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SUSTAINABILITY SOLUTIONS



KEYSTONE ALLIANCE SUSTAINABILITY SOLUTIONS

277 Plenty Road, Preston Vic 3072 T (03) 9478 8991 F (03) 9478 8997

E fadi@keystonealliance.com.au W www.keystonealliance.com.au

**SUSTAINABLE MANAGEMENT PLAN - SMP
PROPOSED MULTI PURPOSE HALL**

927-937 Springvale Road, Keysborough

FOR
LIGHTHOUSE CHRISTIAN COLLEGE
C/- VAN DAMME DESIGN

REF 19507
MAR 2026

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PLAN**

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CONTENTS

1	INTRODUCTION	1
2	SITE DESCRIPTION	2
3	ESD INITIATIVES AND SUMMARY OF RESULTS	3
4	BUILT ENVIRONMENT SUSTAINABILITY SCORECARD (BESS)	4
4.1	BUILDING MANAGEMENT	4
4.2	INTEGRATED WATER MANAGEMENT	5
4.3	OPERATIONAL ENERGY	6
4.4	INDOOR ENVIRONMENTAL QUALITY	8
4.5	TRANSPORT	9
4.6	WASTE	10
4.7	URBAN ECOLOGY	11
4.8	MATERIALS	12
5	IMPLEMENTATION SCHEDULE	13
6	CONCLUSION	14

APPENDICES

A	BESS SCORECARD SUMMARY	16
B	SECTION J AND FAÇADE ASSESSMENTS	18
C	STORM, CATCHMENTS PLAN & MAINTENANCE SCHEDULE	20
D	DAYLIGHT MODELLING	26

ISSUE	DATE	PREPARED	STATUS
A	03.2025	FS	INITIAL SUBMISSION

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1.0 Introduction

Keystone Alliance Sustainability Solutions has been engaged to prepare a Sustainable Design Assessment for the proposed development at **927-937 Springvale Rd, Keysborough VIC 3173**.

The report outlines the ESD requirements for **City of Greater Dandenong** and provides an overview of the sustainable design initiatives **Clause 22.12 and 53.18** for the proposed development demonstrating how it will be implemented in the project.

The project

Architectural drawings prepared by	VAN DAMME DESIGN
Reference - Revision - Date	24006 - TP B - 03.2026

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2.0 Site Description

The project consists of the following:

- Multi-purpose hall, gym and GPLA
- Utility rooms

Site area 17790m² (total site area is 4.24 ha)
Location Keysborough
Municipality Greater Dandenong City Council

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3.0 ESD Initiatives and Categories

The report outlines the key Environmentally Sustainable Design (ESD) initiatives for 927-937 Springvale Rd, Keysborough.

The proposed building forms part of an existing school campus, and the surrounding site is already occupied by buildings, playgrounds and a carpark.

The specific functions of a multi-purpose hall can constrain the implementation of typical ESD strategies due to operational requirements that often include sustainability considerations.

However, the building will aim to achieve high-performance environmental standards whenever possible.

Furthermore, the application of Water Sensitive Urban Design (WSUD) measures will be limited to the new building itself, as there is no opportunity to retrofit the broader site.



MANAGEMENT
Preliminary façade and Section J.



INTEGRATED WATER MANAGEMENT
High Efficient Water fixtures and appliances.
Rainwater tanks are connected to all toilet flushing, laundry, garden irrigation and bin wash.
Best Practice Stormwater Management (Water Sensitive Urban Design).



OPERATIONAL ENERGY
Gas free development.
20KWh solar photovoltaic system.
Insulation and glazing meeting NCC2022 requirements.
Electric hot water system.
Electric reverse cycle air-conditioning system (within 1 star of best available).
LED IC rated internal and external lighting



IEQ
Double-glazed windows and doors.
Low-VOC paints, sealants and adhesives minimum E1 or E0-grade. 2 large commercial ceiling fans installed in the multi-purpose hall.



TRANSPORT
Bicycle parking.

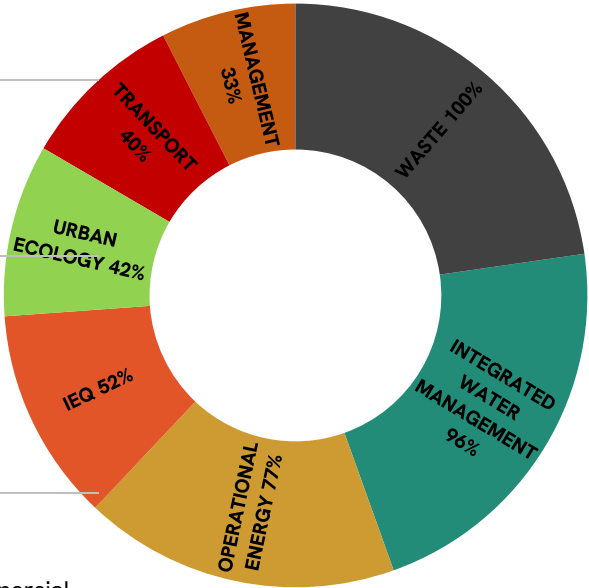


WASTE
Recycling target to be at least 70% for both demolition and construction phases.
2 bin system (Rubbish and Recycling)



URBAN ECOLOGY
20% of the site is covered of vegetation mitigating the Heat Island Effect and biodiversity.
Medium color roof to help mitigating the Heat Island Effect
All insulation used must not contain any Ozone depleting substances.
All HVAC selected to have zero Ozone Depletion Potential.

BESS CATEGORIES



BESS SCORE
64%

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4.0 BUILT ENVIRONMENT SUSTAINABILITY SCORECARD (BESS)



4.1 MANAGEMENT

Best practice for building management means that sustainability is integrated from concept design through the construction process. Good decisions made early to 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.

ELEMENT	PERFORMANCE
Facade assessment has been undertaken in accordance with NCC2022 Section J4D6	Preliminary façade assessment has been completed. “Please refer to Appendix B for more information.”
Preliminary modelling has been undertaken in accordance with either NCC2022 Section J (Energy Efficiency), NABERS or Green Star	Preliminary Section J assessment has been completed. “Please refer to Appendix B for more information.”

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4.2 INTEGRATED WATER MANAGEMENT

Best practice water efficiency means using fixtures and appliances with a high WELS rating, and substituting precious drinking water with alternative water sources (such as greywater and rainwater) for uses such as toilet flushing and garden irrigation, where appropriate.

ELEMENT	PERFORMANCE	
Fixtures, Fittings and Connections	Showerheads Taps Toilets Appliances	Not applicable Kitchen: 5 Star WELS Bath: 5 Star WELS 4 Star WELS A minimum 4 Star WELS rating to be provided as part of the fit-out.
Rainwater Harvesting	Rainwater tanks to be installed. A minimum tanks total capacity of 50KL. A minimum catchment area of 2000m ² . Rainwater collected to be used for all toilet flushing and bin wash area.	
Rainwater Treatment	A rainwater tank filter to be installed after the pump. A triple action filtration system in the 10" and 20" range provides filtration of fine sediments (down to 15 micron), color and odor in the one cartridge.	
Water Efficient Landscape	Where applicable, drought tolerant and native species where applicable - as per local council guidelines.	
Fire System Water Testing	Where applicable, Water saving methods for testing sprinkler alarm testing with proprietary test devices and changes to the test water supply design Options for test water supply could include: - break tanks and return line - pump recirculating tanks - variable speed pumps - remote annular test facility; and - recycled water supplies.	

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4.3 OPERATIONAL ENERGY

Best practice design for energy efficiency means designing buildings that need minimal heating and cooling because they are well insulated, have appropriate summer shading, have good orientation to take advantage of the sun for heating, and have high efficiency fittings and appliances. On-site renewable energy generation is also encouraged to supplement or meet energy needs.

ELEMENT	PERFORMANCE
Renewable Energy	A 70KWh solar photovoltaic system installed at minimum 10 degrees pitch to allow self-cleaning.
Energy Supply	Gas free development
External Lighting	LED fittings. External lighting to be controlled with motion sensors.
Internal Lighting	LED IC-4 rated fittings. The maximum illumination power density (W/m2) in at least 90% of the area of the relevant building class meets the requirements in Table J7D3a of the NCC 2022 Vol 1.
All exposed floors and ceilings (forming part of the envelope) demonstrate meeting the required NCC2022 insulation levels	To comply with J4D4 and J4D7 of the NCC 2022 Vol1.
Glazing demonstrates meeting the required NCC2022 facade calculator	To comply with able J4D6a and J4D6c of the NCC 2022 Vol1.
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	The system must be selected within one star of the best available option at the time of tendering the project and must comply with Part J6 of the NCC 2022 Vol1 in addition to a full economy cycle and CO2 monitoring sensors.
water heating systems within one star of the best available, or 85% or better than the most efficient equivalent capacity unit.	The system must be selected within one star of the best available option at the time of tendering the project and must comply with Part J7D7 of the NCC 2022 Vol1. Electric HWS to be used.
Carpark Ventilation	Naturally ventilated.

