SUSTAINABLE MANAGEMENT PLAN

PROPOSED MIXED-USE DEVELOPMENT

146-150 Bridport Street,
Albert Park

GIW22066
Revision H

Prepared for:
Jacmax Boxhall Pty Ltd

28 November 2024

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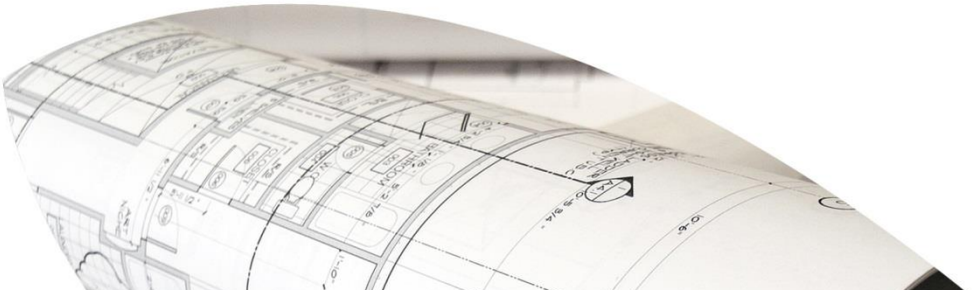

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Revision History

Revision Number	Date Issued	Author	Approved	Comments
A	25/10/2022	MS	IB	Draft
B	08/11/2022	MS	IB	Final
C	08/09/2023	MS	IB	For Endorsement
D	14/09/2023	MS	IB	For Endorsement
E	24/07/2024	MS	IB	For Endorsement
F	04/09/2024	MS	IB	For Endorsement
G	27/11/2024	MS	IB	For Endorsement
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Contents

1. Introduction

Project Information

GIW Environmental Solutions Pty Ltd ("GIW") has been engaged by Jacmax Boxhall Pty Ltd to provide Environmentally Sustainable Design (ESD) consulting services for the proposed mixed-use development at 146-150 Bridport Street, Albert Park.

The proposed development will include 8 apartments and 1 F&B tenancy constructed over 4 levels plus basement carpark and will consist of the following:

- 3 x 2 bedroom apartments
- 2 x 3 bedroom apartments
- 3 x 4 bedroom apartments
- 455m^2 F&B

The site located at 146-150 Bridport Street, Albert Park has an approximate surface area of 972m^2 and is currently the location of a commercial development. Distance from the site to Melbourne CBD is approximately 4km.

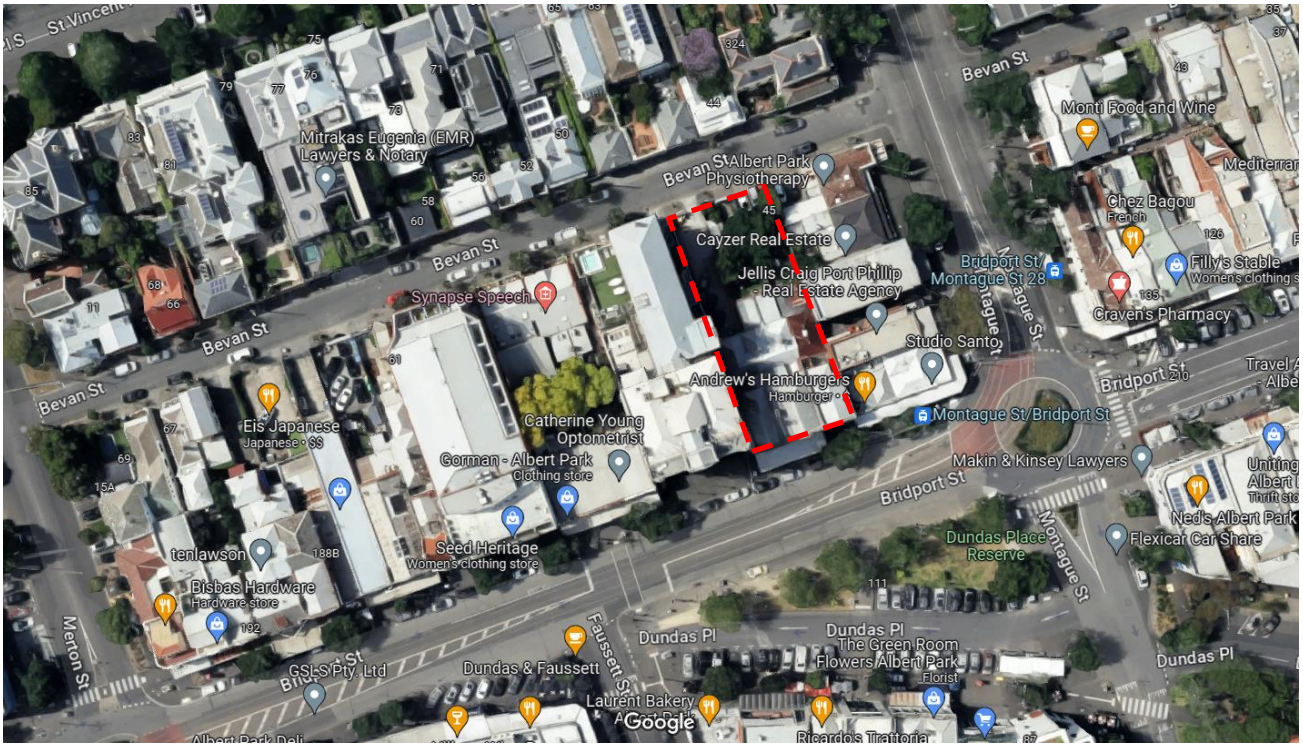


Figure 1 - Pre-existing sites at 146-150 Bridport Street, Albert Park.

Statutory Requirements

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

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

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

Built Environment Sustainability Scorecard (BESS)

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

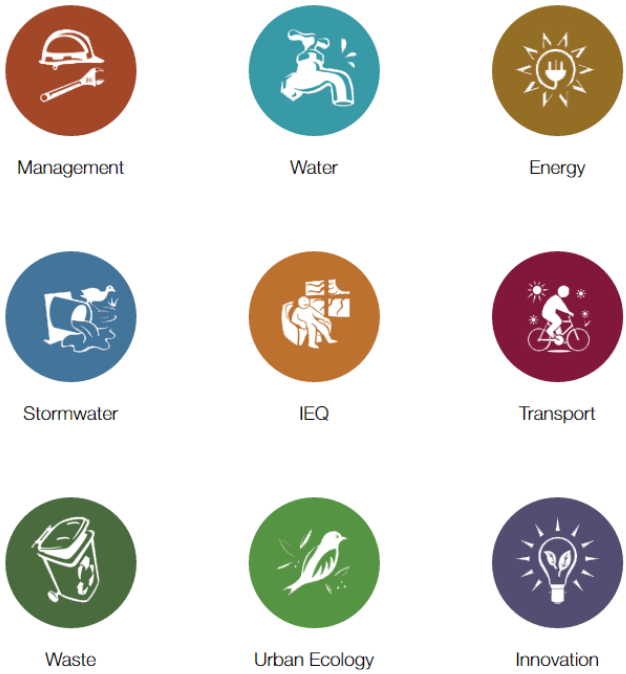


Figure 2 - BESS Environmental Categories (www.bess.net.au)

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

Responsibilities & Implementation

Jacmax Boxhall Pty Ltd will be responsible for the suitable implementation of the requirements of this report throughout the design and development phases. Should the development be sold the responsibility will pass to the new owner. At such time as a builder is novated or a building contract is put in place the builder will be responsible for implementation during the construction phase. At occupancy, the Owners Corporation and individual lot owners and or tenants will be responsible for the correct use of installed equipment and building systems in line with the provided Building User's Guide.

