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Sustainability Management Plan

Regional Renewable Organics Network

Barwon Water

17 September 2024

→ The Power of Commitment

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GHD
Level 9, 180 Lonsdale Street
Melbourne, Victoria 3000, Australia
T +61 3 8687 8000 |

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1. Introduction

1.1 Background

Barwon Water's Strategy 2030 outlines the shift from service provider to regional enabler of economic, social, and environmental prosperity. As part of this, Barwon Water (BW) is fast tracking the move to renewable energy, with a commitment to achieve 100% renewable electricity by 2025 and net zero emissions by 2030.

Traditional organic waste management practices contribute to the emissions profile of Barwon Water (in terms of domestic sewage and trade waste management) and its regional partners, including four councils from within the Geelong Region Alliance (G21 councils) in relation to kerbside organics management. In line with this strategy, and in partnership with four of the G21 councils, Barwon Water is developing the Regional Renewable Organics Network (RRON). This organics processing facility can receive and convert a range of organic wastes into valuable products and renewable energy.

The RRON is an organics processing facility that leverages Barwon Water infrastructure to maximise the value of organic waste and convert it to valuable end products (i.e. biochar, digestate and biogas), reducing costs and emissions, creating jobs and driving a circular economy for the region and Victoria.

The RRON will be located at BW's Black Rock Water Reclamation Plant (WRP) located at 405 Blackrock Road, Connewarre, approximately 18 km south of Geelong. The Black Rock WRP is an established organic waste recycling facility that treats wastewater and produces Class A and Class C recycled water, as well as processing approximately 60,000 t/year of biosolids.

The RRON facility is proposed to process approximately 40,000 t/y of comingled food organics and garden organic (FOGO) waste predominately from local municipalities. This FOGO stream will be pre-processed and separated into a food organics (FO) rich stream and a garden organics (GO) rich stream. The facility will also process other feedstocks including bulk green waste (~9,000 t/y), commercial and industrial (C&I) organic waste (~2,000 t/y), and biosolids (from BW's WRPs). The main processes proposed for the RRON include:

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- Thermal processing via carbonisation of the GO-rich stream (separated from FOGO), bulk green waste and biosolids
- Plug flow anaerobic digestion (PFAD) of the FO-rich stream (separated from FOGO) and FO-rich C&I organic waste

The RRON will produce the following product streams:

- Biochar (from carbonisation), a high-value product for agriculture and production of advanced sustainable materials
- Syngas (from carbonisation), which will be used within the RRON facility to dry the carbonisation feedstocks down to a suitable moisture content for carbonisation
- Digestate (from the PFAD), a product containing high levels of nutrients, which is beneficial in agricultural applications
- Biogas (from the PFAD), which will be transferred to the neighbouring biosolids drying facility and converted into heat via a biogas boiler, reducing the demand for natural gas

1.2 Purpose of this report

This sustainability management plan has been prepared for the RRON project located at 405 Blackrock Road, Connewarre which is within the City of Greater Geelong boundary.

This proposal is classified as 'large-scale' according to the Sustainable Design Assessment in the Planning Process (SDAPP) Framework and Program. The City of Greater Geelong Sustainability Management Plan Guidelines and Template describe generic minimum sustainability expectations, often referring to measures relating to residential buildings. These have been adjusted in this report to be appropriate for the development type and intended use of the facility.

This report demonstrates how the proposed development incorporates environmentally sustainable design and meets the requirements of the City of Greater Geelong planning scheme clause 22.71.

1.3 Scope and limitations

This report: has been prepared by GHD for Barwon Water and may only be used and relied on by Barwon Water for the purpose agreed between GHD and Barwon Water.

GHD otherwise disclaims responsibility to any person other than Barwon Water arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

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2. Project Information

2.1 Basis of assessment

This assessment has been completed with reference to the following documents and planning scheme clauses:

- 'Basic Design Stage' architectural drawings, 24 October 2023
- 'Preliminary Issue' Hydraulic services drawing set, 30 October 2023
- 'Basic Design Stage' Electrical services drawing set, 29 September 2023
- RRON Greenhouse Gas Technical Assessment Report, 27 November 2023
- Planning scheme clause 22.71 – Environmentally Sustainable Development
- Planning scheme clause 52.34 – Bicycle Facilities
- Planning scheme clause 53.18 – Stormwater Management in Urban Development
- City of Greater Geelong Sustainability Management Plan Guidelines and Template

2.2 Build Environment Sustainability Scorecard

In order to assess the overall sustainability credentials of the site in line with CoGG Council requirements and relevant planning schemes, the Build Environment Sustainability Scorecard (BESS) has been utilised.

This tool breaks sustainability into nine categories and lists a range of available sustainability initiatives appropriate for the building type. Each category and initiative are assigned a weighting, and a weighted score is provided for the overall development and in each of the nine categories based on the percentage of these measures to be implemented in the design.

- Management
- Water (mandatory 50%)
- Energy (mandatory 50%)
- Stormwater (mandatory 50%)
- Indoor Environment Quality (mandatory 50%)
- Transport
- Waste
- Innovation

A pass is achieved if the development achieves a score of 50% or more overall as well as a minimum 50% score in each of four mandatory categories as designated above.

The results of the BESS assessment for the development are listed below:

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Category	Contribution of Category to Overall Score	Mandatory Minimum Score	Score Achieved
Management	4.5%	-	0%
Water	9.0%	50%	80%
Energy	27.5%	50%	51%
Stormwater	100%	50%	100%
Indoor Environment Quality	16.5%	50%	56%
Transport	9.0%	-	25%
Waste	5.5%	-	100%
Urban Ecology	5.5%	-	50%
Innovation	9.0%	-	0%
Total	**100%**	**50%**	**54%**

As demonstrated above, the development exceeds the minimum requirements in each individual category and achieves an overall score of 54%, meeting all BESS requirements of the project.

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2.3 Site Description

The proposed development site is located at 405 Blackrock Road, Connewarre, approximately 18 km south of Geelong. A description of the site and proposed development are provided in table 1 and figure 1 below.

Table 1 Site Description

Site Description			
Address	405 Blackrock Road, Connewarre		
Approximate total area of site to be developed	18,200 m^2		
Development type	Large development		
Building Area	Building	Approx. Gross Floor Area (m^2)	Building Use
	Industrial Warehouse	5107	Industrial
	Admin Building (2 floors)	240	Office
	Biofilter Shed	2165	Industrial
	Digester Shed	400	Industrial
	Total	**7912**	
Car parking	Ground level – uncovered		

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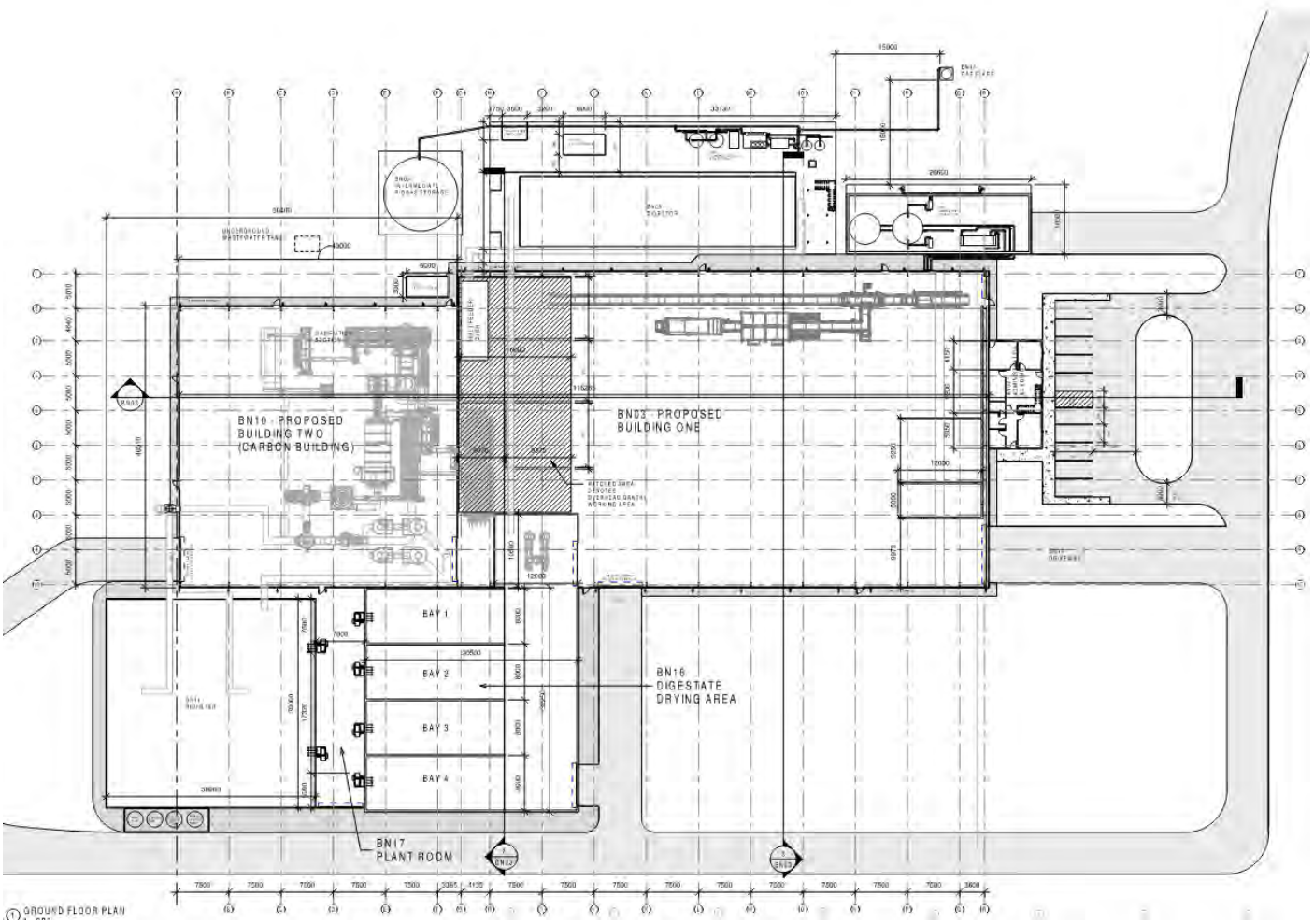

