SUSTAINABILITY MANAGEMENT PLAN

ADVERTISED PLAN

MELBOURNE MONTESSORI COLLEGE STAGE 1
737 HAWTHORN RD
BRIGHTON 3187

ATTENTION: KNEELER DESIGN ARCHITECTURE
ISSUED: 15 AUG 2025
STATUS: FINAL

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FUTURE-FOCUSED
ENGINEERED SOLUTIONS

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CONTENTS

ISSUE AND CHANGE LOG

Date	Purpose of issue and changes	Status	Author
15 Aug 2025	For planning application	Final	PG
16 May 2025	For design team comment	Draft	PG

1 EXECUTIVE SUMMARY

1.1 SUSTAINABILITY MANAGEMENT PLAN (SMP)

This Sustainability Management Plan (SMP) provides a detailed sustainability assessment of the project at the planning stage. It addresses key sustainable design criteria and demonstrates that a detailed and holistic ESD (environmentally or ecologically sustainable development) review has been undertaken. This document also identifies responsibilities for the implementation of the various ESD aspects through the life of the project (design through construction to operation and maintenance).

The report is consistent with the SDAPP (Sustainable Design Assessment in the Planning Process) framework as developed by Victorian local governments. The categories appearing in this framework are fully covered in Section 3 of this document although the terminology and order of categories is slightly different.

1.2 BESS (BUILT ENVIRONMENT SUSTAINABILITY SCORECARD) ASSESSMENT

BESS assesses energy and water efficiency, thermal comfort, and overall environmental sustainability performance of new buildings or alterations. It was created to assist builders and developers to demonstrate that they meet sustainability information requirements as part of a planning permit applications. The BESS tool assesses projects against a benchmark in nine (9) environmental categories as listed below with points available in each category for relevant design strategies.

1. Management
2. Water *
3. Energy *
4. Stormwater *
5. Indoor environment quality (IEQ) *
6. Transport
7. Waste
8. Urban ecology
9. Innovation
10. Materials **

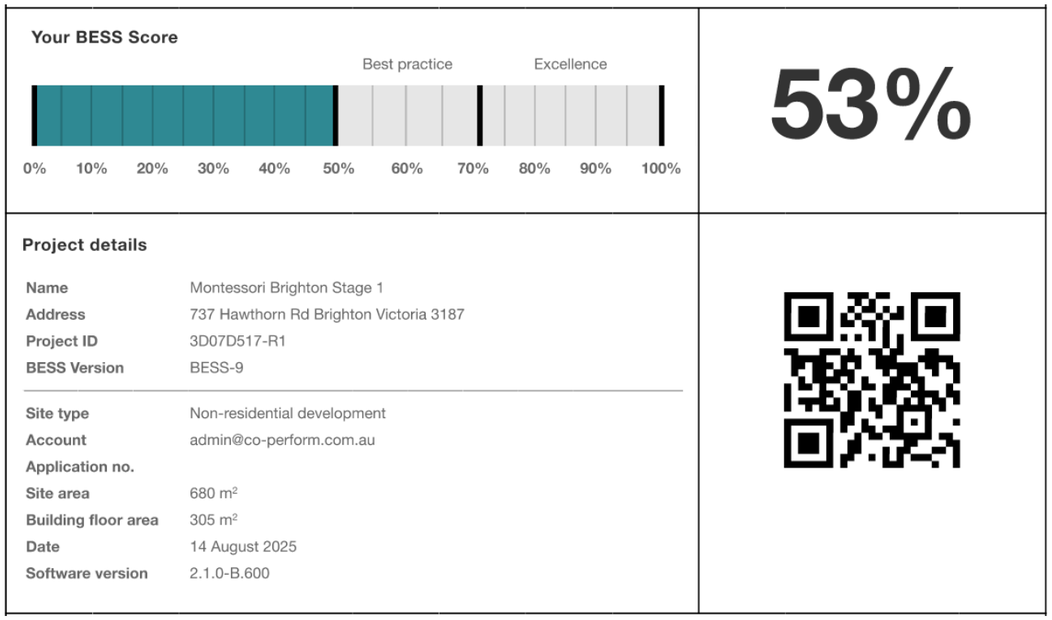
** mandatory category with minimum pass rates.*
**** supplementary category for council that is additional to BESS.*

The overall BESS score is shown as a percentage improvement over a benchmark project.

- A score of 50% and higher is the minimum requirement and equates to "best practice".
- A score of 70% and higher denotes improved performance and equates to BESS "excellence".

This SMP has a target "best practice" rating and the adjacent table shows the outcomes of the assessment. Further details including the measures needed to achieve the target rating are identified in Section 3 and Appendix A.

- The BESS score of 53 exceeds the target score of 50.
- **The project therefore achieves the target best practice rating.**



2 INTRODUCTION

2.1 DESCRIPTION OF THE PROJECT

The proposed development is located at 737 Hawthorn Rd, Brighton.

Key project data includes:

- Site area 680 m^2
- Gross floor area 300 m^2

The proposed project includes a new 2 storey education building with one basement level.

The site is located in an area of excellent accessibility and good public transport.