Sources of Information

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

- Cera Stribley – Project No. 21229 – Drawing No. TP.0100-TP.0102 Rev D; TP.0130 Rev D; TP.0200-TP.0202 Rev D; TP.0300-TP.0303 Rev D; TP.1000 Rev D; TP.1090-TP.1091 Rev F; TP.1100-TP.1103 Rev D; TP.1110 Rev D; TP.2100-TP.2103 Rev D; TP.2104 Rev F; TP.3000-TP.3003 Rev D; TP.5000- TP.5001 Rev D; TP.5004- TP.5005 Rev D; TP.8000-TP.8003 Rev D; TP.9000 Rev A.
- Municipal Association of Victoria - SDAPP Explained; Building Design for a Sustainable Future
- Built Environment Sustainability Scorecard (BESS)
- CSIRO 1999, Urban Stormwater – Best Practise Environmental Management Guidelines

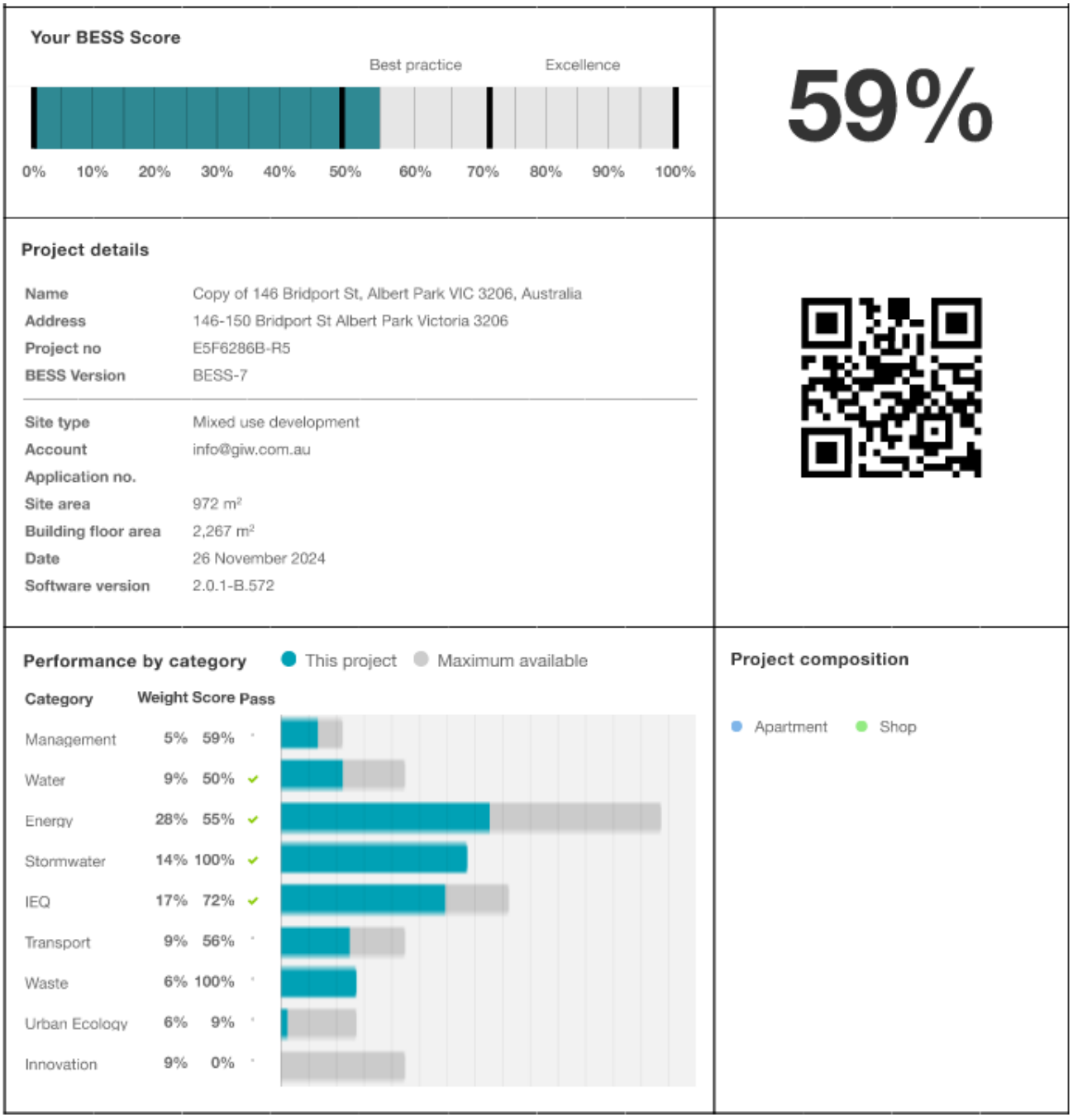
2. ESD Summary

The proposed mixed-use development at 146-150 Bridport Street, Albert Park will implement the following ESD initiatives:

1. The project achieves a total BESS score of 59% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%.
2. 75% (6 out of 8) of the development's apartments are naturally cross-ventilated.
3. The in-built BESS daylight calculator has been utilised to demonstrate compliance under BESS – IEQ 1.2 and 1.3.
4. The non-residential areas are targeting a 2% DF to 33% of the nominated area.
5. 75% (6 out of 8) of apartments achieve at least 3 hours of sunlight.
6. The development is provided with a comprehensive shading strategy.
7. The development is to achieve a 6.5 Star average NatHERS Energy Rating result.
8. The non-residential areas aim to reduce heating and cooling energy consumption below the reference case (BCA Section J 2019).
9. The development is to utilise an electric instantaneous or heat pump hot water system.
10. A 5.2kW Solar PV system is to be located on the roof of the proposed development.
11. Individual cold and electricity meters will be provided to the apartments and communal areas.
12. Water efficient fittings and fixtures are applied throughout.
13. A 17,000-litre rainwater tank will harvest rainwater from the new roof areas. This tank will be connected to all WC's and landscape irrigation.
14. A Melbourne STORM rating of 100% is achieved.
15. Landscape irrigation demand will be connected to the rainwater tank.
16. In total 8 bicycle spaces are to be provided for residents.
17. In total 8 bicycle spaces are to be provided for employees.

3. BESS Performance

The project achieves a total BESS score of 59% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%. This figure represents a percentage improvement over a benchmark project. A score of 50% and higher equates to 'best practice' and is an effective pass of the BESS tool. A score of 70% and higher equates to BESS 'excellence' and exists as a higher benchmark in the tool.



4. ESD Assessment

Management

Council ESD objectives:

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

Council Best Practice Standard

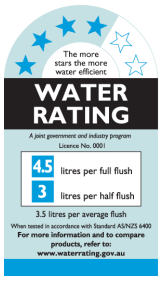
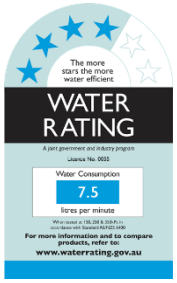
Criteria		Construction and Building Management Actions
Pre-Application Meeting	To ensure appropriate sustainable design principles and strategies are considered from the preliminary design stage of each development.	GIW has been actively involved in the preliminary design stage, but has not been involved in a pre-application meeting with Council.
Metering	To provide building users with information that allows monitoring of energy and water consumption	Electricity and cold water metering is to be provided to each individual apartment and commercial tenancy. Lighting and general power to common areas is to be separately metered to quantify energy used for common areas spaces.
Building User's Guide	To encourage and recognise initiatives that will help building users to use the building more efficiently.	A Building User's Guide will be provided to all occupants explaining the correct use of installed equipment and building systems. This shall cover at a minimum: • Energy and Environmental Strategy • Options for purchasing a ≥3 Star Washing Machine • Monitoring and Targeting • Building Services • Transport Facilities • Materials and Waste Policy • Expansion/Re-fit Considerations • References and Further Information

Water

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Potable Water Reduction	To reduce total potable water use due through the use of efficient fixtures, appliances, and the use of rainwater.	WELS 4 Star - Toilets  WELS 5 Star - Taps  WELS 4 Star -Showerhead  WELS 5 Star - Dishwasher 
Rainwater Collection & Reuse		A 17,000-litre rainwater tank will harvest rainwater from the new roof areas. This tank will be connected to all WC's and landscape irrigation. It is estimated that this will save more than 151kL of potable water every year and meet 76% of the demand in these areas. Stormwater drainage mechanism is to be determined by the hydraulics services engineer at the design development phase. Refer Appendix A – WSUD Response
Landscape Irrigation	To ensure the efficient use of water and to reduce total operating potable water use through encouraging water efficient landscape design.	Landscape irrigation demand will be connected to the rainwater tank.

Council Best Practice Standard

Criteria		Development Provision
Building System Water Use Reduction	Ensure the efficient use of water, to reduce total operating potable water use and to encourage the appropriate use of alternative water sources for cooling and fire testing systems.	N/A

Energy

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Thermal Performance Rating - Residential	To reduce energy needed to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.	The National Construction Code (NCC) Class 2 – Sole Occupancy Unit(s) residential building component is to be designed in accordance with NCC Section J (2019) NatHERS requirements. The residential units must achieve an average 6.5 Star rating, with no unit achieving below 5 Stars. Further to this no dwelling is to exceed the maximum allowed cooling load of 30 MJ/m2 (Climate Zone 21 Melbourne RO) In accordance with BADS Standard B35. The apartments are currently achieving a 7.1 Star average. This represents > 10% reduction compared to minimum NCC compliance benchmarks. The below sample ratings demonstrate the developments ability to achieve this average.