Figure 1 *Proposed Site Plan*

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3. Environmentally sustainable design initiatives

The sections below provide a further summary of each of the nine sustainability categories. This includes the objectives of each category in terms of sustainability and the relevant initiatives that have either been included in the ECI/concept designs completed to date or are proposed to be considered in subsequent phases of design.

3.1 Water

3.1.1 Objectives

- To efficiently use water
- To minimise total operating potable water use
- To collect and reuse rainwater and stormwater
- To use alternative water sources appropriately – for example, recycled water

3.1.2 City of Greater Geelong minimum expectations

- Rainwater capture and reuse for toilet flushing
- BESS water category assessment of 50 per cent

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3.1.3 Initiatives

Initiative	Responsibility	Stage of Implementation
Reticulated third pipe		
The proposed development is proposed to be connected to a Class A recycled water supply which will be utilised for various onsite water usage in instances where the proposed rainwater harvest is insufficient. Recycled water network connection has been documented in the Preliminary Hydraulic Services drawings set (VIC-BAR-HYD-A0000 – Rev A and VIC-BAR-HYD-A002 – Rev G).	Hydraulic, Civil Engineer, Architect	Concept Design
Rainwater Capture and Use		
A reduction in potable water use on site will be achieved by capturing rainwater from the roof surface to be used for the biofilter, scrubber and toilet flushing. Rainwater tank(s) with a capacity of 12kL will be provided for the development, collecting from the roof area of the industrial warehouse and serving toilets within the development. Harvested rainwater is proposed to be the primary supply for toilet flushing with the recycled third pipe supply as back up where required.	Hydraulic, Civil Engineer, Architect	Design Development
Water Fixtures, Fittings, and Connections		
Efficient water fixtures, fittings, and appliances will be implemented throughout the development with the following minimum Water Efficiency Labelling and Standards[1] ratings: **Showers** 4 stars (less than 7.5 L/min) **Kitchen and bathroom taps** 6 stars **Toilets** 4 stars	Architect	Detailed Design
Water Efficient Landscaping		
All new landscaping on the development site will be completed with water efficiency in mind. This includes drought resistant native plant selection and mulching of garden beds to ensure that no irrigation is required after an initial establishment period.	Landscape Architect	Design Development

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3.2 Energy

3.2.1 Objectives

- To use energy efficiently
- To minimise total operating greenhouse emissions
- To minimise energy peak demand through design – for example, orienting the building appropriately, shading glazed surfaces, optimising glazing to exposed surfaces, allocating space for solar panels and external heating and cooling systems
- To minimise associated energy costs

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[1] https://www.waterrating.gov.au/about/standards

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3.2.2 City of Greater Geelong minimum expectations

– BESS energy category assessment of 50 per cent.

3.2.3 Initiatives

In addition to the energy efficiency initiatives outlined within the 'Energy' category of BESS, the inherent function of the facility is aimed at reducing Barwon Water's operational greenhouse gas emissions whilst maximising the value of generated organic waste by converting it to valuable end products and renewable energy for the wider Geelong community.

The RRON facility has been designed with a minimum 25 year design life (continuous operation, 24 hours per day, 365 days per year) and planned to supply biogas directly to the neighbouring biosolids drying facility to offset natural gas use. This will occur until 2032 (Year 1 – 7) at which time the biosolids drying facility is scheduled to be decommissioned. Following decommissioning, the biogas will be sent to a biogas fired cogeneration unit (with 100% combustion) (Year 8 – 25) to provide behind-the-meter electricity for the RRON and the neighbouring WRP with the balance exported to the grid.

The RRON Project utilises anaerobic digestion and carbonisation of organic feedstock to produce biochar, digestate, and biogas and syngas for renewable energy generation. The proposed technology is 'carbon positive' and results in a net emission saving of approximately 13,300 t CO_2-e per annum. Over the life of the project (25 years), this equates to a net reduction in emissions of approximately 330,000 t CO_2-e.

Further to the above, the Black Rock WRP facility currently has an operational 3 MW onsite solar PV installation, one of the largest behind-the-meter solar installations in Australia at the time of construction in 2016. The primary focus of the solar farm is to supply renewable electricity to the Black Rock WRP, which will include the new proposed RRON facility, particularly in the first 7 years of operation before the establishment of the cogeneration equipment. Historically the solar farm has directly supplied over one third of the Black Rock WRP's annual electricity consumption and exports any excess to the grid.

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Initiative	Responsibility	Stage of Implementation
Building Envelope, HVAC and Hot Water Systems		
Heating, cooling, and hot water requirements within the building will be minimised through architectural design, selection of appropriate building fabric, and use of efficient mechanical systems. The development must demonstrate the building fabric and HVAC and hot water system as noted on this page	Sustainability Consultant, Architect, Mechanical Engineer	Design Development

Building fabric targets:

All exposed floors and ceilings forming the building envelope meet the required NCC2022 R-value

– **Floors:** R-Value ≥ 2.0 m^2K/W
– **Roof:** R-value ≥ 3.2 m^2K/W

All walls and glazing meeting or exceeding the minimum NCC2022 compliance requirements.

Walls: R-Value ≥ 1.4 m^2K/W

Glazing: U-Value ≤ 4.0 W/m^2K, SHGC ≤ 0.45

HVAC and hot water systems target

– All heating and cooling systems within one star or with a COP/EER 85% or better of the most efficient equivalent capacity available

Hot water systems within one star or with efficiency 85% or better of the most efficient equivalent capacity system available.

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3.3 Stormwater

3.3.1 Objectives

- To reduce the impact of stormwater runoff
- To improve the water quality of stormwater runoff
- To meet best practice standards for managing stormwater
- To incorporate Water Sensitive Urban Design principles, including stormwater reuse

3.3.2 City of Greater Geelong minimum expectations

- A 100 per cent 'Stormwater Treatment Objective- Relative Measure' (STORM) score using Melbourne Waters STORM calculator or through the use of Model for Urban Stormwater Improvement Conceptualisation (MUSIC) modelling demonstrating best practice standards for managing stormwater.

3.3.3 Initiatives

Initiative	Responsibility	Stage of Implementation
Stormwater Management		
Stormwater runoff from the impervious surfaces of the development will be managed to reduce pollutant loads leaving the site. Measures implemented will include a stormwater basin (new or utilising existing capacity) and rainwater capture and use. Please refer to Appendix C for STORM calculator results	Hydraulic Engineer, Civil Engineer	Design Development

Basis of STORM Calculations[2]

	Impervious Area (m^2)	Treatment Type	Treatment Size (m^2) (existing stormwater basin)	STORM Rating (%)
Site Impervious area	14,177	Pond	1,439	125%

The preliminary STORM calculations show that the existing stormwater basin has sufficient capacity to manage the stormwater flows anticipated from the proposed RRON facility, based on a STORM rating of >100%. This modelling will be confirmed during detailed design to ensure sufficient stormwater basin capacity will be provided.

