC model		-
IEQ 1.1	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.2	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.3	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.4	A short report detailing assumptions used and results achieved.		-
IEQ 1.5	A list of compliant bedrooms		-
IEQ 2.1	A list of naturally ventilated dwellings		-

Credit summary

Management Overall contribution 4.5%

		63%
1.1 Pre-Application Meeting		0%
2.2 Thermal Performance Modelling - Multi-Dwelling Residential		100%
2.3 Thermal Performance Modelling - Non-Residential		100%
2.4 Thermal Performance Modelling - Non-Residential		100%
3.1 Metering		100%
3.2 Metering		100%
3.3 Metering		100%
4.1 Building Users Guide		100%

Water Overall contribution 9.0%

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

Energy Overall contribution 27.5%

		Minimum required 50%	68%	✔ Pass
1.1 Thermal Performance Rating - Non-Residential			38%	
1.2 Thermal Performance Rating - Residential			50%	
2.1 Greenhouse Gas Emissions			100%	
2.2 Peak Demand			0%	
2.3 Electricity Consumption			100%	
2.4 Gas Consumption			N/A	✦ Scoped Out
No gas connection in use				
3.1 Carpark Ventilation			100%	
3.2 Hot Water			100%	
3.4 Clothes Drying			0%	
3.6 Internal Lighting - Residential Multiple Dwellings			100%	
3.7 Internal Lighting - Non-Residential			100%	
4.1 Combined Heat and Power (cogeneration / trigeneration)			N/A	✦ Scoped Out
No cogeneration or trigeneration system in use.				
4.2 Renewable Energy Systems - Solar			92%	
4.4 Renewable Energy Systems - Other			0%	⊘ Disabled
No other (non-solar PV) renewable energy is in use.				


Stormwater Overall contribution 13.5%

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


IEQ Overall contribution 16.5%

		Minimum required 50%	72%	✔ Pass
1.1 Daylight Access - Living Areas			67%	
1.2 Daylight Access - Bedrooms			67%	
1.3 Winter Sunlight			100%	
1.4 Daylight Access - Non-Residential			33%	
1.5 Daylight Access - Minimal Internal Bedrooms			100%	
2.1 Effective Natural Ventilation			67%	

Transport Overall contribution 9.0%

		47%
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.		
1.4 Bicycle Parking - Non-Residential		100%
1.5 Bicycle Parking - Non-Residential Visitor		100%
1.6 End of Trip Facilities - Non-Residential		100%
2.1 Electric Vehicle Infrastructure		100%
2.2 Car Share Scheme		0%
2.3 Motorbikes / Mopeds		0%

Waste Overall contribution 5.5%

		100%
1.1 - Construction Waste - Building Re-Use		N/A  Scoped Out
N/A site is currently vacant		
2.1 - Operational Waste - Food & Garden Waste		100%
2.2 - Operational Waste - Convenience of Recycling		100%

Urban Ecology Overall contribution 5.5%

		21%
1.1 Communal Spaces		0%
2.1 Vegetation		25%
2.2 Green Roofs		0%
2.3 Green Walls and Facades		0%
2.4 Private Open Space - Balcony / Courtyard Ecology		100%
3.1 Food Production - Residential		0%
3.2 Food Production - Non-Residential		0%

Innovation Overall contribution 9.0%

		10%
1.1 Innovation		10%

Credit breakdown

Management Overall contribution 4.5%

		63%
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1.1 Pre-Application Meeting		0%
Score Contribution	This credit contributes 37.1% 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		100%
Score Contribution	This credit contributes 22.7% towards the category score.	
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?	
Question	Criteria Achieved ?	
Apartment	Yes	
2.3 Thermal Performance Modelling - Non-Residential		100%
Score Contribution	This credit contributes 2.1% towards the category score.	
Criteria	Has preliminary modelling been undertaken in accordance with either NCC2019 Section J (Energy Efficiency), NABERS or Green Star?	
Annotation	Section J has been modelled in accordance with NCC 2016.	
Question	Criteria Achieved ?	
Shop	Yes	
2.4 Thermal Performance Modelling - Non-Residential		100%
Score Contribution	This credit contributes 1% towards the category score.	
Criteria	Has a preliminary Section J facade assessment been undertaken?	
Question	Criteria Achieved ?	
Shop	Yes	
3.1 Metering		100%
Score Contribution	This credit contributes 11.3% towards the category score.	
Criteria	Have utility meters been provided for all individual dwellings?	
Question	Criteria Achieved ?	
Apartment	Yes	
3.2 Metering		100%
Score Contribution	This credit contributes 1% towards the category score.	
Criteria	Have utility meters been provided for all individual commercial tenants?	
Question	Criteria Achieved ?	
Shop	Yes	