Apartment No.	ACE Total MJ/M2	ACE Heating	ACE Cooling	ACE NCFA	Star Rating
G01	63.6	57.5	6.1	220.2	7.7
G02	81.5	76.9	4.6	167.7	7.1
101	57	31	26	164.2	7.9
102	49.5	35.3	14.2	170	8.2
201	64.3	36.2	28.1	229.2	7.6
202	98.3	83	15.3	132	6.4
301	105.5	78.7	26.8	211.5	6.3
302	133.6	110.5	23.1	138.7	5.4
Average	**81.7**	**63.6**	**18.0**	**179.2**	**7.1**

*Apartments are assessed using FirstRate5 v5.3.2

Construction assumptions for preliminary FirstRate5 ratings are listed below. Note, these assumptions are based on the sample of apartments assessed and may vary throughout the development. These assumptions are not to be relied upon for

Council Best Practice Standard

Criteria	Development Provision

any other purpose beyond Town Planning assessment.

Element	Material	Insulation Value
Floor (exposed above/below)	Suspended Concrete Slab	R1.75
External Walls	Concrete/Brick	R1.8
Internal Walls	Concrete	R1.8
Internal Walls	Plasterboard	R2.5
Roof	Metal Framed Deck	R7.3+RFL
Fixed Windows	Aluminium framed, Double glazed, Argon filled, Low-E, Clear	Total System: – U-Value: 2.71 – SHGC: 0.58 – VLT: 0.62
Sliding Doors	Aluminium framed, Double glazed, Argon filled, Low-E, Clear	Total System: – U-Value: 3.19 – SHGC: 0.48 – VLT: 0.55
Double Hung Windows	Aluminium framed, Double glazed, Argon filled, Low-E, Clear	Total System: – U-Value: 3.70 – SHGC: 0.49 – VLT: 0.55
Fixed Windows (only applied to 301 northeast and northwest living/kitchen windows)	Aluminium framed, Double glazed, Argon filled, Spectrally Selective	Total System: – U-Value: 2.65 – SHGC: 0.25 – VLT: 0.54
Sliding Doors (only applied to 301 northeast and northwest living/kitchen windows)	Aluminium framed, Double glazed, Argon filled, Spectrally Selective	Total System: – U-Value: 2.79 – SHGC: 0.24 – VLT: 0.54

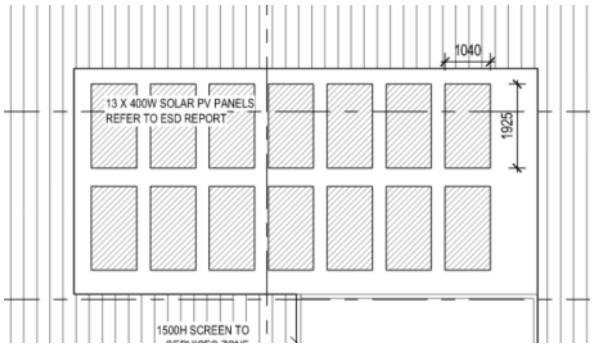
Council Best Practice Standard

Criteria		Development Provision		
		Double Hung Windows (only applied to 301 northeast and northwest living/kitchen windows)	Aluminium framed, Double glazed, Argon filled, Spectrally Selective	Total System: – U-Value: 3.50 – SHGC: 0.22 – VLT: 0.47
Thermal Performance Rating – Non-Residential	To reduce energy needed to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.	The non-residential areas aim to reduce heating and cooling energy consumption below the reference case (BCA Section J 2019). Appendix B – Preliminary Part J1.5 Façade Calculator.		
Electrification	To support the transition to renewable energy sources.	The apartments will be all-electric incl. electric hot water system and cooktops.		
HVAC System	To ensure the efficient use of energy and to reduce consumption of electricity.	Inverter split systems are to be installed and sized to maintain conditions of the habitable rooms of each apartment. The efficiency of the air conditioning system is to be within 1 star rating of best available under MEPS Post-October 2012 measurement standard. VRV / VRF systems with a COP of 3.4 are to be installed to the non-residential areas.		
Hot Water System	To ensure the efficient use of energy and to reduce consumption and greenhouse emissions from water heating.	The development is to utilise either electric instantaneous or heat pump hot water systems.		

Council Best Practice Standard

Criteria		Development Provision
Car Park Ventilation	To ensure the efficient use of energy, reduce total operating greenhouse gas emissions and to reduce energy peak demand.	Carpark ventilation fans are driven by a VSD motor connected to CO sensors within the carpark. The inclusion of CO sensor control will allow the ventilation fans to ramp down when the car park is unoccupied. The system is to be designed in accordance with AS1668.2. The mechanical services engineer is responsible for the design and specification of the system. The contractor is to procure and install the specified system. Maintenance requirements of the CO sensor system are to be included in the O&M manual.
Clothes Drying	To reduce energy consumption and greenhouse emissions associated with clothes drying	Nil.
Internal Lighting - Residential	To ensure the efficient use of energy, to reduce energy consumption, greenhouse emissions associated with artificial lighting, and to reduce energy peak demand.	The maximum illumination power density (W/sqm) is at least 20% lower than NCC 2019 requirements. Lighting power density shall be as follows: • Dwellings: No greater than average 4W/m^2 • POS: No greater than average 4W/m^2 • Back of house and indoor car parks: No greater than average 5W/m^2 All common area, external and carpark lighting is to be controlled with daylight, motion sensors or timers (whichever is deemed appropriate).
Internal Lighting – Non-Residential	To ensure the efficient use of energy, to reduce energy consumption, greenhouse emissions associated with artificial lighting, and to reduce energy peak demand.	The maximum illumination power density (W/m2) in the non-residential areas meets the requirements of Table J6.2a of the NCC 2019 Section J. Lighting power density shall be as follows: • Retail: No greater than average 14W/m^2

Council Best Practice Standard

Criteria		Development Provision
Renewable Energy Systems - Solar	To encourage on-site renewable energy generation and reduce greenhouse emissions.	A 5.2kW Solar PV system is to be located on the roof of the proposed development. The system is expected to generate approximately 7,496kWh.  Location Solar PV System Refer Appendix C – Renewable Energy

Stormwater

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Stormwater Treatment	To minimise negative environmental impacts of stormwater runoff and maximise onsite re-use of stormwater.	The Melbourne Water - Stormwater Treatment Objective Relative Measure (STORM) tool has been applied to determine performance relative to Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999). As per City of Port Phillip Planning Scheme - Clause 53.18 Stormwater Management in Urban Development, the development is required to achieve a STORM rating of 100% or greater. A Melbourne STORM rating of 100% is achieved via the following: • Rainwater collection off the new roof areas is to be directed into a 17,000-litre rainwater tank connected to all WC's and landscape irrigation. Refer Appendix A – WSUD Response.

Indoor Environment Quality

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Daylight Access - Residential	To provide a high level of amenity and energy efficiency through design for natural light.	The in-built BESS daylight calculator has been utilised to demonstrate compliance under BESS – IEQ 1.2 and 1.3.
Winter Sunlight	To provide a high level of amenity and reduce need for artificial heating in winter.	75% (6 out of 8) of apartments achieve at least 3 hours of sunlight.
Daylight Access – Non-Residential	To provide a high level of amenity and energy efficiency through design for natural light.	The non-residential areas are targeting a 2% DF to 33% of the nominated area.
Minimal Internal Bedrooms	90% of bedrooms have an external window.	NIL internal bedrooms.
Effective Natural Ventilation	To provide fresh air and passive cooling opportunities.	75% (6 out of 8) of the development's apartments are naturally cross-ventilated. Apartments are provided with windows on opposite or adjacent facades or are effective single sided ventilated.

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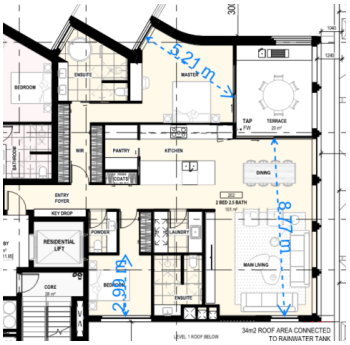
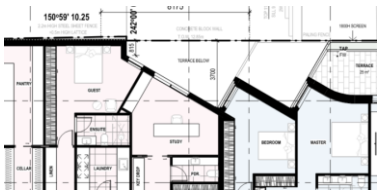
Criteria		Development Provision
		 Typical natural cross-ventilated apartment
Ventilation – Non-Residential	To provide fresh air and passive cooling opportunities.	Outdoor air rate for the commercial areas is to be 50% increased compared to AS 1668:2012. This is to be included in the mechanical design and specifications.
Thermal Comfort	To provide comfortable indoor spaces and reduce energy needed for heating and cooling.	The development is provided with a comprehensive shading strategy:  North oriented windows at ground floor and level 1 are shaded by the overhanging slab of the floor above.  North, east and west bedroom windows at ground floor – level 3 are either shaded by the built form or recessed by 200mm.