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

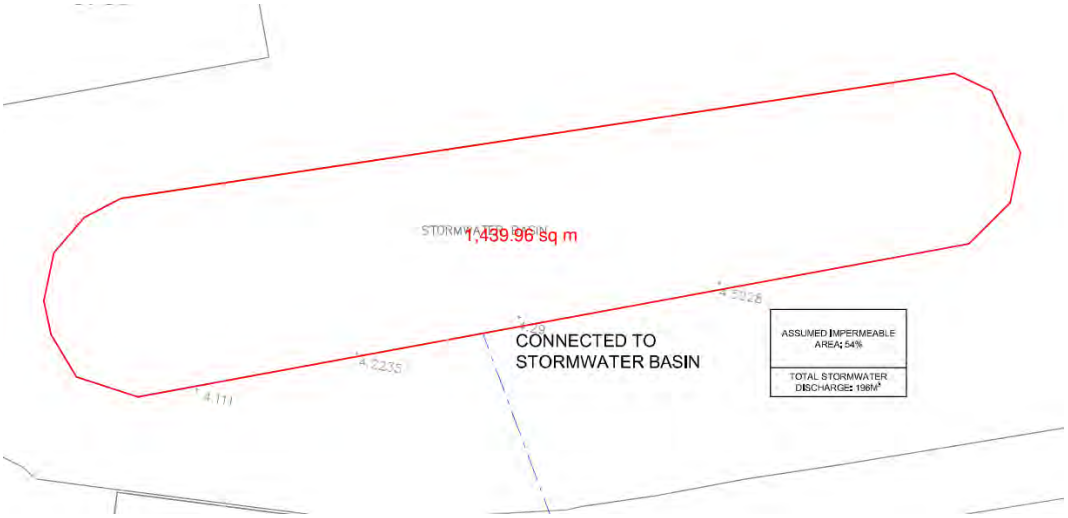

Figure 2 *Proposed Stormwater basin (taken from Hydraulic Services Plan, VIC-BAR-HYD-A002, Rev B)*

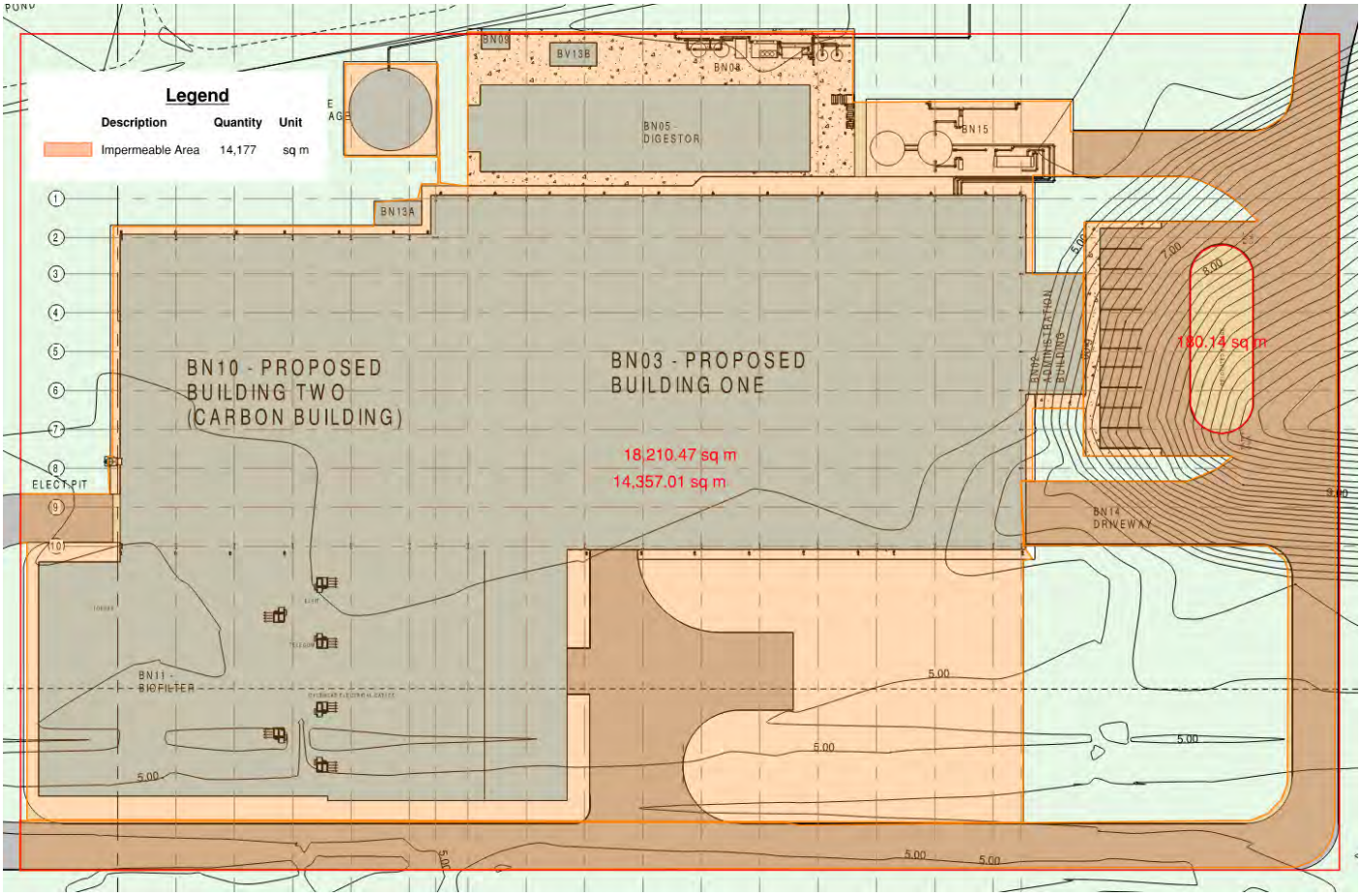

Figure 3 *Impermeable area mark up*

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3.4 Indoor environment quality

3.4.1 Objectives

- To achieve a healthy indoor environment quality for building occupants using fresh air intake, cross ventilation, and natural daylight.
- To achieve maximum thermal comfort with minimal mechanical heating, ventilation and cooling.
- To reduce indoor air pollution by using low-toxic materials.
- To minimise reliance on mechanical heating, ventilation, cooling and lighting systems.
- To minimise noise levels and noise transfer within and between buildings and associated external areas.

3.4.2 City of Greater Geelong minimum expectations

- A minimum BESS score of 50 per cent.
- Adequate daylight to regular use floor areas (as defined in BESS)
- Appropriate shading to all windows receiving direct sunlight.

In addition to an overall 50% score in the Indoor Environment Quality category, BESS has two minimum benchmarks that must be achieved relating to daylight access and ventilation. These minimums will be met as described in the below table.

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3.4.3 Initiatives

<table>
<tr><th>Initiative</th><th>Responsibility</th><th>Stage of Implementation</th></tr>
<tr><td colspan="3">Daylight Access</td></tr>
<tr><td>A minimum score of 33% is required in this credit to pass the IEQ category. The following percentage of regular use floor areas will achieve a daylight factor of at least 2%:
<table>
<tr><th>Space</th><th>Percentage of floor area compliance</th></tr>
<tr><td>Industrial warehouse</td><td>95.6%</td></tr>
<tr><td>Office</td><td>60.4%</td></tr>
</table>
This has been demonstrated though Green Star daylight hand calculation for the Office building and Design Builder daylight modelling for the industrial warehouse, as shown in Appendix B.
To achieve and maintain the specified daylight compliance area above for the industrial warehouse, the design team must include skylights with along the roof ridge that are minimum 1m wide and repeating at 10m intervals.
3D renders of the Warehouse building received on the 23 July 2024 indicate the nominated skylight areas are significantly larger than required to achieve daylight compliance. Therefore the combined total daylight access in regular used areas will meet and exceed the minimum daylight access requirements.</td><td>Architect, Sustainability Consultant</td><td>Design Development</td></tr>
<tr><td colspan="3">Ventilation</td></tr>
<tr><td>Internal air quality will be maintained through mechanical ventilation systems. The proposed ventilation targets are listed below for design in the design development stage:
100% increase in outdoor air provision to the warehouse building spaces compared to the minimum required by AS 1668.2:2012.
The warehouse building is proposed to operate under negative pressure which will allow fresh air intake at a rate of 3 air changes per hour (3 ACH) or approximately 1,600 L/s.person (based on 14 full time equivalent employees) which is much greater than minimum 10 L/s.person requirement for warehouses or medium activity spaces (from AS 1668.2:2012).</td><td>Architect, Mechanical Engineer</td><td>Design Development</td></tr>
<tr><td colspan="3">Volatile Organic Compound Reduction</td></tr>
<tr><td>All paints, sealants, adhesives, carpets, and engineered wood products selected will not exceed maximum total indoor pollutant emissions.
This will be achieved by specifying products that meet current GECA, Global GreenTag GreenRate, Carpet Institute Australia Environmental Classification Scheme Level 2, Green Star or WELL standards for volatile organic compounds in paints, adhesives and sealants, carpets, and engineered wood.</td><td>Architect</td><td>Design Documentation</td></tr>
</table>

