Project: 1-0575
Version: 05
Date: 19th December 2024

Sustainability Management Plan

427 Albert Street, Brunswick

HIP V. HYPE

WHO WE ARE

HIP V. HYPE Sustainability provides advice that is commercially grounded, yet ambitious. We pursue exceptional outcomes that are socially, economically and environmentally sustainable and enable action across government, institutions and organisations.

We seek to partner with those who are willing to think strategically to achieve better. We lead, collaborate and support others to deliver impact and build Better Cities and Regions, Better Buildings and Better Businesses.

DISCLAIMER

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VERSION	DATE	ISSUE	PREPARED BY	APPROVED BY
01	13.02.24	First draft	Agata Starkiewicz, Senior Consultant	David Mahony, Head of Better Buildings
02	05.03.24	Final draft	Agata Starkiewicz, Senior Consultant	David Mahony, Head of Better Buildings
03	26.07.24	Town Planning	Agata Starkiewicz, Senior Consultant	David Mahony, Head of Better Buildings
04	02.10.24	DTP Preliminary Submission	Agata Starkiewicz, Senior Consultant	David Mahony, Head of Better Buildings
05	19.12.24	DTP Formal Submission	Agata Starkiewicz, Senior Consultant	David Mahony, Head of Better Buildings

HIP V. HYPE

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HIP V. HYPE is Equal Assurance ISO 9001, ISO 14001 and ISO 45001 certified.

Contents

Project Overview

Project Name	ParkLife 2
Address	427 Albert Street, Brunswick, Victoria, 3056
Traditional Custodians	Wurundjeri Woi-Wurrung
Client	Clifton & Gilpin Pty Ltd
Architect	Austin Maynard Architects
Sustainability	HIP V. HYPE
Project Summary	Office: 455 m^2 Shop: 95 m^2 Apartments: 61 total 16 x 1BR 37 x 2BR 8 x 3BR Bike Parking: 147

View of ParkLife 2 from Clifton Park. Render by Austin Maynard Architects.

Executive Summary

ParkLife 2 is envisaged to bring high-performance, sustainable apartment living to Brunswick's green spine.

The mixed-use project is comprised of both residential and commercial spaces. The office tenancies open up the ground plane allowing visual connection between Gilpin and Clifton Parks, creating new opportunities to connect and engage with the Brunswick community.

KEY INITIATIVES

The following key initiatives have been adopted by the project team and underpin the design approach:

- Passive design to target a minimum average NatHERS rating of at least 8.5-Stars, minimising the need for active energy systems
- No fossil fuels including natural gas. 100% all-electric building supplied with renewable energy through an embedded network
- Maintain comfortable internal temperatures passively, using little or no energy, providing comfortable living spaces year round and protecting inhabitants from extreme weather events
- Create healthy homes, including reduction in the use of harmful VOCs in glues, sealants and paints, and protection from dust and other external airborne pollutants
- Cost effective design that provides a sustainable outcome, avoiding over engineering and providing for simple maintenance over time
- Minimise consumption of natural resources, including water and raw materials
- Minimise environmental impacts through operation, including energy consumption, waste creation and discharge of pollutants

BESS ASSESSMENT

ParkLife 2 exceeds industry 'Excellence' within BESS, achieving an overall score of 85%.

CATEGORY	SCORE
MANAGEMENT	100%
WATER	74%
ENERGY	94%
STORMWATER	100%
IEQ	80%
TRANSPORT	77%
WASTE	66%
URBAN ECOLOGY	55%
INNOVATION	80%
TOTAL BESS SCORE	85%

Introduction

This Sustainability Management Plan (SMP) has been prepared to communicate the approach taken to embed sustainability into the design, construction and operation of the mixed-use residential project at 427 Albert Street, Brunswick.

The project prioritises sustainable outcomes, with many features embedded into the design and construction to realise a high-performing project that benefits people, place and planet.

PROJECT BACKGROUND

ParkLife 2 proposes a new residential project incorporating a basement/mezzanine level for car parking, ground floor commercial tenancies, and residential apartments on levels one to seven. The project also includes an outdoor roofyard and garden for residents to enjoy.

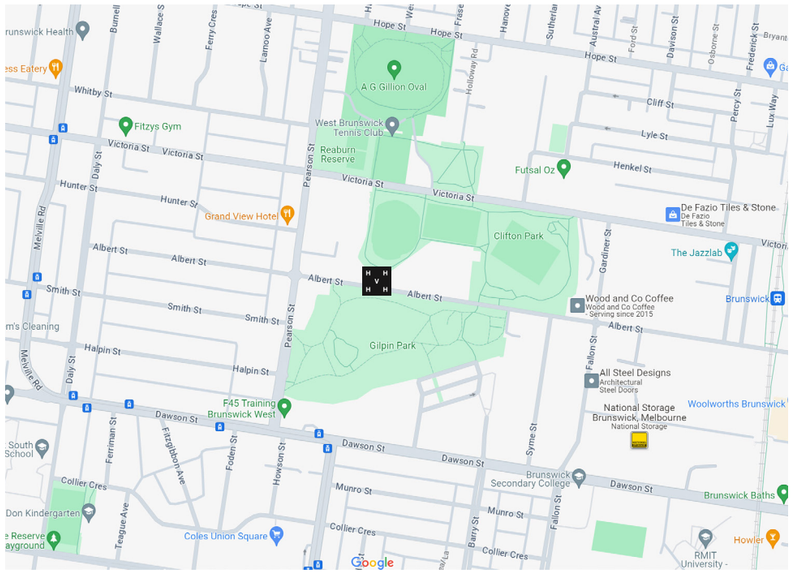
LOCATION & CONTEXT

The site is located on Albert Street, just east of Pearson Street in Brunswick. The site has a unique location between Gilpin and Clifton parks, at the centre of Brunswick's green spine. The proposed project fosters connection across the two parks, with access through walkways on the ground plane and views through the glazed commercial tenancies.

DOCUMENTATION

This report has been informed by the following documentation:

- Architectural drawings prepared by Austin Maynard Architects, Planning Submission Set dated 17th December 2024



Subject site and surrounding context. Map courtesy of Google Maps.

Statutory Requirements

This section provides an overview of the statutory requirements outlined in City of Merri-bek's Planning Scheme. ParkLife 2 responds to Environmental Sustainable Development Clause 15.01-2L-05.

CLAUSE 15.01-2L-05 ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

Energy Performance

Reduce both energy use and energy peak demand through design measures such as:

- Building orientation
- Shading to glazed surfaces
- Optimising glazing to exposed surfaces
- Inclusion of or space allocation for renewable technologies

Integrated Water Management

- Reduce total operating potable water use through appropriate design measures such as water efficient fixtures, appliances, equipment, irrigation and landscaping
- Encourage the appropriate use of alternative water sources (including greywater, rainwater and stormwater)
- Incorporate best practice water sensitive urban design to improve the quality of stormwater runoff and reduce impacts on water systems and water bodies

Indoor Environment Quality

- Achieve a healthy indoor environment quality, including thermal performance and access to fresh air and daylight, prioritising passive design over mechanical heating, ventilation, cooling and lighting
- Reduce indoor air pollutants by encouraging the use of low-toxicity materials
- Minimise noise levels and noise transfer within and between buildings and associated external areas

Transport

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

Waste Management

- Promote waste avoidance, reuse and recycling during the design, construction and operation stages of development
- Encourage use of durable and reusable building materials
- Ensure sufficient space is allocated for future change in waste management needs, including (where possible) composting and green waste facilities

Urban Ecology

- Protect and enhance biodiversity by incorporating natural habitats and planting indigenous vegetation
- Reduce urban heat island effects through building design, landscape design, water sensitive urban design and the retention and provision of canopy and significant trees
- Encourage the provision of space for productive gardens, particularly in larger residential developments

Our responsibility is to leave our cities and regions in a better condition than we found them.

Management

Effective management practices can improve the sustainability performance of a project by influencing areas where decision-making is critical. Projects should prioritise the implementation of processes and strategies that support positive sustainability outcomes during construction.

PROJECT RESPONSE

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

Pre-application Meeting

- HV.H have been involved in a pre-application meeting with Council and Department of Transport and Planning (DTP), touching on sustainability measures in the building

Thermal Performance Modelling

- Preliminary NatHERS modelling has been undertaken, Refer Appendix A
- Preliminary façade assessment has been undertaken, Refer Appendix E

Metering

- Utility meters will be provided to all apartments, with commercial tenancies also separately metered
- All common area lighting and power will be separately metered
- Rooftop PV system will be separately metered
- EV car-charging will be separately metered

Building User's Guide

- A building user's guide with information on how to most efficiently operate all active systems will be provided through a resident welcome pack and additional online videos, covering:
  - + Building overview and description of systems
  - + Potable water management
  - + Sustainable waste management
  - + Sustainable transport
  - + Healthy air & light quality and materials selection

Energy Network

- An energy network will be utilised in the project to ensure renewable energy can be provided to all apartments and commercial tenancies

Rooftop Solar at Burwood Brickworks. Photography by Kim Landy.

Water Efficiency & Management

Water is an increasingly important natural resource. Well managed, it can provide for a multitude of uses critical to our day to day lives, while also sustaining the environment on which we fundamentally depend.

However, there are increasing demands placed on our water sources, and unsustainable water management practices are common.

A building's design has a significant impact on the water consumption of its occupants, along with the way water leaves the site through the sewer and stormwater systems. Minor changes to design can have long lasting benefits.

PROJECT RESPONSE

The project has applied the following key design measures in relation to water use:

Fittings & Fixtures

- During documentation the project will specify the following minimum WELS ratings for fittings and fixtures:
  - Showers: 4-star (<7.5L/min)
  - Toilets: 4-star
  - Taps: 6-star
  - Dishwashers: 6-star
- High-efficiency clothes washing machines and heat pump dryers will be offered as purchaser upgrades at point of sale

Landscape

- Where appropriate drought tolerant plant species will be specified for landscaping as well as integrated edible planting

Building Services

- Mechanical building systems will be air-cooled rather than water-cooled
- Water used in fire test system will be collected and reused for another fit-for purpose use

Rainwater & Stormwater Management

- Clean roof areas to 15,000L rainwater tanks for use in toilet flushing
- Trafficable terrace areas to a 3m^2 raingarden located on the L4 planterboxes
- Refer to Appendix B for WSUD Assessment

Rainwater connections to balcony taps at Ferrars & York.
Photography by Kim Landy.

Energy Efficiency

Energy efficient design is the product of an effective response to environmental factors, early strategic thinking in design and a considered approach to construction.

Achieving a highly energy efficient building doesn't require a significant additional upfront cost. Often, it's just ensuring basic principles of passive design are integrated early on, and that ongoing energy use is considered when selecting building services and appliances.

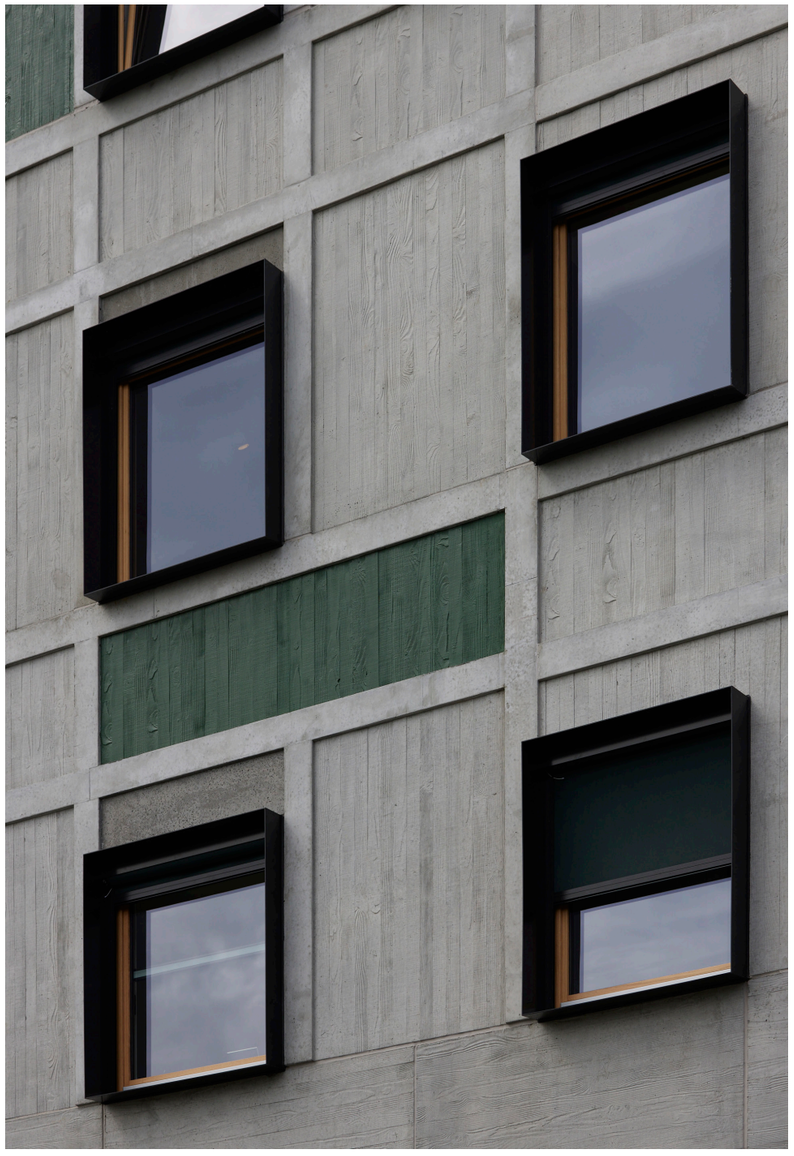
PROJECT RESPONSE

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

Thermal Performance

- An average thermal performance target for all residences of at least 8.5-Star NatHERS
- Glazing placement and sizing carefully managed to reduce unwanted heat gain and heat loss, while providing natural light to habitable spaces
- High-performance, double glazed window systems to all apartments
- External, operable blinds have been included where deemed appropriate through dynamic thermal and glare modelling

A preliminary sample of NatHERS ratings has been undertaken; the outputs are included in Appendix A.



Passive design features at Ferrars & York.
Photography by Kim Landy.

Energy Efficiency

An effective approach to energy efficiency is also often the simplest, cheapest way to reduce greenhouse gas emissions and ongoing operational costs.

Energy Efficiency

- All exposed floors and ceilings in non-residential areas demonstrate a minimum 10% improvement in required NCC2022 insulation levels (total R-value upwards and downwards)
- Heating and cooling systems are within 85% of the most efficient equivalent capacity unit available
- Domestic hot water provided by highly efficient centralised heat pump systems with a Band 3 efficiency rating

Efficient Systems and Appliances

- All internal lighting will be provided at 20% better than that required by NCC2022 Table J6.2a
- Electric induction cooktops will be provided for all apartments
- All apartments will have a master save-switch at the entry to enable all non-essential power to be switched off when leaving the apartment

Renewable Energy

- Zero fossil fuel project, including embedded network providing 100% renewable energy
- A minimum 33kWp solar photovoltaic system will be installed on the rooftop, offsetting residential and commercial power usage and supplementing domestic hot water systems
- Solar calculations and the PV array are provided in Appendix C

Induction cooktops at Ferrars & York. Photography by Kim Landy.