Council Best Practice Standard

Criteria		Development Provision
		 North and east oriented living area windows at level 1-3 are shaded by a 350mm deep overhang and 350mm deep vertical elements  South-west oriented windows are sized to limit solar heat gains during summer and heat loss during winter.
Thermal Comfort – Non-Residential	To provide comfortable indoor spaces and reduce energy needed for heating and cooling.	The development is provided with a comprehensive shading strategy:  Heritage canopy is replaced to match existing.
		None of the regular use areas of the commercial areas are provided with ceiling fans.
Air Quality – Non-Residential	All paints and adhesives meet the maximum total indoor pollutant emission limits.	All internally applied paints adhesives and sealants are to have a low or ultra-low VOC content in line with Green Star Buildings V1 Credit 13.
	All carpet meets the maximum total indoor	All internally applied carpets are to have a low VOC content in line with Green Star Buildings V1 Credit 13.

Council Best Practice Standard

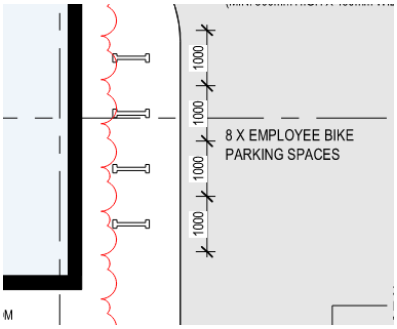
Criteria		Development Provision
	pollutant emission limits.	
	All engineered wood meets the maximum total indoor pollutant emission limits.	All internally applied engineered wood products are to have low formaldehyde levels in line with Green Star Buildings V1 Credit 13.

Transport

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Bicycle Parking – Residential & Residential Visitors	To encourage and recognise initiatives that facilitate cycling.	 In total 8 bicycle spaces are to be provided for residents. This will provide a ratio of approximately 1 resident bicycle space for every apartment.
Bicycle Parking – Non-Residential & Non-Residential Visitors	To encourage and recognise initiatives that facilitate cycling.	 In total 8 bicycle spaces are to be provided for employees. This represents a 50% increase over the planning scheme requirements.
End of Trip Facilities – Non-Residential	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport,	The development is provided with an end of trip facility including 1 shower and changing facilities.

Council Best Practice Standard

Criteria		Development Provision
	walking and cycling.	
Electric Vehicle Infrastructure	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	Six charging point for electrical vehicles are integrated in the proposed development.  Location of electric charging points.
Car Share Scheme	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	Nil.
Motorbikes / Mopeds	To minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.	The proposed development will incorporate min. 5 motorbike / moped spaces in the basement carpark. This represents ≥5% of the total carparking.

Materials

ESD objectives:

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

Council Best Practice Standard

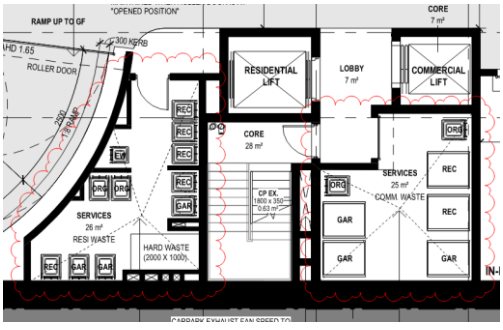
Criteria		Development Provision
Embodied Energy	Limited use of high embodied energy metals and materials, especially in a design with intended high churn (e.g. retail)	The design will seek to limit the use of high embodied energy metal finishes. At least 40% of coarse aggregate in the concrete is crushed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

Waste Management

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Building Re-use	To ensure waste avoidance, reuse and recycling during the design.	At least 30% of the existing structure is re-used.
Construction and Demolition Waste	To reduce construction waste going to landfill	At least 80% of the waste generated during construction and demolition has been diverted from landfill.
Food & Garden Waste	To ensure waste avoidance, reuse and recycling during the operational life of the building.	Organic waste storage is provided in the basement bin storage area.
Convenience of Recycling	To ensure waste avoidance, reuse and recycling during the operational life of the building.	 Separate general, recycling and organic waste storage will be provided at the basement bin storage area. Each tenancy is to be provided with separate general, recycling and food and organics waste bins. This requirement is to be included in the owners corporation rules or lease agreement.

Council Best Practice Standard

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

Urban Ecology

Council ESD objectives:

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

Council Best Practice Standard

Criteria		Development Provision
Communal Space	To encourage and recognise initiatives that facilitate interaction between building occupants.	Nil.
Vegetation	To encourage and recognise the use of vegetation and landscaping within and around developments.	Planter boxes are to be located at ground floor POS, apt G01, G02, 101, 102, 201 and 301 terraces. The total area of vegetation is 3% of the site area.
Green Walls / Roof	To encourage the appropriate use of green roofs, walls and facades to mitigate the impact of the urban heat island effect.	Nil.
Private Open Space - Balcony / Courtyard Ecology	To encourage plants in a healthy ecological context to be grown on balconies and in courtyards.	All balconies or private open space have been provided with a tap and floor waste allowing residents to cultivate their own gardens.
Food	To encourage the	Nil.

Council Best Practice Standard

Criteria		Development Provision
Production - Residential	production of fresh food on-site.	
Heat Island Effect	To reduce the contribution of the project site to the 'heat island effect	Roof are to have a three year SRI of minimum 60 Unshaded hard-scaping elements are to have a three year SRI of minimum 40.

Appendices

Appendix A: WSUD Response

Site layout Plan

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

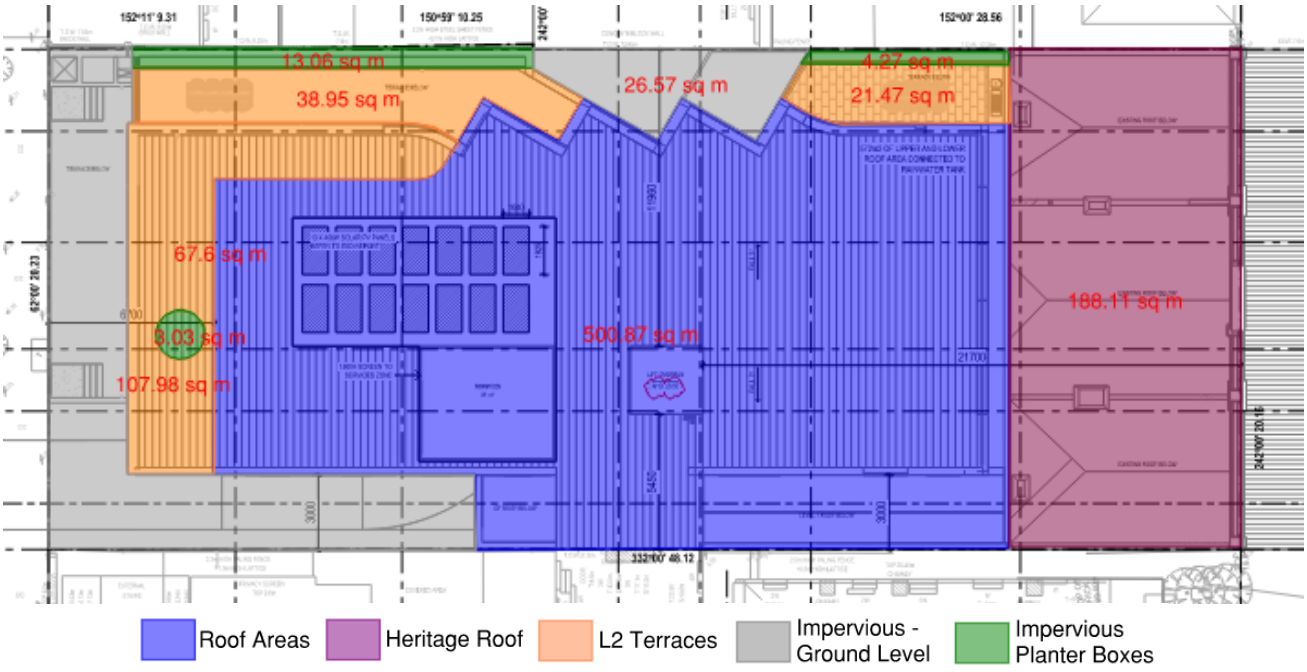


Figure 1 - Mark-up of water catchment and impervious areas

STORM Rating Report

A STORM rating of ≥100% can be achieved by implementing the following initiatives:

- Rainwater collection off the new roof areas is to be directed into a 17,000 litre rainwater tank connected to all WC's and landscape irrigation.

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

The best practice standards have been set out in the Urban Stormwater Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999) for reduction in total suspended solids (TSS), total phosphorus (TP) and total nitrogen (TN) loads.

