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Sustainability Design Assessment

Launch Phoenix
Proposed Townhouse Development
1 Sargood St, Altona VIC 3018

DATE 12.08.2026

REV. 1.5 (Issue for Town Planning)

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01 General Notes

01.01 - Executive Summary

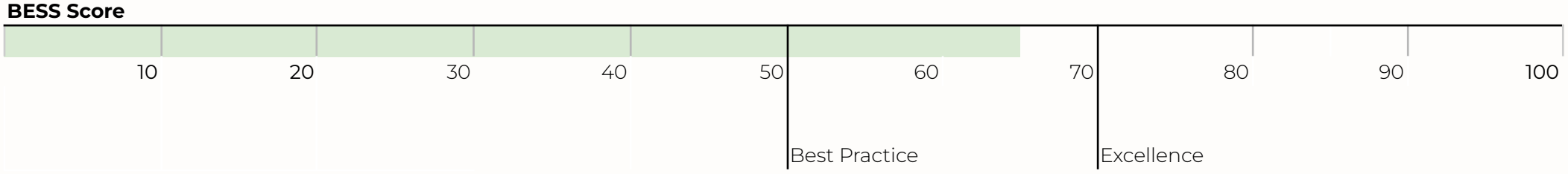
This Sustainability Design Assessment (SDA) documents the sustainability initiatives shaping the design, construction and operation of this housing development. The project has been assessed against the BESS scorecard and local planning scheme, with initiatives selected to reconcile ecological and social impacts, support long-term climate resilience, and create spaces where people and the planet can thrive.

The BESS score card is a local planning scheme requirement and forms part of a town planning application for the development. Specifically, this document addresses clause 15.01-2L-02.

Central to the sustainability strategy for this residential project is a holistic approach to Ecologically Sustainable Development (ESD), in line with Breathe's Sustainability Action Plan and underpinned by a commitment to meet and exceed best-practice sustainability benchmarks.

Key project ESD goals as follows:

- As a project with high sustainability credentials, the development shall aim for **67% Best Practice**- utilising the BESS assessment tool.
- Net Zero in Operation and a commitment to sign up to 100% Greenpower.
- An all electric design with a commitment to installing Solar for on-site generation, aiming for 100% of expected power demand. Installed at or prior point of project handover.
- All dwellings with access to northern solar gain and achieve an average of min. 7.9 NatHERS stars heating & cooling envelope design.
- A commitment to construct the dwellings with reduced upfront embodied emissions by avoiding/ minimising structural steel, specifying low carbon concrete and recycled/ carbon offset masonry..



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01.02 - Project Information & Background

The proposed Multi-Dwelling Development (Townhouses) is located at 1 Sargood St, Altona VIC 3018.

The site is approximately 1012 m^2.

The proposed project entails the demolition of 3no. existing semi-detached dwellings and the construction of 6no. new high performance townhouses - over two storeys.

The Gross Floor Area of the proposed project is approximately 660 m^2.

The construction industry accounts for approximately 39% of global carbon emissions when embodied and operational sources are combined, making it the single largest industry contributor to the ongoing climate crisis. Of that figure, 27% is associated with operational carbon and the remaining 11% is in the embodied carbon of our buildings.

In order to address the impact our projects have on our planet, Breathe has outlined a set of priorities as part of a company wide Sustainability Action Plan.

This document is structured accordingly with the following sections 02.01 - 02.03 addressing operational carbon (aiming for net-zero emissions), and sections 02.04 - 02.06 respectively addressing embodied carbon emissions.

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02 Sustainability Action Plan

02.01 - Greenpower

A. Net Zero in Operation - Building connected to 100% GreenPower
B. Solar PV, installed at handover

02.02 - Electrification

C. All electric fixtures and equipment. Heat pump hot water, Reverse cycle A/C, Induction cooking
No fossil fuels connected.

02.03 - High Performance

D. Min. 7.5 NatHERS average star rating.
- Thermal Mass
- High level of insulation
- Optimised Glazing and shading

E. Water tanks, rain gardens and a permeable paving carpark

02.04 - Build Less, Give More

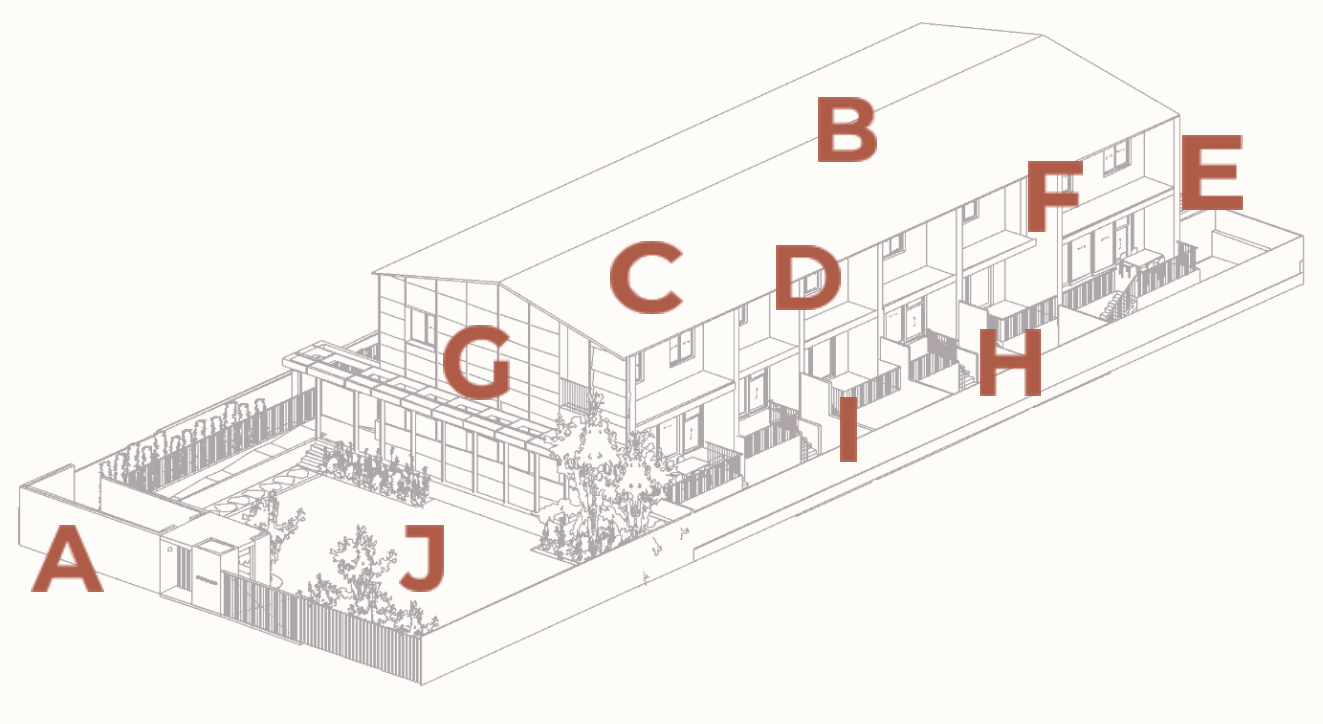
F. Simple structure with no transfers
Minimise steel and concrete
Maximise timber structure
G. Utilise full cladding and lining sheets and minimise wastage.

02.05 - Measure Carbon

H. 45% upfront embodied carbon reduction as compared with Business-as-usual.
I. Low carbon concrete 50-70% cement replacement content.

02.06 - Circularity

J. Recover, Reuse and repurpose demolition resources.
- Existing bricks (or carbon neutral alternative)
- Roof tiles crushed infill material. Concrete demolition recycled offsite, budget permitting.



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02.01 - GreenPower

This project is committed to connecting to 100% GreenPower and installing **Solar for on-site generation**, aiming for 100% of expected power demand.

The large majority of the built environment's carbon footprint is in the energy used for hot water, heating and cooling, lighting and power. Much of that power is sadly generated from dirty coal. Purchasing 100% GreenPower and generating most if not all power needs on site will both future proof against increased energy consumption and result in a net export of electrons back into the grid. This could in essence mean no more power/ gas bills for the occupants.

Action:
Commitment to connect the residential building to 100% GreenPower.
Commitment to install and design solar photovoltaic array allowing for the onsite generation and storage of renewable energy in each dwelling.

02.02 - Electrification

This project is committed to be **all electric. No fossil fuels** shall be connected to the site.

Especially given the volatility of gas prices and supply, it's never been a better time to design and build all electric and avoid retaining a 'stranded asset' in the future.

Electrical fixtures and equipment include:
- air source heat pump hot water,
- induction cooking, and
- reverse cycle air conditioning for heating and cooling.

Action:
Design and specify building services and appliances for an all electric development.

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02.03 - High Performance

A climate resilient thermal envelope achieved by:

- Min. Average of min. 7.5 NatHERS star rating. Considering Long-term climate resilience.
- Considered orientation - i.e. all dwellings to have a northerly aspect for optimal solar gain.
- Optimised glazing extents/ specifications with shading.
- Maximise thermal mass with, reverse brick veneer walls, or a concrete (suspended) slab, or Aerated Autoclaved Concrete floor panels for lightweight structure alternative design.
- Highly insulated thermal envelope.

02.04 - Build Less, Give More

This project is committed to the design of an efficient structure specifying low carbon materials and adopting a reductivist design ethos.

- Where possible the dwellings are designed such that the structure is stacked - avoiding unnecessary structural offsets which account for added upfront emissions.
- The project aims to avoid where possible structural steel, and instead utilise an all timber construction for added thermal performance and reduced upfront carbon emissions.
- Low carbon concrete with >50% recycled content (Holcim Ecopact, Boral Envisia or approved equal) shall be specified and its use limited only where alternative construction approaches are not feasible.
- Utilise full cladding and lining sheets and minimise wastage.

Action:
Coordinate material and structure specifications with the wider consultant team.

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02.05 - Measure Carbon

This project is committed to reducing upfront carbon emissions by preparing an LCA carbon snapshot and implementing the resultant recommendations.

Project Specific Strategies to meet embodied emissions 25 tonnes per occupant, as follows:

- Specify and ensure installation of low carbon concrete .e.g. Holcim Ecopact, Boral Envisia or equal >50-70% cement replacement mix (to be confirmed spec suitability with structural engineer).
- Specify and ensure installation of recycled/ carbon neutral masonry. Refer to the Circularity section for further details.
- Avoid structural steel.

Action:
Coordinate material and structure specifications with the wider consultant team.

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02.06 - Circularity

This project is committed to specifying circular materials and construction processes - to include diverting waste from the building site and demolition.

Where possible, the project will consider mechanical fixing in lieu of adhesives, allowing for future separation of materials for re-use and repurposing.

Project circularity initiatives as follows:

- Bricks recovered from the demolition shall be cleaned and stored to be reused for the proposed project. This is the ideal scenario, cost permitting. Alternatively, carbon neutral and/ or recycled bricks shall be used.
- Roof tiles and existing driveway:
    - Roof tiles shall be crushed either onsite (preferred - https://allenplant.com.au/#machines) or offsite and utilised for screening and crushed rock infill, cost permitting.
    - Concrete driveway and slab demolition waste shall be sent offsite for recycling, cost permitting. https://www.repurposeit.com.au/
- Existing trees which are proposed to be demolished shall be re-purposed as seating logs or other landscape features.
- Imported site fill shall be sourced from local sources with 50-100km of the site.
- Onsite organics composting facilities, provided via council FOGO collection.

Action:
Coordinate specifications with the wider consultant team, incl landscape/ waste consultants.

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Table C - BESS Summary

03.01 - Management

BESS credits early ESD commitments, pre-application Council engagement, thermal modelling, metering strategies and preparation of a Building Users' Guide to support efficient ongoing building operation.