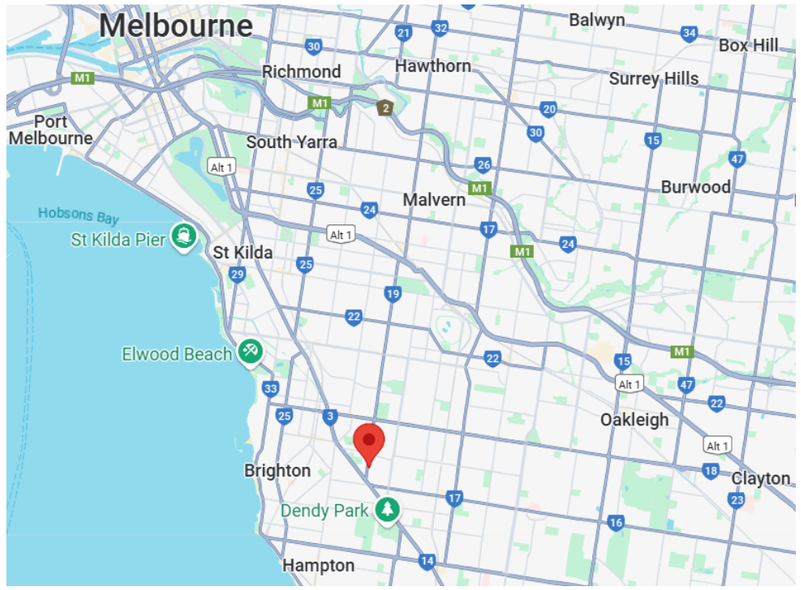


Figure 1: Site location map

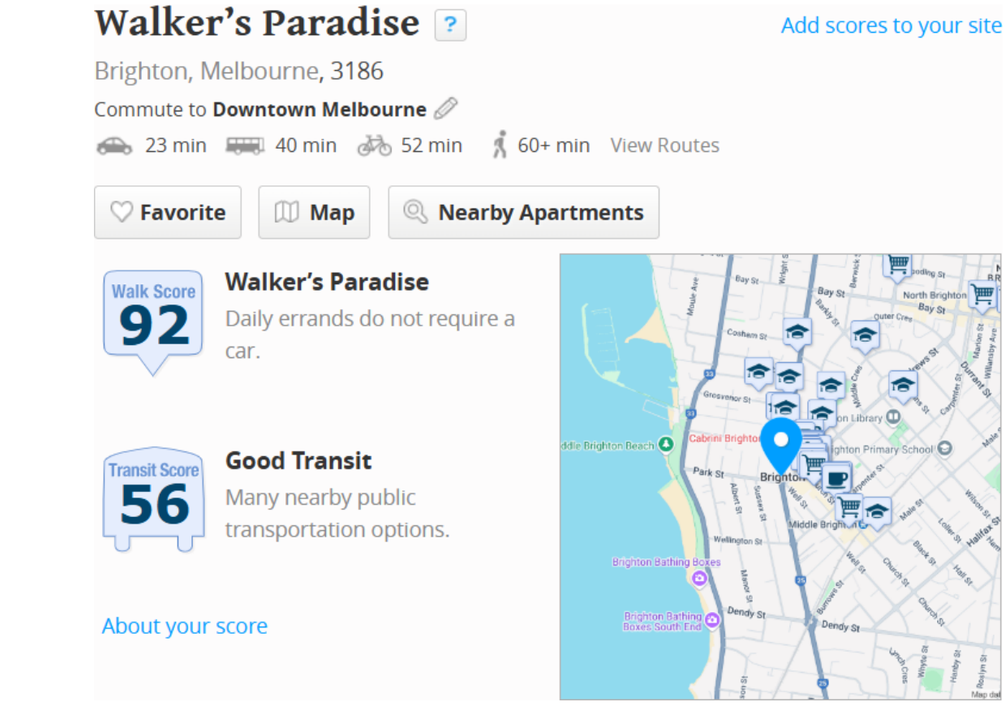


Figure 2: Walkability score

3 ESD DESIGN RESPONSES

3.1 MANAGEMENT

Ensure that sustainability is integrated from concept design through the construction process and into operations. Good decisions made early will always deliver the maximum benefit for the lowest cost. Best practice building management also means giving future occupants the information they need to be able to run their buildings in the most efficient way.

Table 1: Management

ID	Credit	Project response	Responsibility
bess-4.1	Building Users Guide	A Building Users' Guide will be developed for occupants and building maintenance. This guide will explain the function and use of the building's sustainable design initiatives, systems, and processes in non-technical language. It will be presented as a booklet and/or interpretative signage to encourage sustainable behavior.	

3.2 INTEGRATED WATER MANAGEMENT

To ensure the efficient use of water, to reduce total operating potable water consumption and to encourage the appropriate use of alternative water sources. To reduce the impact of stormwater runoff, to improve the water quality of stormwater runoff, to achieve best practice stormwater quality outcomes and to incorporate the use of water sensitive urban design.

Table 2: Integrated Water Management

ID	Credit	Project response	Responsibility
bess-1.1	Potable Water Use	A minimum 25% reduction in annual internal potable water consumption will be achieved through the use of efficient fixtures and appliances (WELS rated), rainwater use, and/or recycled water use. Refer to the BESS Appendix for details.harvesting consisting of a rainwater tank (minimum size: 7500 litres) with a 250sqm (min) catchment and connect to landscaping and to all toilets in the new building.mains backup of the system.	
bess-2.1	Stormwater Treatment	The minimum requirements of Integrated Water Management 2.1 Stormwater Treatment will be achieved by MUSIC modelling that meets the best practice WSUD requirements. Refer to the appendices for details.	

3.3 ENERGY

To ensure the efficient use of energy to reduce total operating greenhouse gas emissions and to reduce energy peak demand.

Table 3: Energy

ID	Credit	Project response	Responsibility
bess-1.1	Thermal Performance Rating - Non-Residential	The building's thermal fabric will be designed to meet the minimum requirements of the National Construction Code 2022 Section J for heating and cooling energy consumption. This will be demonstrated through either deemed-to-satisfy criteria or energy modelling results encompassing building fabric and services.	
bess-2.1	Greenhouse Gas Emissions	The development will meet the minimum requirements for Operational Energy 2.1 Greenhouse Gas Emissions by adhering to the deemed-to-satisfy criteria for non-residential buildings. This demonstrates achievement of the energy efficiency benchmark.	
bess-2.2	Peak Demand	The project's peak cooling demand will meet the required benchmark through adherence to the Deemed-to-Satisfy (DtS) provisions for energy and greenhouse emissions. This will ensure a reduction in demand on electrical infrastructure during peak periods.	

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Table 3: Energy

ID	Credit	Project response	Responsibility
bess-2.7	Energy consumption	Minimum energy efficiency requirements will be met using the Deemed-to-Satisfy (DtS) method. For non-residential projects, compliance with the benchmark will achieve the minimum credit requirements.	
bess-3.2	Hot Water	The project's hot water system energy consumption will meet the non-residential benchmark via the Deemed-to-Satisfy (DtS) method. This ensures efficient energy use and reduced greenhouse gas emissions associated with water heating. Hot water systems will be electric heat pump or instantaneous electric.	
bess-3.7	Internal Lighting - Non-Residential	The non-residential project will achieve the minimum requirements for Operational Energy 3.7 Internal Lighting by ensuring the maximum illumination power density (W/m2) in at least 90% of relevant building classes is 80% of the regulated requirement outlined in Table J7D3a of the NCC 2022 Section J.	

3.4 IEQ

Improving the indoor environment quality at home and in the workplace will generally enhance well-being and reduce the likelihood of ill-health. Through the implementation of passive design principles, good indoor environment quality also leads to energy savings due to reduced energy demands for heating, cooling and artificial lighting.

Table 4: IEQ

ID	Credit	Project response	Responsibility
bess-1.4	Daylight Access - Non-Residential	Daylight modelling demonstrates that at least 33% of regular use areas achieve a daylight factor of 2% under a uniform design sky of 10,000 lux, meeting the minimum requirements for daylight access in non-residential buildings. 52% of regular use areas are assessed to meet the BESS requirements for effective daylight access. Refer to the appendices for details.	
bess-2.3	Ventilation - Non-Residential	Minimum compliance for Indoor Environment Quality 2.3 Ventilation - Non-Residential will be achieved through natural ventilation. 91% of regular use areas are assessed to meet the BESS requirements for natural ventilation. Refer to the appendices for details.	
bess-3.4	Thermal comfort - Shading - Non-Residential	72% of the east, west, and north-facing glazing to regular use areas will have appropriate external shading to provide comfortable indoor spaces and reduce energy needed for cooling.	
bess-3.5	Thermal Comfort - Ceiling Fans - Non-Residential	Ceiling fans will service 70% of regular use spaces to provide comfortable indoor conditions and reduce reliance on mechanical heating and cooling. Permanently installed fans with speed controllers will cover the required floor areas as per the credit criteria.	
bess-4.1	Air Quality - Non-Residential	All specified product types (paints, sealants, adhesives, carpets, and engineered wood) will meet maximum total indoor pollutant emission limits. Products will be selected that comply with current GECA, Global GreenTag GreenRate, Carpet Institute Australia Environmental Classification Scheme Level 2, Green Star, or WELL standards for TVOC and Formaldehyde. Refer to the appendices for details.	

3.5 TRANSPORT

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

Table 5: Transport

ID	Credit	Project response	Responsibility
bess-2.1	Electric Vehicle Infrastructure	Electric vehicle charging infrastructure including at least 1 charging point in the Basement.	

3.6 WASTE

To ensure waste avoidance, reuse and recycling during the construction and operation stages of the development.