3.3 Metering		100%
Score Contribution	This credit contributes 12.4% towards the category score.	
Criteria	Have all major common area services been separately submetered?	
Question	Criteria Achieved ?	
Apartment	Yes	
Shop	Yes	
4.1 Building Users Guide		100%
Score Contribution	This credit contributes 12.4% towards the category score.	
Criteria	Will a building users guide be produced and issued to occupants?	
Question	Criteria Achieved ?	
Project	Yes	

Water Overall contribution 9.0%

		Minimum required 50%	57%	✔ Pass
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Water Approach	
What approach do you want to use Water?:	Use the built in calculation tools
Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No
Are you installing a rainwater tank?:	Yes
Fixtures, fittings & connections profile	
Showerhead:	
Retail 1	Scope out
Retail 2	
1.01	4 Star WELS (>= 6.0 but <= 7.5)
1.02	
1.03	
1.04	
1.05, 2.04	
1.06, 2.05	
3.02, 4.02, 5.02	
3.03, 4.03, 5.03	
3.04, 4.04, 5.04	
3.05, 4.05, 5.05	
3.06, 4.06	
6.01, 701, 801	
6.02. 702, 802	
1.08	
1.07, 2.06	
1.09, 1.10	
2.01	
2.02	
2.03	
2.07	
3.01, 4.01	
5.01	

Bath:	
Retail 1	Scope out
Retail 2	
1.01	
1.02	
1.03	
1.04	
1.05, 2.04	
1.06, 2.05	
3.02, 4.02, 5.02	
3.03, 4.03, 5.03	
3.04, 4.04, 5.04	
3.05, 4.05, 5.05	
3.06, 4.06	
1.08	
1.07, 2.06	
1.09, 1.10	
2.01	
2.02	
2.03	
2.07	
3.01, 4.01	
5.01	
6.01, 701, 801	Medium Sized Contemporary Bath
6.02. 702, 802	
Kitchen Taps: All	>= 5 Star WELS rating
Bathroom Taps: All	>= 5 Star WELS rating

Dishwashers:	
Retail 1	Scope out
Retail 2	
1.01	>= 5 Star WELS rating
1.02	
1.03	
1.04	
1.05, 2.04	
1.06, 2.05	
3.02, 4.02, 5.02	
3.03, 4.03, 5.03	
3.04, 4.04, 5.04	
3.05, 4.05, 5.05	
3.06, 4.06	
6.01, 701, 801	
6.02. 702, 802	
1.08	
1.07, 2.06	
1.09, 1.10	
2.01	
2.02	
2.03	
2.07	
3.01, 4.01	
5.01	
WC: All	>= 4 Star WELS rating
Urinals: All	Scope out

Washing Machine Water Efficiency:			
Retail 1		Scope out	
Retail 2			
1.01		Default or unrated	
1.02			
1.03			
1.04			
1.05, 2.04			
1.06, 2.05			
3.02, 4.02, 5.02			
3.03, 4.03, 5.03			
3.04, 4.04, 5.04			
3.05, 4.05, 5.05			
3.06, 4.06			
6.01, 701, 801			
6.02. 702, 802			
1.08			
1.07, 2.06			
1.09, 1.10			
2.01			
2.02			
2.03			
2.07			
3.01, 4.01			
5.01			
Which non-potable water source is the dwelling/space connected to?: All		76907	
Non-potable water source connected to Toilets: All		Yes	
Non-potable water source connected to Laundry (washing machine): All		No	
Non-potable water source connected to Hot Water System: All		No	
Rainwater tank profile			
What is the total roof area connected to the rainwater tank?: Basement rain water tank		620 m²	
Tank Size: Basement rain water tank		15,000 Litres	
Irrigation area connected to tank: Basement rain water tank		0.0 m²	
Is connected irrigation area a water efficient garden?: Basement rain water tank		No	
Other external water demand connected to tank?: Basement rain water tank		0.0 Litres/Day	
1.1 Potable water use reduction			40%