Category	Criteria	Objective	Design Response	Responsible
Management 	**1.1 Pre-Application Meeting**	To ensure appropriate sustainable design principles and strategies are considered from the preliminary design stage of each development by encouraging early involvement of a suitably qualified ESD professional.	The ESD consultant was present at the Pre-app meeting with Hobsons Bay City Council planning officers who confirmed that a Sustainable Design Assessment is required under Clause 15.01-2L-04 of the Hobsons Bay Planning Scheme. ESD Consultant: Qutaibah Al-Atafi, RAIA Circularity Lead and Senior Architect at Breathe Master Of Architecture ARBV Registered Architect Green Star Accredited Professional (GSAP) Certified Passive House Designer Certificate IV NatHERS Assessment	ESD Consultant
	2.2 Thermal Performance Modelling - Multi-Dwelling Residential	To encourage and recognise developments that use thermal modelling to inform passive design at the early design stage	An initial thermal model was completed utilising HERO NatTHERS accredited software early in the design process. This was iterated upon in order to inform the architectural design in relation to Passive Solar principals. Refer to section **03.03.01** of this report for rating weighted average results and thermal assessment envelope specification assumptions. Refer to Appended draft NatHERS certificates & summary.	Architect / ESD Consultant

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Category	Criteria	Objective	Design Response	Responsible
	4.1 Building Users Guide	To encourage and recognise initiatives that will help building users to use the building more efficiently.	The Contractor shall prepare a Building User's guide, or similar approved document which shall be circulated to all dwelling Owners/ users at point of project handover. A Building Users' Guide will provide information designed for building occupants in common language that includes information aimed at communicating how the building can be used to optimise its performance potential. The Building Users' Guide will also include operational strategies that can result in minimising energy and water use and waste production.	Contractor / Developer

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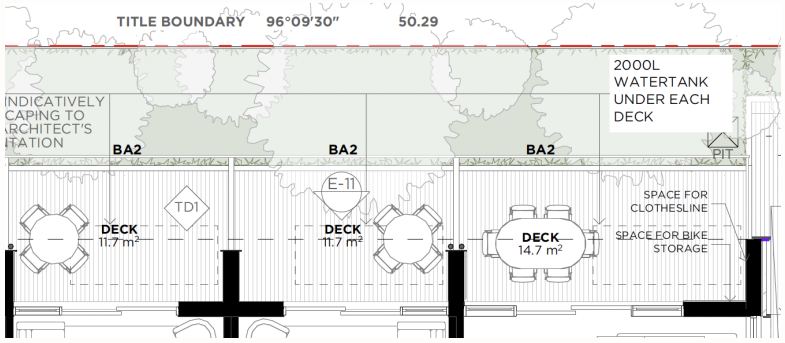
03.02 - Integrated Water Management (IWM)

BESS addresses fixture efficiency, rainwater harvesting, water-efficient landscaping and stormwater treatment, reducing reliance on potable water and minimising polluted runoff into local waterways.

Category	Criteria	Objective	Design Response	Responsible
Integrated Water Management (IWM)	**1.1 Potable Water Use**	To reduce total potable water use due through the use of efficient fixtures, appliances, and the use of rainwater.	Potable water reduction: ≥ 25% Against reference case. The development is committed to specifying quality, high efficiency WELS rated plumbing fixtures and appliances, as noted in the BESS Scorecard. Typical Specification as follows: • Showerheads: ≥ 3 Star WELS rating • Kitchen Taps: ≥ 5 Star WELS rating • Bathroom Taps: ≥ 5 Star WELS rating • Dishwasher: ≥ 5 Star WELS rating • WCs: ≥ 5 Star WELS rating • Washing Machines: ≥ 5 Star WELS rating **Supporting Documentation:** Refer to the Civil Engineering drawings and BESS Scorecard. 	Contractor / Architect / Services Consultant / Civil Engineer

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Category	Criteria	Objective	Design Response	Responsible
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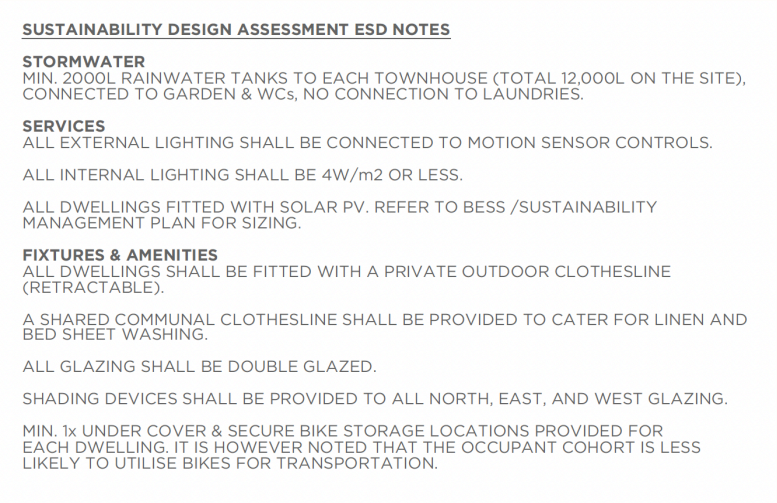
			Above: Architectural Dwelling Type plans showing tank size.	
				
			Above: Screenshot of ESD notes included on the cover sheet of the architectural drawings.	
	2.1 Stormwater Treatment	To minimise negative environmental impacts of stormwater runoff and maximise onsite re-use of stormwater	The development is committed to maximising onsite re-use of stormwater and to meet the required reductions to runoff flows and water quality contaminants. Refer to the Civil Engineering IWMP (Blue Factor) report as part of the project planning application.	Contractor / Architect / Services Consultant / Civil Engineer / Landscape Designer
	3.1 Water Efficient	To ensure the efficient use of	The development is committed to reduce potable water	Contractor /

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Category	Criteria	Objective	Design Response	Responsible
	Landscaping	water and to reduce total operating potable water use through encouraging water efficient landscape design.	usage by specifying water efficient landscape. Refer to the appended Landscape plan for further information.	Architect / Services Consultant / Civil Engineer / Landscape Designer

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03.03 - Operational Energy

Buildings account for up to 39% of global emissions - 70% of which is associated with the operational energy usage.
BESS rewards passive design, efficient services and all-electric development performing above NCC benchmarks. Onsite renewable generation can assist projects in reaching higher performance thresholds.

Category	Criteria	Objective	Design Response	Responsible
Operational Energy	**1.2 Thermal Performance Rating - Residential**	To reduce energy needed to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.	A preliminary thermal model has been completed for all dwelling types, meeting and exceeding minimum NCC requirements. Refer to section **03.03.01-8** of this report for rating weighted average results and thermal assessment envelope specification assumptions. Refer to Appended draft NatHERS certificates & summary.	Architect / ESD Consultant
	2.1 Greenhouse Gas Emissions	Ensure the efficient use of energy and to reduce greenhouse gas emissions from building energy use.	As above.	As above.
	2.6 Electrification	To support the transition to renewable energy sources.	The development shall be 100% electric. No fossil fuels shall be connected.	Contractor / Architect / Services Consultant / Developer
	2.7 Energy consumption	Ensure the efficient use of energy.	As noted above, a preliminary thermal model has been completed for all dwelling types, meeting and exceeding minimum NCC requirements. Refer to section **03.03.01-8** of this report for rating weighted average results and thermal assessment envelope specification assumptions. Refer to Appended draft NatHERS certificates & summary.	Architect / ESD Consultant

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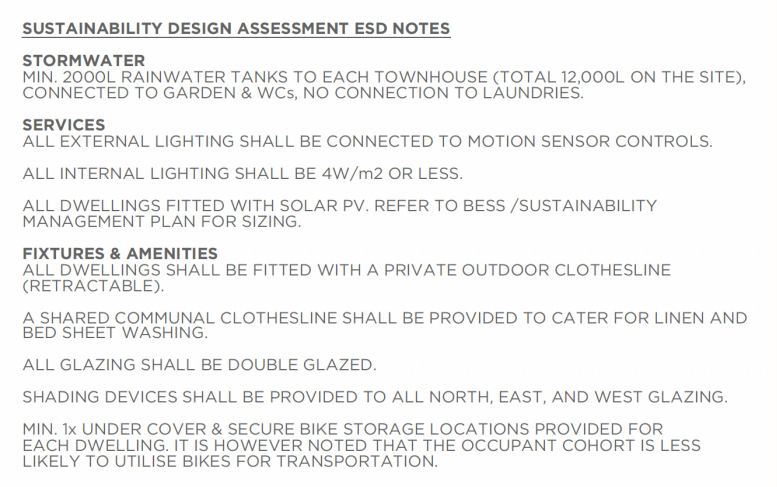
Category	Criteria	Objective	Design Response	Responsible
	3.3 External Lighting	Ensure the efficient use of energy, to reduce energy consumption, greenhouse emissions associated with lighting, and to reduce energy peak demand.	All external lighting shall be controlled by motion sensors. Where there are multiple external lights, at least 50% must be connected. **Supporting Documentation:** Refer to Architectural drawings.  SUSTAINABILITY DESIGN ASSESSMENT ESD NOTES STORMWATER MIN. 2000L RAINWATER TANKS TO EACH TOWNHOUSE (TOTAL 12,000L ON THE SITE), CONNECTED TO GARDEN & WCs, NO CONNECTION TO LAUNDRIES. SERVICES ALL EXTERNAL LIGHTING SHALL BE CONNECTED TO MOTION SENSOR CONTROLS. ALL INTERNAL LIGHTING SHALL BE 4W/m2 OR LESS. ALL DWELLINGS FITTED WITH SOLAR PV. REFER TO BESS /SUSTAINABILITY MANAGEMENT PLAN FOR SIZING. FIXTURES & AMENITIES ALL DWELLINGS SHALL BE FITTED WITH A PRIVATE OUTDOOR CLOTHESLINE (RETRACTABLE). A SHARED COMMUNAL CLOTHESLINE SHALL BE PROVIDED TO CATER FOR LINEN AND BED SHEET WASHING. ALL GLAZING SHALL BE DOUBLE GLAZED. SHADING DEVICES SHALL BE PROVIDED TO ALL NORTH, EAST, AND WEST GLAZING. MIN. 1x UNDER COVER & SECURE BIKE STORAGE LOCATIONS PROVIDED FOR EACH DWELLING. IT IS HOWEVER NOTED THAT THE OCCUPANT COHORT IS LESS LIKELY TO UTILISE BIKES FOR TRANSPORTATION. Above: Screenshot of ESD notes included on the cover sheet of the architectural drawings.	Contractor / Architect / Services Consultant
	3.4 Clothes Drying	Ensure the efficient use of energy and to reduce energy consumption and greenhouse emissions associated with clothes drying	All dwellings shall be fitted with retractable clotheslines (under cover). In addition to privately located clotheslines, a shared communal larger clothesline shall be provided to hang linen and bed sheets.	Architect

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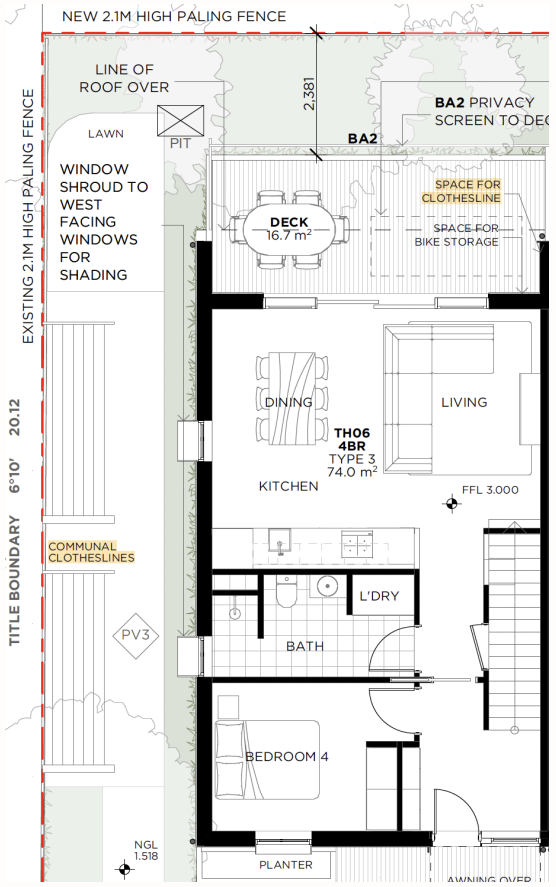
Category	Criteria	Objective	Design Response	Responsible
			Clothes dryers installed shall be 6+ star efficiency rating. **Supporting Documentation:** Refer to Architectural drawings.  	