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3.5 Transport

3.5.1 Objectives

- To encourage walking, cycling and public transport (in that order) with supportive built environments
- To minimise car dependency
- To promote low-to-zero-emission-vehicle technologies and infrastructure

3.5.2 City of Greater Geelong minimum expectations

- Bicycle parking for occupants (industrial space) – 1 per each 1000 m2 of net floor area

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3.5.3 Initiatives

Initiative	Responsibility	Stage of Implementation
Bicycle Parking		
In accordance with Table 1 to clause 52.34, one bicycle space must be provided to each 1000 m^2 of net floor area for the use of land for industry. Materials recycling falls within the umbrella term of 'Industry' as defined within clause 73.03. The Project will include net floor space of 6,586m^2 (excluding digestor and biofiler plant space) Therefore, a total of seven bicycle spaces, one shower, and one communal change room must be provided in accordance with clause 52.34. Up to six bicycle spaces have been accommodated in the site plan and a shower and communal change room facility has been provided on the ground floor of the administration building. There is a shortfall of 1 bicycle park however given the number of full-time employees and the location, the project team believe the provided number of bicycle parks to be sufficient. Refer to clause 52.34 assessment in the Planning Report in addition to the Traffic report	Architect, Landscape Architect	Design Development
Electric Vehicle Charging		
2 Electrical Vehicle charging stations will be provided as part of the new development and will be located within the outdoor carpark adjacent to the Administration building. Refer to Combined Electrical Plan 'BN7 22100-BN01'.	Electrical Engineer	Design Development

3.6 Waste

3.6.1 Objectives

- To minimise waste and encourage reuse and recycling during design, construction and operation
- To ensure long-term reusability of building materials
- To allow sufficient space for future waste management changes, including (where possible) composting and green waste facilities

3.6.2 City of Greater Geelong minimum expectations

- Recycling facilities and general waste facilities are equally convenient.

3.6.3 Initiatives

Initiative	Responsibility	Stage of Implementation
Convenience of Recycling		
All general waste disposal facilities will be accompanied by recycling disposal facilities. This will ensure that recycling is as at least as convenient as general waste and that at a minimum three waste streams (organics, recycling and general waste) are utilised to reduce the site's contribution to landfill.	Architect	Detailed Design
Organic waste on-site management		
The function of the facility will be an industrial scale anaerobic digestor which will process onsite organic waste and organic waste from multiple councils into useable byproducts and biogas which will be converted for use as an alternative energy source. The inherent role of the facility will meet and far exceed the organic waste management initiative as outlined in BESS.	Architect Waste Engineer	Detailed Design

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3.7 Urban Ecology

3.7.1 Objectives

- To protect and enhance biodiversity within the municipality
- To provide environmentally sustainable landscapes and natural habitats, while minimising the urban heat island effect
- To retain significant trees
- To encourage planting of indigenous vegetation
- To create space for productive gardens, particularly in larger residential developments

3.7.2 Initiatives

Initiative	Responsibility	Stage of Implementation
Vegetation		
The proposed site layout presents an area of 4,023 sqm that will be covered by vegetation, this is approximately 20% of the site total area and will meet the minimum BESS vegetation requirement of 20% total site area to be covered with vegetation to improve local ecology and biodiversity. Refer to Figure 4 for a markup of vegetation areas within the site boundary	Architect, Landscape Architect	Design Development
Communal Spaces		
Communal spaces are places where people gather for social exchange. The office space includes a lunchroom at each level for employee use with a total of 30 sqm Refer to Figure 5 for a markup of communal areas within the office building	Architect	Design Development

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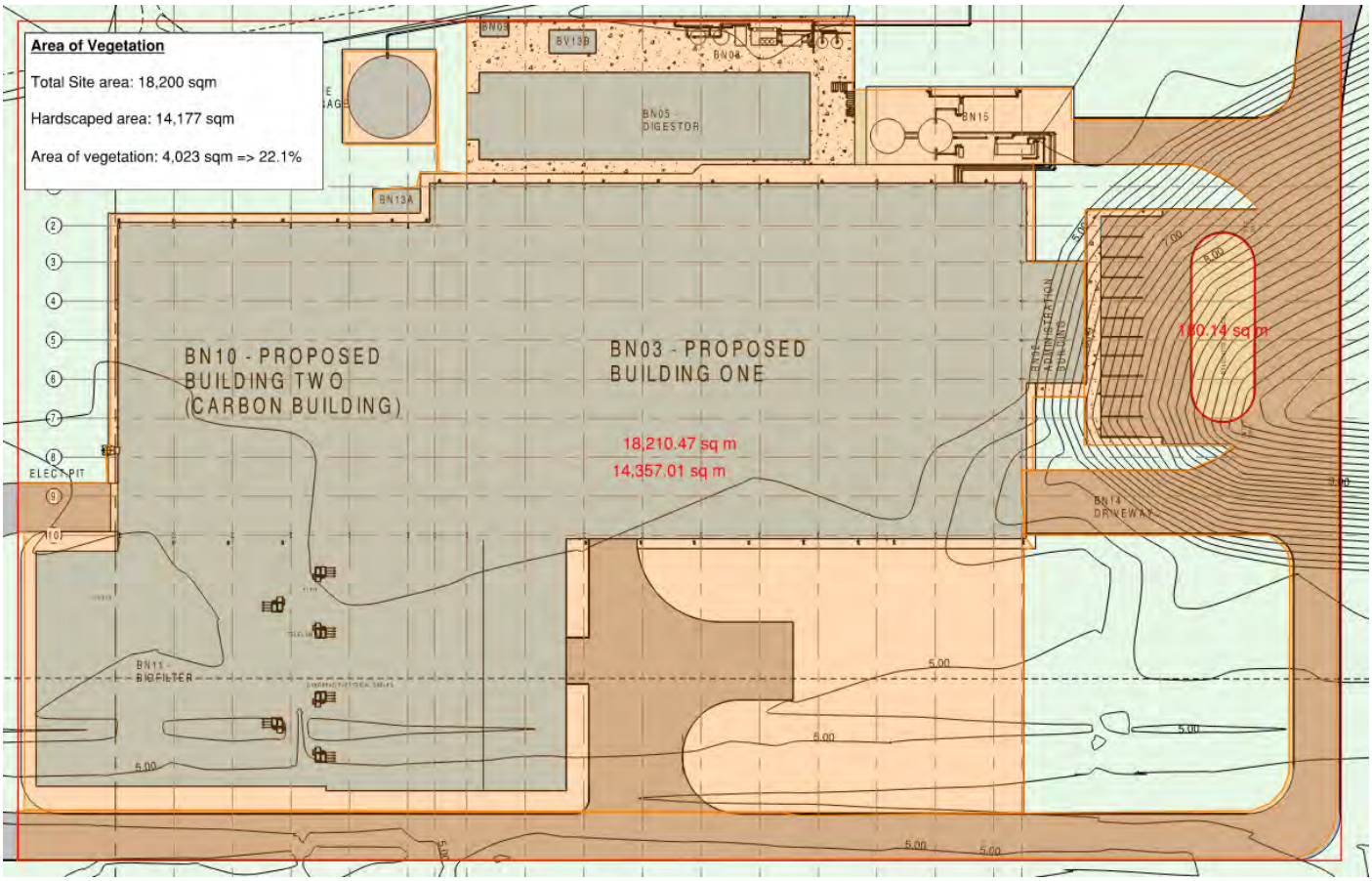