The STORM Result is provided below:

Melbourne Water **STORM Rating Report**

TransactionID:	0
Municipality:	PORT PHILLIP
Rainfall Station:	PORT PHILLIP
Address:	146-152 Bridport St
	Albert Park
	VIC 3206
Assessor:	GIW
Development Type:	Residential - Mixed Use
Allotment Site (m2):	972.00
STORM Rating %:	100

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Roof Areas	572.00	Rainwater Tank	17,000.00	30	170.00	82.00
Heritage Roof	188.00	None	0.00	0	0.00	0.00
GF - Impervious	135.00	None	0.00	0	0.00	0.00
Impervious - Planters	17.00	None	0.00	0	0.00	0.00
L2 Terraces	60.00	None	0.00	0	0.00	0.00

WSUD Strategy

The development will include the provision of a 17,000-litre rainwater tank and associated pump in the basement garage. The rainwater tank is to be connected to all WC's and landscape irrigation.

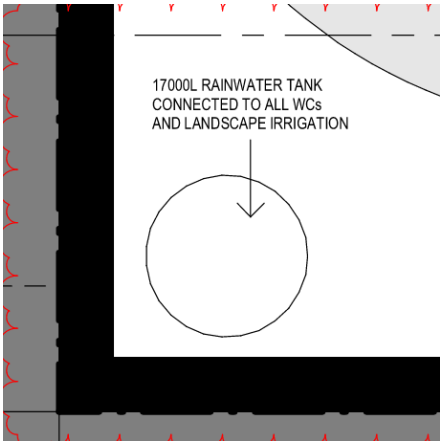


Figure 2 – Location Rainwater Tank

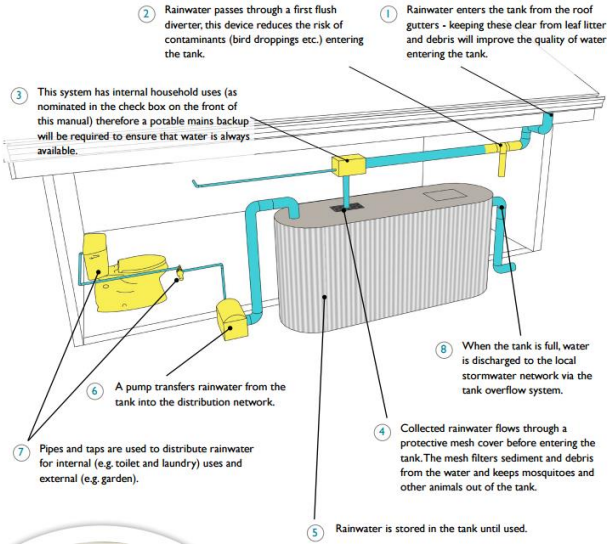


Figure 3 – Cross-section Tank
(City of Port Phillip)

Rainwater Reuse

Inputs

Catchment Area	572	sqm
Number of Occupants	29	
Bin Washout	No	
Irrigation Area	28	sqm
Tank Capacity	17,000	Litre

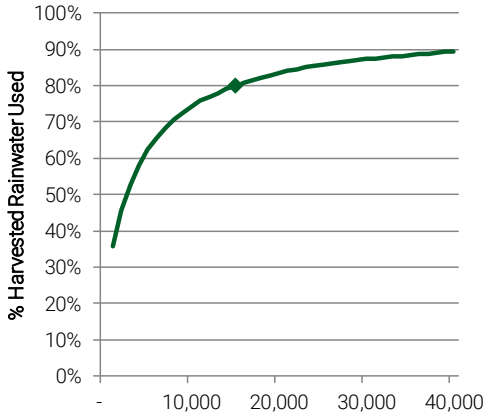
Outputs

% Served by Rainwater	75.5%	
% Harvested Rainwater Used	83.1%	
Total Potable Water Saved	151,041	Litre

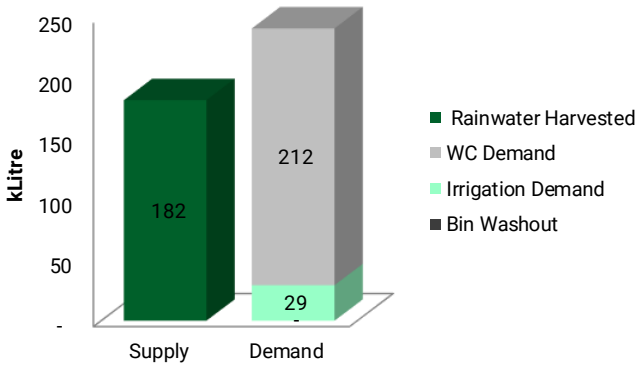
Rainwater Balance (Monthly Averages)

Month	Rainwater Harvested (L)	Irrigation Demand (L)	WC Demand (L)	Bin Washout (L)
Jan	12,560	4,332	17,980	0
Feb	15,121	3,924	16,240	0
Mar	14,286	2,013	17,980	0
Apr	15,028	1,927	17,400	0
May	14,650	1,989	17,980	0
Jun	15,265	906	17,400	0
Jul	12,313	923	17,980	0
Aug	15,013	923	17,980	0
Sep	15,930	2,649	17,400	0
Oct	16,309	2,699	17,980	0
Nov	20,041	2,632	17,400	0
Dec	15,318	4,366	17,980	0
Total	181,832	29,283	211,700	0
Equivalent STORM tool		4		0

Tank Sizing



Supply-Demand



Site Management Statement

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

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

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

Maintenance Program

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

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

Appendix B: Preliminary Part J1.5 Façade Calculator

GIW environmental SOLUTIONS

J1.5 Façade Calculator

Address	146-150 Bridport Street, Albert Park
Climate Zone	6
Building Classification	Class 6
Level	GF-L1

	North	East	South	West	Internal
Façade area (m2)	0.0	159.6	168.0	144.9	0.0

Number of Rows 12

		Dimensions			Shading (m)	
Window No.	Orientation	Height (m)	Width (m)	Area (m2)	P	H
L1	South	2.5	10	25	0.3	2.5
GF	South	3.6	2.31	8.316	5.9	2.85
GF	South	3.2	8.82	28.224	4.55	2.5
GF	West	3.2	0.76	2.432	1.6	2.5
GF	East	3.2	1.96	6.272	1.6	2.5
				0		
				0		
				0		
				0		
				0		

RESULTS

Method 1	U-Value	SHGC	Min. Wall R-values
North	7.50	0.87	1.4
East	7.50	0.87	1.4
South	3.73	0.49	1
West	7.50	0.87	1.4
Internal	7.50		1.4

	U-Value	SHGC
Method 2	7.50	0.49

Appendix C: Renewable Energy

Inputs Solar PV

Peak Wattage of System	5.2	kWp
Azimuth	0	degrees
Inclination	30	degrees

Outputs Solar PV

Electricity Produced per Year	7,496	kWh
No. Panels Required	13	
Total Roof Area Required	34	sqm
Annual Carbon Savings	8,396	kg CO2

Economic Output

Cost of System	7,800	$
Annual Savings	1,499	$
Simple Payback	5	Years

Appendix E: BESS Assessment

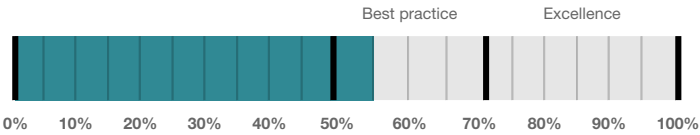
BESS Report

Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 146-150 Bridport St Albert Park Victoria 3206. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Port Phillip City Council.

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

Your BESS Score

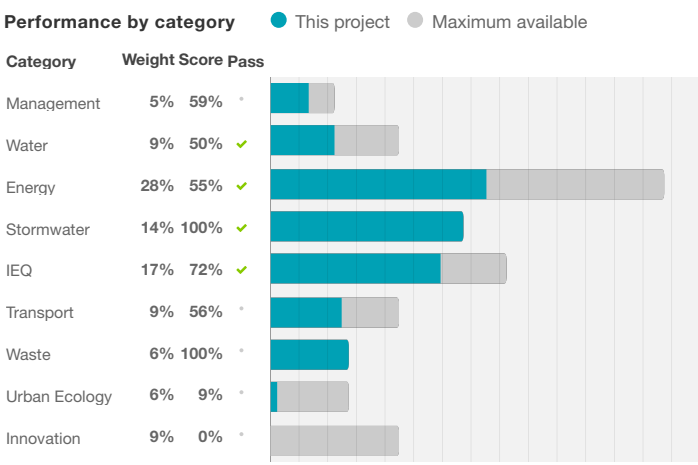


59%

Project details

Name	Copy of 146 Bridport St, Albert Park VIC 3206, Australia
Address	146-150 Bridport St Albert Park Victoria 3206
Project no	E5F6286B-R5
BESS Version	BESS-7
Site type	Mixed use development
Account	info@giw.com.au
Application no.	
Site area	972 m²
Building floor area	2,267 m²
Date	26 November 2024
Software version	2.0.1-B.572

