



Sustainability Management Plan

Project Name:	Kyabram Fauna Park (ZOOS Victoria), 75 Lake Rd, Kyabram VIC 3620
Job Number:	8993
Date:	23/07/2026
Revision	03

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02	17/10/2024	Prepared by: Kevin Xiao	Reviewed by: Neema Swamy
03	23/07/2026	Prepared by: Rishitha Baddepudi	Reviewed by: Kevin Xiao

TABLE OF CONTENTS

1	Introduction	4
1.1	Statutory Framework	4
1.2	Project Description	4
2	Document Evidence	5
3	ESD Assessment Tools	7
3.1	Built Environment Sustainability Scorecard (BESS)	7
3.2	Blue Factor	7
4	ESD Achievements.....	8
5	ESD Initiatives & Implementation	9
5.1	Management	9
5.2	Water Resources	9
5.3	Energy Performance.....	10
5.4	Stormwater Management.....	11
5.5	Indoor Environment Quality – IEQ	11
5.6	Transport.....	12
5.7	Waste Management.....	13
5.8	Urban Ecology	13
5.9	Building Materials	14
5.10	Innovation	15
6	WSUD Response.....	16
6.1	Statutory Framework	16
6.2	Design Details	16
6.3	Rainwater Harvesting	17
6.4	Blue Factor Assessment	18
6.5	Construction Site Management Plan.....	19
6.6	Maintenance Requirements.....	19
7	Management, Maintenance & Monitoring.....	20
8	Appendices.....	21
8.1	Appendix A: Preliminary Daylight Analysis.....	21
8.2	Appendix B: Natural Ventilation Assessment.....	23
8.3	Appendix C: Material Pollutants Limits	25
8.4	Appendix D: Façade Calculator Results	26
8.5	Appendix E: BESS Assessment	27

1 INTRODUCTION

NJM Design has been commissioned to prepare a Sustainability Management Plan (SMP) that outlines the initiatives that have been incorporated into the design for the proposed Wildlife hospital development at Kyabram Fauna Park (ZOOS Victoria), 75 Lake Rd, Kyabram VIC 3620. This development includes a wide range of holistic sustainability measures which have been carefully integrated into the design of the development so that the residents will have the opportunity to reduce their ecological footprint without compromising their quality of life.

1.1 STATUTORY FRAMEWORK

The Campaspe Shire Council encourages the inclusion of Environmentally Sustainable Development (ESD) initiatives within the design process of new developments, which will result in more sustainable buildings within the community.

1.1.1 Building design – 15.01-2S

This report outlines how the development has incorporated key sustainable building aspects into the design process, referencing the specific objectives of 15.01-2S. These objectives cover the following categories:

- Energy performance
- Water resources
- Indoor Environment Quality
- Stormwater Management
- Transport
- Waste Management
- Urban Ecology

1.2 PROJECT DESCRIPTION

The proposed Wildlife hospital development site is situated at Kyabram Fauna Park (ZOOS Victoria), 75 Lake Rd, Kyabram VIC 3620.

Development Overview	
Site Area	Approximately 8439 m ²
Total Floor Area	Approximately 421 m ²
Ground Level	Wildlife Hospital

2 DOCUMENT EVIDENCE

The items below are required to be marked on the plans and specified in the ESD table within the town planning drawing sets.

Items to be marked on drawings:

- WSUD catchment plan showing roof catchment to tank, impermeable area to raingarden, and permeable area in line with the WSUD report.
- Location and size of Rainwater tank proposed
- Location and size of raingardens and type of raingarden selected (in-ground or planter box)- The location will be in accordance with the civil engineer suggestion (minimum 300mm away from boundary or structural footings and LPOD location consideration)
- Lighting sensors for external lighting (motion detectors, timers etc.)
- Showing Bicycle Racks
- Showing Ceiling fans
- Showing 5.16 kW Solar PV system on the roof plan
- Showing the location of bins on floor plans
- showing light colour roof (low absorptance value < 0.45) on roof plans and elevations

Items to be included in the Sustainability initiatives table:

Sustainability initiatives	Notes
General	The project will align with the Sustainability Management Plan report prepared by NJM Design for all Sustainability initiatives.
Management	A building user guide will be provided to the occupants.
Water Efficiency	- Development to be provided with an 8000L rainwater tank. Refer to WSUD Plan. - Rainwater tanks connected to the toilets. - WELS rating for water fittings/fixtures ▪ Toilets – 4 Star WELS rating ▪ Taps (bathroom and kitchen) – 5 Star WELS rating ▪ Showerhead – 4 Star WELS (≥ 6.0 but ≤ 7.5) ▪ Dishwashers – Default or unrated
Stormwater	Refer to WSUD Report/Plan
Energy	- The maximum illumination power density (W/m^2) of the development will meet the requirements in NCC 2022 - Fossil-fuel free development, no gas connection - Heating and cooling system within one Star of the most efficient equivalent capacity unit available, or CoP & EER of the most efficient equivalent capacity unit available. - Hot water system within one Star of the best available, or 85% or better than the most efficient equivalent capacity unit - Lighting sensors for external lighting (motion detectors, timers etc.) - 5.16 kW Solar PV on the roof.
Indoor Environment Quality	- Commitment to Outside Air Fan providing O/A rates above minimum from AS1668, and O/A provision to ensure CO2 concentration remains 800ppm - Ceiling fans to regular occupied areas
Waste	Four bins system including general waste, recycling, FOGO and glass.
Urban Ecology	Light colour roof (solar absorptance value <0.45) to minimise urban heat island effect

3 ESD ASSESSMENT TOOLS

There are a number of calculators and modelling programs available to help assess proposed developments against benchmarks set by the Victorian State Government, City Councils and the Building Code of Australia. This report has utilised the Built Environment Sustainability Scorecard (BESS) system which covers the overall sustainability of the project and STORM, which analyses stormwater treatment onsite.