Score Contribution	This credit contributes 71.4% towards the category score.
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.
Output	Reference
Project	5668 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	4526 kL
Output	Proposed (including rainwater and recycled water use)
Project	4151 kL
Output	% Reduction in Potable Water Consumption
Project	26 %
Output	% of connected demand met by rainwater
Project	61 %
Output	How often does the tank overflow?
Project	Never / Rarely
Output	Opportunity for additional rainwater connection
Project	2040 kL
3.1 Water Efficient Landscaping	100%
Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Will water efficient landscaping be installed?
Question	Criteria Achieved ?
Project	Yes
4.1 Building Systems Water Use Reduction	100%
Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Where applicable, have measures been taken to reduce potable water consumption by >80% in the buildings air-conditioning chillers and when testing fire safety systems?
Question	Criteria Achieved ?
Project	Yes

Energy Overall contribution 27.5%

		Minimum required 50%	68%	✔ Pass
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Use the BESS Deem to Satisfy (DtS) method for Non-residential No spaces?:	
Dwellings Energy Approach	
What approach do you want to use for Dwellings?:	Use the built in calculation tools
Are you installing a solar photovoltaic (PV) system?:	Yes
Are you installing any other renewable energy system(s)?:	No
Gas supplied into building:	No gas connection
Dwelling Energy Profiles	
Below the floor is:	
1.01 1.02 1.03 1.04 1.05, 2.04 1.08	Ground or Carpark
1.06, 2.05 3.02, 4.02, 5.02 3.03, 4.03, 5.03 3.04, 4.04, 5.04 3.05, 4.05, 5.05 3.06, 4.06 6.01, 701, 801 6.02. 702, 802 1.07, 2.06 1.09, 1.10 2.01 2.02 2.03 2.07 3.01, 4.01 5.01	Another Occupancy

Above the ceiling is:	
1.01 1.02 1.03 1.04 1.05, 2.04 1.06, 2.05 3.02, 4.02, 5.02 3.03, 4.03, 5.03 3.04, 4.04, 5.04 3.05, 4.05, 5.05 3.06, 4.06 1.08 1.07, 2.06 1.09, 1.10 2.01 2.02 2.03 2.07 3.01, 4.01 5.01	Another Occupancy
6.01, 701, 801 6.02. 702, 802	Outside
Exposed sides:	
1.01 1.03 1.06, 2.05 3.03, 4.03, 5.03 3.05, 4.05, 5.05 3.06, 4.06 6.01, 701, 801 6.02. 702, 802 1.08 2.01 2.03 2.07 3.01, 4.01 5.01	2
1.02 1.04 1.05, 2.04 3.02, 4.02, 5.02 3.04, 4.04, 5.04 1.07, 2.06 1.09, 1.10 2.02	1
NatHERS Annual Energy Loads - Heat: All	51.5 MJ/sqm
NatHERS Annual Energy Loads - Cool: All	25.6 MJ/sqm
NatHERS star rating: All	7.0
Type of Heating System: All	D Reverse cycle space
Heating System Efficiency: All	3 Star

Type of Cooling System: All	Refrigerative space
Cooling System Efficiency: All	3 Stars
Type of Hot Water System: All	B Electric Instantaneous
% Contribution from solar hot water system: All	0 %
Is the hot water system shared by multiple dwellings?: All	No
Clothes Line: All	A No drying facilities
Clothes Dryer: All	F Clothes dryer 1 stars

Non-residential spaces profiles

Heating, Cooling & Comfort Ventilation - Electricity

Reference fabric & services:

Retail 1	5,594 kWh
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Retail 2	5,597 kWh
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Heating, Cooling & Comfort Ventilation - Electricity	4,803 kWh
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Proposed fabric & reference services: All

Heating, Cooling & Comfort Ventilation - Electricity	4,454 kWh
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Proposed fabric & services: All

Heating - Wood	0.0 MJ
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Reference fabric & services: All

Heating - Wood	0.0 MJ
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Proposed fabric & reference services: All

Heating - Wood	0.0 MJ
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Proposed fabric & services: All

Hot Water - Electricity	10,000 kWh
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Reference: All

Hot Water - Electricity	8,999 kWh
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Proposed: All

Lighting - Reference: All	17,693 kWh
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Lighting - Proposed: All	14,127 kWh
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Peak Thermal Cooling Load	0.0 kW
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Reference fabric and services: All

Peak Thermal Cooling Load	0.0 kW
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Proposed fabric and services: All