Indoor Environment Quality

Best practice design for Indoor Environment Quality means that building occupants can enjoy a comfortable space with high air quality, adequate daylight and ventilation. Indoor environment quality is affected by building orientation and layout, window sizes and specification, shading devices, products used for construction and fit-out and neighbouring structures.

PROJECT RESPONSE

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

Ventilation

- Glazing placement and sizing carefully managed to reduce unwanted heat gain and heat loss, while providing natural ventilation to habitable spaces
- The apartment entryways on each floor are open to the exterior, and allow for further natural ventilation through these areas and the apartment entries
- A minimum increase in outdoor air of at least 50% above AS 1668:2012 will be provided to all commercial tenancies
- Basement carpark to be fitted with CO monitors and variable speed drive fans

Natural Daylight

- All apartment living rooms and bedrooms have access to a view and daylight
- Designed to exceed BESS requirements for daylight into all habitable rooms and commercial and retail spaces
- Refer Appendix D for the Daylight Assessment

Thermal Comfort

- All apartments will have high quality double-glazed and thermally enhanced windows contributing to high thermal comfort outcomes
- External operable blinds have been included on facades, where deemed appropriate through dynamic thermal analysis

Acoustics

- All apartments will be acoustically separated from adjacent apartments and external spaces
- All apartments will have high quality double glazed and thermally enhanced windows contributing to high acoustic performance as well as sealed balcony sliding doors

High-performance double-glazed, thermally broken windows. Photography by Kim Landy.

Material Selection

All materials used in construction have an environmental and social impact. This varies dramatically depending on the raw materials used, manufacturing process, the application and ongoing maintenance requirements.

Careful consideration in selecting materials can significantly reduce the overall environmental and social impact of the project. Materials that have lower embodied energy, use recycled content and renewable resources, exclude harmful substances such as Volatile Organic Compounds (VOCs) and are more durable will result in a more sustainable, longer lasting and safer building.

PROJECT RESPONSE

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

- The selection of materials will focus on durability with the aim of extending replacement times
- During the project's Detailed Design phase all materials will be evaluated regarding their potential toxicity. This will result in the specify of low VOC materials, adhesives and finishes throughout wherever practical
- The project will specify zero to low VOC paints
- The project will minimise the use of MDF
- The project will minimise specification of PVC materials and finishes to limit off gassing exposure
- All structural timber used in construction will be FSC or AFS certified products
- Locally manufactured products will be utilised where possible
- Prioritising low embodied carbon materials
- Utilising recycled materials where possible

Recycled and repurposed materials from Ferrars & York, Revival Sustainable Practice. Photography by Kim Landy.

Sustainable Waste Management

New buildings and infrastructure generate waste during both construction and operation. With considered thinking and minor changes during design, both can be significantly reduced.

Over 75% of waste generated during demolition and construction is clean excavated material, concrete, bricks and timber which are all highly recyclable.

PROJECT RESPONSE

Similarly, approximately 47% of household waste is organic (including food and garden waste). When this goes to landfill methane emissions are released which account for around 3% of Australia's greenhouse gas emissions. However, if diverted to an organic waste treatment system, this waste can be productively reused in productive gardens while avoiding these methane emissions. Poor waste practices and treatment of the environment in the past have not only led to a degradation of our water, air and land resources but also represent a big financial burden to current and future generations.

Simple design decisions can influence the amount of construction waste being produced and operational waste streams being separated.

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

Waste Generated During Construction

- The builder and/or waste management contractor's contract will include a requirement for 90% by mass of construction waste to be diverted from landfill (i.e. reused or recycled). Prior to recycling soil, the contractor will ensure a soil test is conducted and soil is only reused in the absence of contamination

Waste During Operation

- Separated waste streams will be built into kitchen joinery, making it easy for residents to divert as much waste from landfill as possible
- Facilities for food, organics, and green waste will be incorporated into the building design
- Worm farm will be provided on the roof for rooftop gardening waste
- Refer to Reduce Reuse Recycle Strategy produced by HIP V. HYPE

Separated waste streams at Ferrars & York. Photography by Kim Landy.

Sustainable Transport

The sustainability of transport modes is related to both environmental, social and economic factors. Buildings, infrastructure and behaviour conducive to sustainable transport modes can lead to reduced greenhouse gas emissions, less air pollution, lower living costs and improved health and well-being.

Each project has the capacity to influence the future travel habits of occupants. By making a conscious decision to incentivise sustainable transport modes long lasting benefits can be created for the occupants and wider society.

PROJECT RESPONSE

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

Access to Public Transport

- Proximity to forms of public transport which connect it to the city where metropolitan Melbourne and outer suburbs can be accessed
- The project is a 5-minute walk to the Peason Street/Victoria St bus stop, a 13-minute walk to the Number 19 tram on Sydney Road, and a 12-minute walk to Brunswick train station, according to Google Maps

Active Transport

- 106 secure bike parks for residents and 21 for residential visitors are conveniently located outside of each apartment, in the common area entryways on each floor
- A commercial bicycle storage room with 20 bike parks is located in the basement mezzanine for tenants who cycle into work, along with an EOT with 2 showers and 20 lockers, and a bicycle repair station.
- We note from experience that bike parking at ground level presents a significant security challenge for commercial parking and visitors. Bike parking located to common area entryways to apartments is both more convenient and secure.
- The site's location means that many services will be accessible on foot, or by bicycle on the Upfield bike track
- Residents will be provided with a resident's welcome pack containing detailed information on public transport, cycling routes and local shopping

Secure bike parking room at Ferrars & York.
Photography by Kim Landy.

Sustainable Transport

The sustainability of transport modes is related to both environmental, social and economic factors. Buildings, infrastructure and behaviour conducive to sustainable transport modes can lead to reduced greenhouse gas emissions, less air pollution, lower living costs and improved health and well-being.

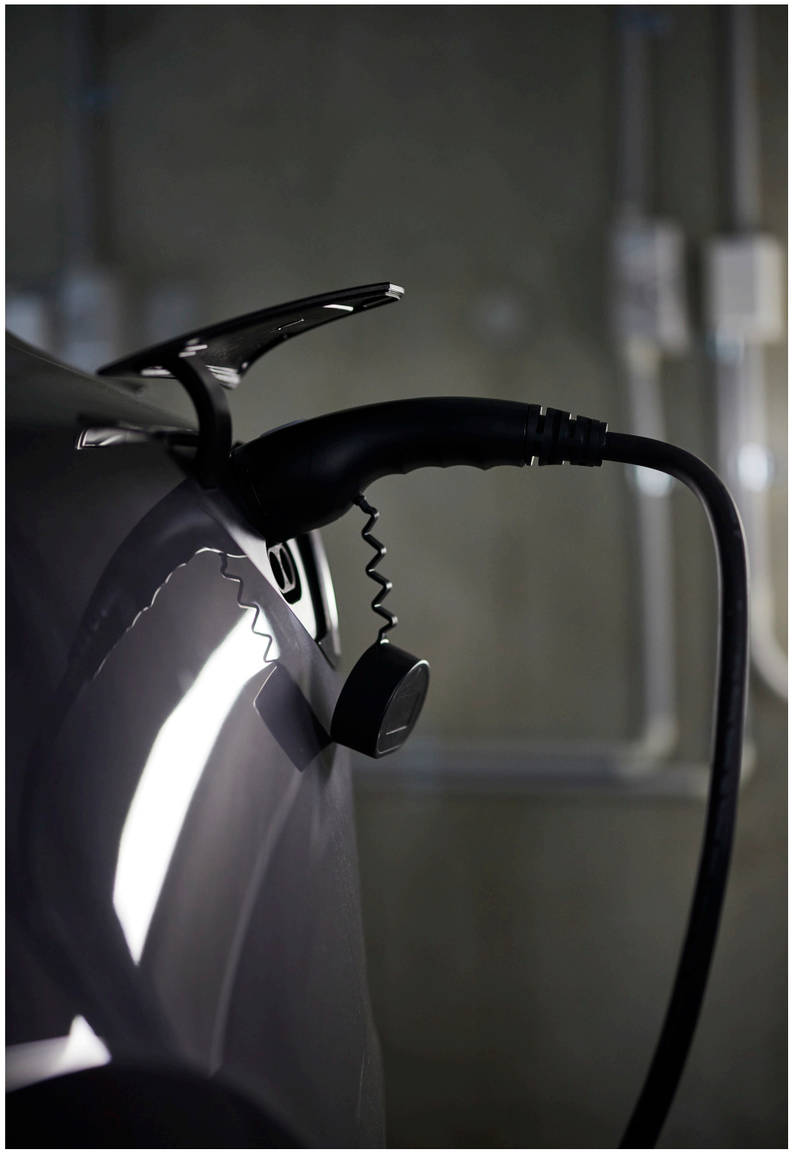
Each project has the capacity to influence the future travel habits of occupants. By making a conscious decision to incentivise sustainable transport modes long lasting benefits can be created for the occupants and wider society.

Minimisation of Private Vehicle Use

- The project contains only 40 car parks in triple car-stacker spaces, deincentivising private vehicle ownership and encouraging residents to travel by foot or bicycle
- Flexicar and GoGet, two council supported schemes, currently have 6 on-street car share pods within 500m of the site. The nearest car share pod is located at Victoria Street, appoximately 250m west of the site

Electric Vehicles

- One EV supercharge point will be provided from day 1, in a fire-isolated space in the Basement for all residents to use, allowing all residents to adequately charge vehicles



Integrated EV charging in Ferrars & York car stacker.
Photography by Kim Landy.

Urban Ecology

The impact of urban development on land use and biodiversity, and the best way to have a positive impact on this, varies dramatically according to context. Urban ecology is also critical to human health and to establishing resilience to urban heat impacts and the extreme heat that climate change is already bringing.

PROJECT RESPONSE

ParkLife 2 responds to these requirements through fundamental integration of a number of measures. These include:

- The design improves the existing site through incorporation of landscaping, including measures in the private and public realm to assist in minimising local urban heat impacts and preserving biodiversity value
- Locally indigenous, native or adaptive species which will be used to reduce maintenance requirements associated with upkeep, irrigation, and pest management
- Outdoor communal roofyard with an electric BBQ and seating will be provided for residents to share and enjoy
- Rooftop planting elements included within the landscape design, including integrated edible plantings
- A tap and floor waste will be provided on each balcony to encourage plants to be grown on balconies

Rooftop electric BBQ at Ferrars & York.
Photography by Kim Landy.

Innovation

ParkLife 2 is adopting a number of innovative strategies and programs that should be used as an exemplar within the City of Merri-Bek.

NET ZERO IN OPERATIONS

ParkLife 2 will enable net zero emissions from energy in operation. A key component of this approach is the delivery of highly efficient dwellings, coupled with 100% renewable energy supply, in a fossil-fuel free project. On-site solar photovoltaic electricity generation complements this efficiency and zero-carbon energy commitment via a Green Power bulk purchase agreement via the embedded network.

BETTER BUILDING EXCHANGE

The Better Building Exchange (BBX) located at 427 Albert Street in Brunswick is a space dedicated to cross disciplinary exchange aimed at amplifying ideas, skills, technologies and relationships to more rapidly decarbonise our built environment at scale.

Rapid deployment of low carbon strategies at scale is one of the great challenges of our time to reduce the climate impact of our built environment. We believe in the power of cross disciplinary exchange and genuine collaboration to achieve exceptional outcomes. We believe that many of the skills and technologies to achieve meaningful outcomes immediately already exist.

The aim of the Better Building Exchange is to amplify cross disciplinary exchange and genuine collaboration to get good work done. Less talk, greater understanding, more action. This may encompass practical workshops, panel discussions, conversations and exhibitions.

BBX aims to contribute in-excess of $50,000 of value to values-aligned organisations and community groups by providing access to the space for events at no rental charge.

Inaugural event at Better Buildings Exchange (BBX).
Photography by Farley Webb.

Innovation

ParkLife 2 is adopting a number of innovative strategies and programs that should be used as an exemplar within the City of Merri-Bek.

ON-SITE WEATHER STATION

ParkLife 2 will have on onsite weather station installed on the rooftop to collect localised weather data. The data will be accessible in real time to all residents and tenants and will be additionally used for future research, building connectivity and optimisation.

POST OCCUPANCY RESEARCH

The HV.H Better Buildings team are a boutique-scale, stand-alone team of qualified engineers and design professionals, who have the unique opportunity to be working internally on HIP V. HYPE's Projects.

This unique arrangement allows the Team to work collaboratively with the Projects team and conduct post-occupancy testing to validate our design advice. This data-driven design process allows the team to refine their advice based on real world feedback. Projects such as Ruskin Elwood, Davison Collaborative and Ferrars & York have all provided valuable post-occupancy feedback to the team, utilising methods such as detailed construction inspections, IEQ monitoring, blower door testing and thermal camera reviews. All project learnings are then taken forward to the next design brief and shared with external client project teams. Post occupancy research will be similarly conducted at ParkLife 2.

Team HV.H at Ceres workshop.
Photography by Kim Landy.

ParkLife 2 is adopting a number of innovative strategies and programs that should be used as an exemplar within the City of Merri-Bek.

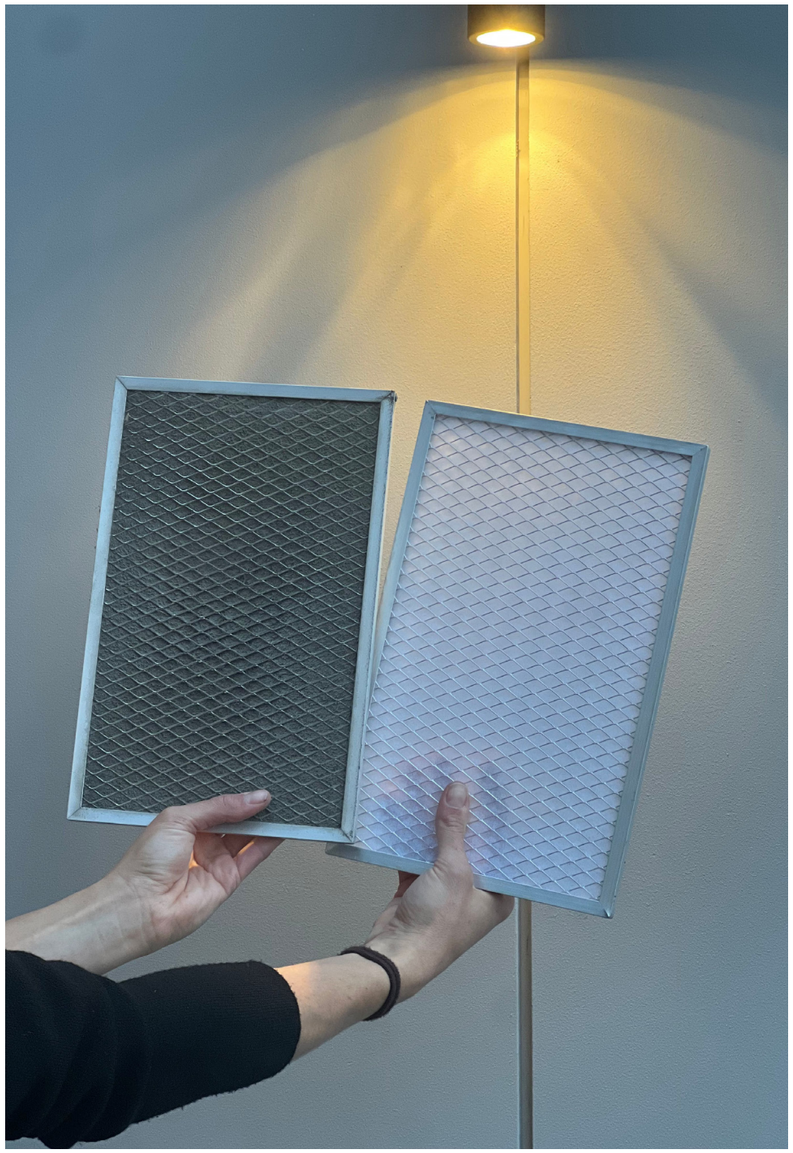
MECHANICAL HEAT RECOVERY VENTILATION

ParkLife 2 will adopt a best practice approach to ventilation across the project by installing Mechanical Heat Recovery Ventilation (MHRV) in each apartment.