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4.4 INDOOR ENVIRONMENTAL QUALITY (IEQ)

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

ELEMENT	PERFORMANCE
Daylight	Daylight modelling was calculated using the Speckel platform to determine the internal daylight levels for the proposed children's rooms. The overall model confirms the following results: 48% of the proposed multi-purpose hall achieve a daylight factor greater than 2%. Light coloured walls internally to help to maximise daylight levels that are below the daylight threshold. All habitable rooms have a minimum of 2.80m ceiling height. "Please refer to Appendix D for more information."
Effective Natural Ventilation	50% of the rooms are naturally ventilated with windows on opposite or adjacent facades. The multi-purpose hall will be fitted with 2 large commercial ceiling fans. All rooms include an operable window or door.
Thermal Comfort	All rooms are to be fitted with high performance double glazing.
External Shading	Overhang outdoor spaces or eaves provide effective shading to the north-facing fenestration.
Air Quality	Low-VOC paints, sealants and adhesives minimum E1 or E0-grade. Timber used at the site to be either reused, post-consumer recycled or certified under a forest certification scheme. No carpet to be used. "Please refer to Section 4.8 for more information." A maximum CO ₂ concentration of 800ppm will be maintained and monitored by the ventilation system design.

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4.5 TRANSPORT

Best practice design for transport means creating buildings that encourage walking, cycling, public transport, car sharing, and the use of lower emissions vehicles.

ELEMENT	PERFORMANCE
Bicycle Parking	The development includes existing bicycle spaces.

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4.6 WASTE

Best practice design for waste means re-using materials during construction where possible, and making sure future building occupants have opportunities to easily

ELEMENT	PERFORMANCE
Construction Waste	70% recycling target of construction and demolition waste has been adopted for the construction phase of the development. - A site induction to all personnel to explain the waste plan and ensure that the waste generated is minimised. - Arranging with recycling contractors to provide clearly marked bins for material separation. - Waste segregation onsite - Waste materials can be separated onsite into dedicated bins/areas for either reuse onsite or collection by a waste contractor and transport to offsite facilities. Source separation is particularly important in minimising damage to salvaged materials. - Commitments to recycle or reduce construction waste. - Prefabricated materials to be specified in the project to reduce the material waste, off-cuts to be recycled. - An environmental site management plan (ESMP) to be implemented to the council guidelines. - A private contractor to be engaged for waste collection during construction. - A logbook that records waste management and collection should be maintained on-site. - The main contractor should provide waste reports including volumes and performance compared to the 90% recycling target to the project manager or development manager for the project on a regular basis. - Create measures to minimise on-site litter and remove litter from the site and litter entering the stormwater system.
Operational Waste	Two bins in kitchen joinery to be provided to facilitate waste segregation. A dedicated bin store on the ground level to contain 1 recycling (paper and plastic) bin and 1 garbage (landfill waste).

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4.7 URBAN ECOLOGY

Best practice for urban ecology means creating more green spaces for a range of health, social, environmental, biodiversity and economic benefits.

ELEMENT	PERFORMANCE
Vegetation	20% of the proposed development has vegetated area, helping to minimise the urban heat island effect. Landscaping has been integrated into the proposed design including planter boxes.
Heat island effect	75% of all horizontal surfaces of the site that have an unobstructed direct vertical sky view have a solar reflectance of >0.64
Proposed materials	

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4.8 MATERIALS

ALL MATERIALS USED TO BE CERTIFIED GOOD ENVIRONMENTAL CHOICE AUSTRALIA (GECA) OR ECOSPECIFIER.

ELEMENT	PERFORMANCE
Paint and sealants	Low VOC, water-based and non-toxic paints, sealants, adhesive to be used and minimum E1 or E0-grade.
Concrete	Subject to structural engineer design. Concrete mixes to incorporate at least 40% replacement of coarse aggregate with slag. Concrete mixes to incorporate at least 50% reclaimed water. Concrete mixes to incorporate at least 30% reduction in Portland cement.
Steel	The steel reinforcement is manufactured using energy-reducing strategies and to be supplied by a steel fabricator/contractor accredited to the Environmental Sustainability Charter of the Australian Steel Institute and certified ISO 1400. Environmental Management System (EMS) in place and be a member of the World Steel Association's (WSA) Climate Action Program (CAP).
Timber	Forest Stewardship Council (FSC), Program for the Endorsement of Forest Certification (PEFC) or recycled. 20% of the project timber cost to be directed for recycled timber
Flooring	75% of cables, pipes and flooring either do not contain PVC or meet Best Practice Guidelines for PVC.
Carpet	Underlay with recycled components is to be used.

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ARCHITECTURAL AND DECORATIVE COATING PRODUCTS VOC LIMITS

ELEMENT	VOC LIMIT (G/L)	
	AVERAGE	MAXIMUM
Timber Coloured Spirit Stain - Low VOC		75
Timber Coloured Spirit Stain - Standard		130
Clear Timber Finish - One Pack Interior - Low VOC Clear		75
Timber Finish - One Pack Interior - Standard		130
Latex Primer for Galvanised Iron & Zincalume		20
Interior Latex Sealer (Buildings)		30
Latex Wood Primer (Buildings)		30
Interior Latex Paint - Gloss, Low odour, very low VOC		<5
Interior Latex Paint - Semi-Gloss, Low odour, very low VOC		<5
Interior Latex Paint - Low Gloss, Low odour, very low VOC		<5
Interior Latex Paint - Washable Flat, Low odour, very low VOC		<5
Interior Latex Paint - Ceiling Flat, Low odour, very low VOC		<5
Interior Water Based Paint for Buildings - Gloss	≤60	70
Interior Water Based Paint for Buildings - Semi-Gloss	≤60	70
Interior Water Based Paint for Buildings - Low Gloss	≤40	60
Interior Water Based Paint for Buildings - Flat - Washable	≤45	60
Interior Water Based Paint for Buildings - Flat - Ceilings	≤40	50
Exterior Water Based Paint for Buildings - Gloss	≤55	60
Exterior Water Based Paint for Buildings - Semi-gloss	≤55	60
Exterior Water Based Paint for Buildings - Low Gloss or Matt	≤40	45
Exterior Water Based Paint for Buildings - Gloss, Heavily Pigmented DTS ¹	≤50	70
Exterior Water Based Paint for Buildings - Low Sheen - Heavily Pigmented DTS ¹ Finish	≤45	55

NOTE: ¹ DTS = direct to substrate

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5.0 IMPLEMENTATION SCHEDULE

All recommendations in this report to be included in the architectural plans and to be communicated with the project team (Architect, builder and building consultants). Ensure the report is endorsed with the town planning drawings.

ESD CATEGORY	REQUIREMENTS	RESPONSIBILITY	STAGE
Management	Preliminary Section J and Façade assessments	ESD consultant	Design Development
	Building tuning Undertake building services fine tuning each quarter for the first 12 months of occupation	Building Manager	Post Development
Integrated Water Management	Taps: Kitchen: 5 Star WELS Bath: 5 Star WELS Toilets: 4 star WELS. Appliances: 4 Star.	Architect	Design Development
	2000m ² roof catchments drained to an 50KL Rainwater tank capacity connected to all toilet flushing system, garden irrigation and bin wash.	Civil Engineer Landscape Designer	
	Specify drought tolerant vegetation and irrigation.	Landscape Designer	
Energy	Gas free development. Provide 70KWh photovoltaic cells. Reverse cycle system to be selected within 1 star of the best available in addition to a full economy cycle and CO2 monitoring sensors. Electric HWS system to be selected within one star of the best available, or 85% or better than the most efficient equivalent capacity unit. The illumination power to be reduced in at least 90% of the relevant building class at least 20% lower than required by clause J7D3(1)(a) and Table J6.2a of the NCC 2022 Vol1. External lighting to be controlled by motion sensors. LED light fittings to be installed.	Services Consultant	Design Development
Indoor Environmental Quality (IEQ)	Provide Double glazing to all windows and doors.	Architect	Design Development
Transport	Existing bicycle racks.	Architect Services Consultant	Design Development
Waste	70% recycling target of construction and demolition waste. An environmental site management plan (ESMP) to be implemented to the council guidelines. Implement water quality protection measures during construction. Provide 2 bins in the kitchen joinery.	ESD consultant Architect	Design Development
Urban Ecology	20% vegetation.	Architect	Design Development
Materials	Provide materials that can be Locally Sourced and Certified. Low VOC. Recycled materials where applicable.	Architect Builder	Design Development

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6.0 Conclusion

This report addresses all the features incorporated into the design and specifications of the development. The development exceeds the Built Environment Sustainability Scorecard (BESS) and also the National Construction Code standards.