Solar Photovoltaic system profile

System Size (lesser of inverter and panel capacity): PV 1	10.0 kW peak
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Orientation (which way is the system facing)?: PV 1	North-West
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Inclination (angle from horizontal): PV 1	30.0 Angle (degrees)
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Which Building Class does this apply to?: PV 1	Apartment
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1.1 Thermal Performance Rating - Non-Residential

38%

Score Contribution	This credit contributes 3.5% towards the category score.
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Criteria	What is the % reduction in heating and cooling energy consumption against the reference case (NCC 2019 Section J)?
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Output	Total Improvement
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Shop	14 %
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1.2 Thermal Performance Rating - Residential

50%

	Score Contribution	This credit contributes 28.8% towards the category score.
	Criteria	What is the average NatHERS rating?
	Output	Average NATHERS Rating (Weighted)
	Apartment	7.0 Stars
2.1 Greenhouse Gas Emissions		100%
	Score Contribution	This credit contributes 10.5% 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)
	Apartment	267,696 kg CO2
	Shop	15,906 kg CO2
	Output	Proposed Building with Proposed Services (Actual Building)
	Apartment	122,358 kg CO2
	Shop	13,722 kg CO2
	Output	% Reduction in GHG Emissions
	Apartment	54 %
	Shop	13 %
2.2 Peak Demand		0%
	Score Contribution	This credit contributes 5.2% towards the category score.
	Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?
	Output	Peak Thermal Cooling Load - Baseline
	Apartment	582 kW
	Output	Peak Thermal Cooling Load - Proposed
	Apartment	537 kW
	Output	Peak Thermal Cooling Load - % Reduction
	Apartment	7 %
2.3 Electricity Consumption		100%
	Score Contribution	This credit contributes 10.5% towards the category score.
	Criteria	What is the % reduction in annual electricity consumption against the benchmark?
	Output	Reference
	Apartment	262,447 kWh
	Shop	15,594 kWh
	Output	Proposed
	Apartment	119,959 kWh
	Shop	13,453 kWh
	Output	Improvement
	Apartment	54 %
	Shop	13 %
2.4 Gas Consumption		N/A ✦ Scoped Out
		No gas connection in use
This credit was scoped out		No gas connection in use

3.1 Carpark Ventilation		100%
Score Contribution	This credit contributes 10.5% towards the category score.	
Criteria	If you have an enclosed carpark, is it: (a) fully naturally ventilated (no mechanical ventilation system) or (b) 40 car spaces or less with Carbon Monoxide monitoring to control the operation and speed of the ventilation fans?	
Question	Criteria Achieved ?	
Project	Yes	
3.2 Hot Water		100%
Score Contribution	This credit contributes 5.2% towards the category score.	
Criteria	What is the % reduction in annual hot water system energy use (gas and electricity) against the benchmark?	
Output	Reference	
Apartment	417,990 MJ	
Shop	46,000 MJ	
Output	Proposed	
Apartment	235,982 MJ	
Shop	41,395 MJ	
Output	Improvement	
Apartment	43 %	
Shop	10 %	
3.4 Clothes Drying		0%
Score Contribution	This credit contributes 4.8% towards the category score.	
Criteria	Does the combination of clothes lines and efficient dryers reduce energy (gas+electricity) consumption by more than 10%?	
Output	Reference	
Apartment	20,010 kWh	
Output	Proposed	
Apartment	20,010 kWh	
Output	Improvement	
Apartment	0 %	
3.6 Internal Lighting - Residential Multiple Dwellings		100%
Score Contribution	This credit contributes 9.6% towards the category score.	
Criteria	Is the maximum illumination power density (W/m2) in at least 90% of the relevant building class at least 20% lower than required by Table J6.2a of the NCC 2019 Vol 1 (Class 2-9) and Clause 3.12.5.5 NCC 2019 Vol 2 (Class 1 & 10)?	
Question	Criteria Achieved ?	
Apartment	Yes	
3.7 Internal Lighting - Non-Residential		100%