MHRV allows for a continuous supply of 100% outside air day and night, providing excellent levels of internal air quality. MHRV helps limit CO2, particulate matter and TVOC levels internally, whilst also assisting with internal humidity and moisture management.

In additional to the above internal air quality improvements MHRV reduces overall heating and cooling energy by recovering internal energy and transferring to incoming air streams.

Furthermore MHRV can assist in limiting dust ingress as well as having acoustic benefits by allowing windows to be closed when needed.



MHRV filter change at Ferrars & York.
Photography by HIP V. HYPE.

Appendix A: Preliminary NatHERS Assessment

Executive Summary

The purpose of this report is to present a summary of the energy modelling process undertaken for the residential project at 427 Albert Street, Brunswick, VIC. The project intends to achieve NCC 2022 Amendment 1 Section J compliance through the NatHERS pathway.

SUMMARY OF RESULTS

To achieve NCC 2022 Part J compliance for the Class 2 component of the project, the following must be achieved:

- A total average NatHERS star rating for all Class 2 dwellings of at least 7 stars
- A minimum NatHERS rating of no less than 6 stars for any Class 2 dwelling within the project
- All apartments shall not exceed the heating load cap of 48 MJ/m2 per annum
- All apartments shall not exceed the cooling load cap of 30 MJ/m2 per annum

Based on the design documentation received to date, the following preliminary NatHERS results have been calculated for the project:

AVERAGE ENERGY INTENSITY (MJ/m²)	AVERAGE STAR RATING	MAXIMUM STAR RATING	MINIMUM STAR RATING	COMPLIANCE ACHIEVED?
34.9	8.5	9.3	7.6	YES

Based on the results above, the Class 2 component of the project at 427 Albert Street, Brunswick is compliant with NCC 2022, Section J.

Introduction

This report has been drafted for ParkLife 2 and is intended to assess the energy efficiency of the Class 2 dwellings under the NCC 2022 Energy Efficiency Requirements.

HIP V. HYPE (HV.H) has been engaged to assess the project at 427 Albert Street, Brunswick against the NCC 2022 Part J requirements for Class 2 projects.

Class 2 projects must adhere to the following:

J3D3 Heating and cooling loads of sole-occupancy units of a Class 2 building or a Class 4 part

The sole-occupancy units of a Class 2 building or a Class 4 part of a building must—

a. For reducing the heating or cooling loads—

i. Collectively achieve an average energy rating of not less than 7 stars; and

ii. Individually achieve an energy rating of not less than 6 stars, using house energy rating software; and

b. For general thermal construction, comply with J4D3; and

c. For thermal breaks, comply with J3D5 and J3D6; and

d. For compensating for a loss of ceiling insulation, other than where the house energy rating software has compensated for a loss of ceiling insulation, comply with Table J3D7w; and

e. For floor edge insulation, comply with J3D10(3), J3D10(5) and J3D10(6); and

f. For building sealing, comply with Part J5.

The following report will assess the project against these requirements.

ParkLife 2, Brunswick. Render by Austin Maynard Architects

Project Details

PROJECT SUMMARY

Project Name	Parklife 2
Address	427 Albert Street, Brunswick, Victoria, 3056
Traditional Custodians	Wurundjeri Woi-wurrung
Client	Clifton & Gilpin Pty Ltd
Architect	Austin Maynard Architects
Sustainability	HIP V. HYPE

Traditional Ownership: We recognise the intrinsic connection of Traditional Owners to Country and value their contribution to managing the land, water, natural and built landscapes.

The Wurundjeri Woi-wurrung people maintain traditional ownership and have shaped the cultural history of the site for thousands of years. They have an inseparable bond with local land and waters.

REFERENCED DOCUMENTATION

The following documents were used to model the ParkLife 2 project:

DRAWING NO	DESCRIPTION	REVISION
A100	Ground Level	17.12.24
A101	Level 01	17.12.24
A102	Level 02	17.12.24
A103	Level 03	17.12.24
A104	Level 04	17.12.24
A105	Level 05	17.12.24
A106	Level 06	17.12.24
A107	Level 07	17.12.24
A108	Level 08 (Roofyard)	17.12.24
A109	Basement Levels	17.12.24

MODELLING SOFTWARE

HERO v4.1 was utilised to assess the project against NatHERS requirements.

Modelling Assumptions

The following section details the assumptions used to develop the NatHERS modelling.

The following table describes the modelling parameter assumptions made for this analysis.

ITEM	ASSUMPTION VALUES	FURTHER COMMENTS
EXTERNAL WALLS	– Lightweight Construction: Askin Panel with R2.6 insulation – Heavyweight Construction: Concrete wall with R2.7 insulation	Walls have been built and assigned based on the following assumptions. Updated plans and wall build up will be reflected in final modelling and may affect the energy rating.
PARTY/INTERNAL WALLS	Lightweight plasterboard stud with R1.5 insulation	
ROOF AND EXPOSED CEILING	– Roof: Metal deck framing, with R4.0 – Exposed Ceiling: R4.0 insulation	
CEILING/FLOOR BETWEEN APARTMENTS	– 250mm ground floor suspended slab – 200mm slab between all levels – No added insulation	Ceiling fans to all living rooms are included.
FLOOR ABOVE UNCONDITIONED SPACES	All exposed: R2.0	
GLAZING PERFORMANCE	Window Glazing Aluminium-Framed, double glazing, high solar gain, low-E clear U: 2.3 SHGC 0.39	Window sizes, types and locations have been modelled based on the Architectural Drawings.

Modelling Results

Based on the modelling assumptions outlined above, the following results have been obtained.

RESULTS SUMMARY

APARTMENT NO.	HEATING LOAD (MJ/M²)	COOLING LOAD (MJ/M²)	TOTAL (MJ/M²)	NATHERS RATING
1.01	19.5	16.7	36.3	8.4
1.02	6.7	25.4	32.1	8.6
1.03	4	18.6	22.6	9.2
1.04	9.5	10.8	20.3	9.3
1.05	31.1	14.3	45.4	7.9
1.06	17.2	14.6	31.8	8.6
1.07	6.6	15.2	21.8	9.2
1.08	11.8	26.7	38.5	8.3
1.09	17.1	20.1	37.1	8.3
1.10	23	14.5	37.5	8.3
1.11	14.4	15.5	29.9	8.7

Modelling Results

Based on the modelling assumptions outlined above, the following results have been obtained.

RESULTS SUMMARY

APARTMENT NO.	HEATING LOAD (MJ/M²)	COOLING LOAD (MJ/M²)	TOTAL (MJ/M²)	NATHERS RATING
5.01	24.5	15.7	40.2	8.2
5.02	12.4	26.4	38.8	8.3
5.03	14.8	14	28.8	8.8
5.04	32.8	17.2	50	7.6
5.05	17.6	13.1	30.7	8.7
5.06	15.3	15.1	30.4	8.7
5.07	30.8	10.5	41.2	8.1
7.01	25.5	15.7	41.2	8.1
7.02	12.7	26.6	39.4	8.2
7.03	14.4	14.7	29.2	8.8
7.04	30.9	17.3	48.2	7.7
7.05	17.8	14	31.8	8.6
7.06	15.5	15.5	31	8.7
7.07	26.9	11.1	38	8.3
TOTAL AVERAGE	**18.1**	**16.8**	**34.9**	**8.5**

Modelling Results

Based on the results, the Class 2 component of the project at 427 Albert Street, Brunswick is compliant with NCC 2022, Section J.

RESULTS SUMMARY

AVERAGE ENERGY INTENSITY (MJ/M2)	AVERAGE STAR RATING	MAXIMUM STAR RATING	MINIMUM STAR RATING	COMPLIANCE ACHIEVED?
34.9	8.5	9.3	7.6	YES

Conclusion

The Class 2 component of the ParkLife 2 project was modelled using HERO software in order to confirm compliance to NCC 2022 Section J.

The NatHERS modelling results generated from the design documentation received to date confirms that the Class 2 component of the project complies with the NCC 2022 Section J requirements.

ParkLife 2, Brunswick. Render by Austin Maynard Architects

Appendix B: Water Sensitive Urban Design

Introduction

This report provides an overview of the water sensitive urban design (WSUD) strategy for the ParkLife 2 project within the municipal boundaries of the City of Merri-bek. This is in response to Clause 15.01-2L-05– Environmentally Sustainable Development, Clause 56.07 Integrated Water Management and Clause 56.08 Site Management.

CLAUSE 15.01-2L-05 ENVIRONMENTAL SUSTAINABLE DEVELOPMENT

Integrated Water Management

- Reduce total operating potable water use through appropriate design measures such as water efficient fixtures, appliances, equipment, irrigation and landscaping.
- Encourage the appropriate use of alternative water sources (including greywater, rainwater and stormwater).
- Incorporate best practice water sensitive urban design to improve the quality of stormwater runoff and reduce impacts on water systems and water bodies.

CLAUSE 56.07-4 STORMWATER MANAGEMENT OBJECTIVES

The overarching objective is:

- To minimise damage to properties and inconvenience to residents from stormwater
- To ensure that the street operates adequately during major storm events and provides for public safety
- To minimise increases in stormwater and protect the environmental values and physical characteristics of receiving waters from degradation by stormwater
- To encourage stormwater management that maximises the retention and reuse of stormwater
- To encourage stormwater management that contributes to cooling, local habitat improvements and provision of attractive and enjoyable spaces

CLAUSE 56.08 SITE MANAGEMENT

The overarching objective is:

- To protect drainage infrastructure and receiving waters from sedimentation and contamination
- To protect the site and surrounding area from environmental degradation or nuisance prior to and during construction of subdivision works
- To encourage the re-use of materials from the site and recycled materials in the construction of subdivisions where practicable

Standard C26

A subdivision application must describe how the site will be managed prior to and during the construction period and may set out requirements for managing:

- Erosion and sediment
- Dust
- Run-off
- Litter, concrete and other construction wastes
- Chemical contamination
- Vegetation and natural features planned for retention

Rainwater Tank Flow Modelling

The rainwater tank flows have been modelled using daily rainfall data, with a methodology that closely estimates usage due to occupants, inflows from rainfall events (actual data) and other relevant inputs to confirm potential for rainwater contribution.

TANK FLOW MODELLING

This model also includes landscape irrigation, and has the potential to include other systems such as greywater and blackwater, though these are not relevant to this project. All relevant inputs and factors are shown below.

Key Information

ITEM	SUMMARY
PROJECT SUMMARY	61 residential apartments: 5,319m², 35m² per person Commercial: 550m², 10m² per person
USAGE TYPE	WC: 2 half flush, 0.5 full flush per day Basin: 3 uses per day for 0.15 mins Shower: 1 use per day for 5 mins Laundry: 1 kg/day per person, 8kg/load and 70L per load Kitchen: 6 tap uses per day for 1.0 mins plus 1 dishwasher use per day Consumed: 5 cups per person per day
IRRIGATION	Landscape Areas; 220m² 10% undercover; Crop co-efficient: 0.5; Subsurface drip-type irrigation
RAINWATER REUSE	Rainwater is used to flush toilets throughout the residential component of the building.

Habitat Regeneration at Gillies Hall, Monash University.
Photography by Kim Landy

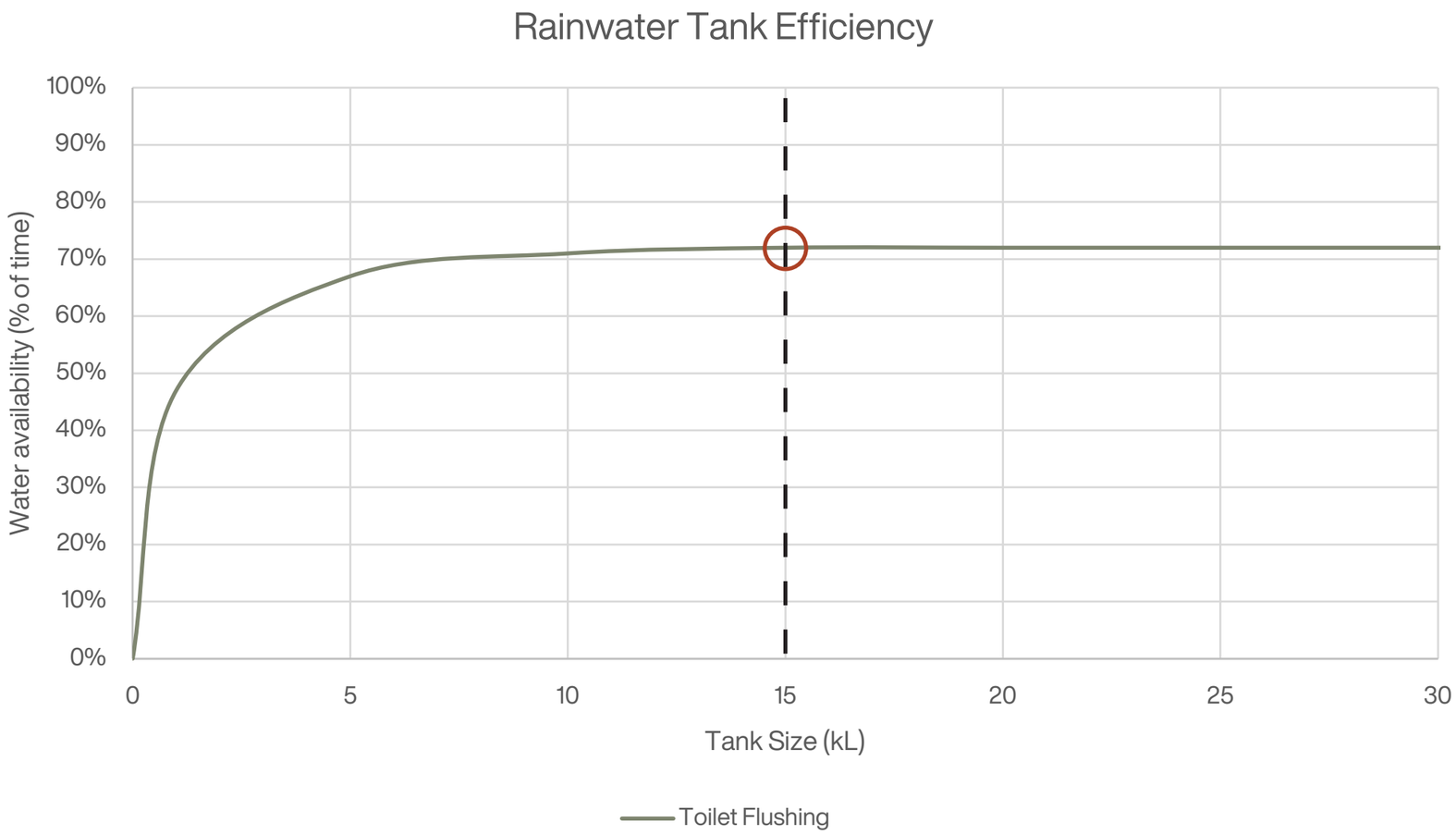
Rainwater Tank Efficiency

TANK EFFICIENCY

The assessment shows that the project rainwater catchment potential is sufficient to provide the entire building with reliable toilet flushing water.