Table 6: Waste

ID	Credit	Project response	Responsibility
bess-2.1	Food & Garden Waste	Food organics and green organics (FOGO) compost stream is to be provided.	
bess-2.2	Convenience of Recycling	Recycling facilities will be as conveniently located as general waste facilities. This ensures ease of use and encourages recycling by building occupants, meeting the minimum requirements for operational waste management.	

3.7 URBAN ECOLOGY

Improve the urban ecosystem through the incorporation of vegetation through landscaping.

Table 7: Urban Ecology

ID	Credit	Project response	Responsibility
bess-1.1	Communal Spaces	The Outdoor Dining space of 107sqm exceeds the BESS minimum area requirements for credits related to facilitating social interaction among occupants.	
bess-2.1	Vegetation	The project achieves the minimum requirements for Urban Ecology through the provision of vegetation covering 10% of the site area.	
bess-2.3	Green Walls and Facades	Climbing and overhanging plants create a green walls to the western facade to provide many benefits such as softening the building aesthetic, shading, cooling and to mitigate the impact of the urban heat island effect.	
bess-3.2	Food Production - Non-Residential	A significant area of planters are dedicated to on-site food production.	

3.8 INNOVATION

Improve sustainable building performance (e.g., reduced energy and water consumption; reduced pollution and waste; improved and more resilient communities and economies) through innovative design solutions such as: exceeding best practice standards; passive, site and climate responsive design; and identifying synergies.

Table 8: Innovation

ID	Credit	Project response	Responsibility
bess-1.1	Innovation	Specifications will include a target minimum recycling rate of 90% of demolition and construction waste.	

APPENDICES

A BESS REPORT

The BESS printout report follows in this appendix.

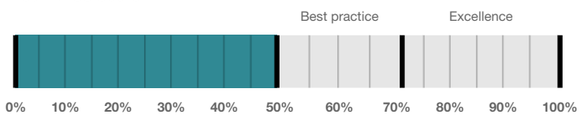
BESS Report

Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 737 Hawthorn Rd Brighton Victoria 3187. 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 Bayside City Council.

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

Your BESS Score

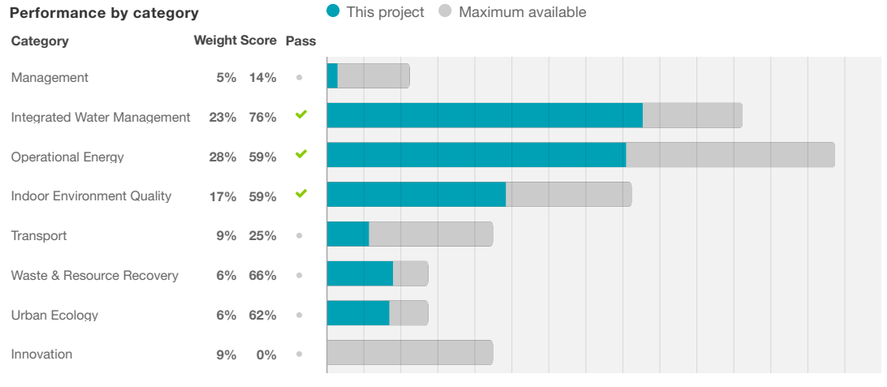


53%

Project details

Name	Montessori Brighton Stage 1
Address	737 Hawthorn Rd Brighton Victoria 3187
Project ID	3D07D517-R1
BESS Version	BESS-9
Site type	Non-residential development
Account	admin@co-perform.com.au
Application no.	
Site area	680 m²
Building floor area	305 m²
Date	14 August 2025
Software version	2.1.0-B.600

Performance by category



Buildings

Name	Height	Footprint	% of total footprint
Food Tech	2	630 m²	100%

Dwellings & Non Res Spaces

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Other building				
Food Tech	1	305 m²	Food Tech	100%
Total	**1**	**305 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)	To be printed Refer to the Architectural drawings for tank locations and to the Stormwater Management Plan for other details.	✔
Transport 2.1	Location of electric vehicle charging infrastructure	To be printed Refer to the Architectural drawings for EV stations.	✔
Waste & Resource Recovery 2.1	Location of food and garden waste facilities	To be printed To be detailed in the design stage.	✔
Waste & Resource Recovery 2.2	Location of recycling facilities	To be printed Part of the existing school.	✔
Urban Ecology 1.1	Location and size of communal spaces	To be printed Refer to the Architectural drawings: covered outdoor areas.	✔
Urban Ecology 2.1	Location and size of vegetated areas	To be printed Refer to architectural and landscape drawings.	✔
Urban Ecology 2.3	Location and size of green facade	To be printed Refer to the Architectural drawings: climbing and overhanging plants create a green walls to the western facade.	✔
Urban Ecology 3.2	Location of food production areas	To be printed Refer to the Architectural drawings: kitchen garden.	✔

Supporting Documentation

Credit	Requirement	Response	Status
Integrated Water Management 2.1	STORM report or MUSIC model	To be printed Stormwater Management Plan Refer to the Stormwater Management Plan and the summary information in the Sustainability Management Plan Appendix D.	✔
Operational Energy 1.1	Energy Report showing calculations of reference case and proposed buildings	To be printed No report required by BESS The BESS pathway is "Deemed to Satisfy". This does not require an Energy Report to be submitted. The DtS requirements will be integrated into the project during the design stage.	✔
Operational Energy 3.7	Average lighting power density and lighting type(s) to be used	To be printed Sustainability Management Plan Refer to the Sustainability Management Plan Section 3.3.	✔
Indoor Environment Quality 1.4	A short report detailing assumptions used and results achieved.	To be printed Sustainability Management Plan Refer to the Sustainability Management Plan Appendix C.	✔

Credit summary

Management Overall contribution 4.5%

	14%	
1.1 Pre-Application Meeting	0%	
2.3 Thermal Performance Modelling - Non-Residential	0%	
3.2 Metering - Non-Residential	N/A	✣ Scoped Out
	There are no separate commercial tenants	
3.3 Metering - Common Areas	0%	
4.1 Building Users Guide	100%	

IWM Overall contribution 22.5%

	76%	✔ **Pass**
1.1 Potable Water Use	48%	✔ Achieved
2.1 Stormwater Treatment	100%	✔ Achieved
3.1 Water Efficient Landscaping	0%	
4.1 Building Systems Water Use	N/A	✣ Scoped Out
	The building does not have a sprinkler system and water based heat rejection systems.	

BESS, Montessori Brighton Stage 1 737 Hawthorn Rd, Brighton 3187

Operational Energy Overall contribution 27.5%

	Minimum required 50%	**59%** ✔ **Pass**
1.1 Thermal Performance Rating - Non-Residential	37%	
2.1 Greenhouse Gas Emissions	100%	
2.2 Peak Demand	100%	
2.6 Electrification	0%	
2.7 Energy consumption	100%	
3.1 Carpark Ventilation	N/A	✣ Scoped Out
	There are no enclosed carparks.	
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	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.	