3.1 BUILT ENVIRONMENT SUSTAINABILITY SCORECARD (BESS)

BESS is designed to support the 'Sustainable Design Assessment in the Planning Process' framework adopted by Victorian councils to ensure that sustainability is addressed within a proposed development. It assesses projects against a benchmark in 9 environmental categories where points are awarded for various design strategies implemented within the project.

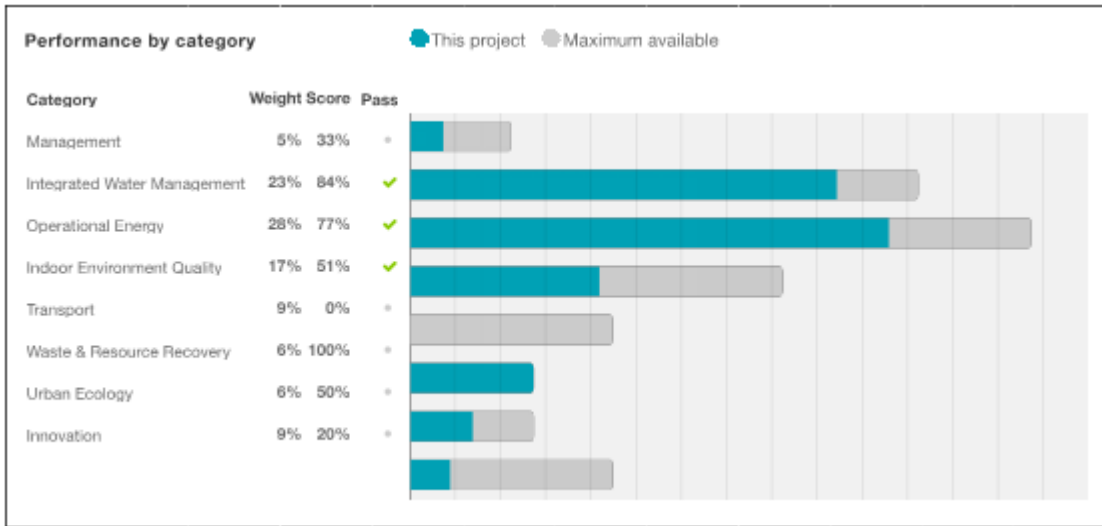
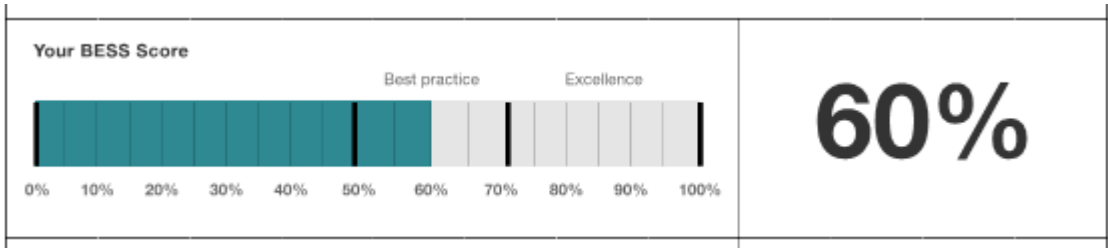
The overall BESS score (shown as a percentage figure) represents a percentage improvement over a benchmark project which is created from the project information inputted into the BESS tool by the user and is based on minimum requirements of the National Construction Code (NCC) and Minimum Energy Performance Standards.

3.2 BLUE FACTOR

The assessment of stormwater management for this project has been undertaken using the Blue Factor tool. This approach evaluates the effectiveness of Water Sensitive Urban Design (WSUD) measures implemented across the site. The Blue Factor provides a performance-based score that reflects how well the development manages stormwater through strategies such as infiltration, retention, and reuse. The resulting score indicates whether best practice environmental targets for stormwater management have been achieved.

4 ESD ACHIEVEMENTS

The following table outlines the scores achieved in each assessment tool used. This development has achieved a 'Pass' score in each of the mandatory category (Water, Energy, Stormwater, IEQ).



Blue Factor Results		
Blue Factor Score	Required Score 100%	Project Score Achieved over 100%

5 ESD INITIATIVES & IMPLEMENTATION

5.1 MANAGEMENT

Design Requirement	Implementation Stage	Responsibility
Thermal Performance Modelling Preliminary façade assessment has been undertaken in accordance with NCC 2022 Section J4D6 requirement. Refer to Appendix D: Façade Calculator Results for details.	Planning stage	ESD
Building User Guide The building user guide will be provided to the occupants and contain the following information: - A description of operational and maintenance requirements of the heat and cooling systems and hot water systems for efficient and safe use of these systems - A description of operational and maintenance requirements of building initiatives to reduce energy and water use - A description of operational and maintenance requirements of water sensitive urban design features - A description of operational and maintenance requirements of waste management strategy Transport facilities including public transport information	After construction	Project manager/Building manager

5.2 WATER RESOURCES

Design Requirement	Implementation Stage	Responsibility
Potable Water Use Reduction (Interior Uses) To improve water efficiency, efficient fixtures and fittings will be installed to ensure a reduction in the total water consumption at the premises. The development is committing to the following fixtures and fittings: - Showerheads: 4 Star WELS (≥ 6.0 but ≤ 7.5) - Kitchen Taps: 5 Star WELS rating - Bathroom Taps: 5 Star WELS rating - Dishwashers: Default or unrated - WC: 4 Star WELS rating	Detailed Design	Architect
Rainwater Collection & Reuse Reducing potable (mains) water consumption through a rainwater collection and re-use scheme ensures cost savings and the efficient use of water. Water will be collected across a roof area of approx. 421 m ² and stored in a rainwater tank of 8,000L. The water will be used to flush all toilets throughout the development and raingarden	Detailed Design	Hydraulic Engineer

Design Requirement	Implementation Stage	Responsibility
systems with a total area of 20 m² or equivalent will be used to treat approx. 1971.6m² of impervious surfaces. Refer to the Water Sensitive Urban Design section of this report for the full details of stormwater management initiatives.		