The most optimal reuse demand strategy is to provide rainwater for flushing in the residential component of the project using a 15kL rainwater tank.

The tank will also be fitted with a first flush device, meter, tank discharge control and water treatment with associated power and telecommunications equipment.



Stormwater Calculations

Melbourne Water's Stormwater Treatment Objective – Relative Measure (STORM) Calculator is a simple analysis method for stormwater treatment and water sensitive urban design (WSUD). It rates the performance of treatment measures such as rainwater tanks, wetlands, and infiltration systems relative to best practice targets, and calculates a weighted average score. A STORM score of 100 or greater indicates that treatment measures are of sufficiently high standard.

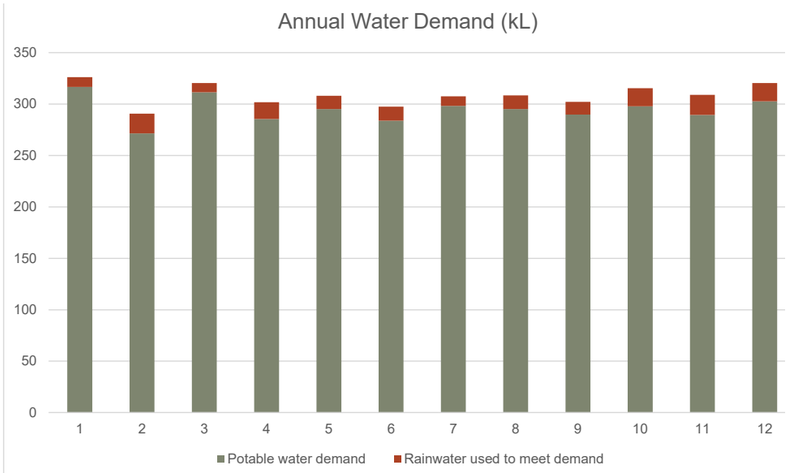
In order to demonstrate compliance, a score of 100% must be achieved using the Stormwater Treatment Objective – Relative Measure (STORM) tool, demonstrating that the following has been achieved:

- Suspended solids: 80% retention of typical urban load
- Total Nitrogen: 45% retention of typical urban load
- Total Phosphorous: 45% retention of typical urban load
- Litter: 70% reduction of typical urban load

A provisional STORM rating has been carried out, based on the following WSUD measures:

- Collection from non-trafficable roof area of 615.2m^2
  + Storage in a 15kL rainwater tank
  + The rainwater collected will be reused for toilet flushing in the building
- Collection from rooftop trafficable terrace area of 162.24m^2
  + Collection in a 3m^2 raingarden located on Level 4

The project achieves a STORM rating of 110%.



Annual potable water demand (kL) and rainwater used to meed demand.

Melbourne Water STORM Rating Report

TransactionID:	0		
Municipality:	MERRI-BEK		
Rainfall Station:	MORELAND		
Address:	427 Albert Street		
	Brunswick		
	VIC	3056	
Assessor:	HIP V. HYPE		
Development Type:	Residential - Mixed Use		
Allotment Site (m2):	1,189.00		
STORM Rating %:	110		

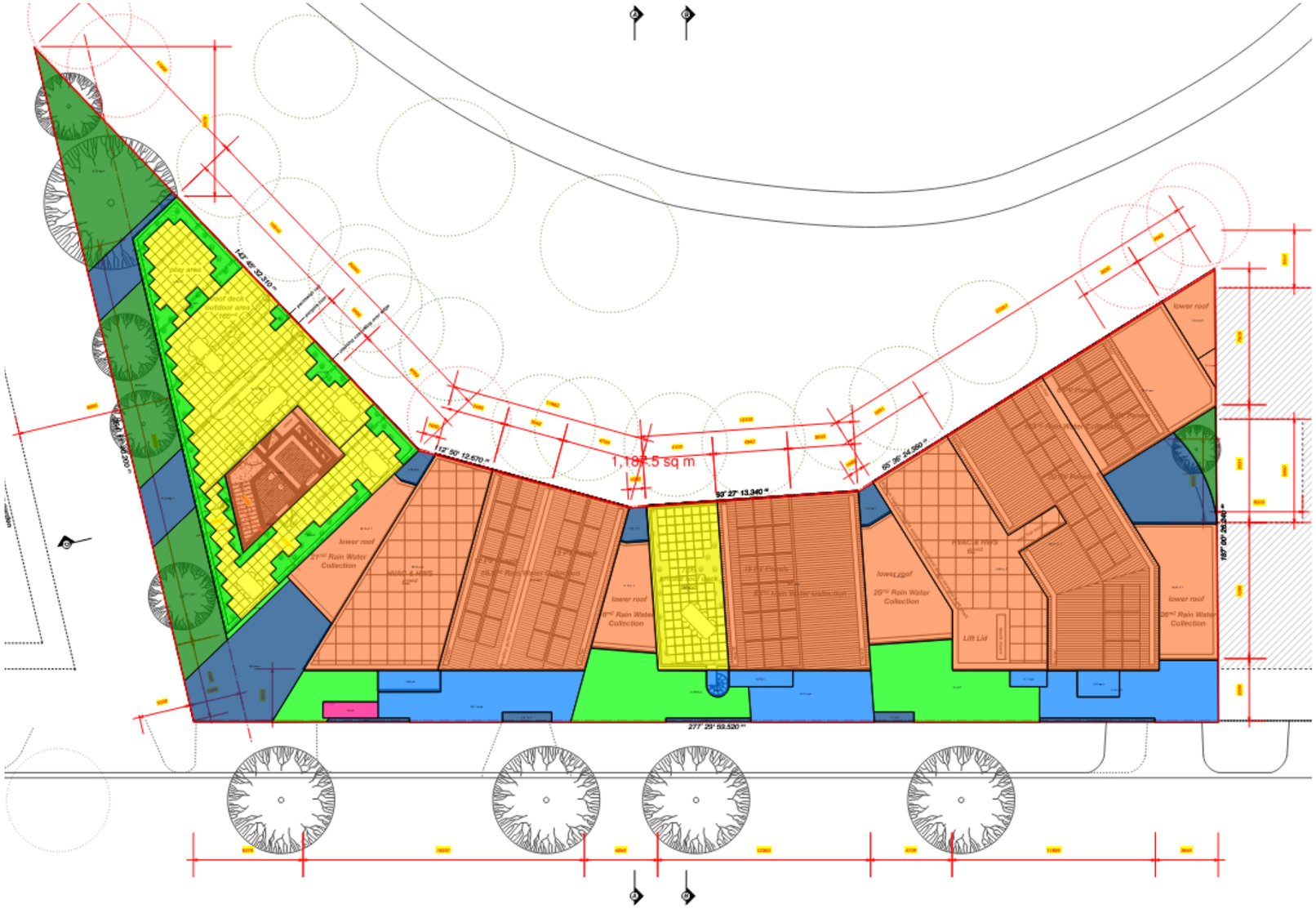
Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Roof to RWT	615.19	Rainwater Tank	15,000.00	100	159.40	81.00
Trafficable Roof Terraces to L4 Raingarden	162.24	Raingarden 300mm	3.00	0	130.00	0.00
All Other Trafficable Terraces to LPOD	90.04	None	0.00	0	0.00	0.00
Landscaping on Structure to LPOD	120.78	None	0.00	0	0.00	0.00
Ground Trafficable to LPOD	96.77	None	0.00	0	0.00	0.00

STORM Result.

Stormwater Collection Areas

This section provides the rainwater collection area mark-ups used for MUSIC calculations. Different colour highlights are used to denote different types of areas.

- Non-Trafficable Roof: 615.19 m²
- Trafficable Roof Terraces to L4 raingarden: 162.24 m²
- All Other Trafficable Terraces: 90.04 m²
- Landscaping on Structure: 120.78 m²
- Deep Soil Planting: 99.2 m²
- Ground trafficable: 96.77 m²
- Raingarden: 3 m²



Rainwater Tank Maintenance Plan

This manual lists the key tasks required to maintain a domestic rainwater tank and the recommended frequency of each task. This manual can be submitted with planning permit applications for projects that include the installation of a domestic rainwater tank. Once endorsed, the property owner is responsible for continuous implementation of rainwater tank maintenance, in accordance with the guidance in this manual.

Rainwater tanks are an exceptional tool for environmental protection. They collect and store roof water for use inside and outside the home. This simultaneously reduces the demand on our precious potable mains water and limits the amount of stormwater pollutants that enter our sensitive Bay.

Maintenance of rainwater tanks is relatively easy however it is important to do the following key tasks to ensure the quality of water is high:

- Stop leaf litter and debris entering the tank.
- Prevent bird droppings and dust building up in the gutters.
- Prevent mosquitoes and other animals entering the tank.

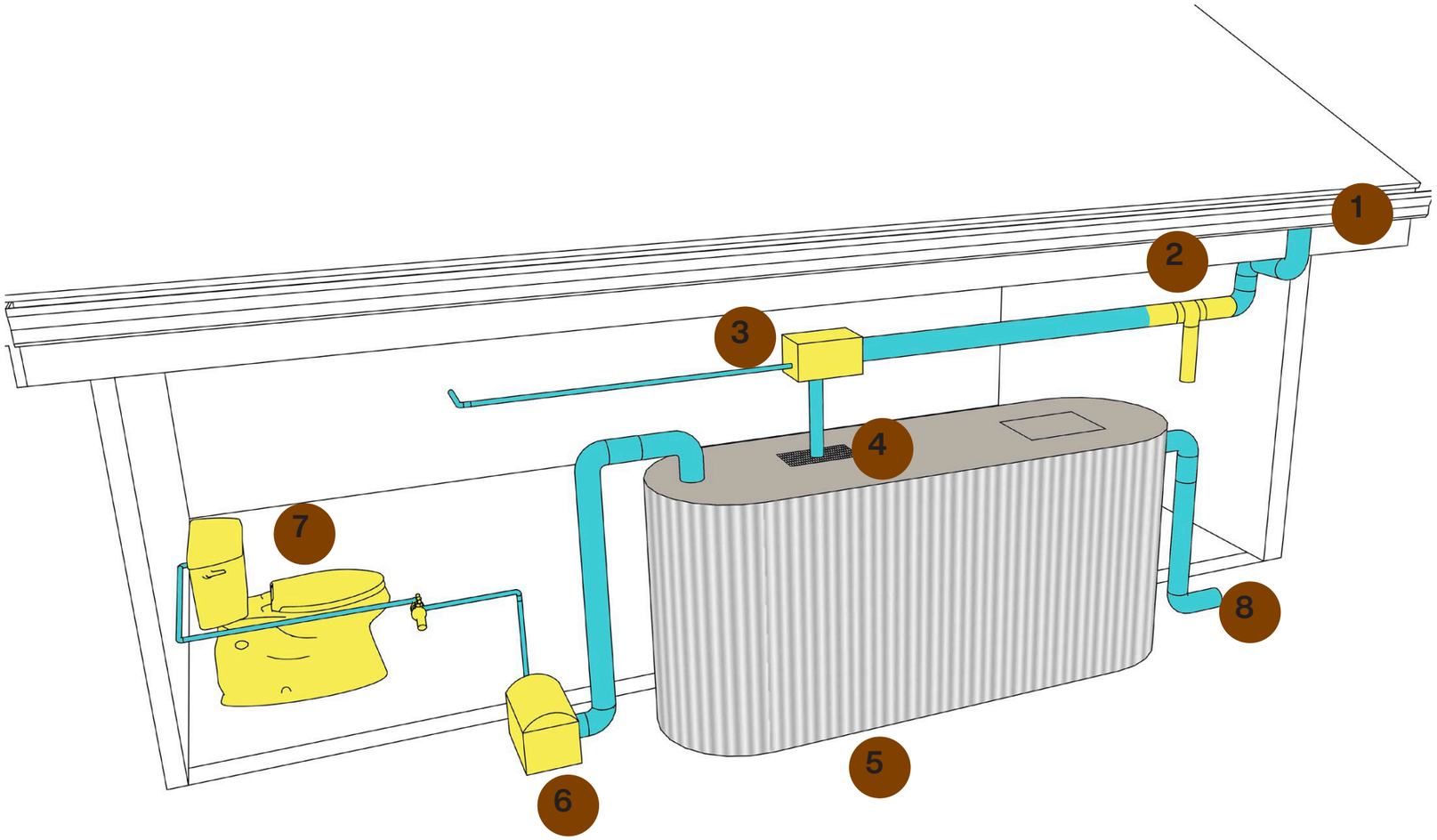
KEY INFORMATION

Tank connected to	Toilet flushing
Tank location	Basement Level B1
Drawing number	A109
Tank construction date	TBC
Date of final building inspection	TBC
Tank volume	1 x 15,000L RWT

Rainwater tanks at The Cape, Cape Paterson. Photography by Kim Landy.

Rainwater Tank Maintenance Plan

1. Rainwater enters the tank from the roof gutters - keeping these clear from leaf litter and debris will improve the quality of water entering the tank.
2. Rainwater passes through a first flush diverter, this device reduces the risk of contaminants (bird droppings etc.) entering the tank.
3. This system has internal household uses therefore a potable mains backup will be required to ensure that water is always available.
4. Collected rainwater flows through a protective mesh cover before entering the tank. The mesh filters sediment and debris from the water and keeps mosquitoes and other animals out of the tank.
5. Rainwater is stored in the tank until used.
6. A pump transfers rainwater from the tank into the distribution network. At this point, the rainwater is passed through a treatment system, including filters and UV light to ensure it is fit for use in the building.
7. Pipes and taps are used to distribute rainwater for internal (e.g. toilet and laundry) uses and external (e.g. garden).
8. When the tank is full, water is discharged to the local stormwater network via the tank overflow system.



Rainwater Tank Maintenance Plan

The property owner is responsible for checking the maintenance items in this checklist at the recommended frequency at the bottom of the table. The maintenance log at the bottom of the page should be filled in once each maintenance check is complete. Upkeep of this maintenance log should continue throughout the life of the rainwater tank.

MAINTENANCE CHECKLIST

ITEM	RAINWATER TANK ELEMENT	INSPECTION ITEM	Y/N	LIKELY MAINTENANCE TASK
1	Roof Gutters And Downpipes	Is there leaf litter or debris in the gutters?		Remove by hand and dispose responsibly.
2	First Flush Diverter	Is there anything blocking the first flush diverter (leaves etc)?		Remove by hand and dispose responsibly.
3	Potable Mains Back Up Device	Is the potable mains back up switch operating correctly?		Repair or replace device. Consider a manual switching device.
4	Mesh Cover	Has the mesh cover deteriorated or have any holes in it?		Replace mesh cover.
5	Tank Volume	Is there large amounts of sediment or debris sitting in the bottom of the tank, reducing the volume available in the tank to store water?		Remove sediment and dispose responsibly.
6	Pump	Is the pump working effectively? Have you heard it on a regular basis?		Check the potable mains back up is not permanently on. Repair or replace pump.
7	Pipes And Taps	Are pipes and taps leaking?		Repair as needed.
8	Overflow	Is the overflow clear and connected to the stormwater network?		Remove blockages and/or restore connections to stormwater.
9	Supporting Base	Are there any cracks or movement?		Empty tank to reduce weight then repair base.