In addition, the proposed development is able to reduce the site stormwater run-off and re-using it within the proposed building.

This development is able to achieve the industry best practice.

The proposed development to be able to reduce the greenhouse gas emissions. The development also provides photovoltaic cells and electric vehicle chargers.

The development aims to respond to Melbourne's changing climate, including higher temperatures and drought stress with thermal efficiency, good light and flow-through ventilation.

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APPENDIX A

BESS SCORECARD SUMMARY

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BESS, 19507 927-937 Springvale Rd, Keysborough 3173

BESS Report

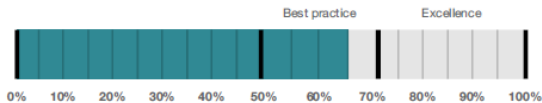
Built Environment Sustainability Scorecard



This BESS report outlines the sustainable design commitments of the proposed development at 927-937 Springvale Rd Keysborough Victoria 3173. 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 Dandenong 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



64%

Project details

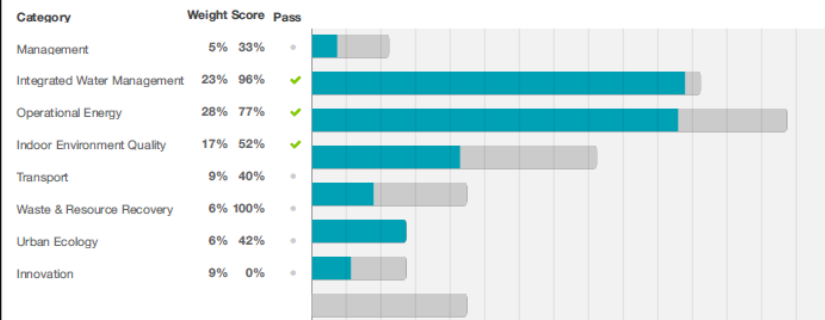
Name 19507
Address 927-937 Springvale Rd Keysborough Victoria 3173
Project ID F67E6060-R2
BESS Version BESS-10
Date 30 March 2026
Software version 2.3.0-B.647

Site type Non-residential development
Account fadi@keystonealliance.com.au
Application no.
Site area 17,790 m²
Building floor area 2,283 m²



Performance by category

● This project ● Maximum available



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

Page 1 of 15

BESS, 19507 927-937 Springvale Rd, Keysborough 3173

Buildings

	Height	Footprint	% of total footprint
Lighthouse Christian College	1	2,583 m ²	100%

Dwellings & Non Res Spaces

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Other building				
MULTI PURPOSE HALL	1	2,283 m ²	Lighthouse Christian College	100%
Total	1	2,283 m ²	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)		-
Integrated Water Management 3.1	Annotation: Water efficient garden details		-
Operational Energy 4.2	Location and size of solar photovoltaic system		-
Transport 1.4	Location of non-residential bicycle parking spaces		-
Waste & Resource Recovery 2.1	Location of food and garden waste facilities		-
Waste & Resource Recovery 2.2	Location of recycling facilities		-
Urban Ecology 2.1	Location and size of vegetated areas		-

Supporting Documentation

Credit	Requirement	Response	Status
Management 2.3b	Preliminary modelling report		-
Integrated Water Management 2.1	STORM report or MUSIC model		-
Operational Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Operational Energy 3.7	Average lighting power density and lighting type(s) to be used		-
Operational Energy 4.2	Specifications of the solar photovoltaic system(s)		-
Indoor Environment Quality 1.4	A short report detailing assumptions used and results achieved.		-
Waste & Resource Recovery 1.1	Details regarding how the existing building is being reused on-site		-

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

Page 2 of 15

Credit summary

Management Overall contribution 4.5%

		33%
1.1 Pre-Application Meeting		0%
2.3 Thermal Performance Modelling - Non-Residential		100%
3.2 Metering - Non-Residential		N/A ◇ Scoped Out
		NOT APPLICABLE
3.3 Metering - Common Areas		N/A ◇ Scoped Out
		NOT APPLICABLE
4.1 Building Users Guide		0%

IWM Overall contribution 22.5%

		96%	✓ Pass
1.1 Potable Water Use		89%	✓ Achieved
2.1 Stormwater Treatment		100%	✓ Achieved
3.1 Water Efficient Landscaping		100%	
4.1 Building Systems Water Use		N/A ◇ Scoped Out	
		NOT APPLICABLE	

Operational Energy Overall contribution 27.5%

		Minimum required 50%	77%	✓ Pass
1.1 Thermal Performance Rating - Non-Residential			37%	
2.1 Greenhouse Gas Emissions			100%	
2.2 Peak Demand			100%	
2.6 Electrification			100%	
2.7 Energy consumption			100%	
3.1 Carpark Ventilation			N/A ◇ Scoped Out	
			NOT APPLICABLE	
3.2 Hot Water - Non-Residential			100%	
3.7 Internal Lighting - Non-Residential			100%	
4.1 Combined Heat and Power (cogeneration / trigeneration)			N/A ◇ Scoped Out	
			No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar			100%	
4.4 Renewable Energy Systems - Other			N/A ◇ Scoped Out	
			No other (non-solar PV) renewable energy is in use.	

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IEO Overall contribution 16.5%

		Minimum required 50%	52%	✓ Pass
1.1 Daylight Access - Non-Residential			48%	✓ Achieved
2.3 Ventilation - Non-Residential			33%	✓ Achieved
3.4 Thermal comfort - Shading - Non-Residential			66%	
3.5 Thermal Comfort - Ceiling Fans - Non-Residential			100%	
4.1 Air Quality - Non-Residential			100%	

Transport Overall contribution 9.0%

		40%
1.4 Bicycle Parking - Non-Residential		100%
1.5 Bicycle Parking - Non-Residential Visitor		0%
1.6 End of Trip Facilities - Non-Residential		0%
2.1 Electric Vehicle Infrastructure		N/A ◇ Scoped Out
		NOT APPLICABLE
2.2 Car Share Scheme		N/A ◇ Scoped Out
		NOT APPLICABLE
2.3 Motorbikes / Mopeds		0%

Waste & Resource Recovery Overall contribution 5.5%

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

Urban Ecology Overall contribution 5.5%

		42%
1.1 Communal Spaces		N/A ◇ Scoped Out
		NOT APPLICABLE FOR THIS BUILDING
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%

APPENDIX B

SECTION J

Building Class	Class 9b
Climate Zone	6

PART J4 – BUILDING FABRIC

Insulation to meet the specified level for all new walls and ceilings.

J4D4 ROOF AND CEILING: Install minimum R4.0 m².k/w insulation plus roof blanket.

J4D5 ROOF LIGHTS: Double glazed unit (U-VALUE NO MORE THAN 3.90 W/M².K AND SHGC NO MORE THAN 0.24)

J4D6 WALLS AND GLAZING

WALLS: EXTERNAL WALLS: Install R2.5 m².k/w insulation.

GLAZING: DTS Glazing and shading requirements of J1.5 have been achieved as per the NCC 2022 facade calculator in Appendix A

TOTAL WINDOW SYSTEM: The window system to comply with the façade calculator provided

AWNING	TOTAL SYSTEM U-VALUE NO MORE THAN 4.27 W/M ² .K AND SHGC NO MORE THAN 0.55
SLIDING WINDOW	TOTAL SYSTEM U-VALUE NO MORE THAN 4.19 W/M ² .K AND SHGC NO MORE THAN 0.58
SLIDING DOOR	TOTAL SYSTEM U-VALUE NO MORE THAN 3.92 W/M ² .K AND SHGC NO MORE THAN 0.60
HINGED DOOR	TOTAL SYSTEM U-VALUE NO MORE THAN 3.90 W/M ² .K AND SHGC NO MORE THAN 0.53

J4D7 FLOORS: No added insulation is required

PART J5 – BUILDING SEALING

Provide air seals to windows and doors servicing conditioned spaces and self-closing mechanism to external doors. Self-closing dampers or self-sealed exhaust fans. Windows and service penetrations must be sealed with close-fitting architrave, skirting or cornice or expanding foam, rubber compressive strip, caulking or the like. Penetrations include windows, doors, roof lights, flues, exhaust fans, and heating and cooling ductwork.