5.3 ENERGY PERFORMANCE

Design Requirement	Implementation Stage	Responsibility
Electrification		
Development will use electricity only.	Detailed Design	Services Engineer
Hot Water System		
Domestic hot water systems are a significant source of greenhouse gas emissions in a development. Every effort should be made to minimise the energy consumption of these items. This project commits to Water heating systems within one star of the best available, or 85% or better than the most efficient equivalent capacity unit.	Detailed Design	Architect / ESD Consultant
Non-Residential - Thermal Performance Rating		
Prior to the building construction stage of the project, a Section J DTS (NCC 2022) assessment has been conducted with the following commitments: - All exposed floors and ceilings (forming part of the envelope) should demonstrate compliance with the required NCC 2022 insulation levels, with a 10% improvement above DTS requirements: ▪ Roof and Ceiling: Total R value of 3.52 (10% Improvement over R3.2) ▪ Floor (without in-slab heating): Total R value of 2.2 (10% Improvement over R2.0) - All wall and glazing demonstrate meeting the required NCC 2022 Façade Calculator – Refer to Appendix D: Façade Calculator Results. ▪ A minimum total R-Value of R1.0 where the wall is less than 80% of the area of the wall-glazing construction; or ▪ R1.4 where the wall is more than 80% of the area of the wall- glazing construction. - Heating and cooling systems within one Star of the most efficiency 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.	Detailed Design	ESD/Mechanical Engineer

Design Requirement	Implementation Stage	Responsibility
Alternatively, prior to the building construction stage of the project, energy modelling will occur with the aim of exceeding requirement of NCC 2022, using an NCC J1V3 method. This will be achieved using high-performance building fabrics with energy efficiency lighting and building service systems. This method will allow for flexibility in glazing performance selection and maintain the BESS Energy score.		
Internal Lighting The maximum illumination power density (W/m ²) in at least 90% of the area of the relevant building class meet the requirements in Table J7D3a of the NCC 2022 Vol 1.	Detailed Design	Lighting Designer / Electrical Engineer
External Lighting External lighting will be controlled by daylight sensors, motion sensors and/or time clocks.	Detailed Design	Lighting Designer
Solar PV system The building will be provided with 5.16 kW Solar PV system.	Detailed Design	Electrical Engineer

5.4 STORMWATER MANAGEMENT

Design Requirement	Implementation Stage	Responsibility
Stormwater Treatment The construction stormwater pollution reduction strategy is to be adhered to. Refer to WSUD Response for further details.	Construction	Builder
The initiatives outlined in the Water Sensitive Urban Design (WSUD) Response comply with the council's WSUD requirements, as demonstrated by achieving a Blue Factor score greater than 100%	Detailed Design	Architect/Civil Engineer

5.5 INDOOR ENVIRONMENT QUALITY – IEQ

Design Requirement	Implementation Stage	Responsibility
Daylight Access – Non-residential Providing daylight to occupied spaces helps reduce energy consumption, allowing occupants to maintain a comfortably lit space without the use of electric lighting. This is especially important for spaces which will be primarily occupied during the day, which would otherwise need artificial lighting. It is mandated that at least 33% of the floor area needs to achieve the minimum daylight requirements. Assessment under the Green Star hand calculation method indicates below:	Town Planning Submission	Architect / ESD Consultant

Design Requirement		Implementation Stage	Responsibility
Building	Percentage of regular use areas which achieved DF over 2.0		
Wildlife Hospital	46%		
Refer to Appendix A: Preliminary Daylight Analysis for further information.			
Thermal comfort - Shading - Non-Residential			
Shading has been provided to eastern façade.		Detailed Design	Architect
Thermal Comfort - Ceiling Fans			
Ceiling fans will be provided to regular occupied rooms which will help provide comfortable indoor spaces and reduce energy needed for heating and cooling. Ceiling fans will be permanently installed with a speed controller.		Town planning stage	Architect
Ventilation – Non-Residential			
To provide fresh air and passive cooling opportunities, the project has been designed to utilise natural cross flow ventilation.		Town Planning Submission	Architect/ESD Consultant
60% of the regularly used spaces are naturally effectively ventilated. Refer to Appendix B: Natural Ventilation Assessment or further information.			
Volatile Organic Compounds and Formaldehyde			
Volatile Organic Compounds easily evaporate into the air at room temperature. They have an odour and can cause irritation and other health problems for occupants. They are commonly found in paints, sealants, carpets, woods, and furniture. Products with a low VOC and formaldehyde content will be selected so that the associated health issues are averted within this development.		Detailed Design	Architect
Refer to Appendix C: Material Pollutants Limits.			
Mechanical Ventilation			
CO2 Monitor will be provided in the primary spaces to ensure that CO2 concentration in the rooms remains below 800ppm.		Detailed Design	Mechanical Engineer

5.6 TRANSPORT

Design Requirement		Implementation Stage	Responsibility
Bicycle Facilities			
Providing easy to use and secure bicycle storage can encourage Occupants to use a bicycle rather than a car.		Town planning stage	Architect
The development will need to provide bicycle spaces and bike rack need to be installed in a key location for easy access and in accordance with AS2890.3:2015.			