MAINTENANCE LOG

MAINTENANCE DATE	MAINTENANCE UNDERTAKEN

Raingarden Maintenance Plan

This manual lists the key tasks required to maintain a raingarden and the recommended frequency of each task. This manual can be submitted with planning permit applications for developments that include the installation of a raingarden. Once endorsed, the property owner is responsible for continuous implementation of raingarden maintenance, in accordance with the guidance in this manual.

A raingarden is a specially designed garden that uses plants and soil to remove the pollutants from stormwater runoff that is generated from roofs, driveways and paths following rainfall events. These natural treatment systems help protect the environment by reducing the amount of stormwater runoff and pollutants that enter the Bay.

Maintenance of raingardens is essential in order to ensure that they:

- Effectively treat stormwater,
- Continue to look good, and
- Don’t cause local flooding. Stop leaf litter and debris entering the tank.

KEY INFORMATION

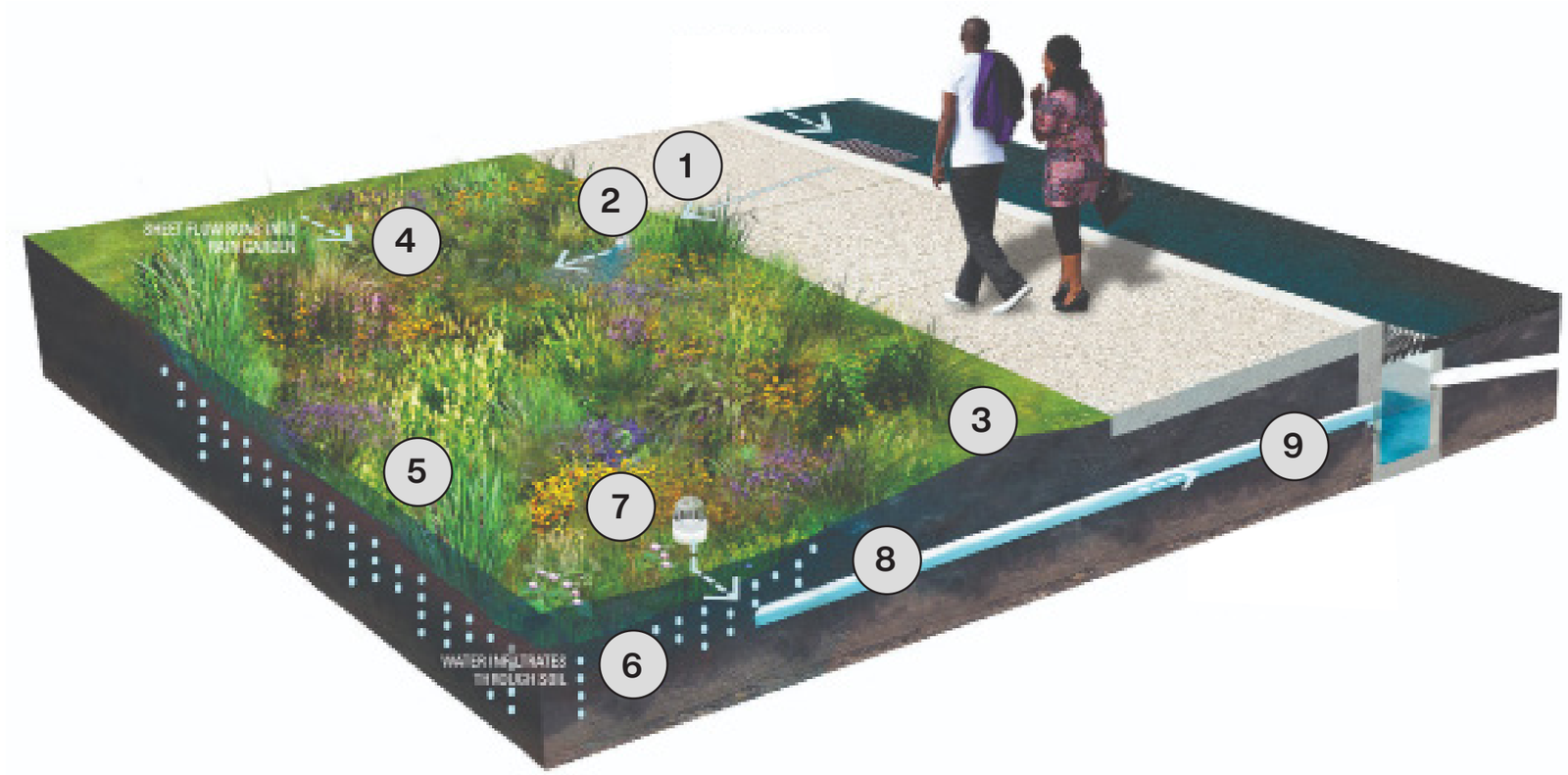
Raingarden location	Level 4 planters
Drawing number	A104
Raingarden construction date	TBC
Date of final building inspection	TBC
Area of Raingarden	3 m²
Area of Catchment	162.24 m²

Cape Paterson. Photography by Kim Landy.

Raingarden Maintenance Plan

1. Water enters the raingarden from a downpipe, rainwater tank overflow or nearby paved surfaces (e.g. driveway or path).
2. The raingarden is slightly lower than the surrounding area (~200mm) or raised edges are provided to allow water to pond.
3. Plants and roots help to remove pollutants from stormwater and allow water to filter through media easily
4. The flat surface of the well-draining raingarden system ensures no long term ponding of water or mosquito issues.
5. Water temporarily ponds in the depressed raingarden before it filters through the planting media.
6. Water filters through special planting media which helps to neutralise pollutants.
7. Once the water level in the raingarden gets too high it enters an overflow pit or pipe instead of flooding the property. Typically the overflow pipe will be 150mm higher than the raingarden surface level.
8. Treated water leaves the raingarden via a slotted drainage pipe that sits in a gravel drainage layer below the planting media.
9. Treated water enters the local stormwater network and is transported away from the property
10. An impermeable liner prevents water from the raingarden impacting nearby structures / foundations.

Note: : It is important not to add fertiliser, compost or floatable mulch to a raingarden as the nutrients will pass through the raingarden and pollute Waterways. The plants best suited to raingardens will grow well in the planting media and take nutrients for their growth from the water entering the raingarden.



Raingarden Maintenance Plan

The property owner is responsible for checking the maintenance items in this checklist at the recommended frequency at the bottom of the table. The maintenance log at the bottom of the page should be filled in once each maintenance check is complete. Upkeep of this maintenance log should continue throughout the life of the raingarden.

MAINTENANCE CHECKLIST

Item	Raingarden element	Inspection Item	Y/N	Likely maintenance task
1	Raingarden Inlet	Is there scour or erosion where water enters the raingarden?		Re-profile with hand tools, place gravel or stones at the inlet.
		Is there rubbish, leaf littter or sediment blocking the inlet?		Remove by hand and dispose responsibly.
2	Raingarden Surface Level	Is the level of the raingarden surface sitting less than 5 cm below the raingarden edges/borders?		Remove sediment from the surface so it is sitting about 10-20 cm below surrounding areas.
3	Raingarden temporary detention	Is there moss or clay on the surface of the raingarden which seem to be slowing the filtration of flows?		Remove the crust from the top of the raingarden and check water will filter through exposed media.
4	Raingarden Surface	Are there areas which appear to be higher and are not getting wet during rain events?		Smooth out surface so it is flat with hand tools
		Are there areas which have been eroded away or scoured?		
5	Plants	Are the plants looking unhealthy or dying?		Prune diseased sections, irrigate and/or replace dead plants. If plants keep dying, replace with a different type which is doing well. Do not use fertilizer to improve plant health as this will pollute the raingarden.
		Are there bare patches forming between plants?		
		Are there weeds present?		Remove weeds by hand and dispose responsibly
6	Planting Media	Is the raingarden holding water for more than a couple of hours after the rain has stopped?		Remove and replace the top 100 mm of planting material (loamy sand).
7	Overflow Pit	Is there anything blocking the top of the overflow pit / pipe preventing water from entering?		Remove blockages and dispose responsibly.
8	Under drainage	Is there rain draining to the bottom of the raingarden following heavy rain?		Flush the underdrain or uncover it to check for blockages.
9	Stormwater Network Connection	Is there water ponding in the overflow pit or pipe and not entering the stormwater network?		Remove blockages and dispose responsibly.

MAINTENANCE LOG

Maintenance Date	Maintenance Undertake

Construction Site Management Plan

A stormwater pollution reduction strategy will be contractually required to be adopted by the Main Contractor as part of its overall Environmental Management Plan (EMP). The strategy should prevent construction debris and littering entering the stormwater systems. The EMP will be required to specifically address the following in respect to stormwater:

OBJECTIVES

1. No impact on offsite surface or ground water due to construction activities
2. Site stormwater to be managed such that no contaminated water is discharged from site

GENERAL

1. Materials and waste to be stored at least 2m away from drainage lines
2. All inadvertent chemical spills to be cleaned up immediately
3. Application and inclusion of a range of mitigation measures for soil depositing on roads, stormwater, dust and noise

STORMWATER

1. Installation of hay bales around stormwater drains to minimise sediment entering stormwater
2. Installation of crushed rock to frequently used tracks / haul roads that may produce sediment

Construction site visit at Ferrars & York. Photography by Kim Landy.

Appendix C: Solar PV Calculations

Solar PV Calculations

The solar photovoltaic system will be located on the roof, ensuring uninterrupted solar access. The electricity generated will offset residential power usage and supplement centralised services energy demands.

SYSTEM REQUIREMENTS

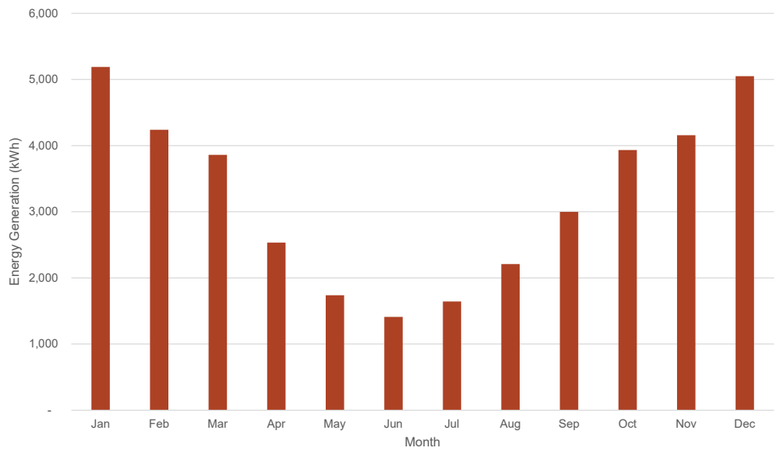
A minimum 33 kWp PV installation consisting of approximately 74 x 450W panels, each panel measuring roughly 1000mm x 1600mm shall be installed.

The PV array is proposed to be installed in an east-west direction in an effort to more closely match the expected demand profile of the residential apartments.

Final PV capacity will be confirmed following further development and spatial coordination between services and structure.

KEY INFORMATION

Proposed Installation	33.3 kWp
Panel Orientation	East-West
Panel Incline	20 degrees
System Losses	14.08%
Annual Generation	38,360 kWh/year

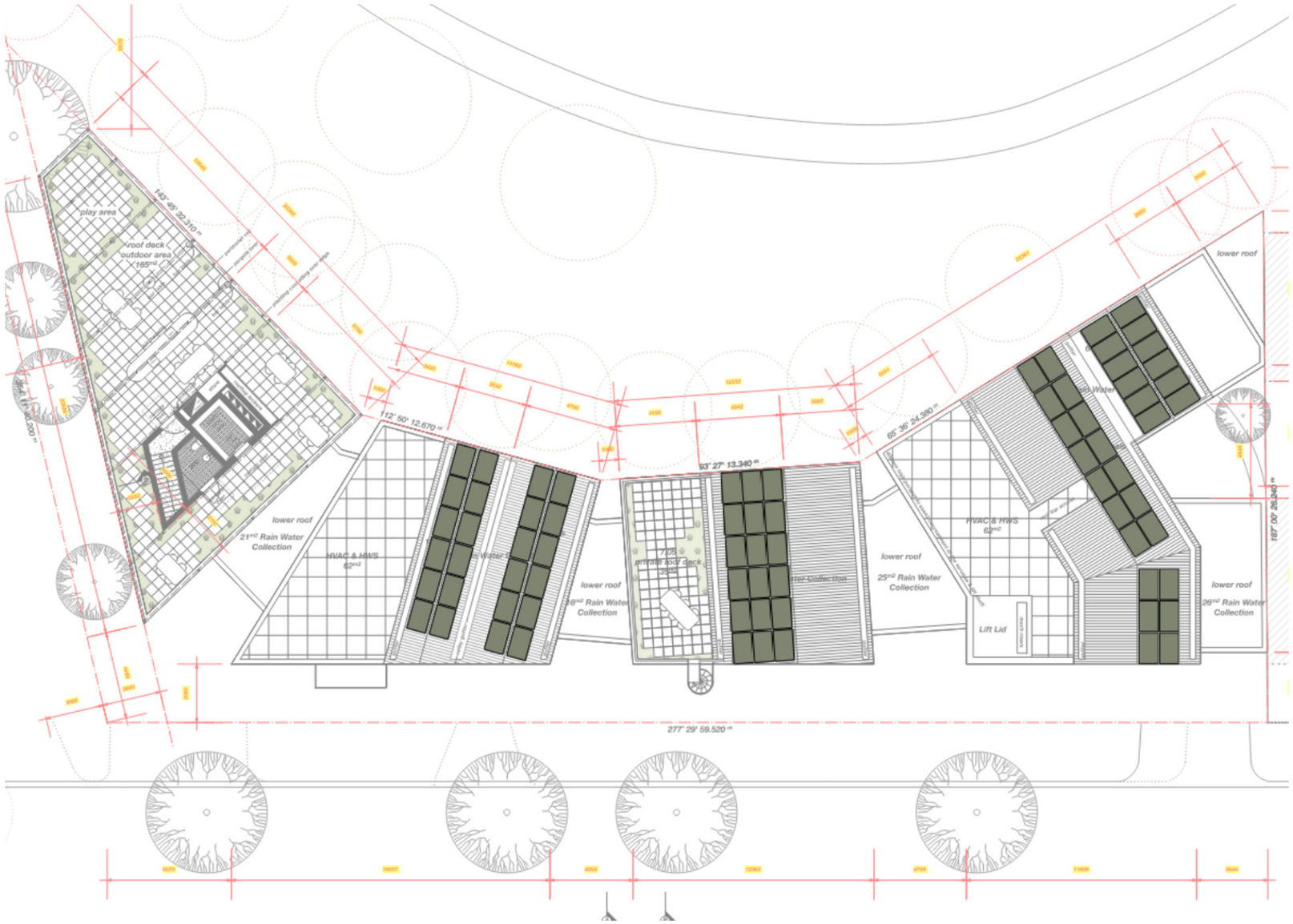


Anticipated monthly energy generation (kWh) from the proposed PV system.