Performance by category



Project composition

Buildings

Name	Height	Footprint	% of total footprint
Building 1	5	2,438 m²	100%

Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	Building	% of total area
Apartment				
101	1	303 m²	Building 1	13%
201	1	280 m²	Building 1	12%
301	1	251 m²	Building 1	11%
G01	1	260 m²	Building 1	11%
102	1	197 m²	Building 1	8%
G02	1	201 m²	Building 1	8%
302	1	159 m²	Building 1	7%
202	1	161 m²	Building 1	7%
Total	**8**	**1,812 m²**	**79%**	

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Shop				
F&B	1	455 m²	Building 1	20%
Total	**1**	**455 m²**	**20%**	

Supporting information

Floorplans & elevation notes

Credit	Requirement	Response	Status
Management 3.1	Annotation: Individual utility meters to be provided to all individual dwellings		-
Management 3.2	Annotation: Individual utility meters to be provided to all individual commercial tenancies		-
Management 3.3	Annotation: Sub-meters to be provided to all major common area services (list each)		-
Water 3.1	Annotation: Water efficient garden details		-
Energy 3.1	Carpark with natural ventilation or CO monitoring system		-
Energy 4.2	Location and size of solar photovoltaic system		-
Stormwater 1.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)		-
IEQ 1.1	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.2	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-

Credit	Requirement	Response	Status
IEQ 1.3	If using BESS daylight calculator, references to floorplans and elevations showing window sizes and sky angles.		-
IEQ 1.5	Floor plans with compliant bedrooms marked		-
IEQ 2.1	Dwellings meeting the requirements for being 'naturally ventilated'		-
Transport 1.1	Location of residential bicycle parking spaces		-
Transport 1.4	Location of non-residential bicycle parking spaces		-
Transport 2.1	Location of electric vehicle charging infrastructure		-
Transport 2.3	Location of nominated motorbicycle parking spaces		-
Waste 2.1	Location of food and garden waste facilities		-
Waste 2.2	Location of recycling facilities		-
Urban Ecology 2.4	Location of taps and floor waste on balconies / courtyards		-

Supporting evidence

Credit	Requirement	Response	Status
Management 2.2	Preliminary NatHERS assessments		-
Management 2.3a	Section J glazing assessment		-
Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Energy 3.1	Details of either the fully natural carpark ventilation or CO monitoring system proposed		-
Energy 3.6	Average lighting power density and lighting type(s) to be used		-
Energy 3.7	Average lighting power density and lighting type(s) to be used		-
Energy 4.2	Specifications of the solar photovoltaic system(s)		-
Stormwater 1.1	STORM report or MUSIC model		-
IEQ 1.1	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.2	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.3	If using an alternative daylight modelling program, a short report detailing assumptions used and results achieved.		-
IEQ 1.4	A short report detailing assumptions used and results achieved.		-
IEQ 1.5	A list of compliant bedrooms		-
IEQ 2.1	A list of naturally ventilated dwellings		-
Waste 1.1	Details regarding how the existing building is being reused on-site		-

Credit summary

Management Overall contribution 4.5%

	59%
1.1 Pre-Application Meeting	0%
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100%
2.3 Thermal Performance Modelling - Non-Residential	50%
3.1 Metering - Residential	100%
3.2 Metering - Non-Residential	100%
3.3 Metering - Common Areas	100%
4.1 Building Users Guide	100%

Water Overall contribution 9.0%

	Minimum required 50%	50%	✔ Pass
1.1 Potable Water Use Reduction		40%	
3.1 Water Efficient Landscaping		100%	
4.1 Building Systems Water Use Reduction		N/A	Scoped Out
			N/A

Energy Overall contribution 27.5%

	Minimum required 50%	55%	Pass

1.1 Thermal Performance Rating - Non-Residential	12%	
1.2 Thermal Performance Rating - Residential	16%	
2.1 Greenhouse Gas Emissions	100%	
2.2 Peak Demand	0%	
2.3 Electricity Consumption	100%	
2.4 Gas Consumption	N/A	Scoped Out
	No gas connection in use	
2.6 Electrification	100%	
3.1 Carpark Ventilation	100%	
3.2 Hot Water	0%	
3.4 Clothes Drying	0%	
3.6 Internal Lighting - Apartments	100%	
3.7 Internal Lighting - Non-Residential	100%	
4.1 Combined Heat and Power (cogeneration / trigeneration)	N/A	Scoped Out
	No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar	79%	
4.4 Renewable Energy Systems - Other	0%	Disabled
	No other (non-solar PV) renewable energy is in use.	

Stormwater Overall contribution 13.5%

	Minimum required 100%	100%	Pass

1.1 Stormwater Treatment	100%

IEQ Overall contribution 16.5%

	Minimum required 50%	72%	Pass
1.1 Daylight Access - Living Areas		100%	
1.2 Daylight Access - Bedrooms		66%	
1.3 Winter Sunlight		100%	
1.4 Daylight Access - Non-Residential		33%	✔ Achieved
1.5 Daylight Access - Minimal Internal Bedrooms		100%	
2.1 Effective Natural Ventilation		66%	
2.3 Ventilation - Non-Residential		33%	✔ Achieved
3.4 Thermal comfort - Shading - Non-Residential		100%	
3.5 Thermal Comfort - Ceiling Fans - Non-Residential		0%	
4.1 Air Quality - Non-Residential		100%	

Transport Overall contribution 9.0%

	56%
1.1 Bicycle Parking - Residential	100%
1.2 Bicycle Parking - Residential Visitor	0%
1.3 Bicycle Parking - Convenience Residential	0%
1.4 Bicycle Parking - Non-Residential	100%
1.5 Bicycle Parking - Non-Residential Visitor	0%
1.6 End of Trip Facilities - Non-Residential	0%
2.1 Electric Vehicle Infrastructure	100%
2.2 Car Share Scheme	0%
2.3 Motorbikes / Mopeds	100%

Waste Overall contribution 5.5%

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

Urban Ecology Overall contribution 3.3%

	9%
1.1 Communal Spaces	0%
2.1 Vegetation	0%
2.2 Green Roofs	0%
2.3 Green Walls and Facades	0%
2.4 Private Open Space - Balcony / Courtyard Ecology	100%
3.1 Food Production - Residential	0%
3.2 Food Production - Non-Residential	0%

Innovation Overall contribution 9.0%

	0%
1.1 Innovation	0%

Credit breakdown

Management Overall contribution 4.5%

59%

1.1 Pre-Application Meeting	0%
Score Contribution	This credit contributes 37.5% towards the category score.
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?
Question	Criteria Achieved ?
Project	No
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100%
Score Contribution	This credit contributes 19% towards the category score.
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?
Question	Criteria Achieved ?
Apartment	Yes
2.3 Thermal Performance Modelling - Non-Residential	50%
Score Contribution	This credit contributes 5% towards the category score.
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2019 Section J1.5?
Question	Criteria Achieved ?
Shop	Yes
Criteria	Has preliminary modelling been undertaken in accordance with either NCC2019 Section J (Energy Efficiency), NABERS or Green Star?
Question	Criteria Achieved ?
Shop	No
3.1 Metering - Residential	100%
Score Contribution	This credit contributes 9% towards the category score.
Criteria	Have utility meters been provided for all individual dwellings?
Question	Criteria Achieved ?
Apartment	Yes
3.2 Metering - Non-Residential	100%
Score Contribution	This credit contributes 2.5% towards the category score.
Criteria	Have utility meters been provided for all individual commercial tenants?
Question	Criteria Achieved ?
Shop	Yes
3.3 Metering - Common Areas	100%

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

4.1 Building Users Guide 100%

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

Water Overall contribution 9.0%

			Minimum required 50%	50%	✔ Pass

Water Approach	
What approach do you want to use for Water?:	Use the built in calculation tools
Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No
Are you installing a rainwater tank?:	Yes
Fixtures, fittings & connections profile	
Showerhead:	
F&B	Scope out
G01 G02 101 102 201 202 301 302	4 Star WELS (>= 6.0 but <= 7.5)
Bath:	
F&B	Scope out
G01 G02 101 102 201 202 301 302	Medium Sized Contemporary Bath
Kitchen Taps: All	>= 5 Star WELS rating
Bathroom Taps: All	>= 5 Star WELS rating
Dishwashers: All	>= 5 Star WELS rating
WC: All	>= 4 Star WELS rating
Urinals: All	Scope out
Washing Machine Water Efficiency:	
F&B	Scope out
G01 G02 101 102 201 202 301 302	Occupant to Install
Which non-potable water source is the dwelling/space connected to?: All	Tank 1

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

Rainwater tank profile

What is the total roof area connected to the rainwater tank?: Tank 1	572 m²
Tank Size: Tank 1	17,000 Litres
Irrigation area connected to tank: Tank 1	28.0 m²
Is connected irrigation area a water efficient garden?: Tank 1	-
Other external water demand connected to tank?: Tank 1	-