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Category	Criteria	Objective	Design Response	Responsible
			Above: Architectural Dwelling Type plans showing clotheslines.	
	3.5 Internal Lighting - Houses and Townhouses	Ensure the efficient use of energy, to reduce energy consumption, greenhouse emissions associated with artificial lighting, and to reduce energy peak demand.	All dwelling lighting illumination power density shall be 4W / m2 or less, utilising high efficiency LED light fittings throughout. **SUSTAINABILITY DESIGN ASSESSMENT ESD NOTES** **STORMWATER** MIN. 2000L RAINWATER TANKS TO EACH TOWNHOUSE (TOTAL 12,000L ON THE SITE), CONNECTED TO GARDEN & WCs, NO CONNECTION TO LAUNDRIES. **SERVICES** ALL EXTERNAL LIGHTING SHALL BE CONNECTED TO MOTION SENSOR CONTROLS. ALL INTERNAL LIGHTING SHALL BE 4W/m2 OR LESS. ALL DWELLINGS FITTED WITH SOLAR PV. REFER TO BESS /SUSTAINABILITY MANAGEMENT PLAN FOR SIZING. **FIXTURES & AMENITIES** ALL DWELLINGS SHALL BE FITTED WITH A PRIVATE OUTDOOR CLOTHESLINE (RETRACTABLE). A SHARED COMMUNAL CLOTHESLINE SHALL BE PROVIDED TO CATER FOR LINEN AND BED SHEET WASHING. ALL GLAZING SHALL BE DOUBLE GLAZED. SHADING DEVICES SHALL BE PROVIDED TO ALL NORTH, EAST, AND WEST GLAZING. MIN. 1x UNDER COVER & SECURE BIKE STORAGE LOCATIONS PROVIDED FOR EACH DWELLING. IT IS HOWEVER NOTED THAT THE OCCUPANT COHORT IS LESS LIKELY TO UTILISE BIKES FOR TRANSPORTATION. Above: Screenshot of ESD notes included on the cover sheet of the architectural drawings. Noting internal lighting wattage density requirements.	Contractor / Architect / Services Consultant
	4.5 Renewable Energy Systems - Solar	What % of the estimated energy consumption of the building class it supplies does the solar power system provide?	All dwellings shall be fitted with solar for on site generation and storage - system sized to approximately 100% of annual demand.	Contractor / Architect / Services Consultant

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Category	Criteria	Objective	Design Response	Responsible

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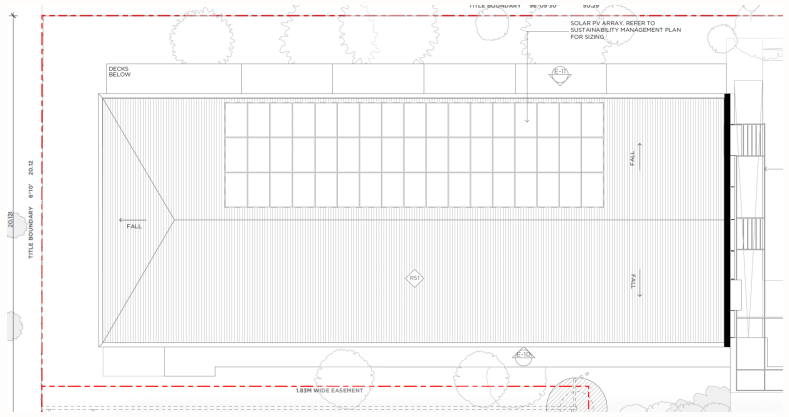
Dwelling Type	Solar PV Size
2 Bedroom x 4no.	3.0 kWp (8 Panels)
3 Bedroom	3.3 kWp (9 Panels)
4 Bedroom	4.0 kWp (10 Panels)
Total	**19.3 kWp (51 Panels)**

All zero azimuth (north facing) and min. 10 degrees inclination for self-cleaning.

Refer to the appendix for the Bess Scorecard.



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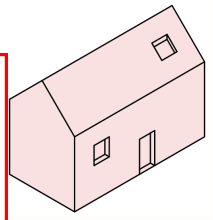

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03.03.01 - Thermal Assessment - General Notes

Table A - Star Rating Summary

Dwelling Type	**No. of Dwellings in Type**	**Rating** (Stars)	**Rating Limit**	**Total** (MJ/m²yr)	**Heating** (MJ/m²yr)	**Cooling** (MJ/m²yr)	**Heating Limit** (MJ/m²yr)	**Cooling Limit** (MJ/m²yr)
Type 2BR (Middle)	4	***7.7***	7	78	66	12	80	22
TYPE 3BR (End)	1	***70***	7	99	76	22	80	22
TYPE 4BR (End)	1	***7.3***	7	89	70	20	80	22
Development Summary								
Total Dwellings							***6***	
Weighted Average Star Rating							***7.5 Stars***	
Pass Condition 1 — Weighted Average ≥ 7.5 Stars							*PASS*	
Pass Condition 2 — No Dwelling Below 7.5 Stars							*PASS*	
Pass Condition 3 — No Heating or Cooling Load Exceeded							*PASS*	
Overall Development Result							***PASS***	

This commitment shall exceed the National Construction Code (NCC) requirement whereby multiple dwelling developments must meet a min. average of 7 stars for compliance, with no dwelling falling below 6 stars. The above table is a summary of the predicted energy required to heat and cool the proposed architectural design, to maintain internal comfort levels relative to the climate zone in which the site is located.

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03.03.02 - Insulation

Shall be installed to meet the latest version of AS/NZS 4859.1 & AS/NZS 3999.
Forming a continuous thermal barrier across floors, walls, bulkheads, ceilings, and the like.
Tight fitting adjacent openings and penetrations whilst not compromising the safe operation of building fixtures, fittings and services.

R-Values noted in this report are added insulation values - not whole system insulation values.

Bulk insulation shall be installed uncompressed, except where draped over battens, pipes and electrical conduits. Where insulation may be compressed, it would be permissible to substitute the bulk insulation with rigid insulation of equal or lesser R-value.

Where reflective insulation has been specified, the required min. 20mm air gap shall be provided and be adequately supported by framing members. Foil sheet joins shall overlap min. 50mm.

Insulation shall be installed adjacent light fittings and other electrical fixtures with minimal safety clearances to the latest version of AS/NZS 3000.

03.03.03 - Sealing and Airtightness

Element	Sealing	
Openings	**Sealed**	If sealed, all windows, doors and skylights shall be sealed and weatherstripped.
Exhaust fans / chimneys	**Sealed**	If sealed, all exhaust fans & chimneys shall be fitted with self closing dampers.
Downlights	**Sealed**	If sealed, all recessed downlights shall be sealed from air leakage and 'IC-rated' to enable insulation to be installed over light fittings, and/ or be fitted with covers over which allow close fitting insulation. NOTE Insulation shall be installed adjacent light fittings and other electrical fixtures with minimal safety clearances to the latest version of AS/NZS 3000.

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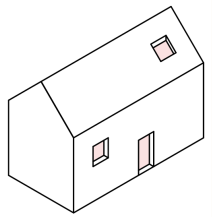

03.03.04 - Openings and Screens - General Notes

Glazing shall be installed to meet the latest version of AS1288.

The U-value is a measure of non-solar heat that is lost or gained through the glazing system. Lower the U-value, the more insulative the window.

Solar Heat Gain Coefficient (SHGC) is a measure of how readily heat from the sun is transmitted through a glazing system and is impacted by the frame fraction (or the area ratio of glass vs. frame) for different operable sash types. Lower SHGC is beneficial in tropical climates, while higher SHGC is beneficial in colder climates where homes are required to be heated most of the year, such as Victoria.

01 - Default Windows
- Derived from a statistical average performance of tested windows.
- Building surveyor should confirm the following:
  - The total U-value (U_W) is equal or lower than the value specified.
  - The Solar Heat Gain Coefficient (SHGC) is within + / - 10% tolerances.

02 - Custom Windows
- Manufacturer windows rated under the WERS scheme. These windows tend to be higher performance on average compared with default windows.
- Building surveyor should confirm the following:
  - The total U-value (U_W) & Solar Heat Gain Coefficient (SHGC) are equal to the value specified.
  - The nominated manufacturer shall provide compliance certification and / or labels.

[OR]
- The total U-value (U_W) is equal or lower than the value specified.
- The Solar Heat Gain Coefficient (SHGC) is within + / - 5% tolerances.

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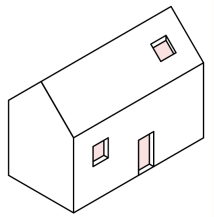

03.03.05 - Opening Specifications

Windows			Group - A	U-Value	SHGC	Group - B	U-Value	SHGC
	Type	Default Double Glazed	Awning	n / a	n / a	Fixed	≤ 3.60	0.54**
	Frame	Alum. Thermal Break	Casement	n / a	n / a	Double hung	≤ 3.60	0.54**
	Glazing	Clear / Air gap / Clear	Bifold	n / a	n / a	Louvre	n / a	n / a
			Tilt & Turn	n / a	n / a	Sliding	n / a	n / a
Doors								
	Type	Default Double Glazed	Hinged	n / a	n / a	Sliding	≤ 3.60	0.54**
	Frame	Alum. Thermal Break	Bifold	n / a	n / a	Stacker	n / a	n / a
	Glazing	Clear / Air gap / Clear						
Skylights						**Shading**	**Internal**	**External**
	Type	n / a	Fixed	n / a	n / a	Operable Blinds	n / a	n / a
	Frame	n / a	Ventilated	n / a	n / a	n / a	n / a	n / a
	Glazing	n / a						
Shading			**Location / Notes**				**Summer**	**Winter**
	Type	Eaves	Roof / upper floor projections as drawn.			Shade factor	100%	100%
	Type	Pergola	n / a			Shade factor	n / a	n / a
	Type	Screen	n / a			Shade factor	n / a	n / a

**The Solar Heat Gain Coefficient (SHGC) is within + / - 10% tolerances.

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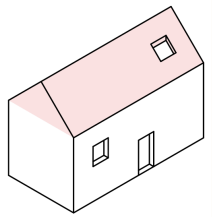

03.03.06 - Roof and Ceiling Specification

Roofs	Storey	Added Insulation R-value	Insulation Type	Radiant Heat Barrier	Colour	Nominal insulative Thickness
	First	**R 1.8**	Bulk	Reflective Foil Sarking	Light (≤0.30 Solar Absorbance)	**79mm**
		Location	Typical roof zone.			
		Installation Notes	Refer to General notes section 03.03.02. Ensure reflective foil is installed with required minimum airspace. Foil shall face downwards.			
		Electrical	**Ceiling fans:** 1.3-1.4m Ø to all main living areas and bedrooms. **Lighting:** Recessed downlights to all bedrooms, wet areas and utility areas. Surface mounted to all other areas.			
Ceilings	**Storey**	**Added Insulation R-value**	**Insulation Type**	**Radiant Heat Barrier**	**Colour**	**Nominal insulative Thickness**
	Ground	**R 5.0**	Bulk	(n / a)	Light (≤0.30 Solar Absorbance)	**220mm**
		Location	Typical ceiling height: **2.7m** Wet area and above cabinetry Bulkhead ceiling height: **2.4m**			
		Installation Notes	Refer to General notes section 03.03.02.			
		Electrical	**Ceiling fans:** 1.3-1.4m Ø to all main living areas and bedrooms. **Lighting:** Recessed downlights to all bedrooms, wet areas and utility areas. Surface mounted to all other areas.			