5.7 WASTE MANAGEMENT

Design Requirement	Implementation Stage	Responsibility
Operational Waste – Convenience of Recycling		
To ensure waste avoidance, reuse, and recycling during the operational life of the building.	Town Planning Submission	Architect
The development will include a waste storage area sized to equally accommodate both recycling and general waste.		
Furthermore, to encourage recycling practices within the development, recycle bins will be conveniently provided alongside general waste bins at points of disposal such as kitchens and wherever a general waste bin is located.		
Operational Waste - Food & Garden Waste		
FOGO collection has been provided for this project.	Town Planning Submission	Architect

5.8 URBAN ECOLOGY

Design Requirement	Implementation Stage	Responsibility
Vegetation		
Over 30% of the site is covered in vegetation, encouraging residents to interact with the vegetated space and limiting the 'heat island' effect.	Town Planning Submission	Architect

5.9 BUILDING MATERIALS

The choice of building materials for a project can have a significant impact on the project's overall environmental footprint. An overarching objective to select materials based on their environmental footprint has been implemented on this project. Materials will be selected based on the following attributes:

Design Requirement	Implementation Stage	Responsibility
Embodied Energy Total embodied energy will be considered when selecting materials. High embodied energy materials, such as concrete, aluminium and zinc will be avoided where possible. When these materials are necessary, suppliers that include a percentage of recycled materials must be selected.	Detailed Design	Architect
Biodiversity and Habitat Destruction All timber used for the project will be from sustainably managed sources. This will be demonstrated through appropriate certification schemes, such as PEFC or FSC.	Detailed Design	Architect
End of Life Consideration will be given to how materials may be disposed of. Recyclable materials will be chosen wherever possible. Preference will be given to suppliers with end-of-life recycling schemes.	Detailed Design	Architect
Toxicity Materials which have health risks during manufacture and installation will be avoided where possible. Low VOC products, E0 or E1 wood products, best practice PVC will be selected wherever practical.	Detailed Design	Architect
Durability Consideration will be given to the life expectancy of materials. Durable materials will be specified for relevant applications.	Detailed Design	Architect
Maintenance Materials that are easily maintained will be specified. This is likely to increase the life expectancy of the material. Materials that require cleaning agents that have environmental impacts will be avoided.	Detailed Design	Architect

5.10 INNOVATION

The continuous evolution and integration of these innovative solutions in ESD practices contribute to creating more sustainable and resilient built environments for the future.

Innovations
ISO14001:2015 certified EMS
Zoo Victoria have ISO14001:2015 certified environmental management system in place.
Climate Active Carbon Neutral
The project will achieve Climate Active Carbon Neutral certification as part of Zoo Victoria.

6 WSUD RESPONSE

Rainwater will be collected across a roof area approx. 421m² and stored in rainwater tanks of 8,000L. The water will be used to flush all toilets throughout the development. Additionally, Raingarden systems with a total area of 20 m² or equivalent will be used to treat approx. 1963.5m² of impervious surfaces. Raingardens quantity, size and location to be confirmed by architect in conjunction with Civil Engineers.

6.1 STATUTORY FRAMEWORK

Melbourne Water recommends that proposed developments provide a Water Sensitive Urban Design Response with the following objectives:

- To improve stormwater discharge quality:
 - Suspended Solids – 80% retention of typical urban annual load
 - Total Nitrogen – 45% retention of typical urban annual load
 - Total Phosphorus – 45% retention of typical urban annual load
 - Litter – 70% reduction of typical urban annual load
- To promote stormwater re-use
- To mitigate the detrimental effect of development on downstream waterways
- To minimise peak stormwater flows and stormwater pollutants
- To reintegrate urban water into the landscape to facilitate benefits such as microclimate cooling, local habitat, and provision of attractive spaces for community use and well-being

A development is required to demonstrate that it meets the objectives of the clause by either:

- Meeting a 100% or higher rating on the Blue Factor rating tool; or
- Meeting the required discharge quality using the MUSIC rating tool

Additionally, adequate maintenance and management procedures are required to ensure the stormwater treatment / reuse measures work as intended.

6.2 DESIGN DETAILS

Rainwater will be collected across a roof area approx. 421m² and stored in rainwater tanks of 8,000L. The water will be used to flush all toilets throughout the development. Additionally, Raingarden systems with a total area of 20 m² or equivalent will be used to treat approx. 1971.6m² of impervious surfaces. Raingardens quantity, size and location to be confirmed by architect in conjunction with Civil Engineers.

6.4 BLUE FACTOR ASSESSMENT

A Melbourne Water STORM assessment on the property has been undertaken to demonstrate compliance with best practice stormwater treatment objectives as set out in the Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO, 1997).

Stormwater Treatment Objective – Relative Measure (Blue Factor) was developed by Melbourne Water to simplify the analysis of stormwater treatment methods within a development. The calculator assesses Water Sensitive Urban Design (WSUD) measures on project sites and delivers a percentage result, determining whether best practice targets have been achieved. A score of 100% or higher means the treatment features meet all objectives.

Project # 7D3659D3
Wildlife Hospital
Kevin Xiao - kevin.xiao@njmdesign.com.au
75 Lake Rd, Kyabram VIC 3620, Australia
20 July 2026 11:42 a.m.