IEQ Overall contribution 16.5%

	Minimum required 50%	**59%**	✔ **Pass**
1.4 Daylight Access - Non-Residential	52%	✔ Achieved	
2.3 Ventilation - Non-Residential	46%	✔ Achieved	
3.4 Thermal comfort - Shading - Non-Residential	81%		
3.5 Thermal Comfort - Ceiling Fans - Non-Residential	70%		
4.1 Air Quality - Non-Residential	100%		

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 & Resource Recovery Overall contribution 5.5%

66%

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

Urban Ecology Overall contribution 5.5%

62%

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

Innovation Overall contribution 9.0%

0%

1.1 Innovation	0%

Credit breakdown

Management Overall contribution 4.5%

14%

1.1 Pre-Application Meeting		0%
Score Contribution	This credit contributes 42.9% 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 28.6% towards the category score.	
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2022 Section J4D6?	
Question	Criteria Achieved ?	
Other building	No	
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
		There are no separate commercial tenants
This credit was scoped out	There are no separate commercial tenants	
3.3 Metering - Common Areas		0%
Score Contribution	This credit contributes 14.3% towards the category score.	
Criteria	Have all major common area services been separately submetered?	
Question	Criteria Achieved ?	
Other building	No	
4.1 Building Users Guide		100%
Score Contribution	This credit contributes 14.3% 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%

76% ✔ 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?:	MUSIC or other modelling software
STORM score achieved:	100
Flow:	0 %
Total Suspended Solids:	88 %
Total Phosphorus:	81 %
Total Nitrogen:	61 %
Rainwater tank profile	
What is the total roof area connected to the rainwater tank?: Rainwater Tank 1	250 m²
Tank Size: Rainwater Tank 1	7,500 Litres
Irrigation area connected to tank: Rainwater Tank 1	46.0 m²
Is connected irrigation area a water efficient garden?: Rainwater Tank 1	No
Other external water demand connected to tank?: Rainwater Tank 1	0.0 Litres/Day
Fixtures, fittings & connections profile	
Building:	Food Tech
Showerhead:	5 Star WELS (>= 4.5 but <= 6.0)
Bath:	Scope out
Kitchen Taps:	>= 4 Star WELS rating
Bathroom Taps:	>= 5 Star WELS rating
Dishwashers:	>= 4 Star WELS rating
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?:	-1
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	48% ✔ Achieved

Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.
Output	Reference
Project	605 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	443 kL
Output	Proposed (including rainwater and recycled water use)
Project	416 kL
Output	% Reduction in Potable Water Consumption
Project	31 %
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	185 kL
2.1 Stormwater Treatment	100% ✔ Achieved
Score Contribution	This credit contributes 60% towards the category score.
Criteria	Has best practice stormwater management been demonstrated?
Output	Flow
Project	0 %
Output	Min Suspended Solids reduction
Project	80 %
Output	Total Suspended Solids reduction
Project	88 %
Output	Min Phosphorus reduction
Project	45 %
Output	Total Phosphorus reduction
Project	81 %
Output	Min Nitrogen reduction
Project	45 %
Output	Total Nitrogen reduction
Project	61 %
3.1 Water Efficient Landscaping	0%
Score Contribution	This credit contributes 6.7% towards the category score.
Criteria	Will water efficient landscaping be installed?
Question	Criteria Achieved ?
Project	No
4.1 Building Systems Water Use	N/A ✣ Scoped Out
	The building does not have a sprinkler system and water based heat rejection systems.

This credit was scoped out	The building does not have a sprinkler system and water based heat rejection systems.	

Operational Energy Overall contribution 27.5%

	Minimum required 50%	59%	✔ Pass

Project profile		
Use the BESS Deem to Satisfy (DtS) method for Non-residential spaces?:	Yes	
Are you installing any renewable energy system(s) (other than solar photovoltaic)?:	No	
Energy Supply:	All-electric	
Non-residential Deemed-to-Satisfy profile		
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	
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		0%
Score Contribution	This credit contributes 13.6% towards the category score.	
Criteria	Is the development all-electric?	
Question	Criteria Achieved?	
Project	No	
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
		There are no enclosed carparks.	
This credit was scoped out	There are no enclosed carparks.		
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		0%	Disabled
		No solar PV renewable energy is in use.	
This credit is 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.	
This credit was scoped out	No other (non-solar PV) renewable energy is in use.		

BESS, Montessori Brighton Stage 1 737 Hawthorn Rd, Brighton 3187

IEQ **Overall contribution 16.5%**

Minimum required 50% **59%** ✔ **Pass**

1.4 Daylight Access - Non-Residential		52%	✔ 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	52 %		
2.3 Ventilation - Non-Residential		46%	✔ 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	91 %		
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	0 ppm		
3.4 Thermal comfort - Shading - Non-Residential		81%	
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	72 %		
3.5 Thermal Comfort - Ceiling Fans - Non-Residential		70%	
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	70 %		
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%**

25%

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 ?	
Other building	No	
Question	Bicycle Spaces Provided ?	
Other building	2	
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 ?	
Other building	No	
Question	Bicycle Spaces Provided ?	
Other building	1	
1.6 End of Trip Facilities - Non-Residential		0% ⊘ Disabled
		Credit 1.4 must be complete first.
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?	
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	
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	

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Waste & Resource Recovery Overall contribution 5.5%

66%

1.1 Construction Waste - Building Re-Use	0%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?
Question	Criteria Achieved ?
Project	No
2.1 Operational Waste - Food & Garden Waste	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	Are facilities provided for on-site management of food and garden waste?
Question	Criteria Achieved ?
Project	Yes
2.2 Operational Waste - Convenience of Recycling	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	Are the recycling facilities at least as convenient for occupants as facilities for general waste?
Question	Criteria Achieved ?
Project	Yes

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Urban Ecology Overall contribution 5.5%

62%

1.1 Communal Spaces	100%
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
Other building	107 m²
Output	Minimum Common Space Required
Other building	15 m²
2.1 Vegetation	50%
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	10 %
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	100%
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	Yes
3.2 Food Production - Non-Residential	100%
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	32.0 m²
Output	Min Food Production Area
Other building	4 m²

The Built Environment Sustainability Scorecard is an initiative of the Council Alliance for a Sustainable Built Environment (CASBE).
For more details see **www.bess.net.au**

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Innovation **Overall contribution 9.0%**

	0%

Project Initiative		
Initiative: Construction & Demolition Waste Recycling Target		O
Description: Construction & Demolition Waste Recycling Target		Innovation credit points are claimed on BESS for the construction and demolition waste target of 90% because this ESD commitment addresses a 'global sustainability' challenge covered by other international sustainability rating systems (as per the Green Star approach to innovation).
Points Targeted: Construction & Demolition Waste Recycling Target		1
Points: Construction & Demolition Waste Recycling Target		-
1.1 Innovation		0%
Score Contribution	This credit contributes 100% towards the category score.	
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?	