Score Contribution	This credit contributes 0.9% towards the category score.		
Criteria	Does the maximum illumination power density (W/m2) in at least 90% of the area of the relevant building class meet the requirements in Table J6.2a of the NCC 2019 Vol 1?		
Question	Criteria Achieved ?		
Shop	Yes		
4.1 Combined Heat and Power (cogeneration / trigeneration)		N/A	✚ Scoped Out
No cogeneration or trigeneration system in use.			
This credit was scoped out		No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar		<div><div></div></div>	92%
Score Contribution	This credit contributes 5.2% towards the category score.		
Criteria	Does the solar power system provide 5% of the estimated energy consumption of the building class it supplies?		
Output	Solar Power - Energy Generation per year		
Apartment	12,509 kWh		
Output	% of Building's Energy		
Apartment	10 %		
4.4 Renewable Energy Systems - Other		<div><div></div></div>	0% <input checked="" type="radio"/> Disabled
No other (non-solar PV) renewable energy is in use.			
This credit is disabled		No other (non-solar PV) renewable energy is in use.	

Stormwater Overall contribution 13.5%

<div><div></div></div>	Minimum required 100%	100%	✔ Pass
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Which stormwater modelling are you using?:		Melbourne Water STORM tool	
1.1 Stormwater Treatment		<div><div></div></div>	100%
Score Contribution	This credit contributes 100% towards the category score.		
Criteria	Has best practice stormwater management been demonstrated?		
Question	STORM score achieved		
Project	113		
Output	Min STORM Score		
Project	100		

IEQ Overall contribution 16.5%

		Minimum required 50%	72%	✔ Pass
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Section Notes:

	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
	Room Designation:	
	Living 1.01	Living
	Living 2.07	
	All Other Living Areas	
	Living 2.02	
	Living 2.03	
	Living 6.01, 7.01, 8.01	
	Living 6.02, 7.02, 8.02	
	1.06, 2.05 Living	
	1.09, 1.10 living	
	1.02	
	3.02 Living	
	Master 1.01	Bedroom
	Bed 1 & Master 2.01, Bed 1 2.07	
	All Other Bedrooms	
	North Bedrooms (grey tint)	
	East Bedrooms (grey tinted)	
	1.10 Bed 1	
	1.09 Bed	
	1.03 Bed 1	
	1.03 Bed M	
	1.04 Bed M, 2.03 Bed M	
	3.01 Bed M	
	4.02, 5.02 Bed 2	
	6.02, 7.02, 8.02 Bed 3	
	3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	

Quantity:	
Living 1.01	1
Living 2.07	
Master 1.01	
Living 2.02	
Living 2.03	
1.10 Bed 1	
1.09 Bed	
1.02	
1.03 Bed 1	
1.03 Bed M	
3.02 Living	
All Other Living Areas	
Bed 1 & Master 2.01, Bed 1 2.07	
All Other Bedrooms	42
North Bedrooms (grey tint)	11
East Bedrooms (grey tinted)	5
Living 6.01, 7.01, 8.01	3
Living 6.02, 7.02, 8.02	
6.02, 7.02, 8.02 Bed 3	
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	
1.06, 2.05 Living	2
1.09, 1.10 living	
1.04 Bed M, 2.03 Bed M	
3.01 Bed M	
4.02, 5.02 Bed 2	

Auto-Pass:	
Living 1.01	No
Master 1.01	
Bed 1 & Master 2.01, Bed 1 2.07	
North Bedrooms (grey tint)	
East Bedrooms (grey tinted)	
Living 2.02	
Living 2.03	
Living 6.01, 7.01, 8.01	
Living 6.02, 7.02, 8.02	
1.06, 2.05 Living	
1.10 Bed 1	
1.09, 1.10 living	
1.09 Bed	
1.02	
1.03 Bed 1	
1.03 Bed M	
1.04 Bed M, 2.03 Bed M	
3.01 Bed M	
3.02 Living	
4.02, 5.02 Bed 2	
6.02, 7.02, 8.02 Bed 3	
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	
Living 2.07	Yes
All Other Living Areas	
All Other Bedrooms	

Room Floor Area:	
Living 1.01	29.5 m²
Living 2.07	26.0 m²
All Other Living Areas	0.0 m²
All Other Bedrooms	
Master 1.01	12.6 m²
Bed 1 & Master 2.01, Bed 1 2.07	13.9 m²
North Bedrooms (grey tint)	10.1 m²
East Bedrooms (grey tinted)	8.4 m²
Living 2.02	31.0 m²
Living 2.03	37.2 m²
Living 6.01, 7.01, 8.01	45.0 m²
Living 6.02, 7.02, 8.02	40.8 m²
1.06, 2.05 Living	29.2 m²
1.10 Bed 1	13.8 m²
1.09 Bed	
1.09, 1.10 living	13.1 m²
1.02	26.4 m²
1.03 Bed 1	11.5 m²
1.03 Bed M	
1.04 Bed M, 2.03 Bed M	22.0 m²
3.01 Bed M	12.2 m²
3.02 Living	28.2 m²
4.02, 5.02 Bed 2	10.0 m²
6.02, 7.02, 8.02 Bed 3	9.2 m²
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	9.6 m²