1.1 Potable Water Use Reduction 40%

Score Contribution	This credit contributes 83.3% 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	2618 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	2081 kL
Output	Proposed (including rainwater and recycled water use)
Project	1759 kL
Output	% Reduction in Potable Water Consumption
Project	32 %
Output	% of connected demand met by rainwater
Project	99 %
Output	How often does the tank overflow?
Project	Never / Rarely
Output	Opportunity for additional rainwater connection
Project	807 kL

3.1 Water Efficient Landscaping 100%

Score Contribution	This credit contributes 16.7% towards the category score.
Criteria	Will water efficient landscaping be installed?
Question	Criteria Achieved ?
Project	Yes

4.1 Building Systems Water Use Reduction N/A Scoped Out

N/A

This credit was scoped out	N/A

Energy Overall contribution 27.5%

		Minimum required 50%	55%	✔ Pass

Use the BESS Deem to Satisfy (DtS) method for Non-residential spaces?:	No
Dwellings Energy Approach	
What approach do you want to use for Dwellings?:	Use the built in calculation tools
Are you installing any solar photovoltaic (PV) system(s)?:	Yes
Are you installing any other renewable energy system(s)?:	No
Energy Supply:	All-electric
Dwelling Energy Profiles	
Building: All	Building 1
Below the floor is:	
G01 G02	Ground or Carpark
101 102 201 202 301 302	Another Occupancy
Above the ceiling is:	
G01 G02 101 102 201 202	Another Occupancy
301 302	Outside
Exposed sides:	
G01 G02 101 102	2
201 202 301 302	3
NatHERS Annual Energy Loads - Heat: All	63.6 MJ/sqm
NatHERS Annual Energy Loads - Cool: All	18.0 MJ/sqm
NatHERS star rating: All	6.5
Type of Heating System: All	Reverse cycle space
Heating System Efficiency: All	3 Star
Type of Cooling System: All	Refrigerative space
Cooling System Efficiency: All	3 Stars

Type of Hot Water System: All	Electric Storage
Is the hot water system shared by multiple dwellings?: All	Yes
Clothes Line: All	No drying facilities
Clothes Dryer: All	Occupant to Install

Non-residential buildings profile

Heating, Cooling & Comfort Ventilation - Electricity Reference fabric & services:	1,000 kWh
Heating, Cooling & Comfort Ventilation - Electricity - proposed fabric and reference services:	1,000 kWh
Heating, Cooling & Comfort Ventilation - Electricity Proposed fabric & services:	1,000 kWh
Heating - Wood - reference fabric and services:	-
Heating - Wood - proposed fabric and reference services:	-
Heating - Wood - proposed fabric and services:	-
Hot Water - Electricity - Reference:	0.0 kWh
Hot Water - Electricity - Proposed:	0.0 kWh
Lighting - Reference:	1,000 kWh
Lighting - Proposed:	1,000 kWh
Peak Thermal Cooling Load - Reference:	-
Peak Thermal Cooling Load - Proposed:	-

Solar Photovoltaic system profile

System Size (lesser of inverter and panel capacity): PV 1	5.2 kW peak
Orientation (which way is the system facing)?: PV 1	North
Inclination (angle from horizontal): PV 1	10.0 Angle (degrees)
Which Building Class does this apply to?: PV 1	Apartment

1.1 Thermal Performance Rating - Non-Residential 12%

Score Contribution	This credit contributes 7.6% towards the category score.
Criteria	What is the % reduction in heating and cooling energy consumption against the reference case (NCC 2019 Section J)?
Output	Total Improvement
Shop	0 %

1.2 Thermal Performance Rating - Residential 16%

Score Contribution	This credit contributes 22.6% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Apartment	6.5 Stars

2.1 Greenhouse Gas Emissions 100%

Score Contribution	This credit contributes 9.4% towards the category score.
Criteria	What is the % reduction in annual greenhouse gas emissions against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Apartment	109,038 kg CO2
Shop	205 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Apartment	66,702 kg CO2
Shop	205 kg CO2
Output	% Reduction in GHG Emissions
Apartment	38 %
Shop	0 %

2.2 Peak Demand 0%

Score Contribution	This credit contributes 4.7% towards the category score.
Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?
Output	Peak Thermal Cooling Load - Baseline
Apartment	117 kW
Output	Peak Thermal Cooling Load - Proposed
Apartment	111 kW
Output	Peak Thermal Cooling Load - % Reduction
Apartment	5 %

2.3 Electricity Consumption 100%

Score Contribution	This credit contributes 9.4% towards the category score.
Criteria	What is the % reduction in annual electricity consumption against the benchmark?
Output	Reference
Apartment	106,900 kWh
Shop	201 kWh
Output	Proposed
Apartment	65,394 kWh
Shop	201 kWh
Output	Improvement
Apartment	38 %
Shop	0 %

2.4 Gas Consumption N/A Scoped Out

No gas connection in use

This credit was scoped out	No gas connection in use

2.6 Electrification 100%

Score Contribution	This credit contributes 9.4% towards the category score.
Criteria	Is the development all-electric?
Question	Criteria Achieved?
Project	Yes

3.1 Carpark Ventilation	100%
Score Contribution	This credit contributes 9.4% towards the category score.
Criteria	If you have an enclosed carpark, is it: (a) fully naturally ventilated (no mechanical ventilation system) or (b) 40 car spaces or less with Carbon Monoxide monitoring to control the operation and speed of the ventilation fans?
Question	Criteria Achieved ?
Project	Yes

3.2 Hot Water	0%
Score Contribution	This credit contributes 4.7% towards the category score.
Criteria	What is the % reduction in annual energy consumption (gas and electricity) of the hot water system against the benchmark?
Output	Reference
Apartment	136,923 MJ
Output	Proposed
Apartment	154,131 MJ
Output	Improvement
Apartment	-13 %

3.4 Clothes Drying	0%
Score Contribution	This credit contributes 3.8% towards the category score.
Criteria	What is the % reduction in annual energy consumption (gas and electricity) from a combination of clothes lines and efficient driers against the benchmark?
Output	Reference
Apartment	6,287 kWh
Output	Proposed
Apartment	6,287 kWh
Output	Improvement
Apartment	0 %

3.6 Internal Lighting - Apartments	100%
Score Contribution	This credit contributes 7.5% towards the category score.
Criteria	Is the maximum illumination power density (W/m2) in at least 90% of the relevant building class at least 20% lower than required by Table J6.2a of the NCC 2019 Vol 1 (Class 2-9)?
Question	Criteria Achieved ?
Apartment	Yes

3.7 Internal Lighting - Non-Residential	100%
Score Contribution	This credit contributes 1.9% towards the category score.
Criteria	Does the maximum illumination power density (W/m2) in at least 90% of the area of the relevant building class meet the requirements in Table J6.2a of the NCC 2019 Vol 1?
Question	Criteria Achieved ?
Shop	Yes

4.1 Combined Heat and Power (cogeneration / trigeneration)	N/A	Scoped Out
		No cogeneration or trigeneration system in use.
This credit was scoped out	No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar	79%	
Score Contribution	This credit contributes 4.7% towards the category score.	
Criteria	What % of the estimated energy consumption of the building class it supplies does the solar power system provide?	
Output	Solar Power - Energy Generation per year	
Apartment	6,302 kWh	
Output	% of Building's Energy	
Apartment	9 %	
4.4 Renewable Energy Systems - Other	0%	Disabled
		No other (non-solar PV) renewable energy is in use.
This credit is disabled	No other (non-solar PV) renewable energy is in use.	