Figure 4 *Mark up area of vegetation within the site*

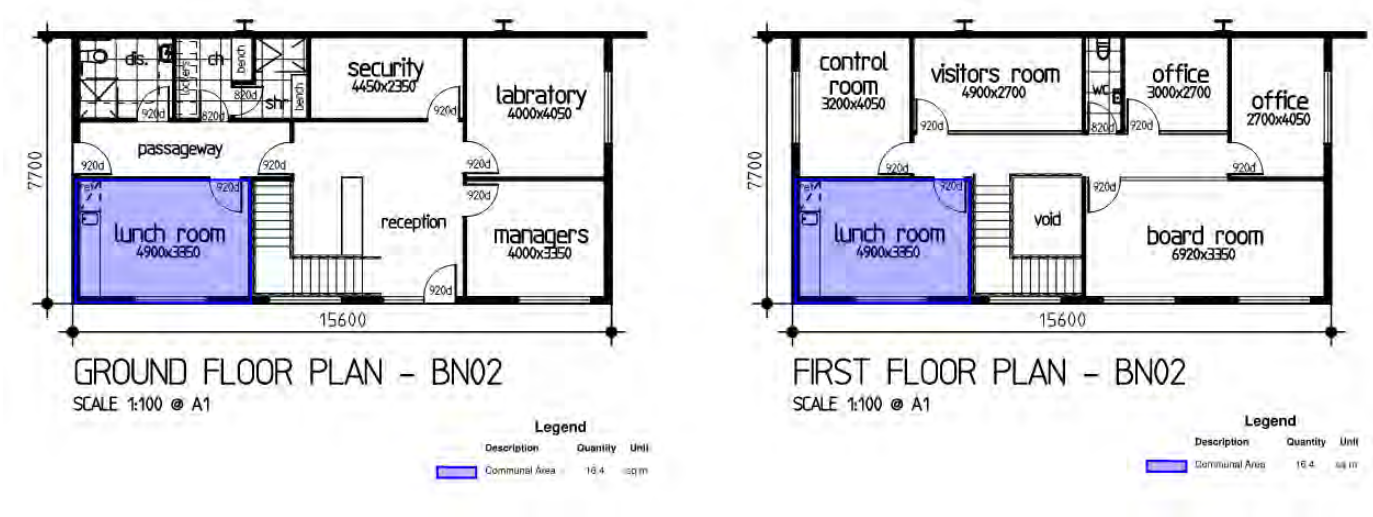

Figure 5 *Markup of communal areas within the office building*

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3.8 Innovation

3.8.1 Objective

– To encourage innovative technology, design and processes which positively influence the sustainability of buildings

The inherent nature of the RRON facility is a strong reflection of Barwon Water's continued commitment for an environmentally sustainable future. By converting organic waste into products such as biochar, digestate, and biogas, the facility is not only diverting a substantial amount of waste from landfills but also harnessing renewable energy to power the site and the wider community. This dual benefit not only minimises the environmental impact of organic waste but also reduces dependence on non-renewable energy sources.

The RRON facility has been designed with a minimum 25 year design life (continuous operation, 24 hours per day, 365 days per year) and planned to supply biogas directly to the neighbouring biosolids drying facility to offset natural gas use. This will occur until 2032 (Year 1 – 7) at which time the biosolids drying facility is scheduled to be decommissioned. The natural gas offset is estimated to be approximately 95,000 GJ per year.

Following decommissioning, the biogas will be sent to a biogas fired cogeneration unit (with 100% combustion) (Year 8 – 25) to provide behind-the-meter electricity for the RRON and the neighbouring WRP with the balance exported to the grid. This is expected to be approximately 9.2GWh of energy production per year.

The proposed technology is 'carbon positive' and results in an average net emission saving of approximately 13,400 t CO_2-e per annum. Over the life of the project (25 years), this equates to a net reduction in emissions of 345,000 t CO_2-e.

Further to the above, the Black Rock WRP facility currently has an operational 3MW onsite solar PV installation, one of the largest behind-the-meter solar installations in Australia at the time of construction in 2016. The primary focus of the solar farm to supply renewable electricity to the Black Rock WRP which will include the new proposed RRON facility, particularly in the first 7 years of operation before the establishment of the cogeneration facility. Historically the solar farm has directly supplied over one third of the Black Rock WRP's annual electricity consumption and exports any excess to the grid.

3.8.2 City of Greater Geelong minimum expectations

This category is designed to recognise new or outstanding initiatives not recognised elsewhere, such as in the Green Star tools. While this category is not specifically covered in Clause 22.71, the information does often overlap with other categories.

Sustainability innovations are earmarked for this project however have not been included here as they may be partially captured in other categories and the development already exceeds the minimum requirements of BESS and relevant planning scheme clauses so additional points have not been claimed.

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4. BESS Results

The development meets the minimum requirements across all categories and the overall BESS assessment as per the results below.

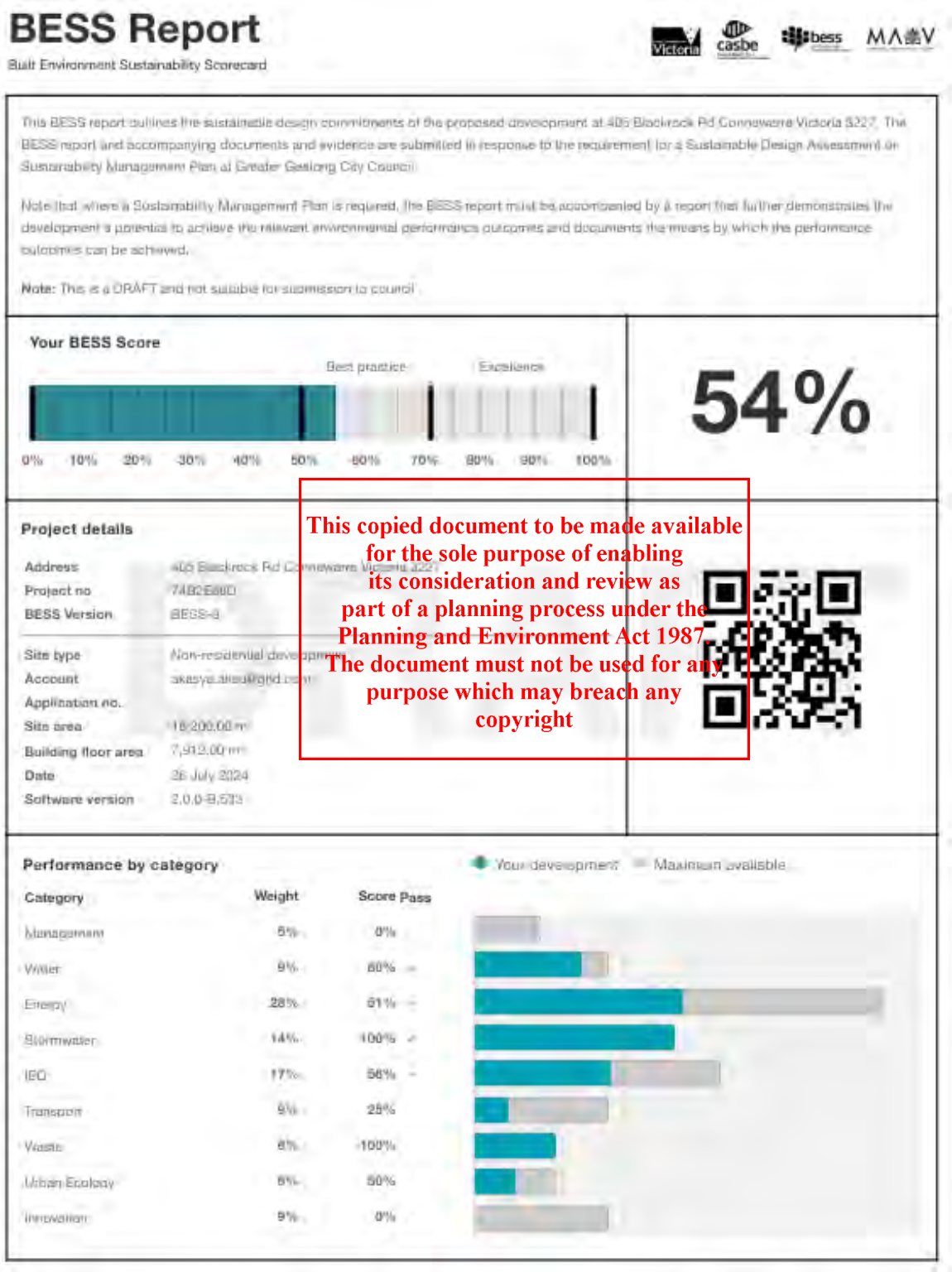

Figure 6 BESS Assessment Cover Page

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5. Conclusion

The design for the proposed Barwon Water Regional Renewable Organics Network (RRON) located at 405 Blackrock Road incorporates numerous initiatives designed to enhance the environmental performance of the facility. These include measures aimed at reducing energy and potable water consumption, managing the volume and quality of stormwater leaving the site, improving the quality of the indoor environment through daylight access and ventilation, facilitating sustainable transport means to and from the site by employees and visitors, effective management of waste, and improvement of local biodiversity through retention of vegetation.