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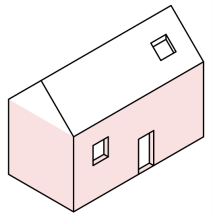

03.03.07 - Wall specifications

EXTERNAL	TYPE	Added Insulation R-value	Insulation Type	Weather Barrier	Colour	Nominal insulative Thickness
	Typical	R 4.0	Bulk	Non-reflective (Class 4 vapour permeable)	Light (≤0.30 Solar Absorbance)	140mm
		Location / Description	Typical Timber Frame (External Perimeter, except intertenancy walls)			
		Installation Notes	140mm stud frame cavity. Refer to General notes section 03.03.02.			
INTER TENANCY	TYPE	Added Insulation R-value	Insulation Type	Weather Barrier	Colour	Nominal insulative Thickness
	Typical	R 2.5	Bulk	Non-reflective (Class 4 vapour permeable)	Light (≤0.30 Solar Absorbance)	90mm
		Location / Description	Typical Timber Frame			
		Installation Notes	90mm stud frame cavity. Refer to General notes section 03.03.02.			
INTERNAL	TYPE	Added Insulation R-value	Insulation Type	Weather Barrier		Nominal insulative Thickness
	Typical	n / a	n / a		Light (≤0.30 Solar Absorbance)	n / a
		Location / Description	Other than the intertenancy walls, no added insulation required for internal walls.			
		Installation Notes	n / a			

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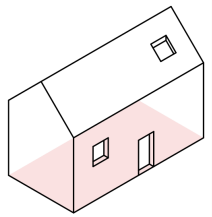

03.03.08 - Floor Specifications

Insulation	Storey	Added Insulation R-value	Insulation Type			Nominal insulative Thickness
	Ground	**R 2.5 (Typical) R 5.0 (3BR TH Only)**	Bulk			**90mm (Typical) 180mm (3BR TH Only)**
		Location	Within raised suspended lightweight floor.			
		Installation Notes	Refer to General notes section 03.03.02.			

Insulation	Storey	Added Insulation R-value	Insulation Type			Nominal insulative Thickness
	First	**R 2.5**	Bulk			**90mm**
		Location	Typical suspended first level floor structural zone.			
		Installation Notes	Refer to General notes section 03.03.02.			

Coverings	Storey	Location	Type
	Ground	Wet areas	Tiled
		Bedrooms including stairs	Carpet
		All other areas including main living and entry areas	Cork

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03.04 - Indoor Environment Quality (IEQ)

BESS addresses daylight, ventilation, solar access and thermal comfort. Australians spend around 90% of their time indoors, making early design decisions critical to occupant health and wellbeing.

Category	Criteria	Objective	Design Response	Responsible
Indoor Environment Quality (IEQ) 	**2.2 Cross Flow Ventilation**	To provide fresh air and passive cooling opportunities.	Due to the Town house nature of the development cross flow ventilation as measured by the BESS Score card is not feasible. However the development considers and demonstrates single-sided ventilation to habitable areas.	-
	3.1 Thermal comfort - Double Glazing	To provide comfortable indoor spaces and reduce energy needed for heating and cooling	All windows shall be double glazed. Refer to section **03.03.01-8** of this report for rating weighted average results and thermal assessment envelope specification assumptions. Refer to Appended draft NatHERS certificates & summary.	Contractor / Architect / Services Consultant
	3.2 Thermal Comfort - External Shading	To provide comfortable indoor spaces and reduce energy needed for heating and cooling	External shading shall be provided to all east, west and north facing habitable room windows. **Supporting Documentation:** Refer to Architectural drawings.	Architect

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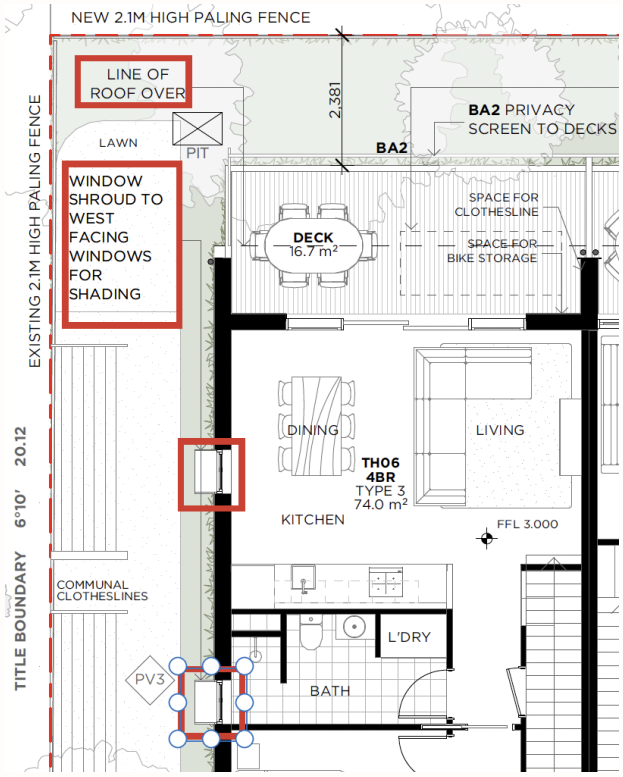
Category	Criteria	Objective	Design Response	Responsible
				

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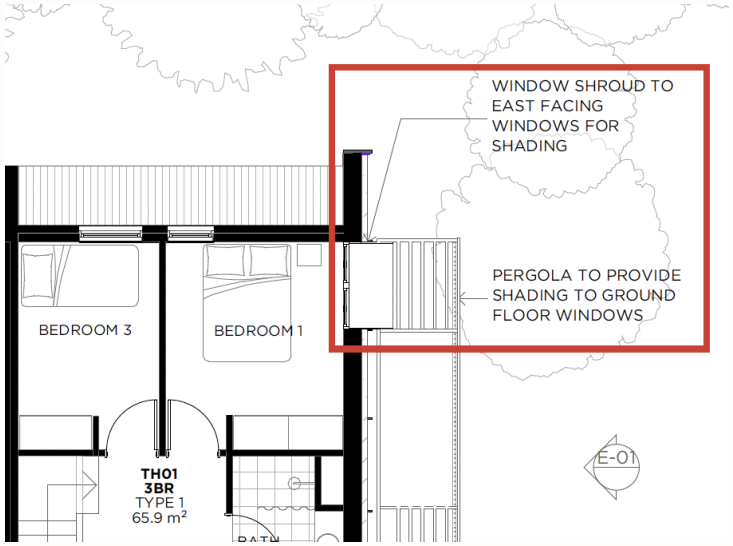
Category	Criteria	Objective	Design Response	Responsible
			 Above: Architectural drawings indicating glazing shading in elevation and plans.	
	3.3 Thermal Comfort - Orientation	To provide comfortable indoor spaces and reduce energy needed for heating and cooling. Orientating living areas to the north provides the best opportunity for passive heating.	50% of all main living areas in all the townhouses are orientated to the north. 'North' includes 20°W–30°E of true (or solar) north.	Architect

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03.05 - Transport

BESS credits bicycle parking, end-of-trip facilities and car share participation, reducing private vehicle reliance and associated greenhouse gas emissions and urban air quality impacts.

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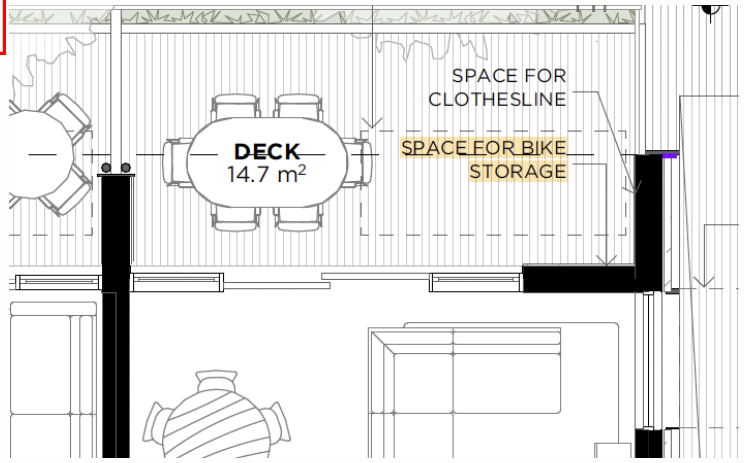
Category	Criteria	Objective	Design Response	Responsible
Transport 	**1.1 Bicycle Parking - Residential**	To encourage and recognise initiatives that facilitate cycling	All dwellings shall show min. 1x undercover secure bike parks. It is noted to be noted that the expected occupancy cohort will unlikely utilise bike transportation, however an allowance for undercover and secure bike storage has been allowed for in all proposed dwellings. **Supporting Documentation:** Refer to Architectural drawings  Above: Architectural drawings indicating secure covered bike parks on plans.	Architect/ Contractor
	1.2 Bicycle Parking - Residential Visitor	To encourage and recognise initiatives that facilitate cycling	N / a It is further noted that the expected occupancy cohort or	N / a

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Category	Criteria	Objective	Design Response	Responsible
			by extension their visitors will unlikely utilise bike transportation. Furthermore, the site is located in close proximity to the Louis Joel Arts & Community Centre which is already serviced with 4 visitor bike parks along Sargood Street. 	
	2.1 Electric Vehicle Infrastructure	N / a	N / a	N / a

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03.06 - Waste & Resource Recovery

Construction and demolition generates up to 40% of Australian landfill waste. BESS credits building reuse, food and garden waste diversion, and accessible recycling facilities, addressing both construction waste and the operational waste generated across a building's life.

Category	Criteria	Objective	Design Response	Responsible
Waste & Resource Recovery 	**1.1 Construction Waste - Building Re-Use**	To ensure waste avoidance, reuse and recycling during the design and construction stages of development.	Where possible and feasible, materials reclaimed from the demolition shall be re-used as part of the proposed demolition. Refer to section 02.06 - Circularity above for further information.	Contractor / Architect / Landscape designer
	2.1 Operational Waste - Food & Garden Waste	To ensure waste avoidance, reuse and recycling during the operational life of the building.	FOGO bin collection is provided by the local council. Waste bin area shall be provided with FOGO bins catered for as part of the development. Refer to architectural plans.	Contractor / Architect / Landscape designer / Waste Consultant

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Category	Criteria	Objective	Design Response	Responsible

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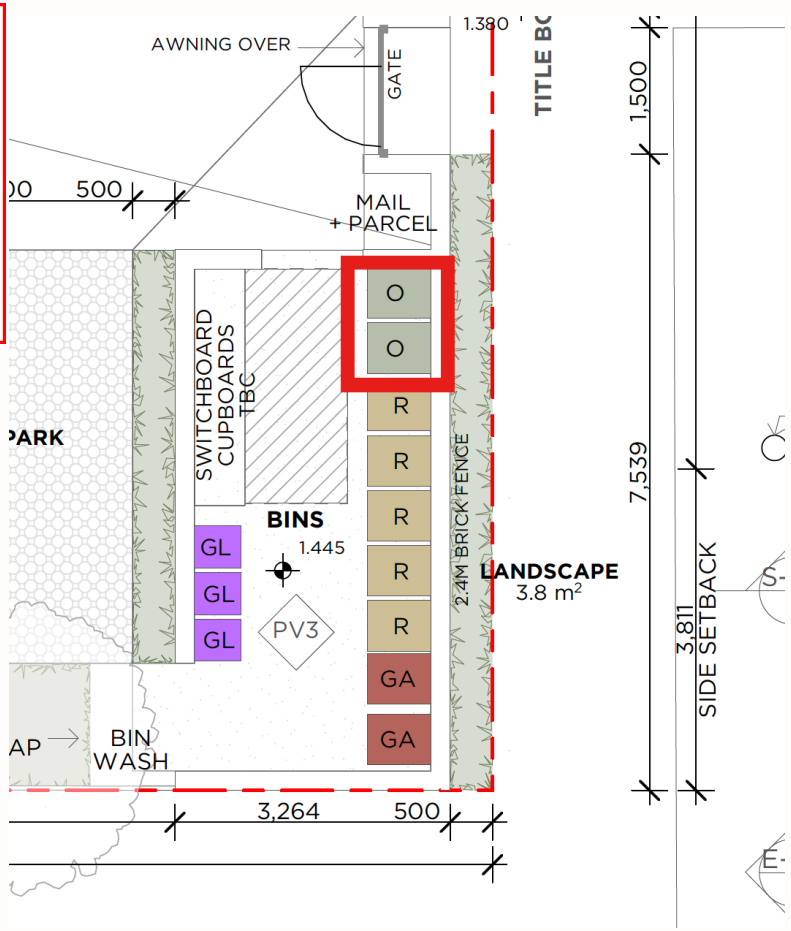

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03.07 - Urban Ecology

BESS credits communal open space, canopy vegetation, food production and green roofs and facades, enhancing urban biodiversity, reducing cooling loads and improving community wellbeing.