BLUE FACTOR®

Wildlife Hospital

The proposed stormwater treatments provide 'deemed to comply' compliance with the minimum planning requirement for total nitrogen but does not comply with all the relevant objectives for management of stormwater flows on-site.



Project details

Name	Wildlife Hospital
Project ID	7D3659D3
Street address	75 Lake Rd, Kyabram VIC 3620, Australia
Municipality	Campaspe
Site area	8439.04 m ²
Planning Number	

Figure 2: Blue Factor Rating Report

6.5 CONSTRUCTION SITE MANAGEMENT PLAN

The following requirements are to be met during onsite works to prevent excessive pollutants entering the local waterways.

1. Temporary drains are to be installed to minimise overland water flows and prevent erosion, especially in areas where water is likely to pool.
2. Temporary silt fences are to be installed on the lower end of the site to prevent excessive sedimentation from entering the stormwater system
3. Temporary side entry filters to be installed to council stormwater pits to prevent sediment entering the stormwater system at the kerb inlet
4. Stockpiles to be located away from the predominant overland stormwater pathway
5. All site litter to be collected and placed in bins (covered if appropriate) so that it cannot end up in the stormwater systems
6. Waste bins to be provided onsite for workers

6.6 MAINTENANCE REQUIREMENTS

The following maintenance measures are required to be undertaken at 6 monthly intervals, when it is evident that a blockage has occurred or after a storm event. The body corporate is to be responsible for the maintenance of the stormwater system.

- Roof and gutters to be cleaned to remove leaves and other debris
- All screens to be checked for blockages and cleaned if necessary
- Sweep, wet vacuum or pressure hose courtyards and laneways to remove accumulated sediment and debris.
- Clear any drainage pipes in the courtyards and laneways that direct water to the stormwater system.

All pumps or specialist equipment to be installed as part of this system are to be maintained in accordance with the manufacturer's specifications.

7 MANAGEMENT, MAINTENANCE & MONITORING

To ensure that the initiatives outlined in this report are implemented and maintained over time a copy this report will be provided to the building management team.

Inefficiently performing services impact on indoor environment qualities and may increase running costs and greenhouse gas emissions. The building management team will monitor all sustainability initiatives on-site and will schedule regular fine-tuning of building services and their ongoing maintenance, ensuring the building's maximum environmental performance is always achieved.

8 APPENDICES

8.1 APPENDIX A: PRELIMINARY DAYLIGHT ANALYSIS

A daylight analysis has been conducted in line with the Green Star Hand Calculation Method to determine how much of the nominated floor area achieves a daylight factor above 2.0% for each building type defined in BESS.

Nominated floor areas as defined by Green Star as all primary spaces, i.e., all areas where a person is expected to remain for an extended period. For this development, the nominated floor area excludes scrub/sterile rooms, necropsy rooms, animal holding rooms, and other non-assessable ancillary spaces.

The table below shows the nominated floor area and compliant areas that achieves the minimum daylight factor requirement of 2.0 % or greater for nominated areas.

Non-Residential

Room Type	Compliant Area (m ²)	Nominated Area (m ²)	% Floor Area Achieving DF>2.0%
Waiting area	11.2	26.6	46%
Reception	3.6	6.5	
Office	7.2	19.9	
Clinical 01	9	16.9	
Clinical 02	9	16.8	
TOTAL	40.0	86.7	

	Compliant zone
	Net lettable area



Figure 3: Daylight assessment - Ground Floor

8.2 APPENDIX B: NATURAL VENTILATION ASSESSMENT

Room Type	Ventilated Area (m ²)	Nominated Area (m ²)	% Floor Area Achieving DF>2.0%
Waiting Area/Reception	15.87	47.07	60%
Office	17.55	19.86	
Clinical 01	15.67	20.5	
Clinical 02	15.9	20.55	
TOTAL	65.0	108.0	



Figure 4: Natural ventilation assessment

8.3 APPENDIX C: MATERIAL POLLUTANTS LIMITS

Table 1: Maximum Volatile Organic Compound Levels for paints, adhesives, Sealants and Carpets. (Source: Green Building Council Australia)

Product Type/Subcategory	Max TVOC Content (g/L of ready-to-use-product)
General purpose adhesives and sealants	50
Internal wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesives, wood flooring and laminate adhesives and sealants	100
Carpets	0.5mg/m ² per hour

Table 2: Formaldehyde Emissions Limit for Engineered wood products. (Source: Green Building Council Australia)

Test Protocol	Emission Limit/Unit of Measurement
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	≤1mg/ L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1mg/ L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤1mg/ L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) - LVL	≤1mg/ L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤0.1 mg/m ² hr*
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤0.1 mg/m ² h
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤0.1 mg/m ² hr (at 3 days)
ASTM D6007	≤0.12mg/m ³ **
ASTM E1333	≤0.12mg/m ³ ***
EN 717-1 (also known as DIN EN 717-1)	≤0.12mg/m ³
EN 717-2 (also known as DIN EN 717-2)	≤3.5mg/m ² hr

8.4 APPENDIX D: FAÇADE CALCULATOR RESULTS



8.5 APPENDIX E: BESS ASSESSMENT

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BESS Buildings Report

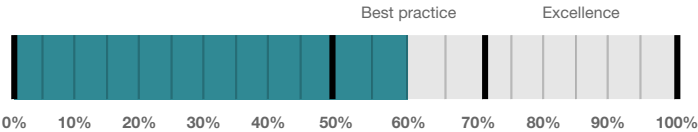
Built Environment Sustainability Scorecard



This BESS report outlines the sustainable design commitments of the proposed development at 75 Lake Rd, Kyabram VIC 3620, Australia Kyabram Victoria 3620. 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 Campaspe Shire Council.