Further to the above initiatives that are proposed for the design of the facility, the nature of the new facility is an innovative solution to for diverting a substantial amount of waste from landfills whilst also harnessing renewable energy to power various aspects of the wider community.

The project achieves all requirements of relevant planning schemes including exceeding minimum mandatory scores of the BESS assessment.

In addition to the initiatives mentioned in the report and captured in the BESS assessment, the principles incorporated in the design a of the building encourages connection to nature and the local landscape and highlight the importance and benefit of sustainable buildings, communities, and practices.

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Appendix A

BESS Report

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BESS Report

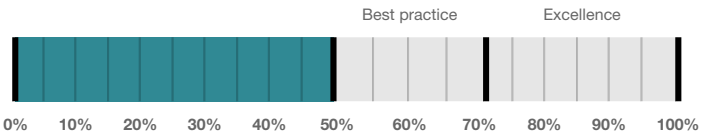
Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 405 Blackrock Rd Connewarre Victoria 3227. 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 Greater Geelong City Council.

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

Note: This is a DRAFT and not suitable for submission to council

Your BESS Score



54%

Project details

Address	405 Blackrock Rd Connewarre Victoria 3227
Project no	74B2E88D
BESS Version	BESS-8
Site type	Non-residential development
Account	akasya.aksu@ghd.com
Application no.	
Site area	18,200.00 m²
Building floor area	7,912.00 m²
Date	07 August 2024
Software version	2.0.0-B.545

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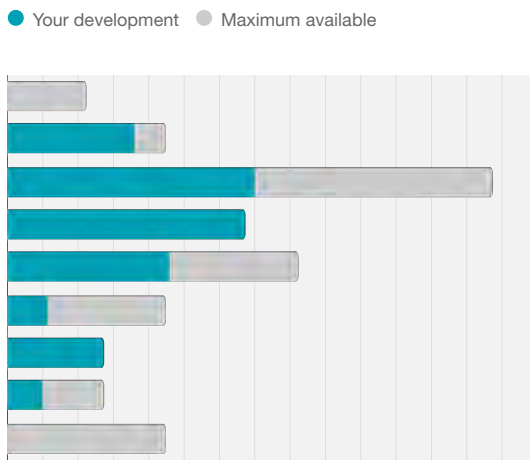
Performance by category

Category	Weight	Score	Pass
Management	5%	0%	
Water	9%	80%	✓
Energy	28%	51%	✓
Stormwater	14%	100%	✓
IEQ	17%	56%	✓
Transport	9%	25%	
Waste	6%	100%	
Urban Ecology	6%	37%	
Innovation	9%	0%	



Buildings

Name	Height	Footprint	% of total footprint
BN03 - Proposed Building One	1	5,107 m²	65%
BN02 - Administration Building	2	120 m²	1%
Biofilter Shed	1	2,165 m²	27%
Digestor Shed	1	400 m²	5%

Dwellings & Non Res Spaces

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Office				
Admin building	1	240 m²	BN02 - Administration Building	3%
Total	**1**	**240 m²**	**3%**	
Unconditioned Warehouse/factory				
warehouse	1	5,107 m²	BN03 - Proposed Building One	64%
Biofilter Shed	1	2,165 m²	Biofilter Shed	27%
Digestor Shed	1	400 m²	Digestor Shed	5%
Total	**3**	**7,672 m²**	**96%**	

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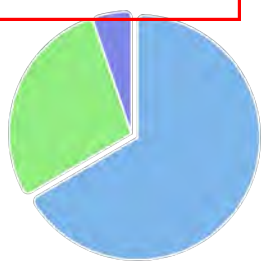
Project composition

Unconditioned Warehouse/factory Office

Building composition



BN03 - Proposed Building One Biofilter Shed Digestor Shed

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Supporting information

Floorplans & elevation notes

Credit	Requirement	Response	Status
Water 3.1	Annotation: Water efficient garden details		-
Stormwater 1.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)		-
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		-

Supporting evidence

Credit	Requirement	Response	Status
Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Stormwater 1.1	STORM report or MUSIC model		-
IEQ 1.4	A short report detailing assumptions used and results achieved.		-

Credit summary

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Management Overall contribution 4.5%

	0%	
1.1 Pre-Application Meeting	0%	
2.3 Thermal Performance Modelling - Non-residential	0%	
3.2 Metering - Non-Residential	N/A	Scoped Out
	The site facility will be owned and operated by Barwon Water exclusively	
3.3 Metering - Common Areas	0%	
4.1 Building Users Guide	0%	

Water Overall contribution 9.0%

	Minimum required 50%	**80%**	**Pass**
1.1 Potable Water Use Reduction	93%		
3.1 Water Efficient Landscaping	100%		
4.1 Building Systems Water Use Reduction	0%		

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Energy Overall contribution 27.5%

	Minimum required 50%	51%	✔ Pass
1.1 Thermal Performance Rating - Non-Residential		37%	
2.1 Greenhouse Gas Emissions		100%	
2.2 Peak Demand		100%	
2.6 Electrification		0%	⊘ Disabled
	Credit is available when the energy supply is set to all-electric (no gas or wood).		
2.7 Energy consumption		100%	
3.1 Carpark Ventilation		N/A	✣ Scoped Out
	Design does not include an enclosed carpark		
3.2 Hot Water		100%	
3.7 Internal Lighting - Non-Residential		0%	
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		0%	⊘ Disabled
	No solar PV renewable energy is in use.		
4.4 Renewable Energy Systems - Other		N/A	✣ Scoped Out
	No other (non-solar PV) renewable energy is in use.		

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Stormwater Overall contribution 13.5%

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

IEQ Overall contribution 16.5%

	Minimum required 50%	56%	✔ Pass
1.4 Daylight Access - Non-Residential		93%	✔ Achieved
2.3 Ventilation - Non-Residential		48%	✔ 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%	

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Transport Overall contribution 9.0%

	25%
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	100%
2.2 Car Share Scheme	0%
2.3 Motorbikes / Mopeds	0%

Waste Overall contribution 5.5%

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

Urban Ecology Overall contribution 5.5%

	37%
1.1 Communal Spaces	3%
2.1 Vegetation	75%
2.2 Green Roofs	0%
2.3 Green Walls and Facades	0%
3.2 Food Production - Non-Residential	0%

Innovation Overall contribution 9.0%

	0%
1.1 Innovation	0%

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Credit breakdown

Management Overall contribution 0%

1.1 Pre-Application Meeting		0%	
Score Contribution	This credit contributes 51% 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		0%	
Score Contribution	This credit contributes 14.9% towards the category score.		
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2022 Section J4D6?		
Question	Criteria Achieved ?		
Office	No		
Criteria	Has preliminary modelling been undertaken in accordance with either NCC2022 Section J (Energy Efficiency), NABERS or Green Star?		
Question	Criteria Achieved ?		
Office	No		
3.2 Metering - Non-Residential		N/A	Scoped Out
This credit was scoped out	The site facility will be owned and operated by Barwon Water exclusively		
3.3 Metering - Common Areas		0%	
Score Contribution	This credit contributes 8.7% towards the category score.		
Criteria	Have all major common area services been separately submetered?		
Question	Criteria Achieved ?		
Office	No		
Unconditioned Warehouse/factory	No		
4.1 Building Users Guide		0%	
Score Contribution	This credit contributes 17% towards the category score.		
Criteria	Will a building users guide be produced and issued to occupants?		
Question	Criteria Achieved ?		
Project	No		

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Water Overall contribution 7% Minimum required 50%