Category	Criteria	Objective	Design Response	Responsible
Urban Ecology	**2.1 Vegetation**	To encourage and recognise the use of vegetation and landscaping within and around developments	At least 20% of the proposed development shall be set aside for vegetation. **Supporting Documentation:** Refer to Landscape Drawings showing % of Garden area/ vegetation.	Contractor / Architect / Landscape designer / Civil Engineer
	2.4 Balconies, Courtyards & Roof terraces	To encourage plants in a healthy ecological context to be grown on balconies and in courtyards	N / a	N / a
	3.1 Food Production - Residential	To encourage the production of fresh food on-site	N / a	N / a

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03.08 - Innovation

Rewarding features new to Victoria or substantially exceeding BESS benchmarks, the Innovation category contributes 9% to the overall score, incentivising exemplary outcomes beyond standard categories.

Category	Criteria	Objective	Design Response	Responsible
Innovation 	**N / a**	N / a	N / a	N / a

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04 Appendix

- BESS Scorecard
- NatHERS preliminary modelling certificates

BESS Buildings Report

Built Environment Sustainability Scorecard

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This BESS report outlines the sustainable design commitments of the proposed development at 1 Sargood St Altona Victoria 3018. 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 Hobsons Bay 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.

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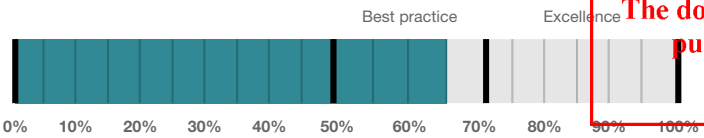
Your BESS Score

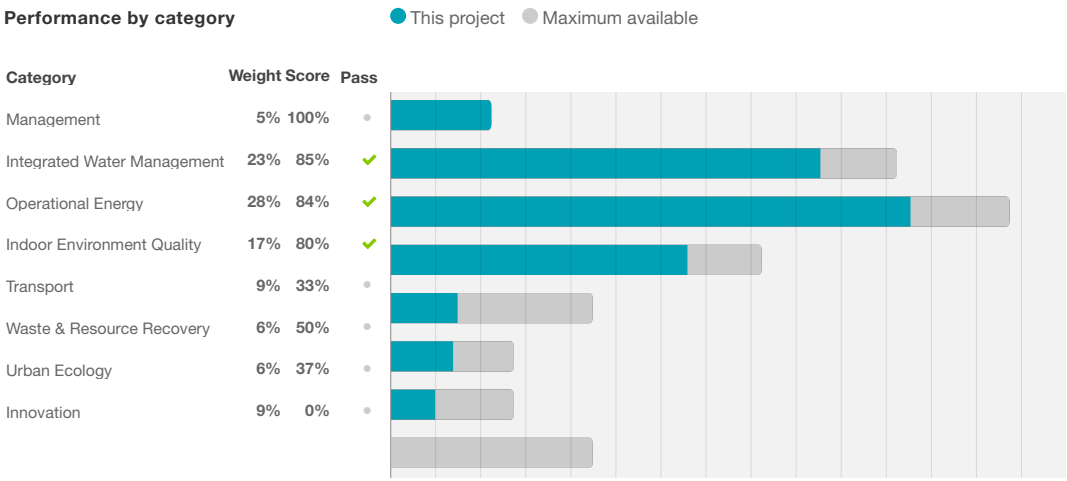


67%

Project details

Name	Phoenix
Address	1 Sargood St Altona Victoria 3018
Project ID	542BC740-R1
BESS Version	BESS-10
Date	31 July 2026
Software version	2.3.0-B.655
Site type	Multi dwelling (dual occupancy, townhouse, villa unit etc)
Account	qutaibah@breathe.com.au
Application no.	
Site area	1,012 m²
Building floor area	658 m²

Performance by category



Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	% of total area
Townhouse			
Type 2BR	4	95.0 m²	57%
Type 4BR	1	148 m²	22%
Type 3BR	1	130 m²	19%
Total	**6**	**658 m²**	**100%**

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Supporting Evidence

Shown on Floor Plans

Credit	Requirement	Response	Status
Integrated Water Management 2.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)	To be printed Refer to Civil Engineer Report.	✔
Integrated Water Management 3.1	Annotation: Water efficient garden details	To be printed Refer to Landscape Drawings.	✔
Operational Energy 3.3	Annotation: External lighting controlled by motion sensors	To be printed	✔
Operational Energy 3.4	Location of clothes line (if proposed)	To be printed	✔
Operational Energy 4.5	Location and size of solar photovoltaic system	To be printed	✔
Indoor Environment Quality 3.1	Annotation: Glazing specification (U-value, SHGC)	To be printed	✔
Indoor Environment Quality 3.2	Shading devices	To be printed	✔
Indoor Environment Quality 3.3	North-facing living areas	To be printed	✔
Transport 1.1	Location of residential bicycle parking spaces	To be printed	✔
Waste & Resource Recovery 2.1	Location of food and garden waste facilities	To be printed	✔
Urban Ecology 2.1	Location and size of vegetated areas	To be printed Refer to Landscape Drawings.	✔

Supporting Documentation

Credit	Requirement	Response	Status
Management 2.2	Preliminary NatHERS assessments		-
Integrated Water Management 2.1	STORM report or MUSIC model		-
Operational Energy 3.5	Average lighting power density and lighting type(s) to be used		-
Operational Energy 4.5	Specifications of the solar photovoltaic system(s)		-

Credit summary

Management Overall contribution 4.5%

	100%	
1.1 Pre-Application Meeting	100%	
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100%	
4.1 Building Users Guide	100%	

IWM Overall contribution 22.5%

	100%	✔ Pass
1.1 Potable Water Use	56%	✔ Achieved
2.1 Stormwater Treatment	100%	✔ Achieved
3.1 Water Efficient Landscaping	100%	

Operational Energy Overall contribution 27.5%

Minimum required 50%	84%	✔ Pass
1.2 Thermal Performance Rating - Residential	40%	✔ Achieved
2.1 Greenhouse Gas Emissions	100%	
2.6 Electrification	100%	
2.7 Energy consumption	100%	
3.3 External Lighting	100%	
3.4 Clothes Drying	100%	
3.5 Internal Lighting - Houses and Townhouses	100%	
4.4 Renewable Energy Systems - Other	0%	
4.5 Solar PV - Houses and Townhouses	100%	

IEQ Overall contribution 16.5%

Minimum required 50%	80%	✔ Pass
2.2 Cross Flow Ventilation	0%	
3.1 Thermal comfort - Double Glazing	100%	
3.2 Thermal Comfort - External Shading	100%	
3.3 Thermal Comfort - Orientation	100%	

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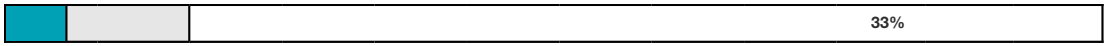
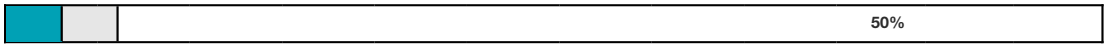
Transport Overall contribution 9.0%



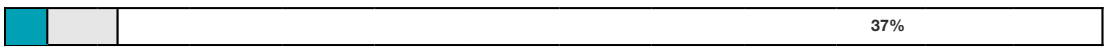
1.1 Bicycle Parking - Residential	100%
1.2 Bicycle Parking - Residential Visitor	0%
2.1 Electric Vehicle Infrastructure	0%

Waste & Resource Recovery Overall contribution 5.5%



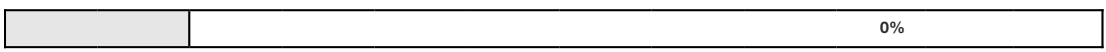
1.1 Construction Waste - Building Re-Use	0%
2.1 Operational Waste - Food & Garden Waste	100%

Urban Ecology Overall contribution 5.5%



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

Innovation Overall contribution 9.0%



1.1 Innovation	0%

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Credit breakdown

Management Overall contribution 4.5%

100%

1.1 Pre-Application Meeting		100%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?	
Question	Criteria Achieved ?	
Project	Yes	
2.2 Thermal Performance Modelling - Multi-Dwelling Residential		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?	
Question	Criteria Achieved ?	
Townhouse	Yes	
4.1 Building Users Guide		100%
Score Contribution	This credit contributes 16.7% towards the category score.	
Criteria	Will a building users guide be produced and issued to occupants?	
Question	Criteria Achieved ?	
Project	Yes	

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IWM Overall contribution 22.5%

85% ✔ Pass

Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No
Stormwater profile	
Which stormwater modelling software are you using?:	Blue Factor
Blue Factor score achieved?:	100
Flow:	-
Total Suspended Solids:	-
Total Phosphorus:	-
Total Nitrogen:	-
Rainwater tank profile	
What is the total roof area connected to the rainwater tank?:	
Rainwater Tank 1	410 m²
	-
Tank Size:	
Rainwater Tank 1	10,000 Litres
	-
Irrigation area connected to tank:	
Rainwater Tank 1	130 m²
	-
Is connected irrigation area a water efficient garden?:	
Rainwater Tank 1	Yes
	-
Other external water demand connected to tank?:	
Rainwater Tank 1	0.0 Litres/Day
	-
Fixtures, fittings & connections profile	
Showerhead: All	3 Star WELS (>= 7.5 but <= 9.0) (minimum requirement)
Bath: All	Scope out
Kitchen Taps: All	>= 5 Star WELS rating
Bathroom Taps: All	>= 5 Star WELS rating
Dishwashers: All	>= 5 Star WELS rating
WC: All	>= 5 Star WELS rating
Urinals: All	Scope out
Washing Machine Water Efficiency: All	>= 5 Star WELS rating
Which non-potable water source is the dwelling/space connected to?: All	Rainwater Tank 1
Non-potable water source connected to Toilets: All	Yes
Non-potable water source connected to Laundry (washing machine): All	No

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Non-potable water source connected to Hot Water System:	All No

1.1 Potable Water Use		56%	✔ Achieved
Score Contribution	This credit contributes 33.3% 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	963 kL		
Output	Proposed (excluding rainwater and recycled water use)		
Project	738 kL		
Output	Proposed (including rainwater and recycled water use)		
Project	606 kL		
Output	% Reduction in Potable Water Consumption		
Project	37 %		
Output	% of connected demand met by rainwater		
Project	96 %		
Output	How often does the tank overflow?		
Project	Often		
Output	Opportunity for additional rainwater connection		
Project	251 kL		

2.1 Stormwater Treatment		100%	✔ Achieved
Score Contribution	This credit contributes 60% towards the category score.		
Criteria	Has best practice stormwater management been demonstrated?		
Output	Min Blue Factor Score		
Project	100		
Output	Blue Factor Score		
Project	100		

3.1 Water Efficient Landscaping		100%
Score Contribution	This credit contributes 6.7% towards the category score.	
Criteria	Will water efficient landscaping be installed?	
Question	Criteria Achieved ?	
Project	Yes	

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Operational Energy Overall contribution 27.5%

	Minimum required 50%	84%	✔ Pass

Are you installing any renewable energy system(s) (other than solar photovoltaic)?:	Yes
Energy Supply:	All-electric
Solar Photovoltaic system profile	
System Size (lesser of inverter and panel capacity): Combined PV Array	19.3 kW peak
Orientation (which way is the system facing)?: Combined PV Array	North
Inclination (angle from horizontal): Combined PV Array	10.0 Angle (degrees)
Dwellings profile	
Below the floor is: All	Ground or Carpark
Above the ceiling is: All	Outside
Exposed sides:	
Type 4BR Type 3BR	3
Type 2BR	2
NatHERS Annual Energy Loads - Heat:	
Type 4BR	70.0 MJ/sqm
Type 2BR	66.0 MJ/sqm
Type 3BR	77.0 MJ/sqm
NatHERS Annual Energy Loads - Cool:	
Type 4BR	20.0 MJ/sqm
Type 2BR	12.0 MJ/sqm
Type 3BR	22.0 MJ/sqm
NatHERS star rating:	
Type 4BR	7.3
Type 2BR	7.7
Type 3BR	7.0
Type of Heating System: All	Reverse cycle space
Heating System Efficiency: All	Current Default / MEPS
Type of Cooling System: All	Refrigerative space
Cooling System Efficiency: All	Current Default / MEPS
Type of Hot Water System: All	Electric Heat Pump Band 1
% Contribution from solar hot water system: All	0 %
Clothes Line: All	Private outdoor clothesline protected from rain
Clothes Dryer: All	Clothes dryer 6 stars