Proposed Rooftop Layout

The image adjacent shows the rooftop PV layout for ParkLife 2. The layout has been designed so as to avoid overshadow from rooftop equipment and services.

The rooftop PV layout has been included in architectural design documentation, drawing reference A108.



74 x 450W PV panels located on the building roof.

Appendix D: Preliminary Daylight Assessment

Introduction

This report provides an overview of the daylight study conducted for the proposed multi-unit residential project at 427 Albert Street, Brunswick within the municipal boundaries of City of Merri-bek.

The objective of this report is to describe the methodology and results of daylight amenity to the residential apartments within the project, benchmarked against the best practice sustainability rating tool, BESS.

PROJECT BACKGROUND

ParkLife 2 brings high quality, sustainable apartment living to Brunswick. In collaboration with Austin Maynard Architects, this high exposure site on Albert Street provides highly efficient dwellings, coupled with 100% renewable energy supply, in a fossil-fuel free project. On-site solar photovoltaic electricity generation complements this efficiency and zero-carbon energy commitment.

STATUTORY CONTEXT

The site is situated in Brunswick within the municipal boundaries of City of Merri-bek. Merri-bek City Council has objectives and strategies relating to ESD which are contained in the Merri-bek Planning Scheme (Clause 15.01-2L Environmentally Sustainable Development) and Planning Policies.

As part of Town Planning requirements, the project team is to demonstrate best practice daylight levels to the residential apartments and commercial tenancies in the project, in line with the BESS rating tool, specifically;

- A Daylight Factor (DF) of at least 1.0 for 90% of the Living Area floor for at least 80% of apartments
- A Daylight Factor (DF) of at least 0.5 for 90% of the Bedroom floor area for at least 80% of bedrooms
- A Daylight Factor (DF) of at least 2.0 for 30% of the commercial floor areas

ParkLife 2, Brunswick. Render by Austin Maynard Architects

Methodology

The daylight study is being conducted using the Daylight Factor method, which calculates the ratio of light levels inside a building to the light levels outside the building. The higher the daylight factor, the better the daylight provision to the indoor space. Daylight Factor calculations rely on a standard overcast sky model and is not dependant on time, season or location-based inputs.

Daylight modelling is being conducted using Climate Studio plug-in for Rhino which uses the Radiance daylight simulation engine to model daylight factor results.

INPUTS & ASSUMPTIONS

The following table outlines the inputs and assumptions used in the daylight modelling analysis

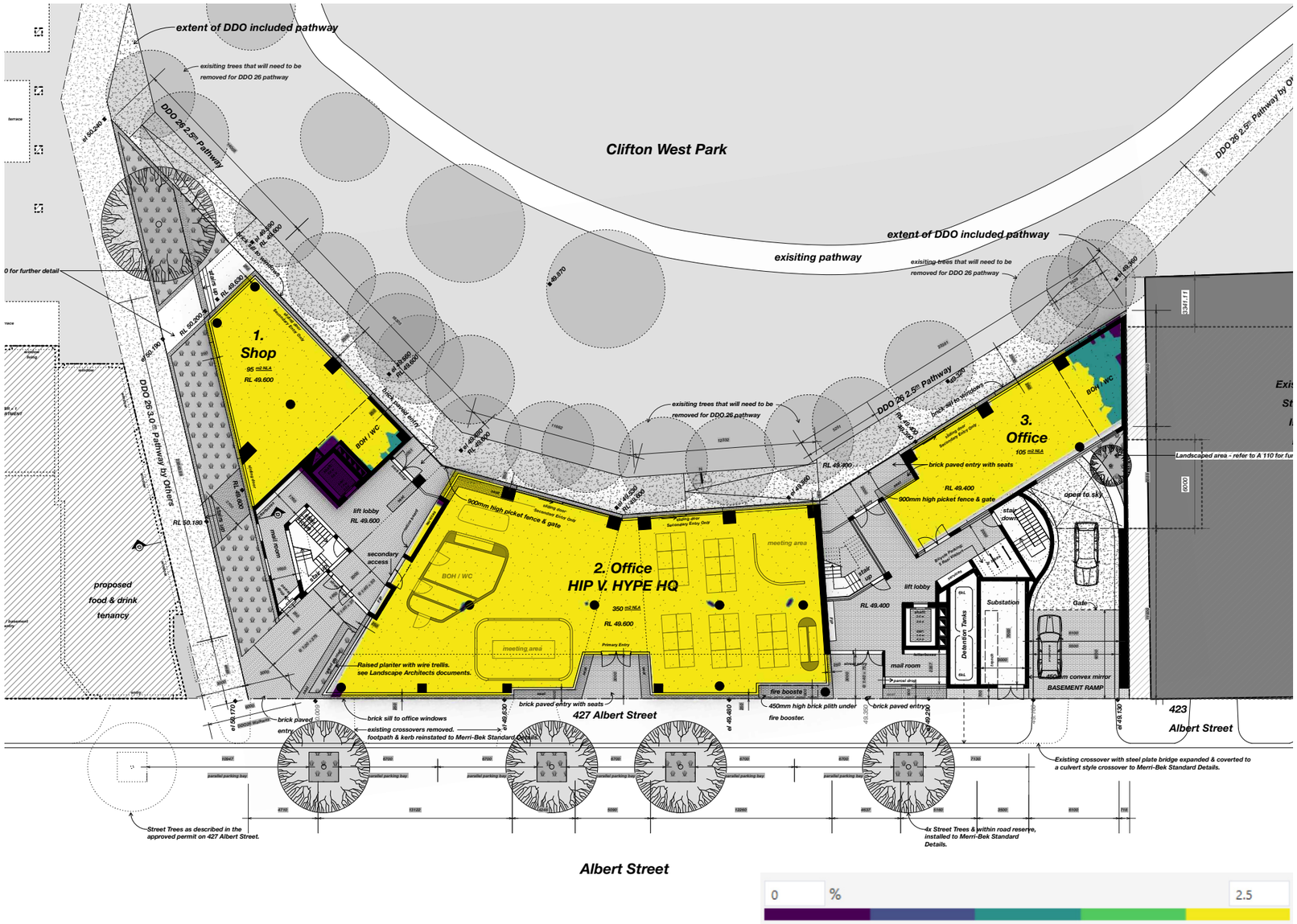
ITEM	PARAMETER
Architectural drawings	Architectural Drawings, Planning Submission Set dated 17.12.24
Apartment floor to ceiling heights	2.75 m
Living area glazing extent	Varied (40-60%)
Glazing visible light transmissivity	70% VLT
Floor reflectance	30% Light coloured timber floors
Wall reflectance	80% Light coloured walls
Ceiling reflectance	85% White painted ceiling
Daylight Analysis Surface	Floor level for apartments 740mm above FFL for commercial tenancies
Overshadowing	Adjacent property and buildings
Sky	10,000 lux CIE Overcast Sky, where the ground ambient light level ≈ 10,000 Lux
Exclusions	Robes, cupboards, toilets, bathrooms, joinery and circulation space have been excluded from the analysis.

Results
Ground Level

SUMMARY OF RESULTS: COMMERCIAL AREAS

The following table summarise the preliminary daylight assessment results for the commercial spaces on ground floor.

AREA	FLOOR AREA DF>2.0
1. Shop	100%
2. Office - HIP V. HYPE HQ	100%
3. Office	100%



Results
Level One

SUMMARY OF RESULTS: LEVEL 1 RESIDENTIAL

Living Areas

The following table summarise the preliminary daylight assessment results for the residential living areas on level one.

AREA	# OF LIVING AREAS	LIVING AREAS DF>1.0	% PASS
Living Areas	11	11	100%

Bedrooms

The following table summarise the preliminary daylight assessment results for the residential bedrooms on level one.

AREA	# OF BEDROOMS	BEDROOMS DF>0.5	% PASS
Bedrooms	18	16	88.9%

The results for level one areas are representative of levels one to three and have been extrapolated out to determine overall compliance in the final calculations on the conclusion page.

Results
Level Five

SUMMARY OF RESULTS: LEVEL 5 RESIDENTIAL

Living Areas

The following table summarise the preliminary daylight assessment results for the residential living areas on level five.

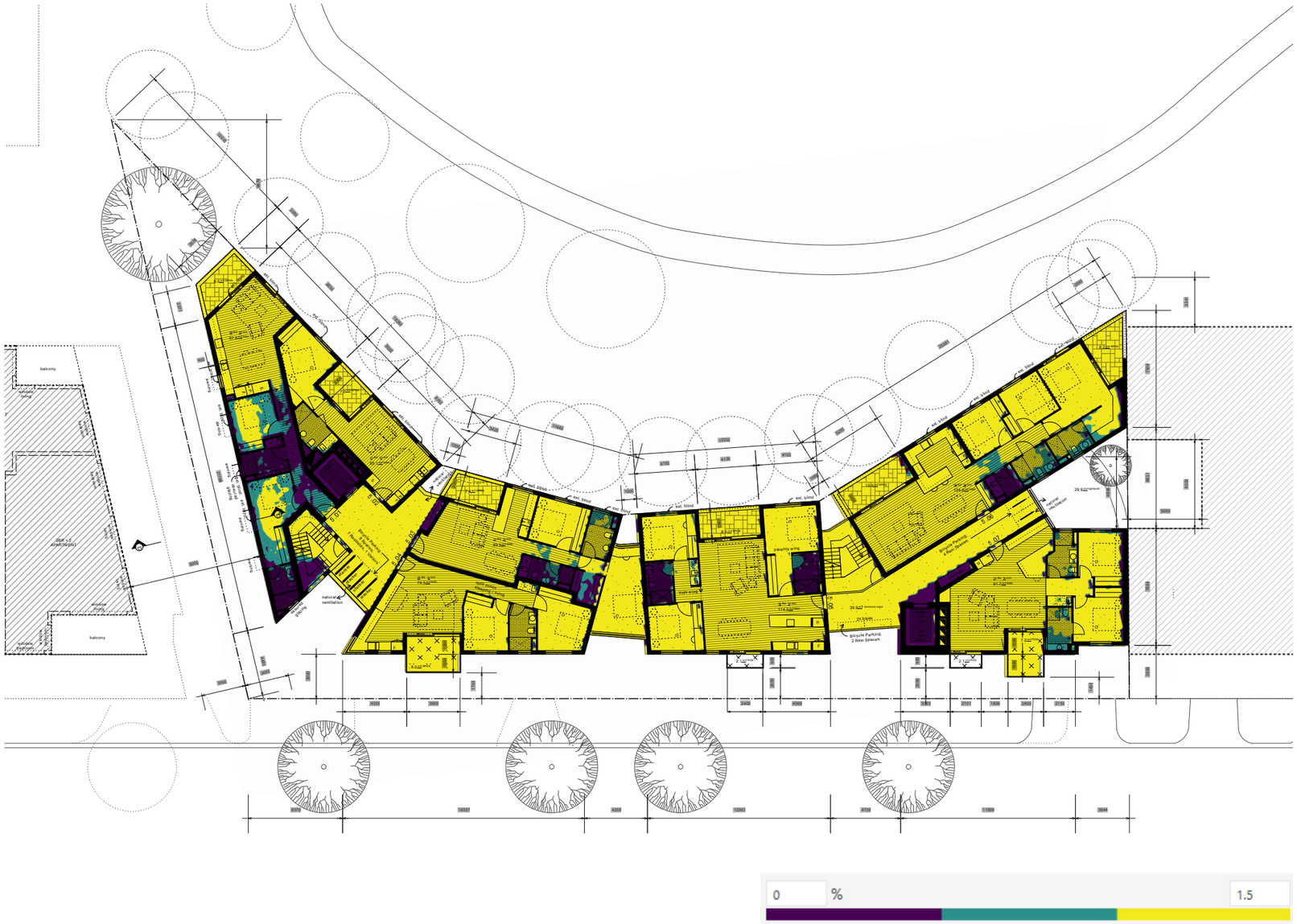
AREA	# LIVING AREAS	LIVING AREAS DF>1.0	% PASS
Living Areas	7	7	100%

Bedrooms

The following table summarise the preliminary daylight assessment results for the residential bedrooms on level five.

AREA	# OF BEDROOMS	BEDROOMS DF>0.5	% PASS
Bedrooms	15	15	100%

The results for level five areas are representative of levels four to seven and have been extrapolated out to determine overall compliance in the final calculations on the conclusion page.



Conclusion

The results presented show excellent outcomes for daylight amenity in both the commercial and residential areas of the project.

Furthermore, the results exceed the compliance requirements for Council and BESS for all areas.

SUMMARY OF RESULTS: COMMERCIAL

The following table summarise the preliminary daylight assessment results for the commercial spaces on ground floor.

AREA	FLOOR AREA DF>2.0
1. Shop	100%
2. Office - HIP V. HYPE HQ	100%
3. Office	100%

SUMMARY OF RESULTS: RESIDENTIAL

Living Areas

The following table summarise the preliminary daylight assessment results for the residential living areas.

AREA	# OF LIVING AREAS	LIVING AREAS DF>1.0	% PASS
Living Areas	61	61	100%

Bedrooms

The following table summarise the preliminary daylight assessment results for the residential bedrooms.

AREA	# OF BEDROOMS	BEDROOMS DF>0.5	% PASS
Bedrooms	114	108	94.7%

ParkLife 2, Brunswick. Render by Austin Maynard Architects

Appendix A: 3D Model

Appendix E: NCC Section J DTS Assessment

Preliminary Energy Efficiency Assessment

A preliminary Energy Efficiency assessment of the building thermal envelope has been conducted following the Deemed-to-Satisfy method.

The final Section J may be conducted following either a DTS or a Verification Method or a combination of the two.

ENERGY EFFICIENCY ASSESSMENT

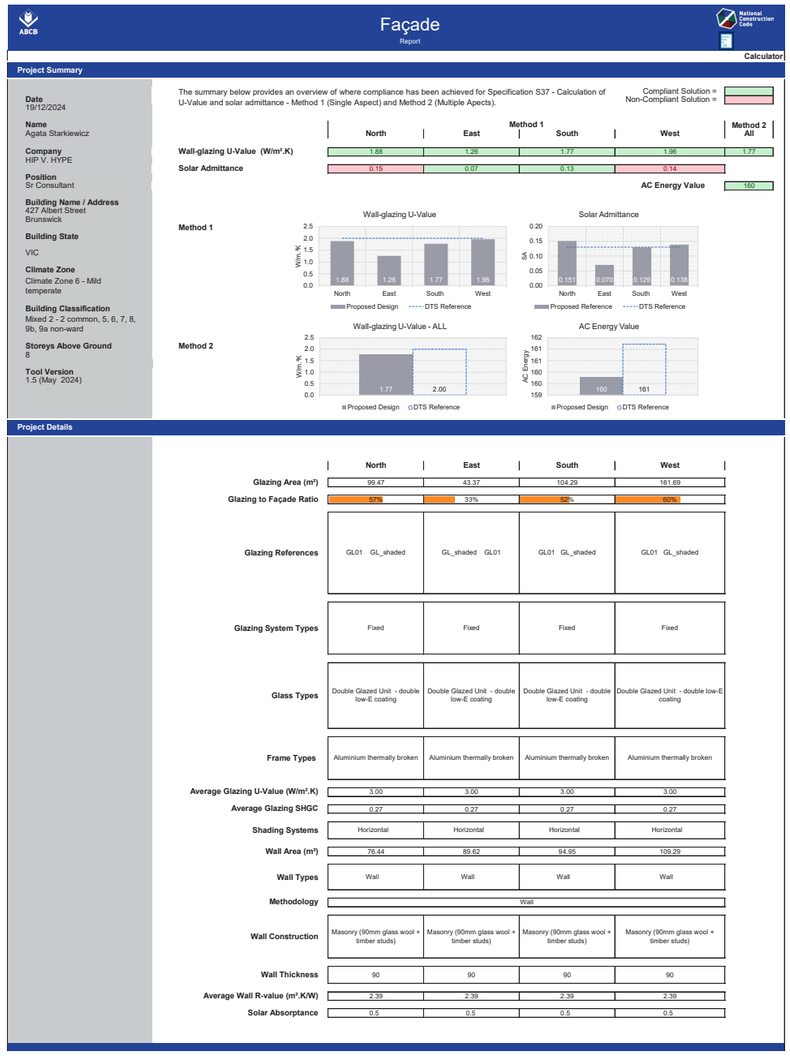
A preliminary Energy Efficiency assessment has been conducted to advise on the thermal performance requirements of the building thermal envelope in order to meet Council ESD expectations and to ensure that the project has the design potential to achieve its sustainability ambitions.