Disclaimer

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

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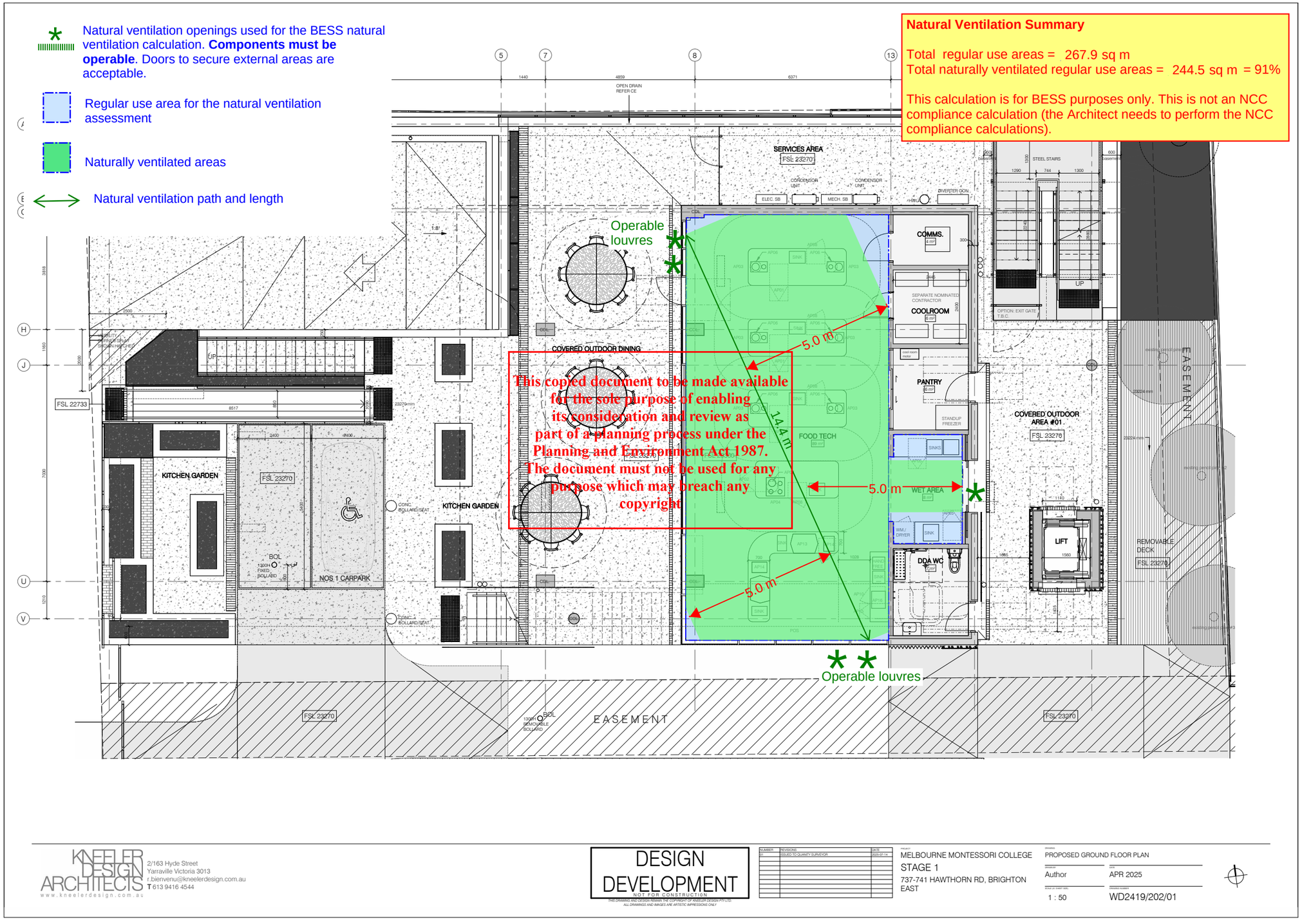
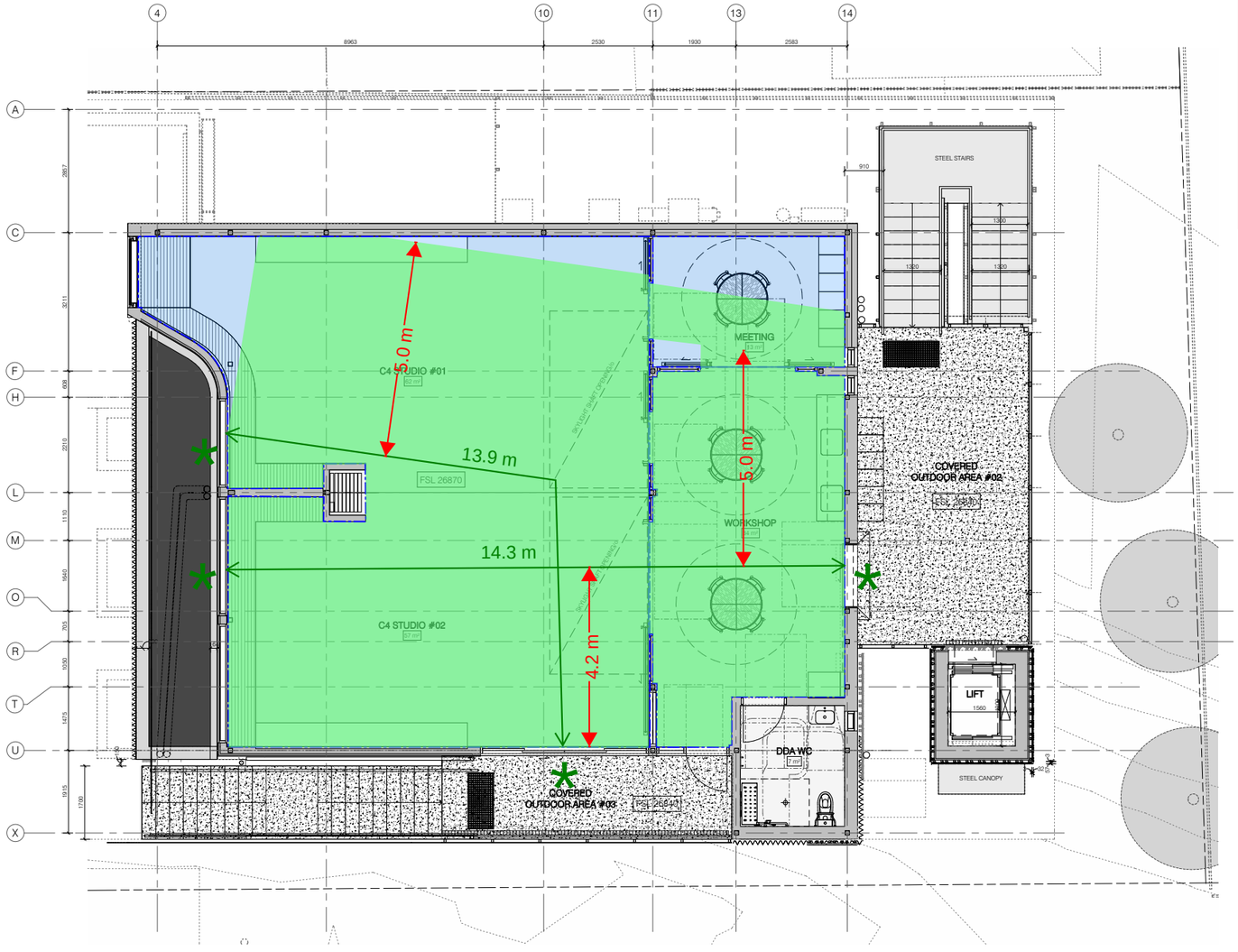
B SUPPORTING INFORMATION





FLOOR PLAN LEGEND

AC	AIR CONDITIONING - REFER MECHANICAL
COL	COLUMN
CJ	CONTROL JOINTS
DP	DOWNPIPE
DF	DRINKING FOUNTAIN
FE	FIRE EXTINGUISHER
FHR	FIRE HOSE REEL - REFER HYDRAULIC
FW	FLOOR WASTE
HWU	HOT WATER UNIT - REFER HYDRAULIC
RU	RACK UNIT - REFER ELECTRICAL
RWT	RAINWATER TANK
SB	SWITCHBOARD - REFER ELECTRICAL
TAP	WATERTAP

FLOOR FINISHES:

BK-PV	BRICK PAVING
CONC	CONCRETE
CP	CARPET TILES
EM	ENTRANCE MAT TILES
VIN	VINYL
TGSI	TACTILE GROUND SURFACE INDICATORS

RL.000.00	RELATIVE LEVEL
FL.000.00	FLOOR LEVEL
WT-12	WALL TYPE - REFER LEGEND
xD01	DOOR NUMBER
FD1	FRAMED OPENING NUMBER
JX-01	JOINERY NUMBER
xSK01	SKYLIGHT NUMBER

FLOOR PLAN NOTES

- DRAWINGS TO BE READ IN CONJUNCTION WITH SPECIFICATION & CONSULTANTS DETAILS/ COMPUTATIONS.
- DO NOT SCALE FROM DRAWINGS; CHECK & CONFIRM ALL DIMENSIONS ON SITE.
- REFER TO INTERNAL ELEVATIONS AND ASSOCIATED SCHEDULES FOR SANITARY & JOINERY FIXTURES.
- REFER TO FLOOR FINISHES PLAN FOR LOCATION AND EXTENT OF FLOOR FINISHES; REFER TO SCHEDULES FOR TYPE, COLOUR, ETC.
- ALLOW FOR BLOCKING OUT OF STUDWORK FOR SUPPORT OF WALL FIXED ITEMS INCLUDING BUT NOT LIMITED TO SANITARY FITTINGS HOOKS, SHELVES ETC.

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T 613 9416 4544

DESIGN DEVELOPMENT
NOT FOR CONSTRUCTION

NUMBER	REVISIONS	DATE
01	ISSUED TO QUANTY SURVEYOR	2025-07-14

PROJECT
MELBOURNE MONTESSORI COLLEGE
STAGE 1
737-741 HAWTHORN RD, BRIGHTON EAST

DRAWING
PROPOSED FIRST FLOOR PLAN

DRAWN BY: Author
DATE: APR 2025
SCALE (@ SHEET SIZE): As indicated
DRAWING NUMBER: WD2419/203/01

C PRELIMINARY DAYLIGHT ASSESSMENT REPORT

C.1 GENERAL

SIMULATION MODEL

The simulation model is shown in Figure **??**. Some minor geometric simplifications have been made where necessary although these will have no significant impact on the outcome of the simulations.

SIMULATION PARAMETERS

The analysis has been completed using the Radiance synthetic imaging system. The model has been configured to calculate diffuse daylight penetration into the building.

Parameter	Value
Sky condition	CIE uniform sky
Ground reflectance	20%

C.2 KEY ASSUMPTIONS

The following table provides a summary of the material properties that have been used in the detailed simulation including surface reflectance for opaque elements and visible light transmittance for glazing elements. Wherever possible, material properties are based on information provided by the design team, however, some assumptions have been made where this information is not available.

Material	Characteristic	Location	Reference
Eave	30% reflectance	Eave	Eave_30P
Floor	20% reflectance	Floor	Floor_20P
Roof	80% reflectance	Roof	Roof_80P
Screen	0% reflectance	Screen	Screen_0P
Skylight	30% transmittance	Skylight	Skylight_30G
Wall	60% reflectance	Wall	Wall_60P
Window	40% transmittance	Window	Window_40G
Window	80% transmittance	Window	Window_80G

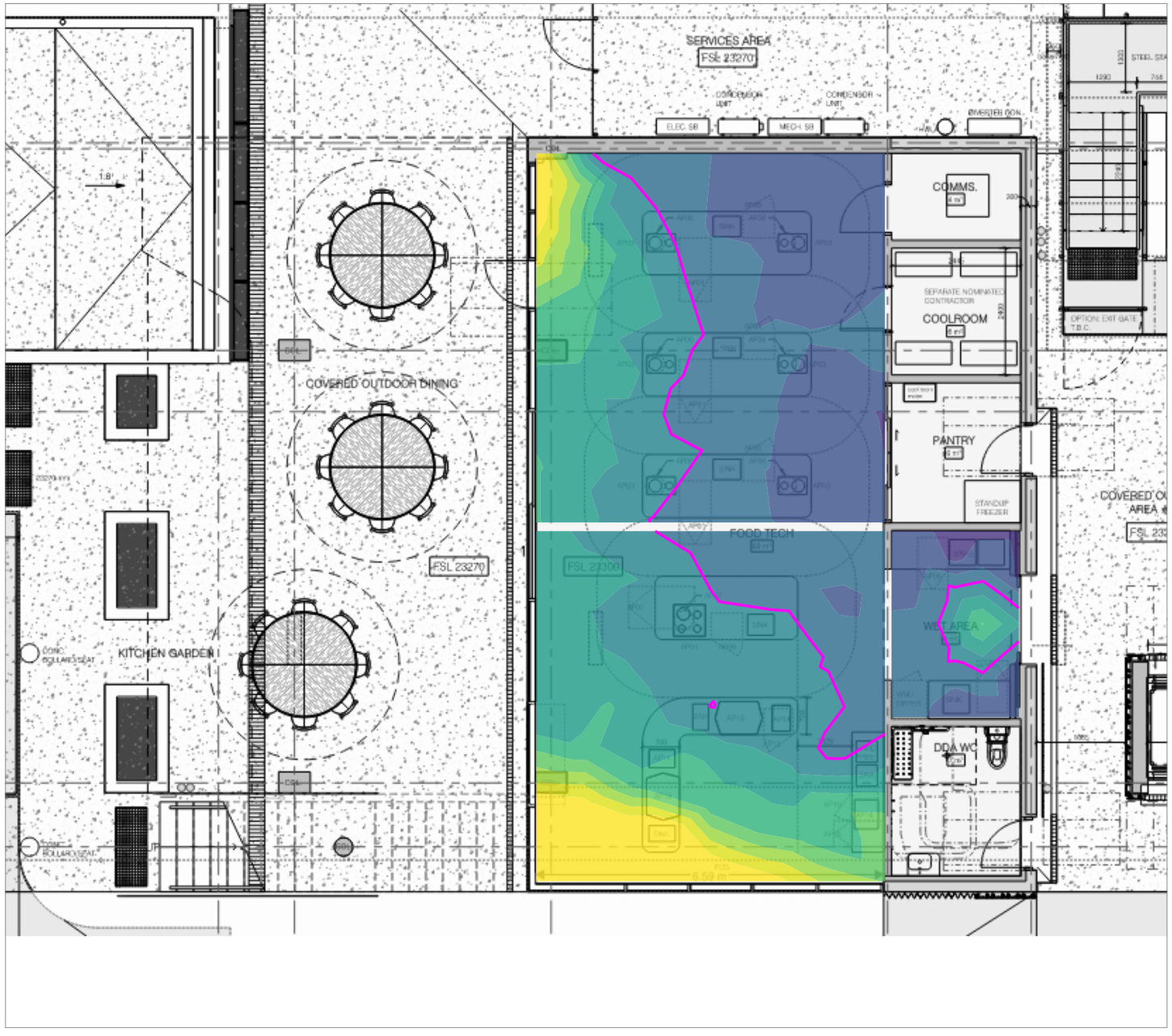
C.3 DAYLIGHT FACTOR

The information below provides a summary of the daylight results achieved in each nominated space. The performance of each space is assessed by calculating the percentage of daylight that exceeds the relevant target threshold. Daylight contours are provided in the following section.