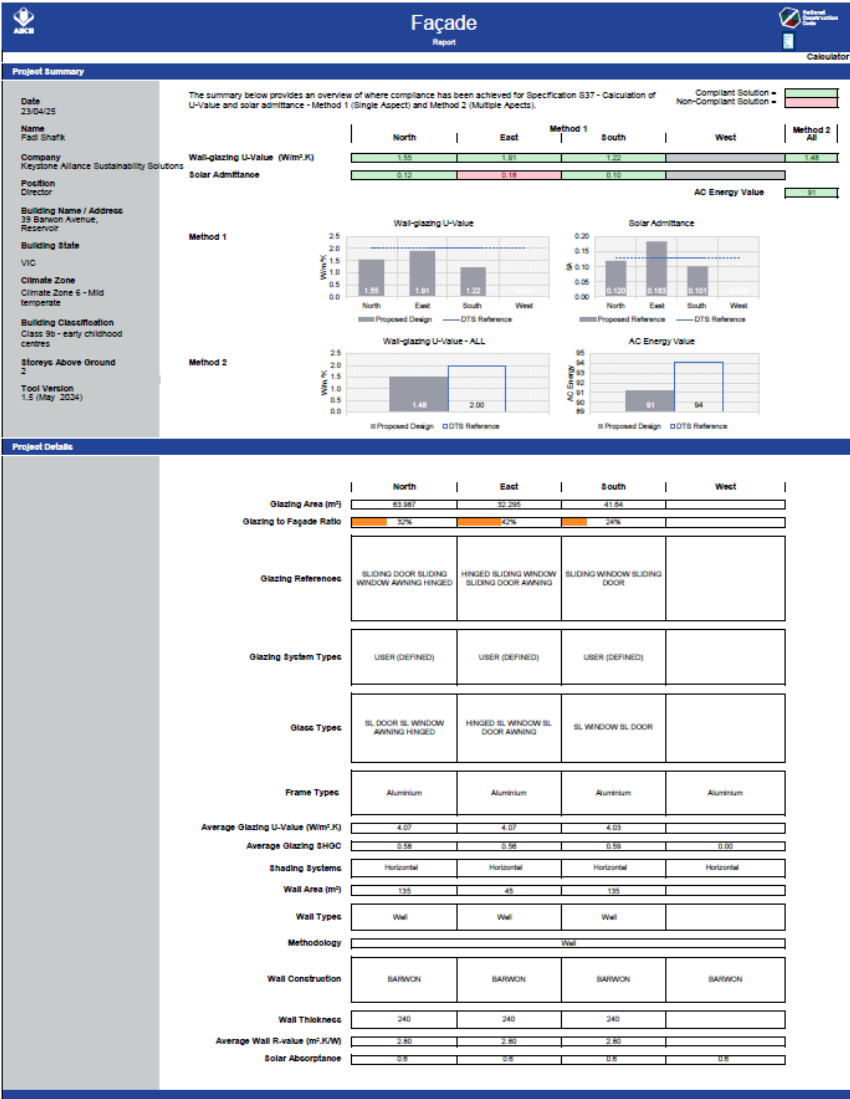
PART J7 – ARTIFICIAL LIGHTING & POWER:

Maximum design lighting power in at least 90% of the area of the relevant building class meets the requirements in Table J7D3a of the NCC 2022 Vol 1.

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APPENDIX C

STORM RATING

Project # A6AE5569
V3: 19507
Fadi Shafik - fadi@keystonealliance.com.au
927-937 Springvale Rd, Keysborough VIC 3173, Australia
30 March 2026 9:15 a.m.



19507

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



Project details

Name	V3: 19507
Project ID	A6AE5569
Street address	927-937 Springvale Rd, Keysborough VIC 3173, Australia
Municipality	Greater Dandenong
Site area	17790 m ²
Planning Number	

Flow and pollutant load reductions

Item	Result	Target	
Mean annual runoff volume harvested or evapotranspired (%)	55%	>27%	✓
Mean annual runoff volume infiltrated or filtered (%)	0%	>9%	✗
Total suspended solids (%)	61%	>80%	✗
Total phosphorus (%)	59%	>45%	✓
Total nitrogen (%)	56%	>45%	✓
Total gross pollutants (%)	73%	>70%	✓

Water treatment

Configuration 1

ROOF TO RWT Roof, 2000m2

Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 50

Catchments

ROOF TO RWT Roof, 2000m2

POROUS SURFACE Pervious (garden and lawn), 15090m2

ROOF Roof, 700m2

Treatments

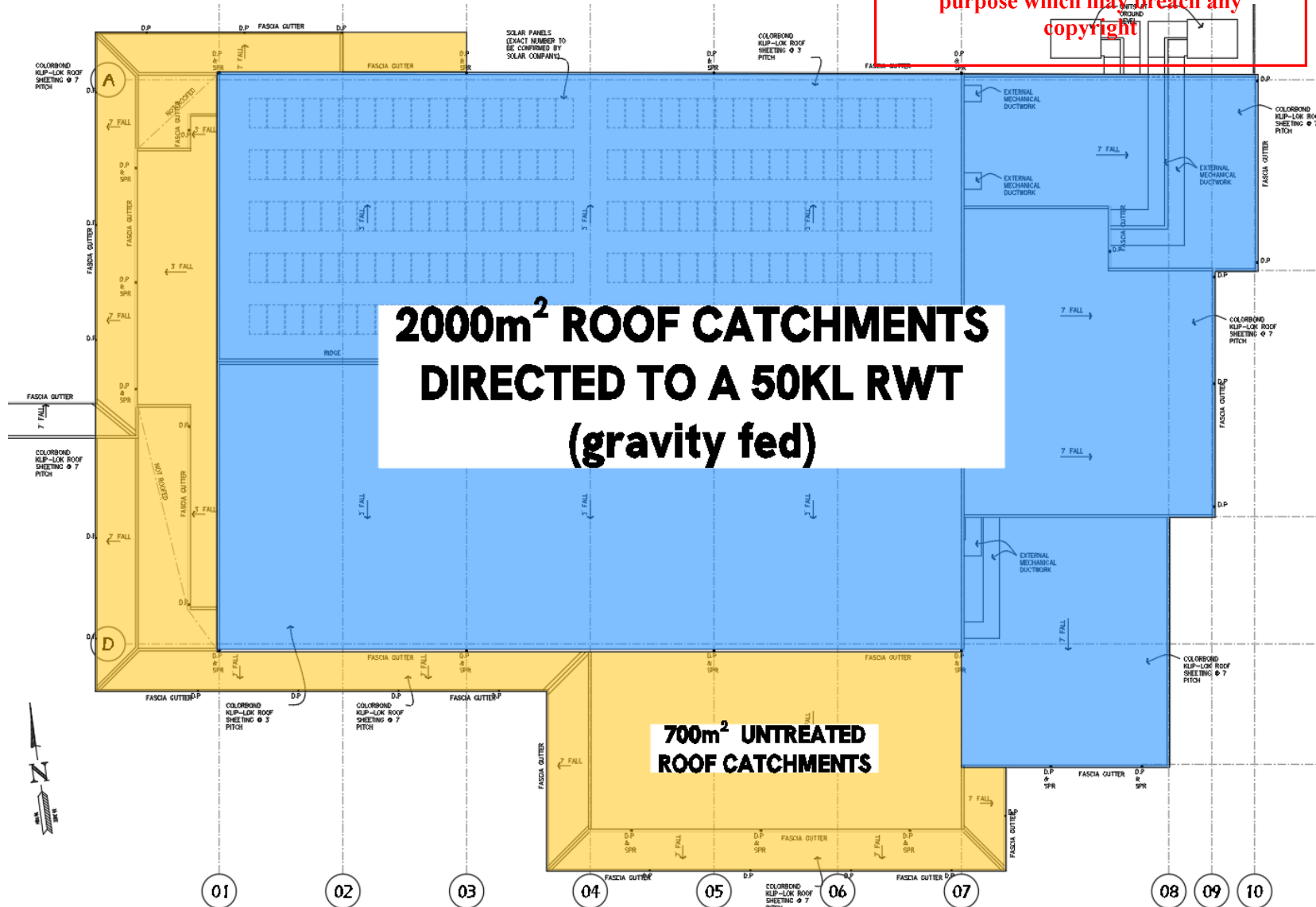
Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 50 170%