Vertical Angle:	
Living 1.01	180 Angle (degrees)
North Bedrooms (grey tint)	
East Bedrooms (grey tinted)	
Living 2.07	43.0 Angle (degrees)
All Other Living Areas	0.0 Angle (degrees)
All Other Bedrooms	
Master 1.01	90.0 Angle (degrees)
1.02	
1.03 Bed 1	
1.03 Bed M	
1.04 Bed M, 2.03 Bed M	
3.01 Bed M	
3.02 Living	
4.02, 5.02 Bed 2	
6.02, 7.02, 8.02 Bed 3	
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	
Bed 1 & Master 2.01, Bed 1 2.07	
Living 2.02	
Living 2.03	98.6 Angle (degrees)
Living 6.01, 7.01, 8.01	94.1 Angle (degrees)
Living 6.02, 7.02, 8.02	
1.06, 2.05 Living	85.0 Angle (degrees)
1.10 Bed 1	9.5 Angle (degrees)
1.09, 1.10 living	
1.09 Bed	78.2 Angle (degrees)

Horizontal Angle:	
Living 1.01	90.0 Angle (degrees)
Living 2.07	0.0 Angle (degrees)
All Other Living Areas	
All Other Bedrooms	
Master 1.01	180 Angle (degrees)
Living 6.01, 7.01, 8.01	
Living 6.02, 7.02, 8.02	
3.01 Bed M	
3.02 Living	
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	
Bed 1 & Master 2.01, Bed 1 2.07	18.0 Angle (degrees)
North Bedrooms (grey tint)	141 Angle (degrees)
East Bedrooms (grey tinted)	
Living 2.02	133 Angle (degrees)
Living 2.03	145 Angle (degrees)
1.06, 2.05 Living	165 Angle (degrees)
1.10 Bed 1	1.0 Angle (degrees)
1.09, 1.10 living	
1.09 Bed	6.0 Angle (degrees)
1.02	134 Angle (degrees)
1.03 Bed 1	135 Angle (degrees)
1.03 Bed M	
1.04 Bed M, 2.03 Bed M	
4.02, 5.02 Bed 2	
6.02, 7.02, 8.02 Bed 3	116 Angle (degrees)

Window Area:	
Living 1.01	9.3 m²
Living 2.07	9.6 m²
All Other Living Areas	0.0 m²
All Other Bedrooms	
Master 1.01	8.7 m²
Bed 1 & Master 2.01, Bed 1 2.07	5.3 m²
North Bedrooms (grey tint)	7.0 m²
Living 2.02	
East Bedrooms (grey tinted)	3.5 m²
Living 2.03	15.0 m²
Living 6.01, 7.01, 8.01	20.0 m²
Living 6.02, 7.02, 8.02	15.5 m²
1.06, 2.05 Living	8.1 m²
1.10 Bed 1	6.9 m²
1.09, 1.10 living	7.5 m²
1.09 Bed	4.8 m²
1.02	10.0 m²
1.03 Bed 1	6.4 m²
1.03 Bed M	5.1 m²
1.04 Bed M, 2.03 Bed M	8.2 m²
3.01 Bed M	7.4 m²
3.02 Living	6.8 m²
4.02, 5.02 Bed 2	3.8 m²
6.02, 7.02, 8.02 Bed 3	7.4 m²
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	4.3 m²


Window Orientation:	
Living 1.01 Living 2.07	South
All Other Living Areas All Other Bedrooms	-
Master 1.01 Living 2.02 Living 2.03 Living 6.02, 7.02, 8.02 1.09 Bed 1.02 1.03 Bed 1 3.01 Bed M 3.02 Living 4.02, 5.02 Bed 2	South-West
Bed 1 & Master 2.01, Bed 1 2.07 1.10 Bed 1 1.09, 1.10 living	South-East
North Bedrooms (grey tint) 1.06, 2.05 Living 1.03 Bed M 1.04 Bed M, 2.03 Bed M 6.02, 7.02, 8.02 Bed 3	North-West
East Bedrooms (grey tinted) Living 6.01, 7.01, 8.01 3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	North-East