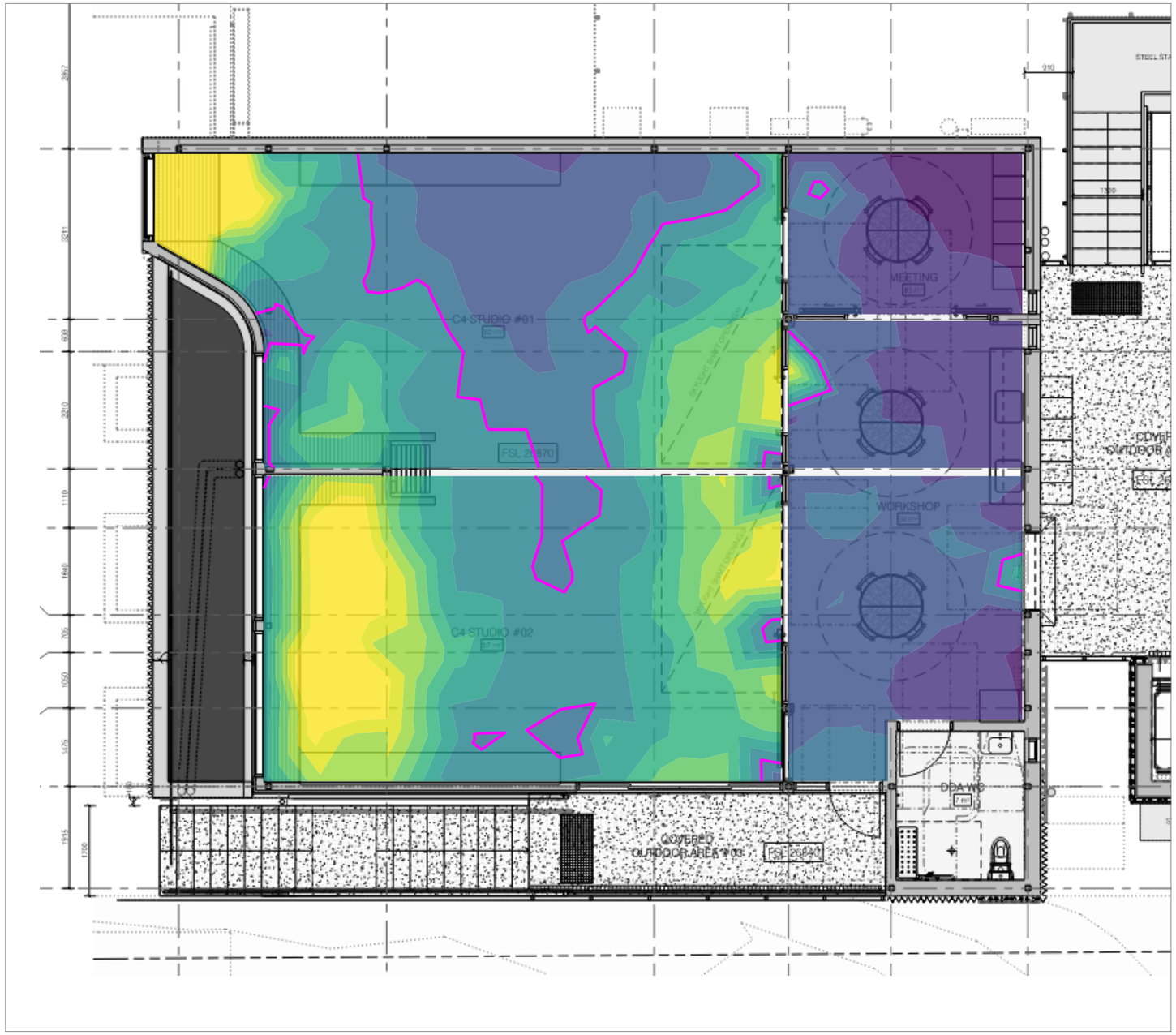
Level	Assessed [m2]	Compliant [m2]	% Compliant
GF	98	50	51.8
Level 1	166	87	52.4
TOTAL	265	138	52.2

C.4 DAYLIGHT CONTOURS

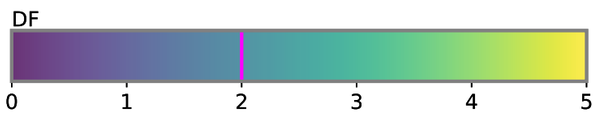
Daylight contours: GF



Daylight contours: Level 1



DF



D BEST PRACTICE WATER SENSITIVE URBAN DESIGN (WSUD)

Best practice for the site will be via a proprietary treatment train that consists of the following (or equivalent):

- Atlan Stormsacks – Primary Treatment
- 1 x Atlan Filter 550mm in a Vault – Tertiary Treatment

Maintenance

Site drainage pit filter (e.g., SPEL Stormsack)

- Typically the filter is serviceable from the pavement level.
- The unit should be maintained in place and cleanded with a vacuum hose attached to a vacuum truck.
- If provided, the oil boom should also be maintained and replaced from the pavement level. Use only proprietary replaceable parts from the original manufacturer.
- Maintenance schedules are dependent on site loadings. Preliminary schedules are to be determined at the design stage and monitored/adjusted in operation as appropriate. The following is provided as a guide only:

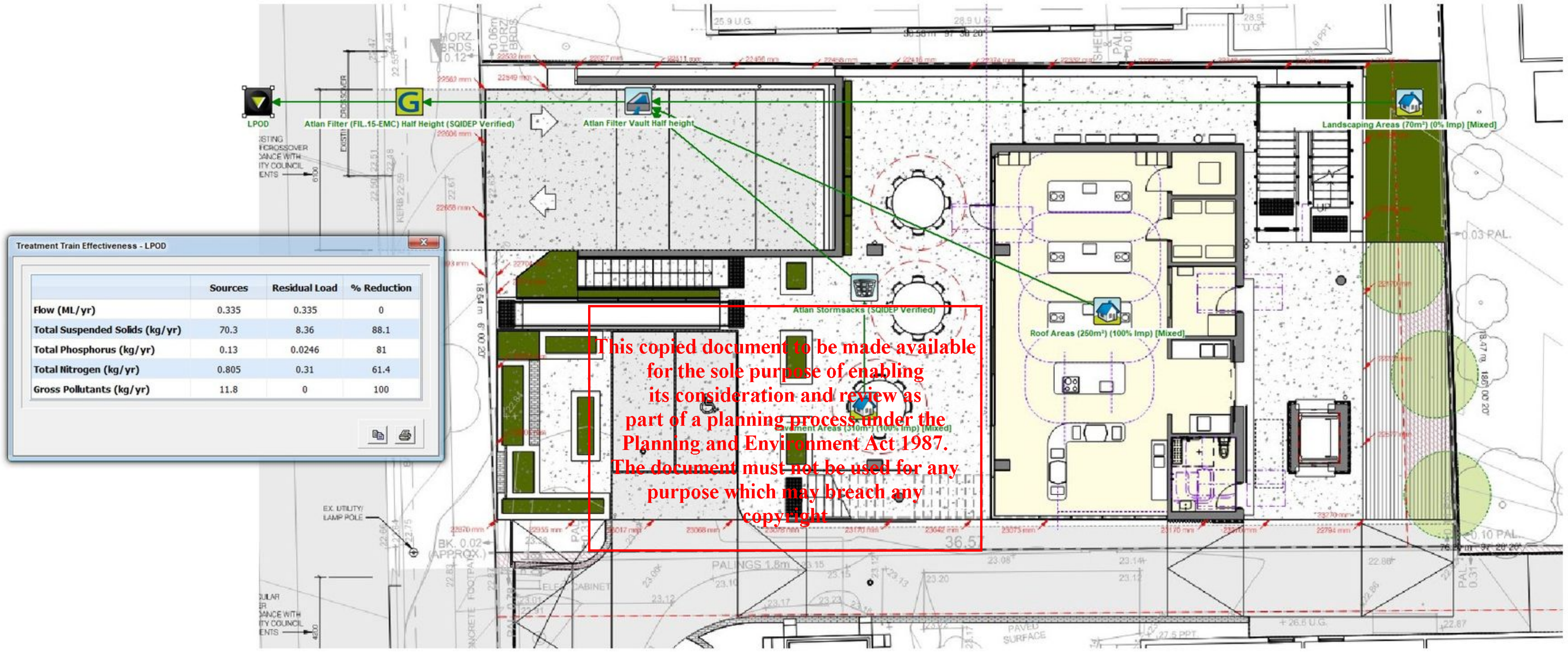
Action	Frequency
Visual inspection for gross pollutants and sediment accumulation.	Year 1 & 2 - Every six months Year 3 – 10 – Once per year
When required the filter will need to have debris removed and the silt vacuumed out	This is dictated by the gross pollutant loading and silt condition on the site and is determined via the regular site inspections.