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RAINWATER TANKS

Leaf litter / debris in gutters	Pump not working
Regularly clear your gutters. Make sure you cover the tank inlet if you're rinsing down the gutters to avoid debris entering the tank	Check operating instructions for your pump. Check that pumps are kept clear of surface water (flooding), vegetation, and have adequate ventilation. Pumps should be serviced every few years to prolong the pump life.
Blocked downpipe	Mains backup or pump not working
If you see water spilling from the edge of the gutters check that the downpipe is not blocked, removing any debris.	Have you heard the pump operating? If the mains backup switching device fails many people do not notice for a long time. Consider a manual system if the switching device is problematic and you don't mind operating it manually.
First flush diverter clogging	Overflow
To clean out, unscrew the cap at the base of the diverter and remove the filter. Wash the filter with clean water and the flow restrictor inside the cap.	Check that the overflow is not blocked and that there is a clear path for water to safely spill from the tank through the overflow pipe when full. Check that a clean mesh screen is safely in place to prevent mosquitoes entering the tank.
Debris on the mesh cover over inlets / outlets	Sediment / debris build-up in tank (more than 20mm thick)
The fine stainless- steel mesh is similar to fly screen mesh. It should be cleaned regularly to ensure it does not become blocked with leaves and other material.	Over time a small amount of fine sediment to collect in the bottom of your tank and this is harmless and natural. It should not be disturbed until it is approx 20 mm thick which may take many years. To clean your tank out simply empty your tank and wash out with a high-pressure washer or hose.
Dirt and debris around the tank base or side.	Base area
Keep leaf build-up, sticks, pot plants and other items off the lid of your tank. Use a hose to remove dust and dirt from the outside of the rainwater tank and ensure there is no debris on the base, bottom lip and walls of your tank.	Tanks must be fully supported by a flat and level base. Check for any movement, cracks or damage to the slab or pavers. If damage is observed, empty the tank to remove the weight and have the fault corrected to prevent damage to the tank. There is no warranty from suppliers for damage to a rainwater tank if the base has failed.
Smelly water or mosquitos	Monitoring the water level
Rainwater tanks can smell if there is debris in the gutters. Check the gutters and leaf strainers are clean. Mosquitos or wrigglers can make their way into your tank if they are small enough to pass through the inlet strainer. A very small amount of chlorine (approx 4 parts per million) can be put in the tank to kill off mosquitos or the bacteria causing odours. The chlorine to disinfect the water and then evaporate. Chlorine tablets from a pool supplier can be used (but check the recommended dose based on your tank capacity).	A range of devices are available to monitor water level. Some simple float systems can be used effectively.

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ITEM	KEY ACTIVITIES	INSPECTION FREQUENCY
	The entire system must be checked for leaks, cleanliness and stability at least every six months. The entire system should be serviced at intervals of approx. 2-3 years. In this case, all parts of the system must be cleaned and their function checked. Servicing should be carried out as follows:	In accordance with supplier's recommendations (otherwise 3 monthly).
Roof Gutters and Downpipes	Ensure they are in good condition and there is no contamination from the roof catchment area.	
Tank filter and first flush	To clean out, unscrew the cap at the base of the diverter and remove the filter. Wash the filter with clean water and the flow restrictor inside the cap. Repair if required.	
Pumps	Inspect and maintain as per the pump manufacturer's guidelines. Check the potable mains back up is not permanently on. Repair or replace pump if required.	
Pipework	Check for any structural or drainage problems and make repairs as required.	
Overflow	Remove blockages and/or restore connections to stormwater network.	

Maintenance frequency

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
X						X					

Regular maintenance to improve the water quality and extend the life of your system. A well-maintained tank isn't likely to need to be cleaned out for up to ten years.

"The tank maintenance to be carried out by a suitably qualified plumber."

Inspection and maintenance log form (This log form should be reproduced and kept with the property documents and transferred to new owners if the property is sold)

Asset ID	
Location	
Inspection Officer's Name	
Date	Date Of Last Rainfall

Photos of site (explanatory notes)

- 1.
- 2.
- 3.
- 4.
- 5.

General comments, sketches, and description of maintenance undertaken

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STORMWATER AND SEDIMENT CONTROL

Stormwater and sediment laden runoff along roads, drains and footpaths etc	Drainage management: Ensure that all works relating to drainage are promptly completed. Sediment traps: A sediment control entry\exit system (rock pad) to be placed at the site entry. A suitable sediment barrier is placed down-slope of any on-site soil disturbance usually along the lowest site boundary with the ends returning up-slope. Use barriers to trap coarse sediment at all points where stormwater is leaving the site. Sweep and clean street gutters – do not hose it. Regularly clean litter and debris ‘trapped’ against site fencing and throughout the general site, and waste collection shall only occur during permitted nominated hours. Dewatering: In case of rain ensure that all works relating to drainage are promptly completed. Stockpile protection: Stockpiles to be covered during periods of strong wind or when strong winds are expected and with a waterproof cover when rain is expected.
Chemical pollutants and other toxicants	Install on-site erosion and sediment control measures. Regular inspections and maintenance are required to ensure their effectiveness. Measures may include, but are not limited to: - Silt fences - sediment traps - geotextile fabrics Litter bins with lids to be used where possible to prevent litter from blowing away and entering stormwater drains. To ensure the safe handling and storage of chemicals, paints, oils, and other substances that could wash off-site, it's essential to prevent them from entering stormwater drains. Whenever possible, stockpiles should be covered, located within the site's fenced area, and positioned away from the lowest points of the site where surface runoff could accumulate. This approach will help minimise erosion. These measures aim to reduce the pollutants entering the stormwater system from the site during construction work, thereby protecting our waterways. Furthermore, the initiatives are consistent with the Application Requirements set out in Clause of the planning scheme.
Asbestos in soil	Asbestos to be handled, packaged and removed in accordance with the Occupational Health And Safety (asbestos) Regulations 1992, EPA publication 364c The Transport and Disposal of Waste Asbestos October 2002, and the WorkSafe Australia asbestos code of practice.
Onsite Fill Material	Excavations will be examined for signs of contamination within any fill (e.g. staining, rubble).
Imported soil or fill	Any soil or fill imported to the site will be required to be tested by the supplier for contamination. No contaminated soil or fill will be imported to the site. Any imported material used onsite must be classified as suitable for commercial land use.
Protection of Council assets (streets, footpaths, laneways and reserves)	Prior to commencement of any works on the site, the builder or developer must apply for a new vehicular crossover or modification or alteration to an existing crossover proposal for assessment and approval by the council’s infrastructure and traffic department.

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Contribution to cooling and improving local habitat.

Urban development dramatically changes the local habitat. It to reduce the process of rainwater evaporation and its plants absorption or soaking it into the ground. This happens when clearing land of vegetation and increasing impervious surfaces, which to cause the following:

- Put pressure and pollute the local stormwater in a very short time after a rain.
- Unnatural flows to the local waterways or rivers for a few hours after it rains.
- Making beaches unsuitable for swimming for 1-2 days after heavy rain
- Eroding stream banks and degrading streams
- Increase in pollutant runoff.

Implementing rainwater tanks and/or raingardens to reduce these negative impacts to the local habitat.

Advantages of rainwater tanks are:

- Minimise water usage when used in the toilet, laundry or garden.
- Reduce strain on the stormwater drainage system.
- Retain water close to source.
- Reduce site run-off and flood peaks.

Advantages of raingardens are:

- Reduce pollutant runoff to the creeks and bay.
- Increase green space to assist with cooling.

Benefits of WSUD

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Economic	Environmental	Social
Capital cost savings – reduced sizing of off-site pipe work, drains and stormwater infrastructure. Construction cost savings – grading and tree clearing. Water quality cost savings – reducing the costs of water quality improvement by maintaining existing waterways. Developer cost savings – reduced developer contributions to downstream drainage capacities and open space requirements. Improved market value – making such developments more desirable and marketable.	Hydrological balance – maintains the hydrological balance by using natural processes of storage, infiltration and evaporation. Sensitive area protection – can contribute to protecting environmentally sensitive areas from urban development. Waterways restoration – supports restorations and enhancement of urban waterways. Impact reduction – minimises the impact of urban development on the environment. Natural habitats enhancement – can enhance the diversity of natural habitats/landscapes. Groundwater recharge.	Amenable urban and residential landscapes. High visual amenity. Opportunities to link community nodes through open spaces. Improving urban heat island effects.
The use of trees and vegetation in the urban environment brings benefits beyond mitigating urban heat islands including: - Reduced energy use: Trees and vegetation that directly shade buildings decrease demand for air conditioning. - Improved air quality and lower greenhouse gas emissions: By reducing energy demand, trees and vegetation decrease the production of associated air pollution and greenhouse gas emissions. They also remove air pollutants and store and sequester carbon dioxide. - Enhanced stormwater management and water quality: Vegetation reduces runoff and improves water quality by absorbing and filtering rainwater. - Reduced pavement maintenance: Tree shade can slow deterioration of street pavement, decreasing the amount of maintenance needed.		