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

Your BESS Score



60%

Project details

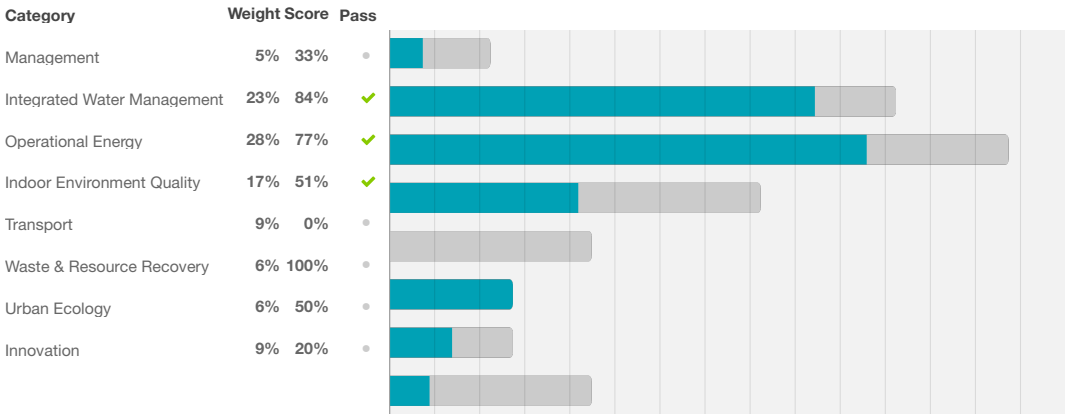
Name	Wildlife Hospital (75 LAKE RD, KYABRAM VIC 3620)
Address	75 Lake Rd, Kyabram VIC 3620, Australia Kyabram Victoria 3620
Project ID	906A922C-R1
BESS Version	BESS-10
Date	23 July 2026
Software version	2.3.0-B.655

Site type	Non-residential development
Account	esd@njmdesign.com.au
Application no.	8993
Site area	8,439 m²
Building floor area	421 m²



Performance by category

● This project ● Maximum available



Buildings

Name	Height	Footprint	% of total footprint
WILDLIFE HOSPITAL	1	421 m²	100%

Dwellings & Non Res Spaces

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Other building				
WILDLIFE HOSPITAL	1	421 m²	WILDLIFE HOSPITAL	100%
Total	1	421 m²	100%	

Supporting Evidence

Shown on Floor Plans

Credit	Requirement	Response	Status
Integrated Water Management 2.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)		-
Operational Energy 4.2	Location and size of solar photovoltaic system		-
Waste & Resource Recovery 2.1	Location of food and garden waste facilities		-
Waste & Resource Recovery 2.2	Location of recycling facilities		-
Urban Ecology 2.1	Location and size of vegetated areas		-

Supporting Documentation

Credit	Requirement	Response	Status
Management 2.3a	Section J glazing assessment		-
Integrated Water Management 2.1	STORM report or MUSIC model		-
Operational Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Operational Energy 3.7	Average lighting power density and lighting type(s) to be used		-
Operational Energy 4.2	Specifications of the solar photovoltaic system(s)		-
Indoor Environment Quality 1.4	A short report detailing assumptions used and results achieved.		-

Credit summary

Management Overall contribution 4.5%

			33%
1.1 Pre-Application Meeting			0%
2.3 Thermal Performance Modelling - Non-Residential			50%
3.2 Metering - Non-Residential			N/A ⚡ Scoped Out
Under only one tenancy			
3.3 Metering - Common Areas			N/A ⚡ Scoped Out
There are no major common areas			
4.1 Building Users Guide			100%

IWM Overall contribution 22.5%

			84%	✔ Pass
1.1 Potable Water Use			55%	✔ Achieved
2.1 Stormwater Treatment			100%	✔ Achieved
3.1 Water Efficient Landscaping			N/A ⚡ Scoped Out	
Landscaping to be connected to RWT				
4.1 Building Systems Water Use			N/A ⚡ Scoped Out	
Not sprinklers or chillers provided				

Operational Energy Overall contribution 27.5%

		Minimum required 50%	77%	✓ Pass
1.1 Thermal Performance Rating - Non-Residential			37%	
2.1 Greenhouse Gas Emissions			100%	
2.2 Peak Demand			100%	
2.6 Electrification			100%	
2.7 Energy consumption			100%	
3.1 Carpark Ventilation			N/A	✦ Scoped Out
No enclosed carpark				
3.2 Hot Water - Non-Residential			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.				

IEQ Overall contribution 16.5%

		Minimum required 50%	51%	✓ Pass
1.4 Daylight Access - Non-Residential			46%	✓ Achieved
2.3 Ventilation - Non-Residential			66%	✓ Achieved
3.4 Thermal comfort - Shading - Non-Residential			0%	
3.5 Thermal Comfort - Ceiling Fans - Non-Residential			100%	
4.1 Air Quality - Non-Residential			100%	

Transport Overall contribution 9.0%

		0%
1.4 Bicycle Parking - Non-Residential		0%
1.5 Bicycle Parking - Non-Residential Visitor		0%
1.6 End of Trip Facilities - Non-Residential		0% ⛔ Disabled
Credit 1.4 must be complete first.		
2.1 Electric Vehicle Infrastructure		0%
2.2 Car Share Scheme		0%
2.3 Motorbikes / Mopeds		0%

Waste & Resource Recovery Overall contribution 5.5%

		100%
1.1 Construction Waste - Building Re-Use		N/A ✦ Scoped Out
		Site has not been developed before
2.1 Operational Waste - Food & Garden Waste		100%
2.2 Operational Waste - Convenience of Recycling		100%