The following table outlines the assumptions that have been used as part of the preliminary assessment.

FABRIC ELEMENT	REQUIREMENT
External walls	R_T2.2
Internal walls	R_T1.6
Floors	R_T2.2
Roofs	R_T3.5
Glazing	U_w3.00 $SHGC_w$0.27

NCC 2022 FACADE CALCULATOR

A copy of the NCC 2022 Facade Calculator used to complete this preliminary assessment is provided hereafter.



ABCB — Façade Report — National Construction Code Calculator

Project Summary

Date 19/12/2024
Name Agata Starkiewicz
Company HIP V. HYPE
Position Sr Consultant
Building Name / Address 427 Albert Street Brunswick
Building State VIC
Climate Zone Climate Zone 6 - Mild temperate
Building Classification Mixed 2 - 2 common, 5, 6, 7, 8, 9b, 9a non-ward
Storeys Above Ground 8
Tool Version 1.5 (May 2024)

The summary below provides an overview of where compliance has been achieved for Specification S37 - Calculation of U-Value and solar admittance - Method 1 (Single Aspect) and Method 2 (Multiple Apects).

Compliant Solution =
Non-Compliant Solution =

	Method 1 North	Method 1 East	Method 1 South	Method 1 West	Method 2 All
Wall-glazing U-Value (W/m².K)	1.88	1.26	1.77	1.96	1.77
Solar Admittance	0.15	0.07	0.13	0.14	
AC Energy Value					160

Method 1

Method 2

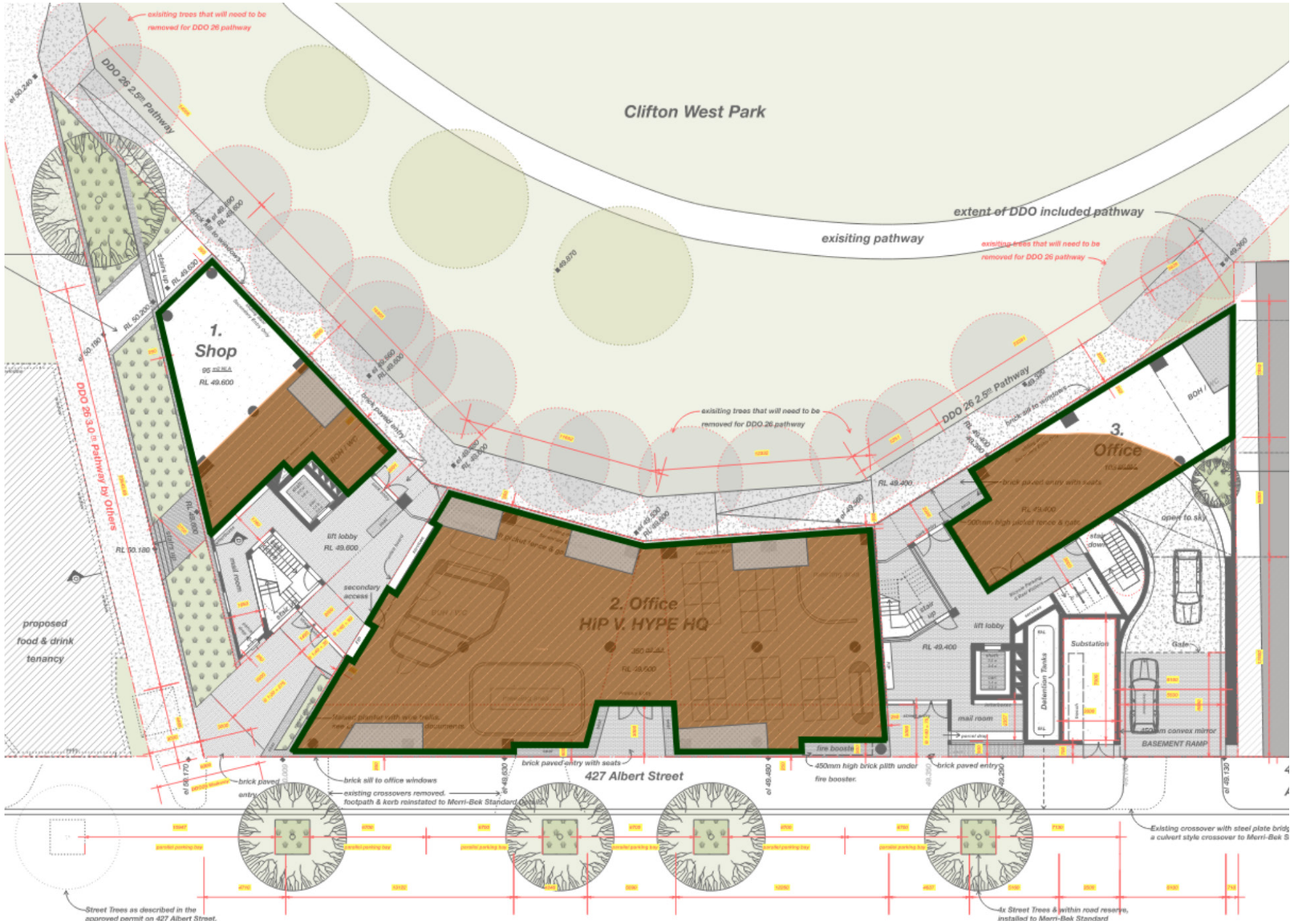
Project Details

	North	East	South	West
Glazing Area (m²)	99.47	43.37	104.29	161.69
Glazing to Façade Ratio	57%	33%	52%	60%
Glazing References	GL01 GL_shaded	GL_shaded GL01	GL01 GL_shaded	GL01 GL_shaded
Glazing System Types	Fixed	Fixed	Fixed	Fixed
Glass Types	Double Glazed Unit - double low-E coating	Double Glazed Unit - double low-E coating	Double Glazed Unit - double low-E coating	Double Glazed Unit - double low-E coating
Frame Types	Aluminium thermally broken	Aluminium thermally broken	Aluminium thermally broken	Aluminium thermally broken
Average Glazing U-Value (W/m².K)	3.00	3.00	3.00	3.00
Average Glazing SHGC	0.27	0.27	0.27	0.27
Shading Systems	Horizontal	Horizontal	Horizontal	Horizontal
Wall Area (m²)	76.44	89.62	94.95	109.29
Wall Types	Wall	Wall	Wall	Wall
Methodology	Wall			
Wall Construction	Masonry (90mm glass wool + timber studs)	Masonry (90mm glass wool + timber studs)	Masonry (90mm glass wool + timber studs)	Masonry (90mm glass wool + timber studs)
Wall Thickness	90	90	90	90
Average Wall R-value (m².K/W)	2.39	2.39	2.39	2.39
Solar Absorptance	0.5	0.5	0.5	0.5

Insulation mark-up

This section provides the floor, ceiling and wall insulation area mark-ups used for Section J DTS compliance. Different colour highlights are used to denote different types of insulation.

- Envelope Walls: Rt2.2
- Ground/basement soffit: Rt2.2
- Roof/ceiling soffit: Rt3.5



Appendix F: BESS Assessment

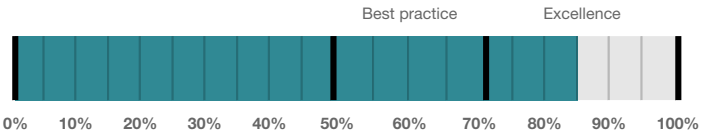
BESS Report

Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 427 Albert St Brunswick Victoria 3056. 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 Merri-bek City Council (Moreland).

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

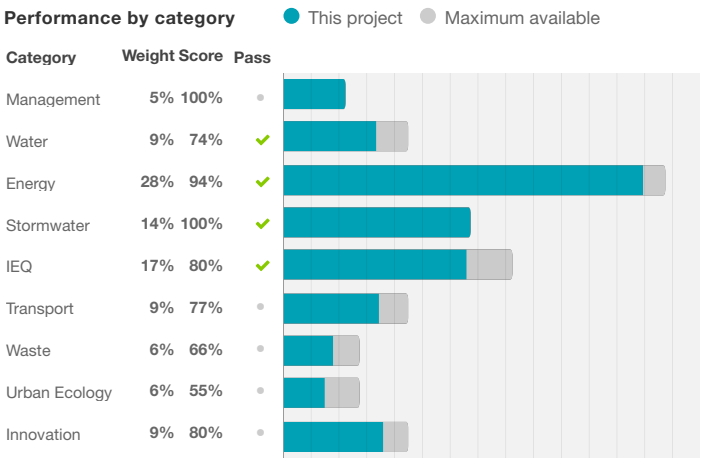


85%

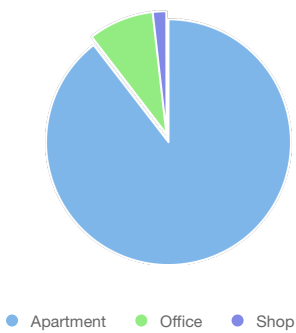
Project details

Name	427 Albert St, Brunswick VIC 3056, Australia
Address	427 Albert St Brunswick Victoria 3056
Project ID	E8C11B5D-R3
BESS Version	BESS-8
Site type	Mixed use development
Account	david@hipvhype.com
Application no.	
Site area	1,188 m²
Building floor area	5,253 m²
Date	19 December 2024
Software version	2.0.1-B.574

Performance by category



Project composition



Buildings

Name	Height	Footprint	% of total footprint
Building 1	8	959 m²	100%

Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	Building	% of total area
Apartment				
2B1B	22	74.7 m²	Building 1	31%
2B2B	15	86.0 m²	Building 1	24%
3B2B	8	114 m²	Building 1	17%
1B1B	16	53.5 m²	Building 1	16%
Total	**61**	**4,703 m²**	**89%**	

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Office				
02_HV.H HQ	1	350 m²	Building 1	6%
03_Office	1	105 m²	Building 1	1%
Total	**2**	**455 m²**	**8%**	
Shop				
01_Shop	1	95.0 m²	Building 1	1%
Total	**1**	**95 m²**	**1%**	

Supporting Evidence

Shown on Floor Plans

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 3.4	Location of clothes line (if proposed)		-
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 1.5	Floor plans with compliant bedrooms marked		-
IEQ 2.1	Dwellings meeting the requirements for being 'naturally ventilated'		-
Transport 1.1	Location of residential bicycle parking spaces		-
Transport 1.2	Location of residential visitor bicycle parking spaces		-
Transport 1.3	Residential bicycle parking spaces at ground level		-
Transport 1.4	Location of non-residential bicycle parking spaces		-
Transport 1.5	Location of non-residential visitor bicycle parking spaces		-
Transport 1.6	Location of showers, change rooms and lockers as nominated		-
Transport 2.1	Location of electric vehicle charging infrastructure		-
Waste 2.1	Location of food and garden waste facilities		-
Waste 2.2	Location of recycling facilities		-
Urban Ecology 1.1	Location and size of communal spaces		-
Urban Ecology 2.1	Location and size of vegetated areas		-
Urban Ecology 2.2	Location and size of green roof		-
Urban Ecology 2.4	Location of taps and floor waste on balconies / courtyards		-

Supporting Documentation

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

Credit summary

Management Overall contribution 4.5%

		100%
1.1 Pre-Application Meeting		100%
2.2 Thermal Performance Modelling - Multi-Dwelling Residential		100%
2.3 Thermal Performance Modelling - Non-Residential		100%
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%	74%	✔ Pass
1.1 Potable Water Use Reduction		63%	
3.1 Water Efficient Landscaping		100%	
4.1 Building Systems Water Use Reduction		100%	

Energy Overall contribution 27.5%

	Minimum required 50%	94%	✔ Pass
1.1 Thermal Performance Rating - Non-Residential		37%	
1.2 Thermal Performance Rating - Residential		100%	✔ Achieved
2.1 Greenhouse Gas Emissions		100%	
2.2 Peak Demand		100%	
2.6 Electrification		100%	
2.7 Energy consumption		100%	
3.1 Carpark Ventilation		100%	
3.2 Hot Water		100%	
3.4 Clothes Drying		60%	
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		100%	
4.4 Renewable Energy Systems - Other		N/A	✣ Scoped Out
		No other (non-solar PV) renewable energy is in use.	