APPENDIX D

DAYLIGHT MODELLING

This is a summary of the daylight levels within the proposed building.

BESS daylight standards for non-residential developments:

- At least 33% of proposed floor area achieves a daylight factor 2%.

DAYLIGHT MODEL PARAMETERS AND ASSUMPTIONS:

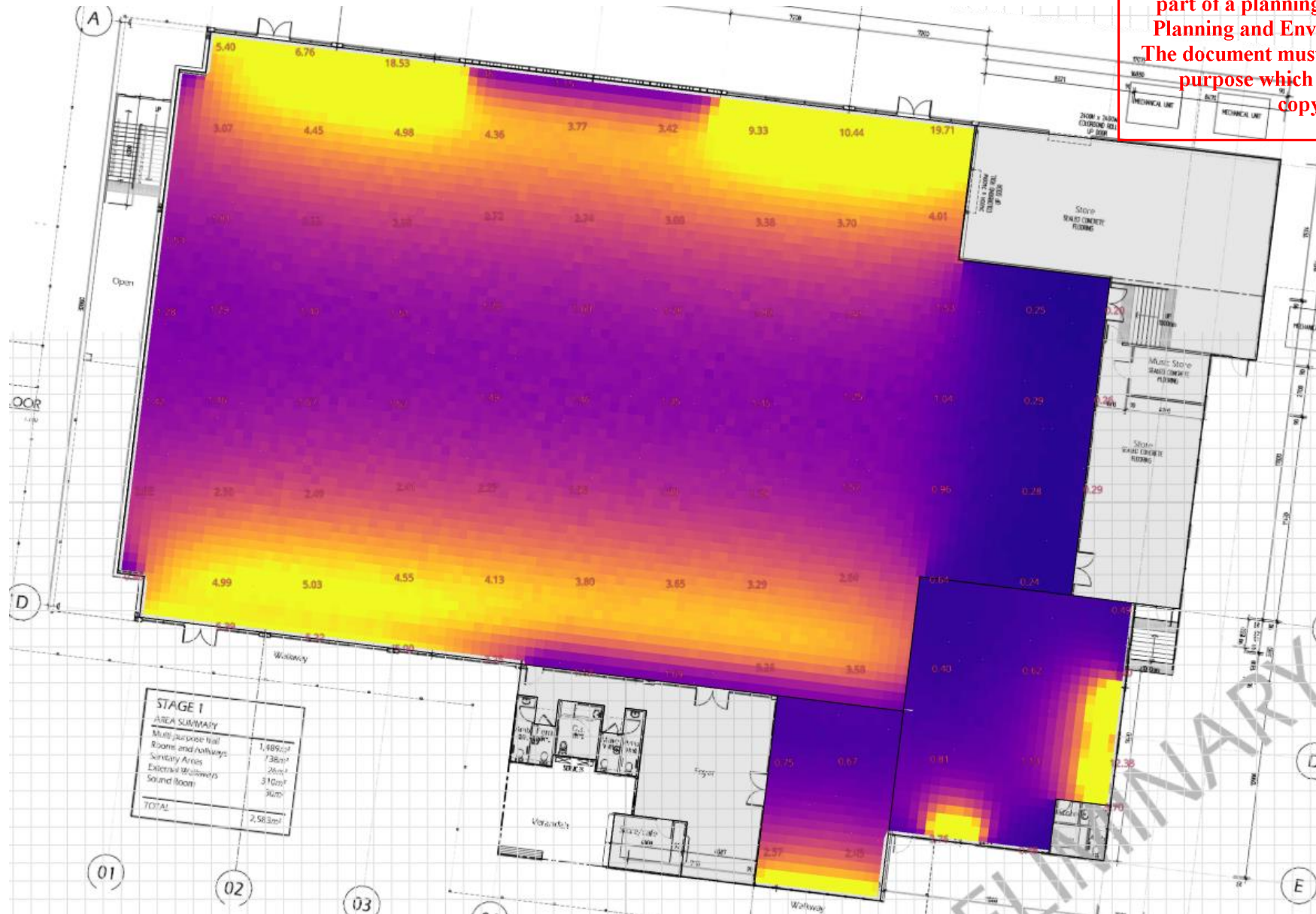
GLAZED ELEMENTS	VISIBLE LIGHT TRANSMISSION (VLT)
GLAZING	60%
PRIVACY SCREENS	60%
BUILDING ELEMENTS	REFLECTANCE (%)
FLOORS	30% reflectivity
WALLS	70% reflectivity
CEILINGS	70% reflectivity
OTHER ELEMENTS	
CIE OVERCAST DESIGN SKY	10000 LUX
NEIGHBOURING STRUCTURES	60% reflectivity
Windows and doors dimensions as shown on the architectural drawings.	
Wet areas and passages are excluded from the model	

ZONE	AREA (m ²)	Floor Area within Limits (m ²)	DF%
MPR	1570	822	52%
GYM	72	21	29%
GPLA	159	30	18%
TOTAL	1801	206.83	48%

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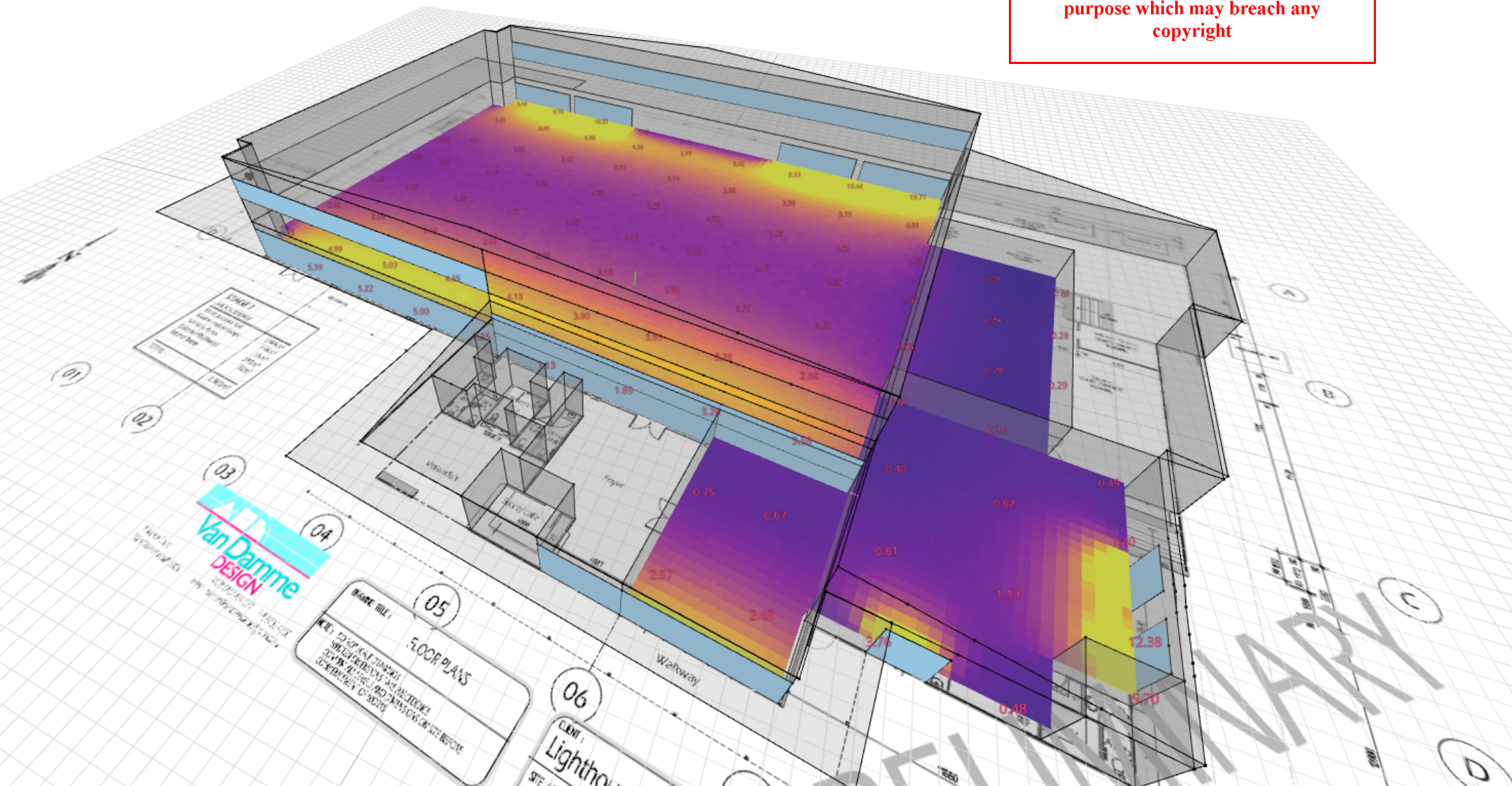
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BESS Report