Water Approach	
What approach do you want to use for Water?:	Use the built in calculation tools
Project Water Profile Question	
Do you have a reticulated third pipe or an on-site water recycling system?:	Yes
Are you installing a swimming pool?:	No
Are you installing a rainwater tank?:	Yes
Reticulated third pipe or an on-site water recycling system	
Recycled Profile Name:	Third pipe
Irrigation area connected to reticulated third pipe or an on-site water recycling system only (i.e. not also connected to rainwater system):	-
Water Efficient Garden?:	-
Other external water demand connected to reticulated third pipe or an on-site water recycling system only (i.e. not also connected to rainwater system):	-
Fixtures, fittings & connections profile	
Showerhead:	
Admin building	4 Star WELS (>= 6.0 but <= 7.5)
warehouse Biofilter Shed Digestor Shed	Scope out
Bath: All	Scope out
Kitchen Taps: All	>= 6 Star WELS rating
Bathroom Taps: All	>= 6 Star WELS rating
Dishwashers:	
Admin building	>= 4 Star WELS rating
warehouse Biofilter Shed Digestor Shed	Scope out
WC: All	>= 4 Star WELS rating
Urinals:	
Admin building	>= 6 Star WELS rating
warehouse Biofilter Shed Digestor Shed	Scope out
Washing Machine Water Efficiency: All	Scope out
Which non-potable water source is the dwelling/space connected to?:	
Admin building warehouse	Tank 1
Biofilter Shed Digestor Shed	1
Non-potable water source connected to Toilets: All	Yes

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

Rainwater tank profile

What is the total roof area connected to the rainwater tank?: Tank 1	5,210 m²
Will this tank be connected to the reticulated third pipe or onsite water recycling system?: Tank 1	No
Tank Size: Tank 1	12,000 Litres
Irrigation area connected to tank: Tank 1	0.0 m²
Is connected irrigation area a water efficient garden?: Tank 1	No
Other external water demand connected to tank?: Tank 1	0.0 Litres/Day

1.1 Potable Water Use Reduction 93%

Score Contribution	This credit contributes 71.4% towards the category score.
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.
Output	Reference
Project	3033 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	1935 kL
Output	Proposed (including rainwater and recycled water use)
Project	1068 kL
Output	% Reduction in Potable Water Consumption
Project	64 %
Output	% of connected demand met by rainwater
Project	88 %
Output	How often does the tank overflow?
Project	Very Often
Output	Opportunity for additional rainwater connection
Project	583 kL

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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 0%

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	No

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Energy

Overall contribution 14% Minimum required 50%

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
Use the BESS Deem to Satisfy (DtS) method for Unconditioned non-residential spaces?:	-
Are you installing a cogeneration or trigeneration system?:	No
Non-residential buildings profile	
Heating, Cooling & Comfort Ventilation - Electricity Reference fabric & services:	
Heating, Cooling & Comfort Ventilation - Electricity Proposed fabric and reference services:	
Heating, Cooling & Comfort Ventilation - Electricity Proposed fabric & services:	
Heating - Gas - Reference fabric and services:	0.0 MJ
Heating - Gas - Proposed fabric and Reference services:	0.0 MJ
Heating - Gas - Proposed fabric and services:	0.0 MJ
Heating - Wood - reference fabric and services:	-
Heating - Wood - proposed fabric and reference services:	-
Heating - Wood - proposed fabric and services:	-
Hot Water - Electricity - Reference:	-
Hot Water - Electricity - Proposed:	-
Hot Water - Gas - Baseline:	0.0 MJ
Hot Water - Gas - Proposed:	0.0 MJ
Lighting - Reference:	-
Lighting - Proposed:	-
Peak Thermal Cooling Load - Reference:	-
Peak Thermal Cooling Load - Proposed:	-

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1.1 Thermal Performance Rating - Non-Residential — 37%

Score Contribution	This credit contributes 20.7% 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 11.8% 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 2.6% towards the category score.		
Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?		
2.6 Electrification		0%	⊘ Disabled
This credit is disabled	Credit is available when the energy supply is set to all-electric (no gas or wood).		
2.7 Energy consumption		100%	
Score Contribution	This credit contributes 23.6% towards the category score.		
Criteria	What is the % reduction in annual energy consumption against the benchmark?		
3.1 Carpark Ventilation		N/A	◈ Scoped Out
This credit was scoped out	Design does not include an enclosed carpark		
3.2 Hot Water		100%	
Score Contribution	This credit contributes 5.9% 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		0%	
Score Contribution	This credit contributes 1.18% 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	No		
Unconditioned Warehouse/factory	No		
4.1 Combined Heat and Power (cogeneration / trigeneration)		N/A	◈ Scoped Out
This credit was scoped out	No cogeneration or trigeneration system in use.		
4.2 Renewable Energy Systems - Solar		0%	⊘ Disabled
This credit is disabled	No solar PV renewable energy is in use.		
4.4 Renewable Energy Systems - Other		N/A	◈ Scoped Out
This credit was scoped out	No other (non-solar PV) renewable energy is in use.		

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Stormwater

Overall contribution 14% Minimum required 100%

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	125
Output	Min STORM Score
Project	100

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IEQ Overall contribution 9% Minimum required 50%

1.4 Daylight Access - Non-Residential		93%	✔ 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?		
Office	60 %		
Unconditioned Warehouse/factory	95 %		
2.3 Ventilation - Non-Residential		48%	✔ 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?		
Office	0 %		
Unconditioned Warehouse/factory	0 %		
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	0 %		
Unconditioned Warehouse/factory	100 %		
Criteria	What CO_2 concentrations are the ventilation systems designed to achieve, to monitor and to maintain?		
Question	Value		
Office	0 ppm		
Unconditioned Warehouse/factory	0 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?		
Office	0 %		
Unconditioned Warehouse/factory	0 %		
3.5 Thermal Comfort - Ceiling Fans - Non-Residential		0%	
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?		
Office	0 %		
Unconditioned Warehouse/factory	0 %		
4.1 Air Quality - Non-Residential		100%	
Score Contribution	This credit contributes 5.9% towards the category score.		

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Criteria	Do all paints, sealants and adhesives meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Office	Yes
Unconditioned Warehouse/factory	Yes
Criteria	Does all carpet meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Office	Yes
Unconditioned Warehouse/factory	No carpet
Criteria	Does all engineered wood meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Office	Yes
Unconditioned Warehouse/factory	No engineered wood

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Transport Overall contribution 2%

1.4 Bicycle Parking - Non-Residential		0%	
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 ?		
Office	No		
Unconditioned Warehouse/factory	No		
Question	Bicycle Spaces Provided ?		
Office	0		
Unconditioned Warehouse/factory	0		
1.5 Bicycle Parking - Non-Residential Visitor		0%	
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 ?		
Office	No		
Unconditioned Warehouse/factory	No		
Question	Bicycle Spaces Provided ?		
Office	0		
Unconditioned Warehouse/factory	0		
1.6 End of Trip Facilities - Non-Residential		0%	⊘ Disabled
This credit is disabled	Credit 1.4 must be complete first.		
2.1 Electric Vehicle Infrastructure		100%	
Score Contribution	This credit contributes 25% towards the category score.		
Criteria	Are facilities provided for the charging of electric vehicles?		
Annotation	2 x EV charging stations provided in outdoor carpark adjacent to the Administration building. Refer to Combined Electrical Plan 'BN7 22100-BN01'.		
Question	Criteria Achieved ?		
Project	Yes		
2.2 Car Share Scheme		0%	
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		

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2.3 Motorbikes / Mopeds		0%
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

Overall contribution 6%

1.1 - Construction Waste - Building Re-Use		N/A	Scoped Out
This credit was scoped out	Previously greenfield site		

2.1 - Operational Waste - Food & Garden Waste		100%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Are facilities provided for on-site management of food and garden waste?	
Annotation	The facility is an industrial scale anaerobic digestor which will process onsite organic waste and organic waste from 4 local councils	
Question	Criteria Achieved ?	
Project	Yes	

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

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Urban Ecology Overall contribution 2%

1.1 Communal Spaces		3%
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 : * 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	
Office	33.0 m²	
Unconditioned Warehouse/factory	0.0 m²	
Output	Minimum Common Space Required	
Office	19 m²	
Unconditioned Warehouse/factory	101 m²	
2.1 Vegetation		75%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area?	
Question	Percentage Achieved ?	
Project	32 %	
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	
Office	-	
Unconditioned Warehouse/factory	-	
Output	Min Food Production Area	
Office	5 m²	
Unconditioned Warehouse/factory	39 m²	

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Innovation Overall contribution 0%

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

Note

This is a DRAFT and not suitable for submission to council.