Glass Type:	
Living 1.01	Clear Double (VLT 0.71)
Living 2.07	
Bed 1 & Master 2.01, Bed 1 2.07	
Living 2.02	
Living 2.03	
Living 6.01, 7.01, 8.01	
1.10 Bed 1	
1.09, 1.10 living	
1.09 Bed	
All Other Living Areas	-
All Other Bedrooms	
Master 1.01	Grey Double (VLT 0.32)
Living 6.02, 7.02, 8.02	
1.02	
1.03 Bed 1	
1.03 Bed M	
1.04 Bed M, 2.03 Bed M	
3.01 Bed M	
3.02 Living	
4.02, 5.02 Bed 2	
6.02, 7.02, 8.02 Bed 3	
North Bedrooms (grey tint)	Dark grey Double (VLT 0.16)
East Bedrooms (grey tinted)	
1.06, 2.05 Living	
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1	

Daylight Criteria Achieved?:			
Living 1.01		Yes	
Living 2.07			
All Other Living Areas			
Master 1.01			
All Other Bedrooms			
North Bedrooms (grey tint)			
East Bedrooms (grey tinted)			
Living 2.02			
Living 2.03			
Living 6.01, 7.01, 8.01			
Living 6.02, 7.02, 8.02			
1.06, 2.05 Living			
1.02			
1.03 Bed 1			
1.03 Bed M			
1.04 Bed M, 2.03 Bed M			
3.01 Bed M			
3.02 Living			
4.02, 5.02 Bed 2			
6.02, 7.02, 8.02 Bed 3			
3.04 Bed 1, 4.02 Bed 1, 5.02 Bed 1			
Bed 1 & Master 2.01, Bed 1 2.07		No	
1.10 Bed 1			
1.09, 1.10 living			
1.09 Bed			
1.1 Daylight Access - Living Areas		<div><div></div></div>	67%
Score Contribution		This credit contributes 26.6% towards the category score.	
Criteria		What % of living areas achieve a daylight factor greater than 1%	
Output		Calculated percentage	
Apartment		95 %	
1.2 Daylight Access - Bedrooms		<div><div></div></div>	67%
Score Contribution		This credit contributes 26.6% towards the category score.	
Criteria		What % of bedrooms achieve a daylight factor greater than 0.5%	
Output		Calculated percentage	
Apartment		92 %	
1.3 Winter Sunlight		<div><div></div></div>	100%
Score Contribution		This credit contributes 8.9% 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		Yes	
1.4 Daylight Access - Non-Residential		<div><div></div></div>	33%

	Score Contribution	This credit contributes 2.4% towards the category score.	
	Criteria	What % of the nominated floor area has at least 2% daylight factor?	
	Question	Percentage Achieved?	
	Shop	47 %	
1.5 Daylight Access - Minimal Internal Bedrooms		<div><div></div></div>	100%
	Score Contribution	This credit contributes 8.9% towards the category score.	
	Criteria	Do at least 90% of dwellings have an external window in all bedrooms?	
	Question	Criteria Achieved ?	
	Apartment	Yes	
2.1 Effective Natural Ventilation		<div><div></div></div>	67%
	Score Contribution	This credit contributes 26.6% towards the category score.	
	Criteria	What % of dwellings are effectively naturally ventilated?	
	Question	Percentage Achieved?	
	Apartment	68 %	

Transport Overall contribution 9.0%

		47%
1.1 Bicycle Parking - Residential		0%
Score Contribution	This credit contributes 20.6% towards the category score.	
Criteria	Is there at least one secure bicycle space per dwelling?	
Question	Bicycle Spaces Provided ?	
Apartment	30	
Output	Min Bicycle Spaces Required	
Apartment	40	
1.2 Bicycle Parking - Residential Visitor		100%
Score Contribution	This credit contributes 20.6% towards the category score.	
Criteria	Is there at least one visitor bicycle space per 5 dwellings?	
Question	Visitor Bicycle Spaces Provided ?	
Apartment	10	
Output	Min Visitor Bicycle Spaces Required	
Apartment	8	
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.	
1.4 Bicycle Parking - Non-Residential		100%
Score Contribution	This credit contributes 1.9% towards the category score.	
Criteria	Have the planning scheme requirements for employee bicycle parking been exceeded by at least 50% (or a minimum of 2 where there is no planning scheme requirement)?	
Question	Criteria Achieved ?	
Shop	Yes	
Question	Bicycle Spaces Provided ?	
Shop	2	
1.5 Bicycle Parking - Non-Residential Visitor		100%
Score Contribution	This credit contributes 0.9% towards the category score.	
Criteria	Have the planning scheme requirements for visitor bicycle parking been exceeded by at least 50% (or a minimum of 1 where there is no planning scheme requirement)?	
Question	Criteria Achieved ?	
Shop	Yes	
Question	Bicycle Spaces Provided ?	
Shop	4	
1.6 End of Trip Facilities - Non-Residential		100%