Built Environment Sustainability Scorecard

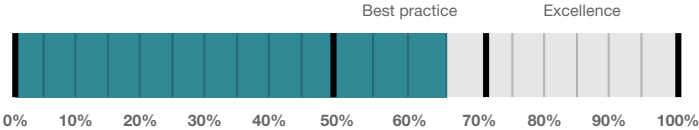
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This BESS report outlines the sustainable design commitments of the proposed development at 927-937 Springvale Rd Keysborough Victoria 3173. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Greater Dandenong 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



64%

Project details

Name 19507
Address 927-937 Springvale Rd Keysborough Victoria 3173
Project ID F67E6060-R2
BESS Version BESS-10
Date 30 March 2026
Software version 2.3.0-B.647

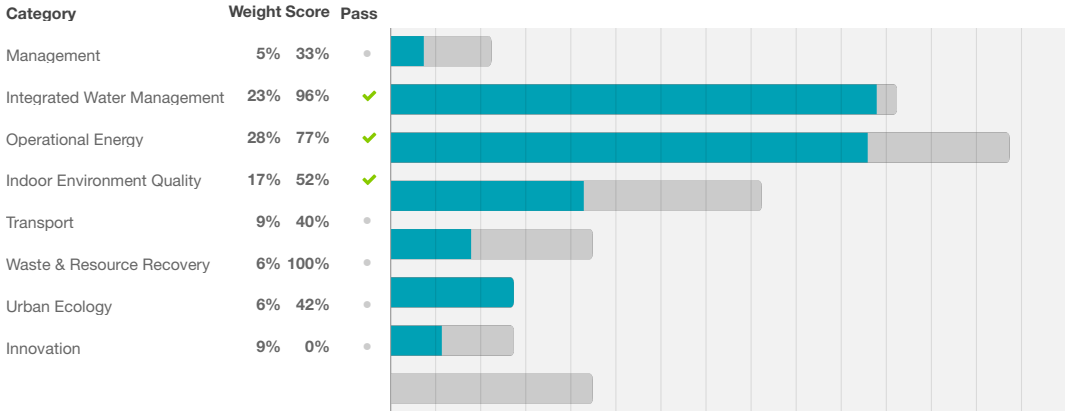
Site type Non-residential development
Account fadi@keystonealliance.com.au
Application no.
Site area 17,790 m²
Building floor area 2,283 m²



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Performance by category

● This project ● Maximum available



Buildings

Name	Height	Footprint	% of total footprint
Lighthouse Christian College	1	2,583 m²	100%

Dwellings & Non Res Spaces

Non-Res Spaces

Name	Quantity	Area	Building	% of total area
Other building				
MULTI PURPOSE HALL	1	2,283 m²	Lighthouse Christian College	100%
Total	1	2,283 m²	100%	

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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)		-
Integrated Water Management 3.1	Annotation: Water efficient garden details		-
Operational Energy 4.2	Location and size of solar photovoltaic system		-
Transport 1.4	Location of non-residential bicycle parking spaces		-
Waste & Resource Recovery 2.1	Location of food and garden waste facilities		-
Waste & Resource Recovery 2.2	Location of recycling facilities		-
Urban Ecology 2.1	Location and size of vegetated areas		-

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Supporting Documentation

Credit	Requirement	Response	Status
Management 2.3b	Preliminary modelling report		-
Integrated Water Management 2.1	STORM report or MUSIC model		-
Operational Energy 1.1	Energy Report showing calculations of reference case and proposed buildings		-
Operational Energy 3.7	Average lighting power density and lighting type(s) to be used		-
Operational Energy 4.2	Specifications of the solar photovoltaic system(s)		-
Indoor Environment Quality 1.4	A short report detailing assumptions used and results achieved.		-
Waste & Resource Recovery 1.1	Details regarding how the existing building is being reused on-site		-

Credit summary

Management Overall contribution 4.5%

		33%
1.1 Pre-Application Meeting		0%
2.3 Thermal Performance Modelling - Non-Residential		100%
3.2 Metering - Non-Residential		N/A  Scoped Out
		NOT APPLICABLE
3.3 Metering - Common Areas		N/A  Scoped Out
		NOT APPLICABLE
4.1 Building Users Guide		0%

IWM Overall contribution 22.5%

		96%	✔ Pass
	1.1 Potable Water Use	89%	✔ Achieved
	2.1 Stormwater Treatment	100%	✔ Achieved
	3.1 Water Efficient Landscaping	100%	
	4.1 Building Systems Water Use	N/A	✦ Scoped Out
	NOT APPLICABLE		

Operational Energy Overall contribution 27.5%

		Minimum required 50%	77%	✔ Pass
1.1 Thermal Performance Rating - Non-Residential			37%	
2.1 Greenhouse Gas Emissions			100%	
2.2 Peak Demand			100%	
2.6 Electrification			100%	
2.7 Energy consumption			100%	
3.1 Carpark Ventilation			N/A	✦ Scoped Out
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NOT APPLICABLE				
3.2 Hot Water - Non-Residential			100%	
3.7 Internal Lighting - Non-Residential			100%	
4.1 Combined Heat and Power (cogeneration / trigeneration)			N/A	✦ Scoped Out
No cogeneration or trigeneration system in use.				
4.2 Renewable Energy Systems - Solar			100%	
4.4 Renewable Energy Systems - Other			N/A	✦ Scoped Out
Renewable energy is in use.				

IEQ Overall contribution 16.5%

		Minimum required 50%	52%	✔ Pass
	1.4 Daylight Access - Non-Residential		48%	✔ Achieved
	2.3 Ventilation - Non-Residential		33%	✔ Achieved
	3.4 Thermal comfort - Shading - Non-Residential		66%	
	3.5 Thermal Comfort - Ceiling Fans - Non-Residential		100%	
	4.1 Air Quality - Non-Residential		100%	

Transport Overall contribution 9.0%

		40%
1.4 Bicycle Parking - Non-Residential		100%
1.5 Bicycle Parking - Non-Residential Visitor		0%
1.6 End of Trip Facilities - Non-Residential		0%
2.1 Electric Vehicle Infrastructure		N/A ✦ Scoped Out
		NOT APPLICABLE
2.2 Car Share Scheme		N/A ✦ Scoped Out
		NOT APPLICABLE
2.3 Motorbikes / Mopeds		0%

Waste & Resource Recovery Overall contribution 5.5%

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

Urban Ecology Overall contribution 5.5%

		42%
1.1 Communal Spaces		N/A ✦ Scoped Out
		NOT APPLICABLE FOR THIS BUILDING
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%

Credit breakdown

Management Overall contribution 4.5%

		33%
--	--	-----

1.1 Pre-Application Meeting		0%
-----------------------------	--	----

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

2.3 Thermal Performance Modelling - Non-Residential		100%
---	--	------

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

3.2 Metering - Non-Residential		N/A	✦ Scoped Out
NOT APPLICABLE			

This credit was scoped out	NOT APPLICABLE		
----------------------------	----------------	--	--

3.3 Metering - Common Areas		N/A	✦ Scoped Out
NOT APPLICABLE			

This credit was scoped out	NOT APPLICABLE		
----------------------------	----------------	--	--

4.1 Building Users Guide		0%
--------------------------	--	----

Score Contribution	This credit contributes 16.7% towards the category score.	
Criteria	Will a building users guide be produced and issued to occupants?	
Question	Criteria Achieved ?	
Project	No	

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IWM Overall contribution 22.5%96% ✔ Pass