1.2 Thermal Performance Rating - Residential		40%	✔ Achieved

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Score Contribution	This credit contributes 16.7% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Townhouse	7.4 Stars

2.1 Greenhouse Gas Emissions 100%

Score Contribution	This credit contributes 16.7% towards the category score.
Criteria	What is the % reduction in annual greenhouse gas emissions against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Townhouse	14,218 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Townhouse	10,509 kg CO2
Output	% Reduction in GHG Emissions
Townhouse	26 %

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2.6 Electrification 100%

Score Contribution	This credit contributes 16.7% towards the category score.
Criteria	Is the development all-electric?
Question	Criteria Achieved?
Project	Yes

2.7 Energy consumption 100%

Score Contribution	This credit contributes 22.2% towards the category score.
Criteria	What is the % reduction in annual energy consumption against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Townhouse	126,281 MJ
Output	Proposed Building with Proposed Services (Actual Building)
Townhouse	48,504 MJ
Output	% Reduction in total energy
Townhouse	61 %

3.3 External Lighting 100%

Score Contribution	This credit contributes 2.8% towards the category score.
Criteria	Is the external lighting controlled by a motion detector?
Question	Criteria Achieved ?
Townhouse	Yes

3.4 Clothes Drying 100%

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Score Contribution	This credit contributes 5.6% towards the category score.
Criteria	What is the % reduction in annual energy consumption (gas and electricity) from a combination of clothes lines and efficient driers against the benchmark?
Output	Reference
Townhouse	2,934 kWh
Output	Proposed
Townhouse	153 kWh
Output	Improvement
Townhouse	94 %

3.5 Internal Lighting - Houses and Townhouses 100%

Score Contribution	This credit contributes 2.8% towards the category score.
Criteria	Does the development achieve a maximum illumination power density of 4W/sqm or less?
Question	Criteria Achieved?
Townhouse	Yes

4.4 Renewable Energy Systems - Other 0%

Score Contribution	This credit contributes 5.6% towards the category score.
Criteria	Does another form of renewable energy (not solar) provide 5% of the estimated energy consumption of the building class it supplies?
Question	Other Renewable Energy - Energy Generation per year
Townhouse	-

4.5 Solar PV - Houses and Townhouses 100%

Score Contribution	This credit contributes 11.1% towards the category score.
Criteria	What % of the estimated energy consumption of the building class it supplies does the solar power system provide?
Output	Solar Power - Energy Generation per year
Townhouse	23,388 kWh
Output	% of Building's Energy
Townhouse	173 %

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IEQ Overall contribution 16.5%

	Minimum required 50%	80%	✔ Pass

2.2 Cross Flow Ventilation	0%
Score Contribution	This credit contributes 20% towards the category score.
Criteria	Are all habitable rooms designed to achieve natural cross flow ventilation?
Question	Criteria Achieved ?
Townhouse	No
3.1 Thermal comfort - Double Glazing	100%
Score Contribution	This credit contributes 40% towards the category score.
Criteria	Is double glazing (or better) used to all habitable areas?
Question	Criteria Achieved ?
Townhouse	Yes
3.2 Thermal Comfort - External Shading	100%
Score Contribution	This credit contributes 20% towards the category score.
Criteria	Is appropriate external shading provided to east, west and north facing glazing?
Question	Criteria Achieved ?
Townhouse	Yes
3.3 Thermal Comfort - Orientation	100%
Score Contribution	This credit contributes 20% towards the category score.
Criteria	Are at least 50% of main living areas orientated to the north?
Question	Criteria Achieved ?
Townhouse	Yes

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Transport Overall contribution 9.0%

33%

1.1 Bicycle Parking - Residential		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	How many secure and undercover bicycle spaces are there for residents?	
Question	Bicycle Spaces Provided ?	
Townhouse	6	
Output	Min Bicycle Spaces Required	
Townhouse	6	

1.2 Bicycle Parking - Residential Visitor		0%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	How many secure bicycle spaces are there for visitors?	
Question	Visitor Bicycle Spaces Provided ?	
Townhouse	0	

2.1 Electric Vehicle Infrastructure		0%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Are facilities provided for the charging of electric vehicles?	
Question	Criteria Achieved ?	
Project	No	

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Waste & Resource Recovery Overall contribution 5.5%

50%

1.1 Construction Waste - Building Re-Use		0%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?	
Question	Criteria Achieved ?	
Project	No	

2.1 Operational Waste - Food & Garden Waste		100%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Are facilities provided for on-site management of food and garden waste?	
Question	Criteria Achieved ?	
Project	Yes	

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Urban Ecology Overall contribution 5.5%

37%

2.1 Vegetation		75%
Score Contribution	This credit contributes 50% 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	20 %	
2.2 Green Roofs		0%
Score Contribution	This credit contributes 12.5% 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 12.5% towards the category score.	
Criteria	Does the development incorporate a green wall or green façade?	
Question	Criteria Achieved ?	
Project	No	
2.4 Balconies, Courtyards & Roof terraces		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Is there a tap and floor waste on every balcony and courtyard (including any roof terraces)?	
Question	Criteria Achieved ?	
Townhouse	No	
3.1 Food Production - Residential		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	What area of space per resident is dedicated to food production?	
Question	Food Production Area	
Townhouse	0.0 m²	
Output	Min Food Production Area	
Townhouse	4 m²	

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Innovation Overall contribution 9.0%

0%

1.1 Innovation		0%
Score Contribution	This credit contributes 100% towards the category score.	
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?	

Disclaimer

The Built Environment Sustainability Scorecard (BESS) has been provided for the purpose of information and communication. While we make every effort to ensure that material is accurate and up to date (except where denoted as 'archival'), this material does in no way constitute the provision of professional or specific advice. You should seek appropriate, independent, professional advice before acting on any of the areas covered by BESS.

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Residential energy rating report - Non-accredited No.

Class 1 summary

Generated on 31 Jul 2026 using Hero 4.1

This report was created using NatHERS accredited software but the non-accredited assessor (rater) is not accredited under NatHERS and this report is not accredited as being compliant with NatHERS.
Reliance on this report is accordingly at your own risk.

Property

Address 1 Sargood Street, Altona , VIC, 3018

Lot/DP

NatHERS climate zone 60 - Tullamarine

Rater*

Name Qutaibah Al-Atafi

Business name Breathe Architecture

Email qutaibah@breathe.com.au

Phone +61 457298808

Verification

DRAFT PREVIEW ISSUE - NOT TO BE USED FOR CERTIFICATION

Thermal performance Star rating

7.0

Minimum star rating

The rating above is the minimum of all dwellings in this summary

Whole of Home performance rating

23 out of 100

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

National Construction Code (NCC) requirements

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

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

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

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

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Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m².yr)	Cooling load (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
	2BR	66.1 (92)	12.1 (36)	78.2	7.7	23
	3BR	76.7 (92)	22.3 (36)	99.0	7.0	23
	4BR	69.7 (92)	19.5 (36)	89.3	7.3	24
Maximum Loads and Minimum Ratings		76.7	22.3	99.0	7.0	23

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Explanatory notes

About the ratings

The thermal performance star rating in this Report is the lowest rating of all NCC Class 1 dwellings in a development. The Whole of Home performance rating in this Report is the lowest rating for the apartment block. Individual unit ratings are listed in the *'Summary of all dwellings'* section of this Report.
NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes societal cost.
For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Rater

Non-accredited assessors (Raters) are not required to have any formal qualifications, insurance, ongoing professional development or quality assurance checks on their ratings. This is distinct from NatHERS accredited assessors who are required to have qualifications, ongoing professional development and have quality assurance checks on their ratings.

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

Any questions or concerns about this report should be directed to the rater in the first instance. If the rater is unable to address these questions or concerns, the state or territory building code authority should be contacted.

Disclaimer

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

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

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

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

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Residential energy rating report Non-accredited No.

Generated on 31 Jul 2026 using Hero 4.1

This report was created using NatHERS accredited software but the non-accredited assessor (rater) is not accredited under NatHERS and this report is not accredited as being compliant with NatHERS.
Reliance on this report is accordingly at your own risk.

Property

Address	2BR, 1 Sargood Street, Altona , VIC, 3018
Lot/DP	
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

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Plans

Main Plan	2524
Prepared by	Breathe

Thermal performance star rating

7.7

star rating

78.2 MJ/m2

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

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	74.8	Suburban
Unconditioned*	2.2	**NatHERS climate zone**
Total	77.0	60 - Tullamarine
Garage	0.0	

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	66.1	12.1
Load limits	92	36

Features determining load limits

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

Rater**

Name	Qutaibah Al-Atafi
Business name	Breathe Architecture
Email	qutaibah@breathe.com.au
Phone	+61 457298808
Declaration of interest	Conflict of Interest (Managed)

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NCC Requirements

BCA provisions	Volume 2
State/Territory variation	No

National Construction Code (NCC) requirements

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

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

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

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

Whole of Home performance rating

23 out of 100

Verification

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* Refer to glossary.

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About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **23 out of 100**

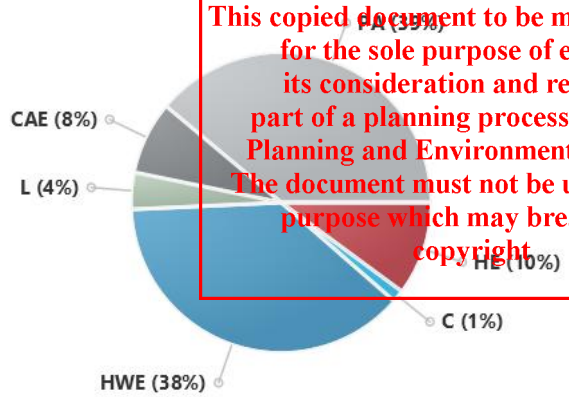
This home's annual greenhouse emissions:
6350 kg CO2e (with solar)
6350 kg CO2e (without solar)

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

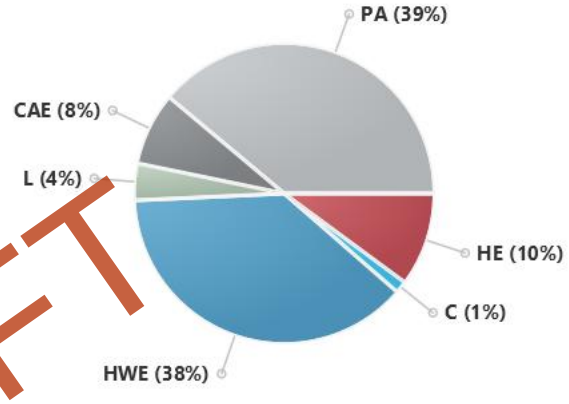
Predicted Whole of Home annual impact by appliance

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

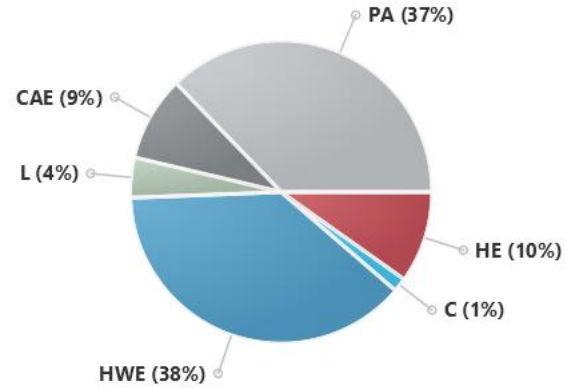
Energy use:



Greenhouse gas emissions:



Cost:



Graph Key:

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

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Certificate check

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

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

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

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* Refer to glossary.