Disclaimer

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Appendix B

Daylight Assessment

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Office Building

As a minimum requirement for BESS, the development must demonstrate that 33% of the regularly occupied spaces achieve the target daylight factor of 2%. To demonstrate this, the daylight assessment was completed in line with the methodology of the Green Star Daylight and Views Hand Calculation Guide (Version 5, September 2019) for the office space.

Areas are deemed to have a daylight factor of 2% if they are within the 'zone of compliance' as required by the calculation method. The zone of compliance is an area (in the horizontal plane) that is the width of the window by a depth which is twice the height of the window head above desktop/tabletop level as illustrated in the Figure 2 below.

$$Depth\ of\ the\ Zone\ of\ Compliance = h \times 2$$

$$'w'\ width\ of\ the\ Zone\ of\ Compliance = Width\ of\ the\ glazing$$

$$Zone\ of\ compliance = h \times 2 \times w$$

Additional Notes:

- When plotting the depth of the Zone of Compliance the zone may not be drawn past permanent solid or glazed partitions
- Any column or mullion < 0.5m in width can be disregarded and the glazing can be considered to be continuous in width
- For the purposes of this hand calculation desktop/tabletop level is set at 700mm AFFL for all rating tools

A summary of the results for the office building can be found in the following table and images.

Areas	Total Primary Area	Daylight Compliance Area	Daylight Compliance %
Ground Floor	46.1	21.8	47%
Level 1	50.5	36.5	72%
Total (office space)	**96.6**	**58.3**	**60.4%**

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Ground Floor

Level 1

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Industrial Building

As a minimum requirement for BESS, the development must demonstrate that 33% of the regularly occupied spaces achieve the target daylight factor of 2%. To demonstrate this, the daylight assessment was completed in line with the methodology of Daylight modelling completed in Design Builder 3D modelling software.

Modelling parameters:

- Modelling software: Design Builder
- Sky: Uniform design sky of 10,000 lux
- Floor surface reflectance: 0.3
- Walls surface reflectance: 0.7
- Ceilings surface reflectance: 0.7
- Skylights VLT: 0.8

A summary of the results for the office building can be found in the following table and images.

Areas	Floor Area within Limits	Average Daylight Factor
Total	**95.6%**	**3.97%**

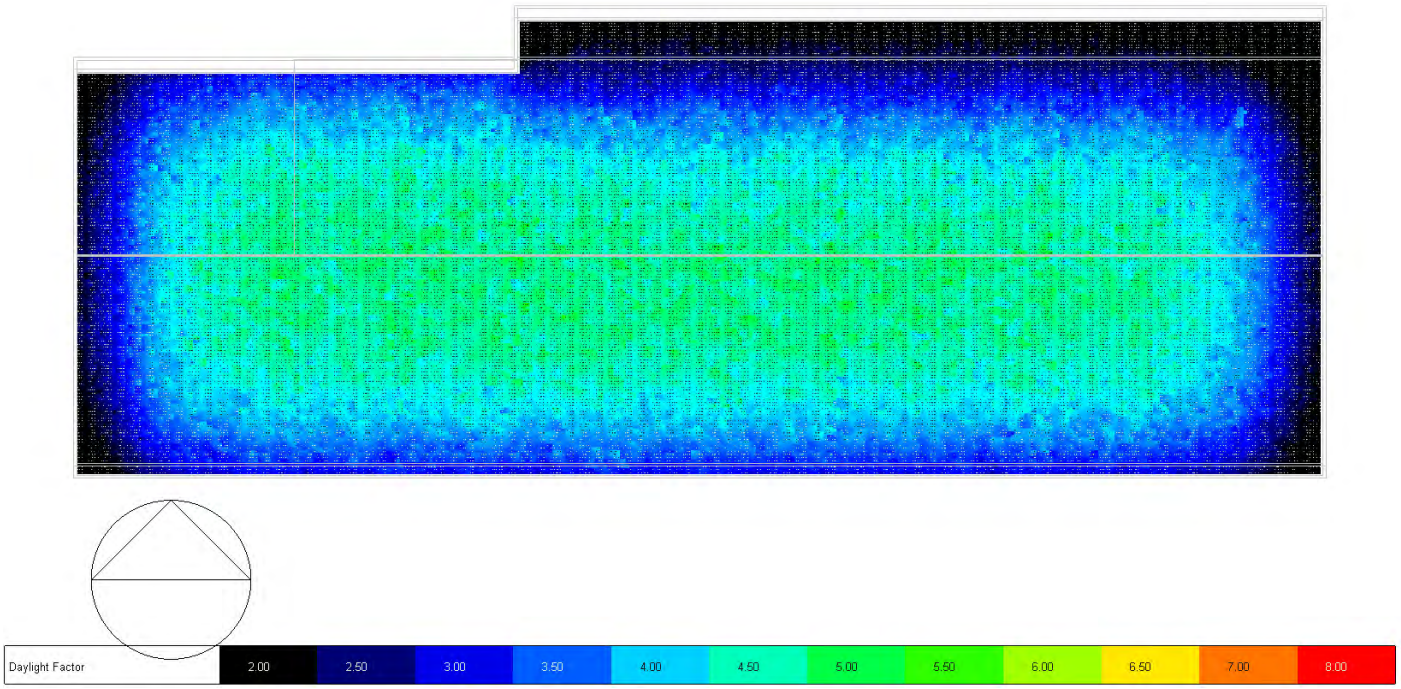

Figure 7 Design builder daylight assessment for the industrial building

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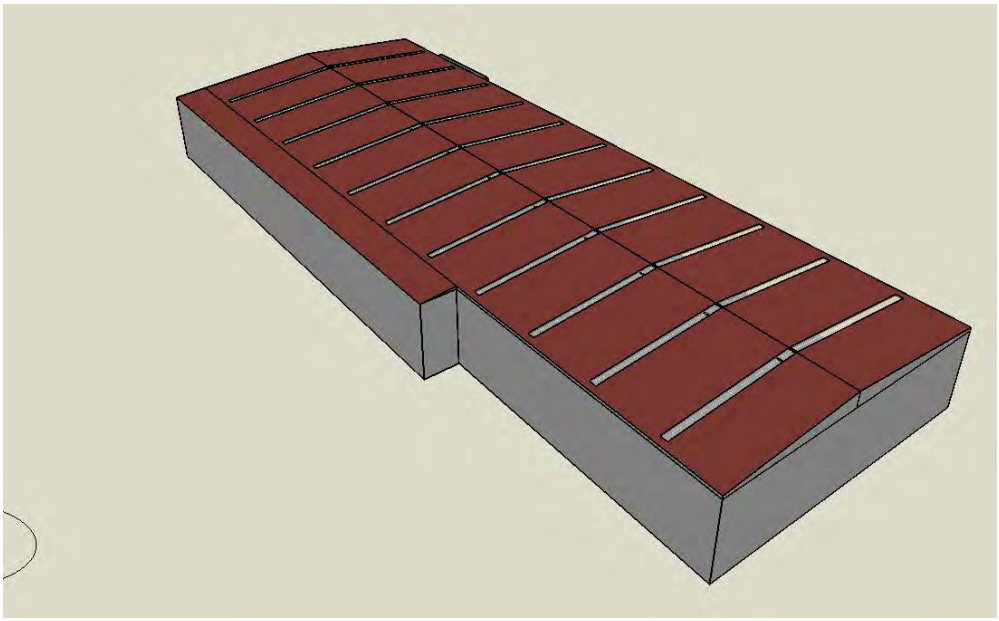

Figure 8 ***Design Builder model showing the proposed skylights on the industrial building to achieve daylight access requirements***

Figure 9 *Warehouse building with nominated extent of skylight (3D render updated 23rd of July 2024)*

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Appendix C

STORM Calculator Results

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STORM Rating Report

TransactionID: 0

Municipality: GREATER GEELONG

Rainfall Station: GREATER GEELONG

Address: 405 Blackrock Rd

Connewarre

VIC 3227

Assessor:

Development Type: Industrial

Allotment Site (m2): 18,200.00

STORM Rating %: 125

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Hard surface	14,177.00	Pond	1,439.00	0	125.10	0.00

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Date Generated: 05-Aug-2024

Program Version: 1.0.0

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