Do you have a reticulated third pipe or an on-site water recycling system?: No

Are you installing a swimming pool?: No

Stormwater profile

Which stormwater modelling software are you using?: Blue Factor

Blue Factor score achieved?: 100

Flow: -

Total Suspended Solids: -

Total Phosphorus: -

Total Nitrogen: -

Rainwater tank profile

What is the total roof area connected to the rainwater tank?:

Rainwater Tank 2,000 m²

-

Tank Size:

Rainwater Tank 50,000 Litres

-

Irrigation area connected to tank:

Rainwater Tank 300 m²

-

Is connected irrigation area a water efficient garden?:

Rainwater Tank No

-

Other external water demand connected to tank?:

Rainwater Tank 0.0 Litres/Day

-

Fixtures, fittings & connections profile

Building: Lighthouse Christian College

Showerhead: Scope out

Bath: Scope out

Kitchen Taps: >= 5 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?: Rainwater Tank

Non-potable water source connected to Toilets: Yes

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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		89%  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	2257 kL	
Output	Proposed (excluding rainwater and recycled water use)	
Project	1715 kL	
Output	Proposed (including rainwater and recycled water use)	
Project	851 kL	
Output	% Reduction in Potable Water Consumption	
Project	62 %	
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	224 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	Min Blue Factor Score	
Project	100	
Output	Blue Factor Score	
Project	100	
3.1 Water Efficient Landscaping		100%
Score Contribution	This credit contributes 6.7% towards the category score.	
Criteria	Will water efficient landscaping be installed?	
Question	Criteria Achieved ?	
Project	Yes	
4.1 Building Systems Water Use		N/A  Scoped Out
This credit was scoped out		NOT APPLICABLE

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Operational Energy Overall contribution 27.5%

		Minimum required 50%	77%	✓ 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
Solar Photovoltaic system profile	
System Size (lesser of inverter and panel capacity): Solar Photovoltaic system	70.0 kW peak
Orientation (which way is the system facing)?: Solar Photovoltaic system	North
Inclination (angle from horizontal): Solar Photovoltaic system	0.0 Angle (degrees)
Non-residential Deemed-to-Satisfy profile	
Do all exposed floors and ceilings (forming part of the envelope) demonstrate a minimum 10% improvement in required NCC2022 insulation levels (total R-value upwards and downwards)?:	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	
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	
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	
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	
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?

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Score Contribution	This credit contributes 13.6% towards the category score.	
Criteria	Is the development all-electric?	
Question	Criteria Achieved?	
Project	Yes	
2.7 Energy consumption		100%
Score Contribution	This credit contributes 18.2% towards the category score.	
Criteria	What is the % reduction in annual energy consumption against the benchmark?	
3.1 Carpark Ventilation		N/A  Scoped Out
NOT APPLICABLE		
This credit was scoped out	NOT APPLICABLE	
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	This credit is achieved if all buildings in at least 90% of the area of the relevant building type are in Table J7D3a of the NCC 2022 Vol 1?	
Question	Criteria Achieved?	
Other building	No	
4.1 Combined Heat and Power (cogeneration / trigeneration)		N/A  Scoped Out
No cogeneration or trigeneration system in use.		
This credit was scoped out	No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar		100%
Score Contribution	This credit contributes 4.5% towards the category score.	
Criteria	What % of the estimated energy consumption of the building class it supplies does the solar power system provide?	
Output	Solar Power - Energy Generation per year	
Other building	84,829 kWh	
Output	% of Building's Energy	
Other building	132 %	
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.	

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IEQ Overall contribution 16.5%

		Minimum required 50%	52%	✓ Pass
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1.4 Daylight Access - Non-Residential			48%	✓ 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	48 %			
2.3 Ventilation - Non-Residential			33%	✓ 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	50 %			
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	10 %			
Criteria	What CO2 concentrations are the ventilation systems designed to achieve, to monitor and to maintain?			
Question	Value			
Other building	800 ppm			
3.4 Thermal comfort - Shading - Non-Residential			66%	
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	50 %			
3.5 Thermal Comfort - Ceiling Fans - Non-Residential			100%	
Score Contribution	This credit contributes 5.9% towards the category score.			
Criteria	What percentage of regular use areas in tenancies have ceiling fans?			
Annotation	MPH AND GPLA ARE SERVED WITH OPERABLE WINDOWS. 2 LARGE COMMERCIAL			
Question	Percentage Achieved?			
Other building				
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 ?
Other building	Yes
Criteria	Does all carpet meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Other building	No carpet
Criteria	Does all engineered wood meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Other building	No engineered wood

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Transport Overall contribution 9.0%

			40%
1.4 Bicycle Parking - Non-Residential Visitor			100%
Score Contribution	This credit contributes 40% 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	Yes		
Question	Bicycle Spaces Provided ?		
Other building	10		
1.5 Bicycle Parking - Non-Residential Visitor			0%
Score Contribution	This credit contributes 20% 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	-		
1.6 End of Trip Facilities - Non-Residential			0%
Score Contribution	This credit contributes 20% towards the category score.		
Criteria	Where adequate bicycle parking has been provided. Is there also: * 1 shower for the first 5 employee bicycle spaces plus 1 to each 10 employee bicycles spaces thereafter, * changing facilities adjacent to showers, and * one secure locker per employee bicycle space in the vicinity of the changing / shower facilities?		
Question	Number of showers provided ?		
Other building	0		
Question	Number of lockers provided ?		
Other building	0		
Output	Min Showers Required		
Other building	1		
Output	Min Lockers Required		
Other building	10		
2.1 Electric Vehicle Infrastructure		N/A	✦ Scoped Out
NOT APPLICABLE			
This credit was scoped out	NOT APPLICABLE		
2.2 Car Share Scheme		N/A	✦ Scoped Out
NOT APPLICABLE			
This credit was scoped out	NOT APPLICABLE		
2.3 Motorbikes / Mopeds			0%

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Score Contribution	This credit contributes 20% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	No

Waste & Resource Recovery Overall contribution 5.5%

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

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Urban Ecology Overall contribution 5.5%

		42%
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1.1 Communal Spaces		N/A	Scoped Out
NOT APPLICABLE FOR THIS BUILDING			

This credit was scoped out	NOT APPLICABLE FOR THIS BUILDING
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2.1 Vegetation		75%
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Score Contribution	This credit contributes 57.1% 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	20 %

2.2 Green Roofs		0%
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Score Contribution	This credit contributes 14.3% towards the category score.
Criteria	Does the development incorporate a green roof?
Question	Criteria Achieved ?
Project	No

2.3 Green Walls and Facades		0%
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Score Contribution	This credit contributes 14.3% 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 14.3% towards the category score.
Criteria	What area of space per occupant is dedicated to food production?
Question	Food Production Area
Other building	-
Output	Min Food Production Area
Other building	29 m²

Innovation Overall contribution 9.0%

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

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19507

126%
SCORE

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

Project details

Name	V3: 19507
Project ID	A6AE5569
Street address	927-937 Springvale Rd, Keysborough VIC 3173, Australia
Municipality	Greater Dandenong
Site area	11090m ²
Planning Number	

Flow and pollutant load reductions

Item	Result	Target	
Mean annual runoff volume harvested or intercepted (%)	55%	>27%	✓
Mean annual runoff volume infiltrated or filtered (%)	0%	>9%	✗
Total suspended solids (%)	61%	>80%	✗
Total phosphorus (%)	59%	>45%	✓
Total nitrogen (%)	56%	>45%	✓
Total gross pollutants (%)	73%	>70%	✓

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Configuration 1



ROOF TO RWT Roof, 2000m2



Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 50

Catchments



ROOF TO RWT Roof, 2000m2



POROUS SURFACE Pervious (garden and lawn), 15090m2



ROOF Roof, 700m2

Treatments



Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 50

170%

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MULTI PURPOSE HALL

Non-Residential BCA Class 5 - Commercial/Office,
200 employee(s)

Water sources	I want to calculate my water use based on fixtures and fittings
Basin taps - Primary water source	Mains water
Basin taps - Efficiency	5 star WELS rating
Showers - Primary water source	Mains water
Showers - Efficiency	Scope out
Clothes Washer - Primary water source	
Clothes Washer - Efficiency	Scope out
Urinal - Primary water source	
Urinal - Efficiency	No urinals
Toilets connected to mains water	0
Toilets connected to rainwater	6
Toilets connected to recycled water	0
Toilets efficiency	4 star WELS rating
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
Irrigated garden area supplied by:	
• Mains	0 m ²
• Rainwater Tank	900 m ²
• Recycled Water	0 m ²
Garden water use efficiency	Medium

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