Score Contribution	This credit contributes 0.9% towards the category score.
Criteria	Where adequate bicycle parking has been provided. Is there also: * 1 shower for the first 5 employee bicycle spaces plus 1 to each 10 employee bicycles spaces thereafter, * changing facilities adjacent to showers, and * one secure locker per employee bicycle space in the vicinity of the changing / shower facilities?
Question	Number of showers provided ?
Shop	1
Question	Number of lockers provided ?
Shop	5
Output	Min Showers Required
Shop	1
Output	Min Lockers Required
Shop	2
2.1 Electric Vehicle Infrastructure	100%
Score Contribution	This credit contributes 22.4% towards the category score.
Criteria	Are facilities provided for the charging of electric vehicles?
Question	Criteria Achieved ?
Project	Yes
2.2 Car Share Scheme	0%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Question	Criteria Achieved ?
Project	No
2.3 Motorbikes / Mopeds	0%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	No

Waste Overall contribution 5.5%



1.1 - Construction Waste - Building Re-Use	N/A	✦ Scoped Out
N/A site is currently vacant		

This credit was scoped out	N/A site is currently vacant
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2.1 - Operational Waste - Food & Garden Waste	100%
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Score Contribution	This credit contributes 50% 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%
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Score Contribution	This credit contributes 50% 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%

		21%
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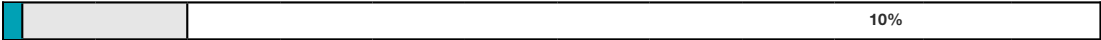
1.1 Communal Spaces		0%
Score Contribution	This credit contributes 11.2% towards the category score.	
Criteria	Is there at least the following amount of common space measured in square meters : * 1m ² for each of the first 50 occupants * Additional 0.5m ² for each occupant between 51 and 250 * Additional 0.25m ² for each occupant above 251?	
Question	Common space provided	
Apartment	0.0 m ²	
Shop	0.0 m ²	
Output	Minimum Common Space Required	
Apartment	67 m ²	
Shop	31 m ²	
2.1 Vegetation		25%
Score Contribution	This credit contributes 44.9% 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	7 %	
2.2 Green Roofs		0%
Score Contribution	This credit contributes 11.2% towards the category score.	
Criteria	Does the development incorporate a green roof?	
Question	Criteria Achieved ?	
Project	No	
2.3 Green Walls and Facades		0%
Score Contribution	This credit contributes 11.2% towards the category score.	
Criteria	Does the development incorporate a green wall or facade?	
Question	Criteria Achieved ?	
Project	No	
2.4 Private Open Space - Balcony / Courtyard Ecology		100%
Score Contribution	This credit contributes 10.3% towards the category score.	
Criteria	Is there a tap and floor waste on every balcony / in every courtyard?	
Question	Criteria Achieved ?	
Apartment	Yes	
3.1 Food Production - Residential		0%

Score Contribution	This credit contributes 10.3% towards the category score.
Criteria	Is there at least 0.25m ² of space per resident dedicated to food production?
Question	Food Production Area
Apartment	0.0 m ²
Output	Min Food Production Area
Apartment	22 m ²

3.2 Food Production - Non-Residential	0%
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Score Contribution	This credit contributes 0.9% towards the category score.
Criteria	Is there at least 0.25m ² of space per occupant dedicated to food production?
Question	Food Production Area
Shop	0.0 m ²
Output	Min Food Production Area
Shop	8 m ²

Innovation Overall contribution 9.0%



Innovation	
Description:	90% of waste from demolition and construction diverted from landfill
Points Targeted:	90% of waste from demolition and construction diverted from landfill
	1

1.1 Innovation	10%
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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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