Certificate check

Continued

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

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

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* Refer to glossary.

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Room *schedule*

Room	Zone Type	Area (m²)
KITCHEN/LIVING/DINING	Kitchen/Living	26.87
LAUNDRY	Day Time	2.57
STAIRS	Day Time	2.53
PWDR	Unconditioned	2.19
ENTRY	Day Time	4.94
BEDROOM	Bedroom	13.30
STAIRS	Day Time	5.33
BEDROOM	Bedroom	13.17
BATH	Day Time	4.90
HALLWAY	Day Time	4.43

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Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ATB-004-01 B	Al Thermally Broken B DG Air Fill Clear-Clear	3.6	0.54	0.51	0.57

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BEDROOM	ATB-004-01 B	W101	2000	1100	Double Hung	45	N	None
BEDROOM	ATB-004-01 B	W108	2000	1100	Double Hung	45	S	None
ENTRY	ATB-004-01 B	W07	1600	1000	Double Hung	45	S	None

* Refer to glossary.

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Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
KITCHEN/LIVING/DINING	ATB-004-01 B	W02 DOUBLE HUNG	2400	800	Double Hung	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W02 SLIDING	2400	2200	Sliding Door	45	N	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

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Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
ENTRY	2400	920	90	S

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* Refer to glossary.

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External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
FC-NONREFL-CAV	Fibre-Cement Clad Battened (Non-Refl Cavity) Stud Wall	0.30	Light	4.00	No

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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature*
BEDROOM	FC-NONREFL-CAV	2700	4202	N	1019	Yes
BEDROOM	FC-NONREFL-CAV	2700	3069	S		No
ENTRY	FC-NONREFL-CAV	2700	1506	E	1421	Yes
ENTRY	FC-NONREFL-CAV	2700	2663	S		Yes
KITCHEN/LIVING /DINING	FC-NONREFL-CAV	2700	4209	N	1002	Yes
PWDR	FC-NONREFL-CAV	2400	1515	S	1565	Yes
STAIRS	FC-NONREFL-CAV	2700	1010	S		No

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	55.1	0.00
Parti Wall1	Parti Wall	101.8	5.00

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Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	TIMB-002: Suspended Timber Floor - Lined Below	4.9	N/A	2.50	Tile (8mm)
BEDROOM	TIMB-002: Suspended Timber Floor - Lined Below	26.4	N/A	2.50	Carpet
ENTRY	TIMB-001: Suspended Timber Floor	4.9	Enclosed (Disc.)	2.50	Cork
HALLWAY	TIMB-002: Suspended Timber Floor - Lined Below	4.4	N/A	2.50	Carpet
KITCHEN/LIVING/DINING	TIMB-001: Suspended Timber Floor	26.9	Enclosed (Disc.)	2.50	Cork
LAUNDRY	TIMB-001: Suspended Timber Floor	2.6	Enclosed (Disc.)	2.50	Cork
PWDR	TIMB-001: Suspended Timber Floor	2.2	Enclosed (Disc.)	2.50	Tile (8mm)

* Refer to glossary.

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Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
STAIRS	TIMB-001: Suspended Timber Floor	2.5	Enclosed (Disc.)	2.50	Carpet
STAIRS	TIMB-002: Suspended Timber Floor - Lined Below	5.3	N/A	2.50	Carpet

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Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
BEDROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
HALLWAY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
STAIRS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	2	Downlight	100	Sealed
BATH	1	Exhaust Fan	250	Sealed
BEDROOM	8	Downlight	100	Sealed
ENTRY	1	Downlight	100	Sealed
KITCHEN/LIVING/DINING	1	Exhaust Fan	250	Sealed
LAUNDRY	1	Downlight	100	Sealed
LAUNDRY	1	Exhaust Fan	250	Sealed
PWDR	1	Downlight	100	Sealed
PWDR	1	Exhaust Fan	250	Sealed

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Ceiling *fans*

Location	Quantity	Diameter (mm)
BEDROOM	2	1200
KITCHEN/LIVING/DINING	1	1200

* Refer to glossary.

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Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
None				

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Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	KITCHEN/LIVING/DINING / LAUNDRY / STAIRS / ENTRY / BEDROOM / STAIRS / BEDROOM / BATH / HALLWAY	Electricity	2.0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	KITCHEN/LIVING/DINING / LAUNDRY / STAIRS / ENTRY / BEDROOM / STAIRS / BEDROOM / BATH / HALLWAY	Electricity	1.0 stars	n/a

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Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Electric Storage (Peak)	Electricity	4	n/a	84

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
None		

* Refer to glossary.

Battery *schedule*

Type	Storage Capacity [kWh]
None	

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Explanatory Notes

About this report

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

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

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

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

Accredited assessors

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

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

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

Disclaimer

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

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

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

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

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Glossary

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

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* Refer to glossary.

Residential energy rating report Non-accredited No.

Generated on 31 Jul 2026 using Hero 4.1

This report was created using NatHERS accredited software but the non-accredited assessor (rater) is not accredited under NatHERS and this report is not accredited as being compliant with NatHERS.
Reliance on this report is accordingly at your own risk.

Property

Address	3BR, 1 Sargood Street, Altona , VIC, 3018
Lot/DP	
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

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Plans

Main Plan	2524
Prepared by	Breathe

Thermal performance star rating

7.0

star rating

99.0 MJ/m2

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

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	101.8	Suburban
Unconditioned*	4.1	**NatHERS climate zone**
Total	105.9	60 - Tullamarine
Garage	0.0	

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	76.7	22.3
Load limits	92	36

Features determining load limits

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

Rater**

Name	Qutaibah Al-Atafi
Business name	Breathe Architecture
Email	qutaibah@breathe.com.au
Phone	+61 457298808
Declaration of interest	Conflict of Interest (Managed)

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NCC Requirements

BCA provisions	Volume 2
State/Territory variation	No

National Construction Code (NCC) requirements

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

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

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

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

Whole of Home performance rating

23 out of 100

Verification

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* Refer to glossary.

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About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **23 out of 100**

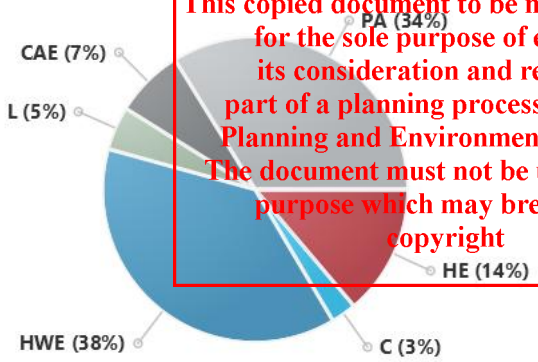
This home's annual greenhouse emissions:
7505 kg CO2e (with solar)
7505 kg CO2e (without solar)

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

Predicted Whole of Home annual impact by appliance

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

Energy use:



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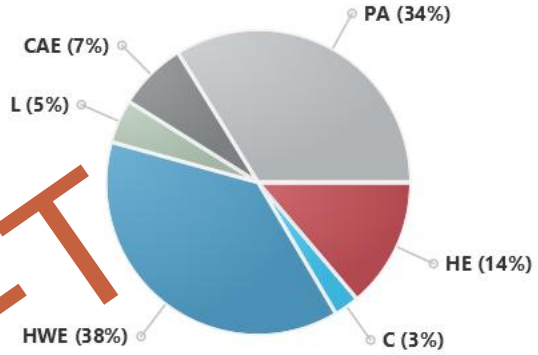
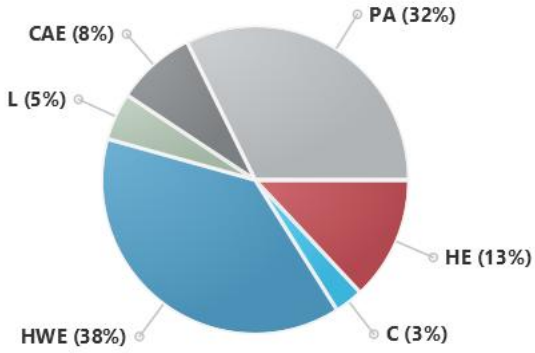
Greenhouse gas emissions:



Cost:



Graph Key:

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

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* Refer to glossary.

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Certificate check

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

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

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

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* Refer to glossary.

Certificate check

Continued

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

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

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* Refer to glossary.

ADVERTISED PLAN

Room *schedule*

Room	Zone Type	Area (m²)
STAIRS	Day Time	3.56
PWDR	Day Time	2.79
LAUNDRY	Unconditioned	4.13
ENTRY	Day Time	5.11
KITCHEN/LIVING/DINING	Kitchen/Living	36.45
BEDROOM	Bedroom	11.01
BEDROOM	Bedroom	8.83
BATH	Day Time	5.24
BEDROOM	Bedroom	11.26
STAIRS	Day Time	3.98
LIVING	Living	14.58

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Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ATB-004-01 B	Al Thermally Broken B DG Air Fill Clear-Clear	3.6	0.54	0.51	0.57

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BEDROOM	ATB-004-01 B	W102	2000	1100	Double Hung	45	N	None
BEDROOM	ATB-004-01 B	W103	2400	1510	Sliding Door	45	E	None

* Refer to glossary.

ADVERTISED PLAN

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BEDROOM	ATB-004-01 B	W101	2000	1100	Double Hung	45	N	None
BEDROOM	ATB-004-01 B	W104	1600	1500	Double Hung	45	E	None
BEDROOM	ATB-004-01 B	W105	2000	1100	Double Hung	45	S	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W03 DOUBLE HUNG	2400	800	Double Hung	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W03 SLIDING	2400	2600	Sliding Door	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W03 DOUBLE HUNG-a	2400	800	Double Hung	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W04	1600	1550	Fixed	0	E	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W05	1600	1550	Fixed	0	E	None
LAUNDRY	ATB-004-01 B	W06	1600	1150	Double Hung	45	S	None
LIVING	ATB-004-01 B	W106	2000	1100	Double Hung	45	S	None

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Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

DRAFT

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

* Refer to glossary.

ADVERTISED PLAN

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
ENTRY	2400	920	90	S

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External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
FC-NONREFL-CAV	Fibre-Cement Clad Battened (Non-Refl Cavity) Stud Wall	0.30	Light	4.00	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	FC-NONREFL-CAV	2400	2740	E		Yes
BEDROOM	FC-NONREFL-CAV	2700	3063	N		Yes
BEDROOM	FC-NONREFL-CAV	2700	3595	E	624	Yes
BEDROOM	FC-NONREFL-CAV	2700	2453	N	1006	Yes
BEDROOM	FC-NONREFL-CAV	2700	3645	E	594	Yes
BEDROOM	FC-NONREFL-CAV	2700	3088	S		No
ENTRY	FC-NONREFL-CAV	2700	1504	S		Yes
ENTRY	FC-NONREFL-CAV	2700	1631	W	1341	Yes
ENTRY	FC-NONREFL-CAV	2700	519	S	1610	Yes
KITCHEN/LIVING /DINING	FC-NONREFL-CAV	2700	5628	N	1023	Yes
KITCHEN/LIVING /DINING	FC-NONREFL-CAV	2700	7142	E	1557	Yes
LAUNDRY	FC-NONREFL-CAV	2400	1703	E	1552	Yes
LAUNDRY	FC-NONREFL-CAV	2400	2423	S		Yes
LIVING	FC-NONREFL-CAV	2700	2458	S		No
PWDR	FC-NONREFL-CAV	2400	1148	E	1564	Yes

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* Refer to glossary.