Stormwater Overall contribution 13.5%

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

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

IEQ Overall contribution 16.5%

		Minimum required 50%	72%	✔ Pass

Use the BESS Deemed to Satisfy (DtS) method for daylight to Dwellings?:	No
What approach do you want to use for daylight to Dwellings?:	Use the built in calculation tools
Room Designation:	
G.01 Living G.02 Living 102 Living All other living areas	Living
G01 Bed 1 G01 Bed 2 101 Guest Bed All other bedrooms	Bedroom
Quantity:	
G.01 Living G.02 Living G01 Bed 1 G01 Bed 2 102 Living 101 Guest Bed	1
All other living areas	5
All other bedrooms	21
Auto-Pass:	
G.01 Living G.02 Living G01 Bed 1 G01 Bed 2 102 Living 101 Guest Bed	No
All other living areas All other bedrooms	Yes
Room Floor Area:	
G.01 Living	62.5 m²
G.02 Living	37.8 m²
G01 Bed 1	14.9 m²
G01 Bed 2	11.2 m²
102 Living	50.2 m²
101 Guest Bed	14.5 m²
All other living areas All other bedrooms	-

Vertical Angle:	
G.01 Living G.02 Living G01 Bed 1 G01 Bed 2	30.0 Angle (degrees)
102 Living	29.0 Angle (degrees)
101 Guest Bed	55.0 Angle (degrees)
All other living areas All other bedrooms	-
Horizontal Angle:	
G.01 Living	78.6 Angle (degrees)
G.02 Living	70.4 Angle (degrees)
G01 Bed 1	1.0 Angle (degrees)
G01 Bed 2	4.0 Angle (degrees)
102 Living	122 Angle (degrees)
101 Guest Bed	105 Angle (degrees)
All other living areas All other bedrooms	-
Window Area:	
G.01 Living	15.9 m^2
G.02 Living	11.4 m^2
G01 Bed 1	3.0 m^2
G01 Bed 2	6.9 m^2
102 Living	15.4 m^2
101 Guest Bed	2.9 m^2
All other living areas All other bedrooms	-
Window Orientation:	
G.01 Living G.02 Living	North
G01 Bed 1 G01 Bed 2 102 Living 101 Guest Bed	East
All other living areas All other bedrooms	-
Glass Type:	
G.01 Living G.02 Living G01 Bed 1 G01 Bed 2 102 Living 101 Guest Bed	Clear Low-E Double (VLT 0.73)
All other living areas All other bedrooms	-

Daylight Criteria Achieved?:	
G.01 Living G.02 Living 102 Living 101 Guest Bed All other living areas All other bedrooms	Yes
G01 Bed 1 G01 Bed 2	No

1.1 Daylight Access - Living Areas 100%

Score Contribution	This credit contributes 19.6% towards the category score.
Criteria	What % of living areas achieve a daylight factor greater than 1%
Output	Calculated percentage
Apartment	100 %

1.2 Daylight Access - Bedrooms 66%

Score Contribution	This credit contributes 19.6% towards the category score.
Criteria	What % of bedrooms achieve a daylight factor greater than 0.5%
Output	Calculated percentage
Apartment	91 %

1.3 Winter Sunlight 100%

Score Contribution	This credit contributes 6.5% towards the category score.
Criteria	Do 70% of dwellings receive at least 3 hours of direct sunlight in all Living areas between 9am and 3pm in mid-winter?
Question	Criteria Achieved ?
Apartment	Yes

1.4 Daylight Access - Non-Residential 33% ✔ Achieved

Score Contribution	This credit contributes 9.9% towards the category score.
Criteria	What % of the nominated floor area has at least 2% daylight factor?
Question	Percentage Achieved?
Shop	33 %

1.5 Daylight Access - Minimal Internal Bedrooms 100%

Score Contribution	This credit contributes 6.5% towards the category score.
Criteria	Do at least 90% of dwellings have an external window in all bedrooms?
Question	Criteria Achieved ?
Apartment	Yes

2.1 Effective Natural Ventilation 66%

Score Contribution	This credit contributes 19.6% towards the category score.
Criteria	What % of dwellings are effectively naturally ventilated?
Question	Percentage Achieved?
Apartment	75 %

2.3 Ventilation - Non-Residential 33% ✔ Achieved

Score Contribution	This credit contributes 9.9% towards the category score.

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

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

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

3.4 Thermal comfort - Shading - Non-Residential 100%

Score Contribution	This credit contributes 4.9% towards the category score.
Annotation	Only glazing is to heritage façade - nil additional glazing proposed

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

3.5 Thermal Comfort - Ceiling Fans - Non-Residential 0%

Score Contribution	This credit contributes 1.6% towards the category score.
Criteria	What percentage of regular use areas in tenancies have ceiling fans?
Question	Percentage Achieved?
Shop	0 %

4.1 Air Quality - Non-Residential 100%

Score Contribution	This credit contributes 1.6% towards the category score.

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

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

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

Transport Overall contribution 9.0%

56%

1.1 Bicycle Parking - Residential	100%
Score Contribution	This credit contributes 18.2% towards the category score.
Criteria	How many secure and undercover bicycle spaces are there per dwelling for residents?
Question	Bicycle Spaces Provided ?
Apartment	8
Output	Min Bicycle Spaces Required
Apartment	8

1.2 Bicycle Parking - Residential Visitor	0%
Score Contribution	This credit contributes 18.2% towards the category score.
Criteria	How many secure bicycle spaces are there per 5 dwellings for visitors?
Question	Visitor Bicycle Spaces Provided ?
Apartment	0

1.3 Bicycle Parking - Convenience Residential	0%
Score Contribution	This credit contributes 9.1% towards the category score.
Criteria	Are bike parking facilities for residents located at ground or entry level?
Question	Criteria Achieved ?
Apartment	No

1.4 Bicycle Parking - Non-Residential	100%
Score Contribution	This credit contributes 4.6% towards the category score.
Criteria	Have the planning scheme requirements for employee bicycle parking been exceeded by at least 50% (or a minimum of 2 where there is no planning scheme requirement)?
Question	Criteria Achieved ?
Shop	Yes
Question	Bicycle Spaces Provided ?
Shop	8

1.5 Bicycle Parking - Non-Residential Visitor	0%
Score Contribution	This credit contributes 2.3% towards the category score.
Criteria	Have the planning scheme requirements for visitor bicycle parking been exceeded by at least 50% (or a minimum of 1 where there is no planning scheme requirement)?
Question	Criteria Achieved ?
Shop	No
Question	Bicycle Spaces Provided ?
Shop	0

1.6 End of Trip Facilities - Non-Residential	0%

Score Contribution	This credit contributes 2.3% towards the category score.
Criteria	Where adequate bicycle parking has been provided. Is there also: * 1 shower for the first 5 employee bicycle spaces plus 1 to each 10 employee bicycles spaces thereafter, * changing facilities adjacent to showers, and * one secure locker per employee bicycle space in the vicinity of the changing / shower facilities?
Question	Number of showers provided ?
Shop	1
Question	Number of lockers provided ?
Shop	-
Output	Min Showers Required
Shop	1
Output	Min Lockers Required
Shop	8

2.1 Electric Vehicle Infrastructure 100%

Score Contribution	This credit contributes 22.7% towards the category score.
Criteria	Are facilities provided for the charging of electric vehicles?
Question	Criteria Achieved ?
Project	Yes

2.2 Car Share Scheme 0%

Score Contribution	This credit contributes 11.4% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Question	Criteria Achieved ?
Project	No

2.3 Motorbikes / Mopeds 100%

Score Contribution	This credit contributes 11.4% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	Yes

Waste **Overall contribution 5.5%**

	100%

1.1 - Construction Waste - Building Re-Use		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?	
Annotation	Existing heritage façade to remain	
Question	Criteria Achieved ?	
Project	Yes	
2.1 - Operational Waste - Food & Garden Waste		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Are facilities provided for on-site management of food and garden waste?	
Question	Criteria Achieved ?	
Project	Yes	
2.2 - Operational Waste - Convenience of Recycling		100%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Are the recycling facilities at least as convenient for occupants as facilities for general waste?	
Question	Criteria Achieved ?	
Project	Yes	

Urban Ecology Overall contribution 3.3%

		9%

1.1 Communal Spaces		0%
Score Contribution	This credit contributes 11.4% towards the category score.	
Criteria	Is there at least the following amount of common space measured in square meters : * 1m² for each of the first 50 occupants * Additional 0.5m² for each occupant between 51 and 250 * Additional 0.25m² for each occupant above 251?	
Question	Common space provided	
Apartment	0.0 m²	
Shop	0.0 m²	
Output	Minimum Common Space Required	
Apartment	28 m²	
Shop	45 m²	
2.1 Vegetation		0%
Score Contribution	This credit contributes 45.5% 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	3 %	
2.2 Green Roofs		0%
Score Contribution	This credit contributes 11.4% towards the category score.	
Criteria	Does the development incorporate a green roof?	
Question	Criteria Achieved ?	
Project	No	
2.3 Green Walls and Facades		0%
Score Contribution	This credit contributes 11.4% towards the category score.	
Criteria	Does the development incorporate a green wall or green façade?	
Question	Criteria Achieved ?	
Project	No	
2.4 Private Open Space - Balcony / Courtyard Ecology		100%
Score Contribution	This credit contributes 9.1% towards the category score.	
Criteria	Is there a tap and floor waste on every balcony and courtyard (including any roof terraces)?	
Question	Criteria Achieved ?	
Apartment	Yes	
3.1 Food Production - Residential		0%

Score Contribution	This credit contributes 9.1% towards the category score.
Criteria	What area of space per resident is dedicated to food production?
Question	Food Production Area
Apartment	-
Output	Min Food Production Area
Apartment	8 m²

3.2 Food Production - Non-Residential	0%

Score Contribution	This credit contributes 2.3% towards the category score.
Criteria	What area of space per occupant is dedicated to food production?
Question	Food Production Area
Shop	-
Output	Min Food Production Area
Shop	12 m²

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)?

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