Urban Ecology Overall contribution 5.5%

		50%
1.1 Communal Spaces		0%
2.1 Vegetation		100%
2.2 Green Roofs		0%
2.3 Green Walls and Facades		0%
3.2 Food Production - Non-Residential		0%

Innovation Overall contribution 9.0%

		20%
1.1 Innovation		20%

Credit breakdown

Management Overall contribution 4.5%

		33%
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1.1 Pre-Application Meeting		0%
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Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?	
Question	Criteria Achieved ?	
Project	No	

2.3 Thermal Performance Modelling - Non-Residential		50%
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Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2022 Section J4D6?	
Question	Criteria Achieved ?	
Other building	Yes	

Criteria	Has preliminary modelling been undertaken in accordance with either NCC2022 Section J (Energy Efficiency), NABERS or Green Star?	
Question	Criteria Achieved ?	
Other building	No	

3.2 Metering - Non-Residential		N/A	✦ Scoped Out
Under only one tenancy			
This credit was scoped out	Under only one tenancy		

3.3 Metering - Common Areas		N/A	✦ Scoped Out
There are no major common areas			
This credit was scoped out	There are no major common areas		

4.1 Building Users Guide		100%
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Score Contribution	This credit contributes 16.7% towards the category score.	
Criteria	Will a building users guide be produced and issued to occupants?	
Question	Criteria Achieved ?	
Project	Yes	

IWM Overall contribution 22.5%**84% ✓ Pass**

Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No
Stormwater profile	
Which stormwater modelling software are you using?:	Blue Factor
Blue Factor score achieved?:	100
Flow:	0 %
Total Suspended Solids:	0 %
Total Phosphorus:	0 %
Total Nitrogen:	0 %
Rainwater tank profile	
What is the total roof area connected to the rainwater tank?:	
RWT	421 m ²
	-
Tank Size:	
RWT	8,000 Litres
	-
Irrigation area connected to tank:	
RWT	0.0 m ²
	-
Is connected irrigation area a water efficient garden?:	
RWT	No
	-
Other external water demand connected to tank?:	
RWT	0.0 Litres/Day
	-
Fixtures, fittings & connections profile	
Building:	WILDLIFE HOSPITAL
Showerhead:	4 Star WELS (>= 6.0 but <= 7.5)
Bath:	Scope out
Kitchen Taps:	>= 5 Star WELS rating
Bathroom Taps:	>= 5 Star WELS rating
Dishwashers:	Default or unrated
WC:	>= 4 Star WELS rating
Urinals:	Scope out
Washing Machine Water Efficiency:	Scope out
Which non-potable water source is the dwelling/space connected to?:	RWT
Non-potable water source connected to Toilets:	Yes

Non-potable water source connected to Laundry (washing machine):		No	
Non-potable water source connected to Hot Water System:		No	
1.1 Potable Water Use			55% ✔ Achieved
Score Contribution	This credit contributes 35.7% towards the category score.		
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.		
Output	Reference		
Project	798 kL		
Output	Proposed (excluding rainwater and recycled water use)		
Project	633 kL		
Output	Proposed (including rainwater and recycled water use)		
Project	506 kL		
Output	% Reduction in Potable Water Consumption		
Project	36 %		
Output	% of connected demand met by rainwater		
Project	100 %		
Output	How often does the tank overflow?		
Project	Very Often		
Output	Opportunity for additional rainwater connection		
Project	145 kL		
2.1 Stormwater Treatment			100% ✔ Achieved
Score Contribution	This credit contributes 64.3% towards the category score.		
Criteria	Has best practice stormwater management been demonstrated?		
Output	Min Blue Factor Score		
Project	100		
Output	Blue Factor Score		
Project	100		
3.1 Water Efficient Landscaping			N/A ✦ Scoped Out
Landscaping to be connected to RWT			
This credit was scoped out	Landscaping to be connected to RWT		
4.1 Building Systems Water Use			N/A ✦ Scoped Out
Not sprinklers or chillers provided			
This credit was scoped out	Not sprinklers or chillers provided		

Operational Energy Overall contribution 27.5%

		Minimum required 50%	77%	✓ Pass
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Project profile		
Use the BESS Deem to Satisfy (DtS) method for Non-residential spaces?:		
Are you installing any renewable energy system(s) (other than solar photovoltaic)?:		No
Energy Supply:		All-electric
Solar Photovoltaic system profile		
System Size (lesser of inverter and panel capacity):		PV 5.2 kW peak
Orientation (which way is the system facing)?:		PV North
Inclination (angle from horizontal):		PV 30.0 Angle (degrees)
Non-residential Deemed-to-Satisfy profile		
Do all exposed floors and ceilings (forming part of the envelope) demonstrate a minimum 10% improvement in required NCC2022 insulation levels (total R-value upwards and downwards)?:		
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?:		
1.1 Thermal Performance Rating - Non-Residential		37%
Score Contribution		This credit contributes 36.4% towards the category score.
Criteria		What is the % reduction in heating and cooling energy consumption against the reference case (NCC2022 Section J)?
2.1 Greenhouse Gas Emissions		100%
Score Contribution		This credit contributes 9.1% towards the category score.
Criteria		What is the % reduction in annual greenhouse gas emissions against the benchmark?
2.2 Peak Demand		100%
Score Contribution		This credit contributes 4.5% 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 13.6% 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 18.2% towards the category score.		
Criteria	What is the % reduction in annual energy consumption against the benchmark?		
3.1 Carpark Ventilation			N/A ✦ Scoped Out
No enclosed carpark			
This credit was scoped out		No enclosed carpark	
3.2 Hot Water - Non-Residential			100%
Score Contribution	This credit contributes 4.5% towards the category score.		
Criteria	What is the % reduction in annual energy consumption (gas and electricity) of the hot water system against the benchmark?		
3.7 Internal Lighting - Non-Residential			100%
Score Contribution	This credit contributes 9.1% 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 ?		
Other building	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 4.5% 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		
Other building	6,724 kWh		
Output	% of Building's Energy		
Other building	57 %		
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.	