Stormwater Overall contribution 13.5%

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

IEQ Overall contribution 16.5%

	Minimum required 50%	80%	✔ Pass
1.1 Daylight Access - Living Areas		100%	
1.2 Daylight Access - Bedrooms		66%	
1.3 Winter Sunlight		0%	
1.4 Daylight Access - Non-Residential		100%	✔ Achieved
1.5 Daylight Access - Minimal Internal Bedrooms		100%	
2.1 Effective Natural Ventilation		100%	
2.3 Ventilation - Non-Residential		100%	✔ Achieved
3.4 Thermal comfort - Shading - Non-Residential		0%	
3.5 Thermal Comfort - Ceiling Fans - Non-Residential		0%	
4.1 Air Quality - Non-Residential		100%	

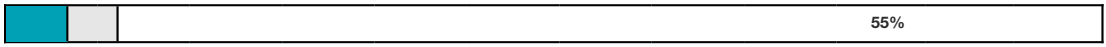
Transport Overall contribution 9.0%

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

Waste Overall contribution 5.5%

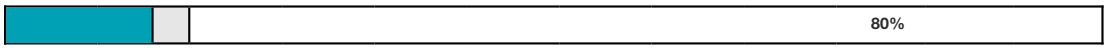
		66%	
1.1 - Construction Waste - Building Re-Use		0%	
2.1 - Operational Waste - Food & Garden Waste		100%	
2.2 - Operational Waste - Convenience of Recycling		100%	

Urban Ecology Overall contribution 5.5%



1.1 Communal Spaces	100%
2.1 Vegetation	50%
2.2 Green Roofs	100%
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%



1.1 Innovation	80%

Credit breakdown

Management Overall contribution 4.5%

100%

1.1 Pre-Application Meeting	100%
Score Contribution	This credit contributes 37.5% towards the category score.
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?
Question	Criteria Achieved ?
Project	Yes
2.2 Thermal Performance Modelling - Multi-Dwelling Residential	100%
Score Contribution	This credit contributes 22.4% towards the category score.
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?
Question	Criteria Achieved ?
Apartment	Yes
2.3 Thermal Performance Modelling - Non-Residential	100%
Score Contribution	This credit contributes 2.6% towards the category score.
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2022 Section J4D6?
Question	Criteria Achieved ?
Office	Yes
Shop	Yes
Criteria	Has preliminary modelling been undertaken in accordance with either NCC2022 Section J (Energy Efficiency), NABERS or Green Star?
Question	Criteria Achieved ?
Office	Yes
Shop	Yes
3.1 Metering - Residential	100%
Score Contribution	This credit contributes 11.2% 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 1.3% towards the category score.
Criteria	Have utility meters been provided for all individual commercial tenants?
Question	Criteria Achieved ?
Office	Yes
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
Office	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%	74%	✔ Pass

Water Approach	
What approach do you want to use for Water?:	Provide our own calculations
1.1 Potable Water Use Reduction	63%
Score Contribution	This credit contributes 71.4% towards the category score.
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.
Question	Percentage Achieved ?
Project	43 %
3.1 Water Efficient Landscaping	100%
Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Will water efficient landscaping be installed?
Question	Criteria Achieved ?
Project	Yes
4.1 Building Systems Water Use Reduction	100%
Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Where applicable, have measures been taken to reduce potable water consumption by >80% in the buildings air-conditioning chillers and when testing fire safety systems?
Question	Criteria Achieved ?
Project	Yes

Energy Overall contribution 27.5%

	Minimum required 50%	94%	✔ Pass

Use the BESS Deem to Satisfy (DtS) method for Non-residential spaces?:	Yes
Do all exposed floors and ceilings (forming part of the envelope) demonstrate meeting the required NCC2022 insulation levels (total R-value upwards and downwards)?:	Yes
Does all wall and glazing demonstrate meeting the required NCC2022 facade calculator (or better than the total allowance)?:	Yes
Are heating and cooling systems within one Star of the most efficient equivalent capacity unit available, or Coefficient of Performance (CoP) & Energy Efficiency Ratios (EER) not less than 85% of the CoP & EER of the most efficient equivalent capacity unit available?:	Yes
Are water heating systems within one star of the best available, or 85% or better than the most efficient equivalent capacity unit?:	Yes
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: All	Another Occupancy
Above the ceiling is: All	Another Occupancy
Exposed sides:	
1B1B	2
2B1B 2B2B	3
3B2B	4
NatHERS Annual Energy Loads - Heat:	
1B1B	4.0 MJ/sqm
2B1B	31.1 MJ/sqm
2B2B	14.8 MJ/sqm
3B2B	15.5 MJ/sqm
NatHERS Annual Energy Loads - Cool:	
1B1B	18.6 MJ/sqm
2B1B	17.2 MJ/sqm
2B2B	14.0 MJ/sqm
3B2B	15.5 MJ/sqm

NatHERS star rating:	
1B1B	9.2
2B1B	7.9
2B2B	8.8
3B2B	8.7
Type of Heating System: All	Reverse cycle central other
Heating System Efficiency: All	3 Stars (2019 MEPS)
Type of Cooling System: All	Refrigerative central other
Cooling System Efficiency: All	5 Stars (2019 MEPS)
Type of Hot Water System: All	Electric Heat Pump Band 3
Is the hot water system shared by multiple dwellings?: All	Yes
Clothes Line: All	No drying facilities
Clothes Dryer: All	Shared heat pump dryer

Solar Photovoltaic system profile

System Size (lesser of inverter and panel capacity):	
Residential	25.0 kW peak
Commercial	5.0 kW peak
Retail	3.0 kW peak
Orientation (which way is the system facing)?:	
Residential	West
Commercial	East
Retail	East
Inclination (angle from horizontal):	
Residential	20.0 Angle (degrees)
Commercial	20.0 Angle (degrees)
Retail	20.0 Angle (degrees)
Which Building Class does this apply to?:	
Residential	Apartment
Commercial	Office
Retail	Shop

1.1 Thermal Performance Rating - Non-Residential 37%

Score Contribution	This credit contributes 4.8% towards the category score.
Criteria	What is the % reduction in heating and cooling energy consumption against the reference case (NCC2022 Section J)?

1.2 Thermal Performance Rating - Residential 100% ✔ Achieved

Score Contribution	This credit contributes 15.2% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Apartment	8.5 Stars

2.1 Greenhouse Gas Emissions 100%

Score Contribution	This credit contributes 16.4% 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	110,795 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Apartment	57,758 kg CO2
Output	% Reduction in GHG Emissions
Apartment	47 %

2.2 Peak Demand 100%

Score Contribution	This credit contributes 0.6% towards the category score.
Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?

2.6 Electrification 100%

Score Contribution	This credit contributes 17% 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 22.7% towards the category score.
Criteria	What is the % reduction in annual energy consumption against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Apartment	1,034,321 MJ
Output	Proposed Building with Proposed Services (Actual Building)
Apartment	244,622 MJ
Output	% Reduction in total energy
Apartment	76 %

3.1 Carpark Ventilation 100%

Score Contribution	This credit contributes 5.7% towards the category score.
Criteria	If you have an enclosed carpark, is it: (a) fully naturally ventilated (no mechanical ventilation system) or (b) 40 car spaces or less with Carbon Monoxide monitoring to control the operation and speed of the ventilation fans?
Question	Criteria Achieved ?
Project	Yes

3.2 Hot Water 100%

Score Contribution	This credit contributes 0.6% towards the category score.
Criteria	What is the % reduction in annual energy consumption (gas and electricity) of the hot water system against the benchmark?

3.4 Clothes Drying 60%

Score Contribution	This credit contributes 5.1% 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	24,340 kWh
Output	Proposed
Apartment	17,038 kWh
Output	Improvement
Apartment	30 %

3.6 Internal Lighting - Apartments 100%

Score Contribution	This credit contributes 5.1% towards the category score.
Criteria	Is the maximum illumination power density (W/m2) in at least 90% of the relevant building class at least 20% lower than required by clause J7D3(1)(a) and Table J6.2a of the NCC 2022 Vol 1 (Class 2-9)?
Question	Criteria Achieved ?
Apartment	Yes

3.7 Internal Lighting - Non-Residential 100%

Score Contribution	This credit contributes 1.2% towards the category score.
Criteria	Does the maximum illumination power density (W/m2) in at least 90% of the area of the relevant building class meet the requirements in Table J7D3a of the NCC 2022 Vol 1?
Question	Criteria Achieved ?
Office	Yes
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 100%

Score Contribution	This credit contributes 5.7% 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	28,341 kWh
Office	5,473 kWh
Shop	3,284 kWh
Output	% of Building's Energy
Apartment	41 %
Office	38 %
Shop	30 %

4.4 Renewable Energy Systems - Other N/A Scoped Out

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

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

Stormwater **Overall contribution 13.5%**

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

Which stormwater modelling software are you using?:	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	110
Output	Min STORM Score
Project	100

IEQ Overall contribution 16.5%

	Minimum required 50%	80%	✔ Pass

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

1.1 Daylight Access - Living Areas	100%	
Score Contribution	This credit contributes 23.1% towards the category score.	
Criteria	What % of living areas achieve a daylight factor greater than 1%	
Question	Percentage Achieved ?	
Apartment	100 %	
1.2 Daylight Access - Bedrooms	66%	
Score Contribution	This credit contributes 23.1% towards the category score.	
Criteria	What % of bedrooms achieve a daylight factor greater than 0.5%	
Question	Percentage Achieved ?	
Apartment	95 %	
1.3 Winter Sunlight	0%	
Score Contribution	This credit contributes 7.7% towards the category score.	
Criteria	Do 70% of dwellings receive at least 3 hours of direct sunlight in all Living areas between 9am and 3pm in mid-winter?	
Question	Criteria Achieved ?	
Apartment	No	
1.4 Daylight Access - Non-Residential	100%	✔ Achieved
Score Contribution	This credit contributes 5.4% towards the category score.	
Criteria	What % of the nominated floor area has at least 2% daylight factor?	
Question	Percentage Achieved?	
Office	100 %	
Shop	100 %	
1.5 Daylight Access - Minimal Internal Bedrooms	100%	
Score Contribution	This credit contributes 7.7% 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	100%	
Score Contribution	This credit contributes 23.1% towards the category score.	
Criteria	What % of dwellings are effectively naturally ventilated?	
Question	Percentage Achieved?	
Apartment	100 %	
2.3 Ventilation - Non-Residential	100%	✔ Achieved

Score Contribution	This credit contributes 5.4% towards the category score.

Criteria	What % of the regular use areas are effectively naturally ventilated?
Question	Percentage Achieved?
Office	100 %
Shop	100 %

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?
Office	50 %
Shop	50 %

Criteria	What CO2 concentrations are the ventilation systems designed to achieve, to monitor and to maintain?
Question	Value
Office	800 ppm
Shop	800 ppm

3.4 Thermal comfort - Shading - Non-Residential 0%

Score Contribution	This credit contributes 2.7% towards the category score.

Criteria	What percentage of east, north and west glazing to regular use areas is effectively shaded?
Question	Percentage Achieved?
Office	0 %
Shop	0 %

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

Score Contribution	This credit contributes 0.9% towards the category score.
Criteria	What percentage of regular use areas in tenancies have ceiling fans?
Question	Percentage Achieved?
Office	0 %
Shop	0 %

4.1 Air Quality - Non-Residential 100%

Score Contribution	This credit contributes 0.9% towards the category score.

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

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

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

Transport Overall contribution 9.0%

77%

1.1 Bicycle Parking - Residential	100%
Score Contribution	This credit contributes 20.1% towards the category score.
Criteria	How many secure and undercover bicycle spaces are there for residents?
Question	Bicycle Spaces Provided ?
Apartment	106
Output	Min Bicycle Spaces Required
Apartment	61

1.2 Bicycle Parking - Residential Visitor	100%
Score Contribution	This credit contributes 20.1% towards the category score.
Criteria	How many secure bicycle spaces are there for visitors?
Question	Visitor Bicycle Spaces Provided ?
Apartment	21
Output	Min Visitor Bicycle Spaces Required
Apartment	13

1.3 Bicycle Parking - Convenience Residential	100%
Score Contribution	This credit contributes 10.1% towards the category score.
Criteria	Are bike parking facilities for residents located at ground or entry level?
Annotation	Bike parking is located in the common area entryways to apartments, providing easily accessible bike parking at their front doors. Bike parking at ground level presents a significant security challenge. Bike parking located near apartment entryways is both more convenient and secure.
Question	Criteria Achieved ?
Apartment	Yes

1.4 Bicycle Parking - Non-Residential	100%
Score Contribution	This credit contributes 2.4% 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 ?
Office	Yes
Shop	Yes
Question	Bicycle Spaces Provided ?
Office	10
Shop	10

1.5 Bicycle Parking - Non-Residential Visitor	100%

Score Contribution	This credit contributes 1.2% 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 ?
Office	Yes
Shop	Yes
Question	Bicycle Spaces Provided ?
Office	0
Shop	0

1.6 End of Trip Facilities - Non-Residential 100%

Score Contribution	This credit contributes 1.2% 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 ?
Office	1
Shop	1
Question	Number of lockers provided ?
Office	10
Shop	10
Output	Min Showers Required
Office	1
Shop	1
Output	Min Lockers Required
Office	10
Shop	10

2.1 Electric Vehicle Infrastructure 100%

Score Contribution	This credit contributes 22.5% towards the category score.
Criteria	Are facilities provided for the charging of electric vehicles?
Question	Criteria Achieved ?
Project	Yes

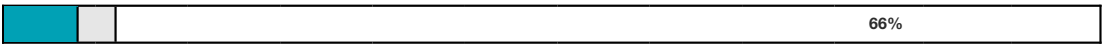
2.2 Car Share Scheme 0%

Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Annotation	Flexicar and GoGet, two Council supported schemes, currently have 6 on-street car share pods within 500m of the site. The nearest car share pod are located at Victoria Street, approximately 250m north-west of the site.
Question	Criteria Achieved ?
Project	No

2.3 Motorbikes / Mopeds 0%

Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	No

Waste **Overall contribution 5.5%**



1.1 - Construction Waste - Building Re-Use	0%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?
Question	Criteria Achieved ?
Project	No

2.1 - Operational Waste - Food & Garden Waste	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	Are facilities provided for on-site management of food and garden waste?
Question	Criteria Achieved ?
Project	Yes

2.2 - Operational Waste - Convenience of Recycling	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	Are the recycling facilities at least as convenient for occupants as facilities for general waste?
Question	Criteria Achieved ?
Project	Yes

Urban Ecology Overall contribution 5.5%

55%

1.1 Communal Spaces	100%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Is there at least the following amount of common space measured in square meters : * 1m² for each of the first 50 occupants * Additional 0.5m² for each occupant between 51 and 250 * Additional 0.25m² for each occupant above 251?
Question	Common space provided
Apartment	100 m²
Office	36.0 m²
Shop	29.0 m²
Output	Minimum Common Space Required
Apartment	85 m²
Office	36 m²
Shop	9 m²

2.1 Vegetation	50%
Score Contribution	This credit contributes 44% 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	19 %

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

2.3 Green Walls and Facades	0%
Score Contribution	This credit contributes 11.2% towards the category score.
Criteria	Does the development incorporate a green wall or green façade?
Question	Criteria Achieved ?
Project	No

2.4 Private Open Space - Balcony / Courtyard Ecology	100%
Score Contribution	This credit contributes 10.1% 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

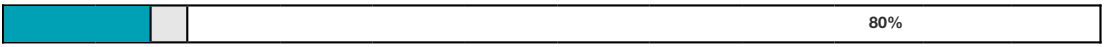
3.1 Food Production - Residential	0%

Score Contribution	This credit contributes 10.1% 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	31 m²

3.2 Food Production - Non-Residential	0%

Score Contribution	This credit contributes 1.2% towards the category score.
Criteria	What area of space per occupant is dedicated to food production?
Question	Food Production Area
Office	-
Shop	-
Output	Min Food Production Area
Office	10 m²
Shop	3 m²

Innovation **Overall contribution 9.0%**



Innovations	
Description:	
Site Activation	Better Buildings Exchange - knowledge hub and forum
Net Zero Carbon Energy	Net zero in operations
On Site Weather Station	Onsite connected and accessible weather station
Post Occupancy Research	Post occupancy research
Mechanical Heat Recovery Ventilation	Mechanical Heat Recovery Ventilation providing 100% OA to all apartments
Points Targeted:	
Site Activation	2
Net Zero Carbon Energy	1
On Site Weather Station	1
Post Occupancy Research	2
Mechanical Heat Recovery Ventilation	2

1.1 Innovation	80%

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.

We respectfully acknowledge that every project enabled or assisted by HIP V. HYPE in Australia exists on traditional Aboriginal lands which have been sustained for thousands of years.

We honour their ongoing connection to these lands, and seek to respectfully acknowledge the Traditional Custodians in our work.

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For additional information, questions unturned, collaboration opportunities and project enquiries please get in touch.

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HIP V. HYPE Sustainability Pty Ltd is a Climate Active certified carbon neutral business.

HIP V. HYPE is Equal Assurance ISO 9001, ISO 14001 and ISO 45001 certified.

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