Stormwater tertiary filter treatment

Maintenance schedules are dependent on site loadings. Preliminary schedules are to be determined at the design stage and monitored/adjusted in operation as appropriate.

Action	Frequency
Visual inspection for gross pollutants and sediment accumulation.	Year 1 & 2 - Every six months Year 3 – 10 – Once per year
When required the filter will need to have debris removed and the silt vacuumed out	This is dictated by the gross pollutant loading and silt condition on the site and is determined via the regular site inspections.

WSUD REPORT



Treatment Train Effectiveness - LPOD

	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.335	0.335	0
Total Suspended Solids (kg/yr)	70.3	8.36	88.1
Total Phosphorus (kg/yr)	0.13	0.0246	81
Total Nitrogen (kg/yr)	0.805	0.31	61.4
Gross Pollutants (kg/yr)	11.8	0	100

TOLERANCE: All Dimensions to Closest 10 mm & +/- 30 mm

ALL INTERCONNECTING PIPEWORK, PITS AND ASSOCIATED DRAINAGE BY OTHERS

Bayside CITY COUNCIL

CO-PERFORM

REV	DATE	BY	DESCRIPTION	CHK
2	31-07-2025	OT		

Drawn	Date
Check	Date
Verified	Date
Approved	Date

Atlan STORMWATER

PROJECT 741 Hawthorn Road, Brighton East VIC

TITLE **MUSIC Modelling**

SCALE	SIZE	SHEET	REV
N.T.S	A3	1 OF 1	2

CUSTOMER CODE : 25-77629 | DWG No.

E LOW VOC MATERIALS

The maximum TVOC content and emissions limits shall be followed when selecting indoor paints, sealants, adhesives, wall and ceiling coverings.

Maximum TVOC content limits for indoor paints and varnishes (g/l of ready-to-use product)

Product type	Max TVOC Content
Walls and ceilings – interior gloss	75
Walls and ceilings – interior semi gloss	16
Walls and ceilings – interior low sheen	16
Walls and ceilings- interior flat washable	16
Ceilings – interior flat	14
Timber and binding primers	30
Trim – gloss, semi gloss, satin, varnishes and wood stains	75
Latex primer for galvanized iron and zincalume	60
Interior latex undercoat	65
Interior sealer	65
One and two pack performance coatings for floors	140
Any indoor solvent-based coatings whose purpose is not covered in this table	200

Maximum TVOC content limits for indoor adhesives and sealants (g/l of product)

Product type	Max TVOC Content
Indoor carpet adhesive	50
Carpet pad adhesive	50
Wood flooring and Laminate adhesive	100
Rubber flooring adhesive	60
Sub-floor adhesive	50
Ceramic tile adhesive	65
Cove base adhesive	50
Drywall and panel adhesive	50
Multipurpose construction adhesive	70
Structural glazing adhesive	100
Architectural sealants	250
Any indoor solvent-based coatings whose purpose is not covered in this table	200

Indoor wall and ceiling covering TVOC emissions limits

Product type	Max TVOC Emission Limit (mg/m2 per hour)
TVOC at 3 days	5
TVOC at 28 days	0.5

Engineered Wood Products

The term "engineered wood products" includes composite wood products and includes raw/ un-finished as well as finished products. Items not covered by these limits include products used in exterior applications, formwork, internal car park applications, reused products, and raw timber. All emission levels must be established by a NATA or ISO/IEC 17025 registered laboratory as per the testing methodologies in the table below.

Formaldehyde emission limit values for engineered wood products

Test Protocol	Emission Limit / Unit of Measurement	Additional Notes
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	< 1.0 mg/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	< 1.0 mg/L	
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	< 1.0 mg/L	
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	< 1.0 mg/L	
JIS A1901 (not applicable to Plywood)	< 1.0 mg/L	
ASTM D5116	<0.1 (+/- 0.0005) mg/m²hr	Equivalent unit mg/m²/hr.
ISO 16000 part 9, 10 and 11 (also known as EN 13419)	<0.1 (+/- 0.0005) mg/m²hr	Equivalent unit mg/m²/hr.
ASTM D6007	0.12mg/m³*	
ASTM E1333	0.12mg/m³**	
EN 717-1 (also known as DIN EN 717-1)	0.12 mg/m³	
EN 717-2 (also known as DIN EN 717-2)	3.5 mg/m²hr	Equivalent unit mg/m²/hr.

*The test report must confirm that the conditions of Table 1 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.

**The final results must be presented in EN 717-1 equivalent (as presented in the table), using the correlation ratio of 0.98.

F GLOSSARY AND NOMENCLATURE

Term	Explanation
ABCB	Australian Building Codes Board
Alternative water sources	Sources of water other than potable water deliver delivered to site by the water authority. Examples include rain water harvesting, stormwater harvesting and grey water re-use.
BCA	Building Code of Australia.
BESS	Built Environment Sustainability Scorecard.
EER	Energy Efficiency Ratio. An efficiency measure for heating based on thermal capacity out versus energy capacity in.
ESD	Ecologically Sustainable Development.
GBCA	Green Building Council of Australia
Green Star	Green Star is a national, voluntary environmental rating system that evaluates the environmental design and construction of buildings and communities across a range of environmental categories.
HVAC	Heating, ventilating and air conditioning
KCC	Kingston City Council; City of Kingston
KCC ESD Policy	City of Kingston ESD Policy for Community Buildings
Potable water	Suitable for human consumption as drinking water and in food preparation.
Rain garden	A water saving garden that is similar to a regular garden bed but designed specifically to capture stormwater from hard surfaces such as driveways, patios and roofs via downpipes and to treat the water via bioremediation before it enters the civic drainage system.
SDA	Sustainable Design Assessment.
SDAPP	Sustainable Design Assessment in the Planning Process.
SOU	Sole Occupancy Unit
STORM	Melbourne Water developed the STORM Calculator to simplify the calculation and analysis of stormwater treatment methods to meet best practice WSUD targets.
VOC	Volatile organic compound.

Term	Explanation
Arch	Architect
ESD	ESD Consultant
Occupants	Building occupants
PM	Project Manager

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