IEQ Overall contribution 16.5%

		Minimum required 50%	51%	✓ Pass
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1.4 Daylight Access - Non-Residential			46%	✓ Achieved
Score Contribution	This credit contributes 35.3% towards the category score.			
Criteria	What % of the nominated floor area has at least 2% daylight factor?			
Question	Percentage Achieved?			
Other building	46 %			
2.3 Ventilation - Non-Residential			66%	✓ Achieved
Score Contribution	This credit contributes 35.3% towards the category score.			
Criteria	What % of the regular use areas are effectively naturally ventilated?			
Question	Percentage Achieved?			
Other building	60 %			
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?			
Other building	0 %			
Criteria	What CO2 concentrations are the ventilation systems designed to achieve, to monitor and to maintain?			
Question	Value			
Other building	800 ppm			
3.4 Thermal comfort - Shading - Non-Residential			0%	
Score Contribution	This credit contributes 17.6% towards the category score.			
Criteria	What percentage of east, north and west glazing to regular use areas is effectively shaded?			
Question	Percentage Achieved?			
Other building	25 %			
3.5 Thermal Comfort - Ceiling Fans - Non-Residential			100%	
Score Contribution	This credit contributes 5.9% towards the category score.			
Criteria	What percentage of regular use areas in tenancies have ceiling fans?			
Question	Percentage Achieved?			
Other building	100 %			
4.1 Air Quality - Non-Residential			100%	
Score Contribution	This credit contributes 5.9% towards the category score.			

Criteria	Do all paints, sealants and adhesives meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Other building	Yes
Criteria	Does all carpet meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Other building	Yes
Criteria	Does all engineered wood meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Other building	Yes

Transport Overall contribution 9.0%

	0%
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1.4 Bicycle Parking - Non-Residential	0%
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Score Contribution	This credit contributes 25% 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 ?
Other building	No
Question	Bicycle Spaces Provided ?
Other building	0

1.5 Bicycle Parking - Non-Residential Visitor	0%
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Score Contribution	This credit contributes 12.5% 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 ?
Other building	No
Question	Bicycle Spaces Provided ?
Other building	0

1.6 End of Trip Facilities - Non-Residential	0%  Disabled
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Credit 1.4 must be complete first.

This credit is disabled	Credit 1.4 must be complete first.
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2.1 Electric Vehicle Infrastructure	0%
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Score Contribution	This credit contributes 25% towards the category score.
Criteria	Are facilities provided for the charging of electric vehicles?
Question	Criteria Achieved ?
Project	No

2.2 Car Share Scheme	0%
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Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Question	Criteria Achieved ?
Project	No

2.3 Motorbikes / Mopeds	0%
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Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	No

Waste & Resource Recovery Overall contribution 5.5%

	100%
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1.1 Construction Waste - Building Re-Use	N/A	✦ Scoped Out
Site has not been developed before		

This credit was scoped out	Site has not been developed before
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2.1 Operational Waste - Food & Garden Waste	100%
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Score Contribution	This credit contributes 50% towards the category score.
Criteria	Are facilities provided for on-site management of food and garden waste?
Question	Criteria Achieved ?
Project	Yes

2.2 Operational Waste - Convenience of Recycling	100%
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Score Contribution	This credit contributes 50% towards the category score.
Criteria	Are the recycling facilities at least as convenient for occupants as facilities for general waste?
Question	Criteria Achieved ?
Project	Yes

Urban Ecology Overall contribution 5.5%

		50%
1.1 Communal Spaces		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Is there at least the following amount of common space measured in square meters : * 1m ² for each of the first 50 occupants * Additional 0.5m ² for each occupant between 51 and 250 * Additional 0.25m ² for each occupant above 251?	
Question	Common space provided	
Other building	-	
Output	Minimum Common Space Required	
Other building	21 m ²	
2.1 Vegetation		100%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area?	
Question	Percentage Achieved ?	
Project	30 %	
2.2 Green Roofs		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Does the development incorporate a green roof?	
Question	Criteria Achieved ?	
Project	No	
2.3 Green Walls and Facades		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Does the development incorporate a green wall or green façade?	
Question	Criteria Achieved ?	
Project	No	
3.2 Food Production - Non-Residential		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	What area of space per occupant is dedicated to food production?	
Question	Food Production Area	
Other building	-	
Output	Min Food Production Area	
Other building	6 m ²	

Innovation Overall contribution 9.0%

		20%
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Project Initiatives		
Initiative:		
ISO14001:2015 certified EMS	O	
Climate Active Carbon Neutral certification	O	
Description:		
ISO14001:2015 certified EMS	Have ISO 14001 environmental management system in place	
Climate Active Carbon Neutral certification	Achieved Climate Active Carbon Neutral certification as part of Zoo Victoria	
Points Targeted:		
ISO14001:2015 certified EMS	1	
Climate Active Carbon Neutral certification	1	
Points:		
ISO14001:2015 certified EMS	-	
Climate Active Carbon Neutral certification	-	
1.1 Innovation		20%
Score Contribution	This credit contributes 100% towards the category score.	
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?	

Disclaimer

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