ADVERTISED PLAN

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
STAIRS	FC-NONREFL-CAV	2700	956	S	1601	Yes

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Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	76.6	0.00
Parti Wall1	Parti Wall	49.9	5.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	TIMB-002: Suspended Timber Floor - Lined Below	5.2	N/A	2.50	Tile (8mm)
BEDROOM	TIMB-002: Suspended Timber Floor - Lined Below	31.1	N/A	2.50	Carpet
ENTRY	TIMB-001: Suspended Timber Floor	5.1	Enclosed (Disc.)	5.00	Cork
KITCHEN/LIVING/DINING	TIMB-001: Suspended Timber Floor	36.5	Enclosed (Disc.)	5.00	Cork
LAUNDRY	TIMB-001: Suspended Timber Floor	4.1	Enclosed (Disc.)	5.00	Tile (8mm)
LIVING	TIMB-002: Suspended Timber Floor - Lined Below	14.5	N/A	2.50	Carpet
PWDR	TIMB-001: Suspended Timber Floor	2.8	Enclosed (Disc.)	5.00	Tile (8mm)
STAIRS	TIMB-001: Suspended Timber Floor	4.6	Enclosed (Disc.)	5.00	Carpet
STAIRS	TIMB-002: Suspended Timber Floor - Lined Below	4.0	N/A	2.50	Carpet

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Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
BEDROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
LIVING	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
STAIRS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

* Refer to glossary.

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Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	2	Downlight	100	Sealed
BATH	1	Exhaust Fan	250	Sealed
BEDROOM	12	Downlight	100	Sealed
ENTRY	1	Downlight	100	Sealed
KITCHEN/LIVING/DINING	1	Exhaust Fan	250	Sealed
LAUNDRY	2	Downlight	100	Sealed
LAUNDRY	1	Exhaust Fan	250	Sealed
PWDR	1	Downlight	100	Sealed
PWDR	1	Exhaust Fan	250	Sealed
STAIRS	1	Downlight	100	Sealed

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Ceiling *fans*

Location	Quantity	Diameter (mm)
BEDROOM	3	1200
KITCHEN/LIVING/DINING	1	1200

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Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	STAIRS / PWDR / ENTRY / KITCHEN/LIVING /DINING / BEDROOM / BEDROOM / BATH / BEDROOM / STAIRS / LIVING	Electricity	2.0 stars	n/a

* Refer to glossary.

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Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	STAIRS / PWDR / ENTRY / KITCHEN/LIVING /DINING / BEDROOM / BEDROOM / BATH / BEDROOM / STAIRS / LIVING	Electricity	1.0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Electric Storage (Peak)	Electricity	4	n/a	103

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
None		

Battery *schedule*

Type	Storage Capacity [kWh]
None	

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Explanatory Notes

About this report

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

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

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

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

Accredited assessors

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

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

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

Disclaimer

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

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

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

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

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Glossary

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

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* Refer to glossary.

Residential energy rating report Non-accredited No.

Generated on 31 Jul 2026 using Hero 4.1

This report was created using NatHERS accredited software but the non-accredited assessor (rater) is not accredited under NatHERS and this report is not accredited as being compliant with NatHERS.
Reliance on this report is accordingly at your own risk.

Property

Address	4BR, 1 Sargood Street, Altona , VIC, 3018
Lot/DP	
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

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Plans

Main Plan	2524
Prepared by	Breathe

Thermal performance star rating

7.3

star rating

89.3 MJ/m2

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

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	109.0	Suburban
Unconditioned*	14.3	**NatHERS climate zone**
Total	123.3	60 - Tullamarine
Garage	0.0	

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	69.7	19.5
Load limits	92	36

Features determining load limits

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

Rater**

Name	Qutaibah Al-Atafi
Business name	Breathe Architecture
Email	qutaibah@breathe.com.au
Phone	+61 457298808
Declaration of interest	Conflict of Interest (Managed)

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NCC Requirements

BCA provisions	Volume 2
State/Territory variation	No

National Construction Code (NCC) requirements

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

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

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

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

Whole of Home performance rating

24 out of 100

Verification

ADVERTISED PLAN

* Refer to glossary.

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About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

Your Whole of Home performance rating without onsite renewable energy generation is **24 out of 100**

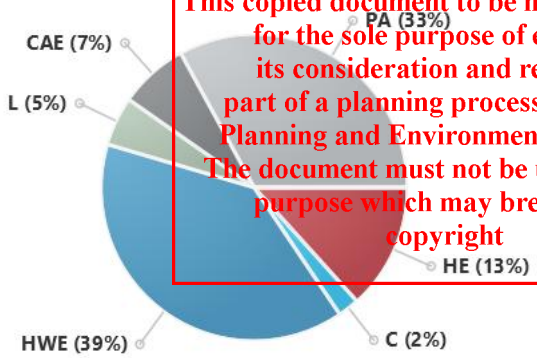
This home's annual greenhouse emissions:
7794 kg CO2e (with solar)
7794 kg CO2e (without solar)

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

Predicted Whole of Home annual impact by appliance

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

Energy use:



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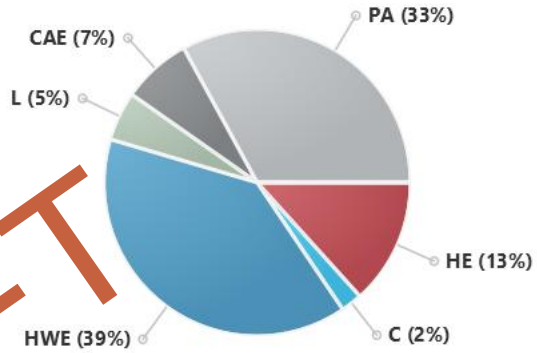
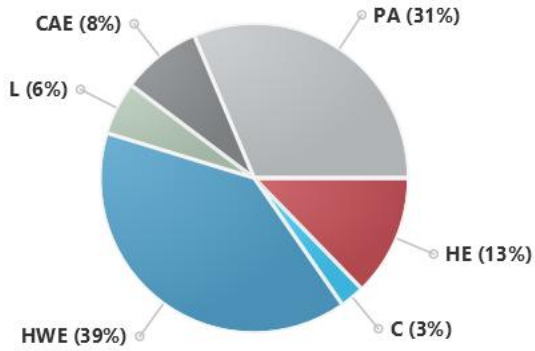
Greenhouse gas emissions:



Cost:



Graph Key:

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

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* Refer to glossary.

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Certificate check

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

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

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

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* Refer to glossary.

Certificate check

Continued

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

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

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* Refer to glossary.

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Room *schedule*

Room	Zone Type	Area (m²)
LAUNDRY	Unconditioned	3.05
BEDROOM	Bedroom	10.85
STAIRS	Day Time	3.67
ENTRY	Day Time	6.33
CORRIDOR	Day Time	2.48
KITCHEN/LIVING/DINING	Kitchen/Living	31.76
BEDROOM	Bedroom	10.32
BEDROOM	Bedroom	10.01
BATH	Unconditioned	6.27
BEDROOM	Bedroom	10.53
STAIRS	Day Time	3.58
LIVING	Living	21.37

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Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ATB-004-01 B	Al Thermally Broken B DG Air Fill Clear-Clear	3.6	0.54	0.51	0.57

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BATH	ATB-004-01 B	W112	1600	800	Double Hung	45	W	None

* Refer to glossary.

ADVERTISED PLAN

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BEDROOM	ATB-004-01 B	W08	2000	1100	Double Hung	45	S	None
BEDROOM	ATB-004-01 B	W101	2000	1100	Double Hung	45	N	None
BEDROOM	ATB-004-01 B	W113	1600	800	Double Hung	45	W	None
BEDROOM	ATB-004-01 B	W101	2000	1100	Double Hung	45	N	None
BEDROOM	ATB-004-01 B	W110	2000	1100	Double Hung	45	S	None
BEDROOM	ATB-004-01 B	W111	1600	800	Double Hung	45	W	None
ENTRY	ATB-004-01 B	W07	1600	1000	Double Hung	45	S	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W01 DOUBLE HUNG	2400	800	Double Hung	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W01 SLIDING	2400	2600	Sliding Door	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W01 DOUBLE HUNG-a	2400	800	Double Hung	45	N	None
KITCHEN/LIVING/DINING	ATB-004-01 B	W10	1600	800	Double Hung	45	W	None
LAUNDRY	ATB-004-01 B	W09	1600	800	Double Hung	45	W	None
LIVING	ATB-004-01 B	W109	2000	1100	Double Hung	45	S	None

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Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

* Refer to glossary.

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Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

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External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
ENTRY	2400	920	90	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
FC-NONREFL-CAV	Fibre-Cement Clad Battened (Non-Refl Cavity) Stud Wall	0.30	Light	4.00	No

External wall *schedule*

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Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	FC-NONREFL-CAV	2400	2524	W		Yes
BEDROOM	FC-NONREFL-CAV	2700	3617	S		Yes
BEDROOM	FC-NONREFL-CAV	2700	2900	W		Yes
BEDROOM	FC-NONREFL-CAV	2700	2980	N	1024	Yes
BEDROOM	FC-NONREFL-CAV	2700	3837	W		Yes
BEDROOM	FC-NONREFL-CAV	2700	3306	N	1015	Yes
BEDROOM	FC-NONREFL-CAV	2700	2974	S		No
BEDROOM	FC-NONREFL-CAV	2700	3528	W		Yes
ENTRY	FC-NONREFL-CAV	2700	2695	S		Yes
KITCHEN/LIVING /DINING	FC-NONREFL-CAV	2700	6401	N	1004	Yes
KITCHEN/LIVING /DINING	FC-NONREFL-CAV	2700	5096	W		Yes
LAUNDRY	FC-NONREFL-CAV	2400	2025	W		Yes
LIVING	FC-NONREFL-CAV	2700	3307	S		No

* Refer to glossary.

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Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	102.9	0.00
Parti Wall1	Parti Wall	52.7	5.00

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Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	TIMB-002: Suspended Timber Floor - Lined Below	6.3	N/A	2.50	Tile (8mm)
BEDROOM	TIMB-001: Suspended Timber Floor	10.9	Enclosed (Disc.)	2.50	Cork
BEDROOM	TIMB-002: Suspended Timber Floor - Lined Below	30.9	N/A	2.50	Carpet
CORRIDOR	TIMB-001: Suspended Timber Floor	2.5	Enclosed (Disc.)	2.50	Cork
ENTRY	TIMB-001: Suspended Timber Floor	6.3	Enclosed (Disc.)	2.50	Cork
KITCHEN/LIVING/DINING	TIMB-001: Suspended Timber Floor	31.8	Enclosed (Disc.)	2.50	Cork
LAUNDRY	TIMB-001: Suspended Timber Floor	8.1	Enclosed (Disc.)	2.50	Tile (8mm)
LIVING	TIMB-002: Suspended Timber Floor - Lined Below	21.4	N/A	2.50	Carpet
STAIRS	TIMB-001: Suspended Timber Floor	3.7	Enclosed (Disc.)	2.50	Carpet
STAIRS	TIMB-002: Suspended Timber Floor - Lined Below	3.6	N/A	2.50	Carpet

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Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
BEDROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
LIVING	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
STAIRS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	2	Downlight	100	Sealed

* Refer to glossary.

ADVERTISED PLAN

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	1	Exhaust Fan	250	Sealed
BEDROOM	16	Downlight	100	Sealed
ENTRY	1	Downlight	100	Sealed
KITCHEN/LIVING/DINING	1	Exhaust Fan	250	Sealed
LAUNDRY	3	Downlight	100	Sealed
LAUNDRY	2	Exhaust Fan	250	Sealed
STAIRS	1	Downlight	100	Sealed

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Ceiling *fans*

Location	Quantity	Diameter (mm)
BEDROOM	4	1200
KITCHEN/LIVING/DINING	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light

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Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	BEDROOM / STAIRS / ENTRY / CORRIDOR / KITCHEN/LIVING/DINING / BEDROOM / BEDROOM / BEDROOM / STAIRS / LIVING	Electricity	2.0 stars	n/a

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

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Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
Unknown or None (Default AC)	BEDROOM / STAIRS / ENTRY / CORRIDOR / KITCHEN/LIVING/DINING / BEDROOM / BEDROOM / BEDROOM / STAIRS / LIVING	Electricity	1.0 stars	n/a

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
Electric Storage (Peak)	Electricity	4	n/a	112

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
None			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
None		

Battery *schedule*

Type	Storage Capacity [kWh]
None	

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* Refer to glossary.

ADVERTISED PLAN

Explanatory Notes

About this report

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

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

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

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

Accredited assessors

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

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

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

Disclaimer

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

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

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

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

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Glossary

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

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* Refer to glossary.