ADVERTISED
PLAN

# Westbourne Grammar School

## Middle Years 5 – 8 Learning Centre

Sustainability Management Plan / prepared for Westbourne Grammar School

**Waterman Group (AUS) Pty Ltd**
ACN 121 003 334 ABN 46 121 003 334
60 Park Street, South Melbourne, Victoria 3205
**t** 03 9685 9900 **f** 03 9685 9999 **e** melbourne@waterman-australia.com.au

www.watermangroup.com

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

## Document Status

| | | |
|---|---|---|
| **Project No.** 6752 | **Version** 3 | **Date** 26 May 2023 |

Author(s) Li Chen

Approved by Brian Mason

| Version | Issue Description | Date |
|---|---|---|
| 1 | Draft for Review | 11 April 2023 |
| 2 | Updated Draft for Review | 19 May 2023 |
| 3 | Final Issue for Town Planning | 26 May 2023 |
| | | |
| | | |
| | | |
| | | |
| | | |

*This report has been prepared in accordance with the terms and conditions of appointment.*
*Waterman Group (AUS) Pty Ltd (ABN 46 121 003 334) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.*

ADVERTISED
PLAN

This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright

## Table of Contents



ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

# 1 Introduction

## 1.1 Purpose

Waterman has been engaged to prepare Sustainability Management Plan for the proposed educational development.

This Sustainability Management Plan lists the sustainable initiatives and attributes currently considered for the design of the project. The project team will endeavour to ensure that all aspects of the design listed within this report are fully implemented into the design documents and the constructed building.

## 1.2 General Scope of Work

The project involves the development of a new Middle Years Learning Centre (Years 5 to 8) at Westbourne Grammar School in Truganina.

Westbourne Grammar School is situated over three separate allotments. The proposed new building will be located at the centre of the school site (referred to as Lot 2) and shall be accessible via Sayers Road.

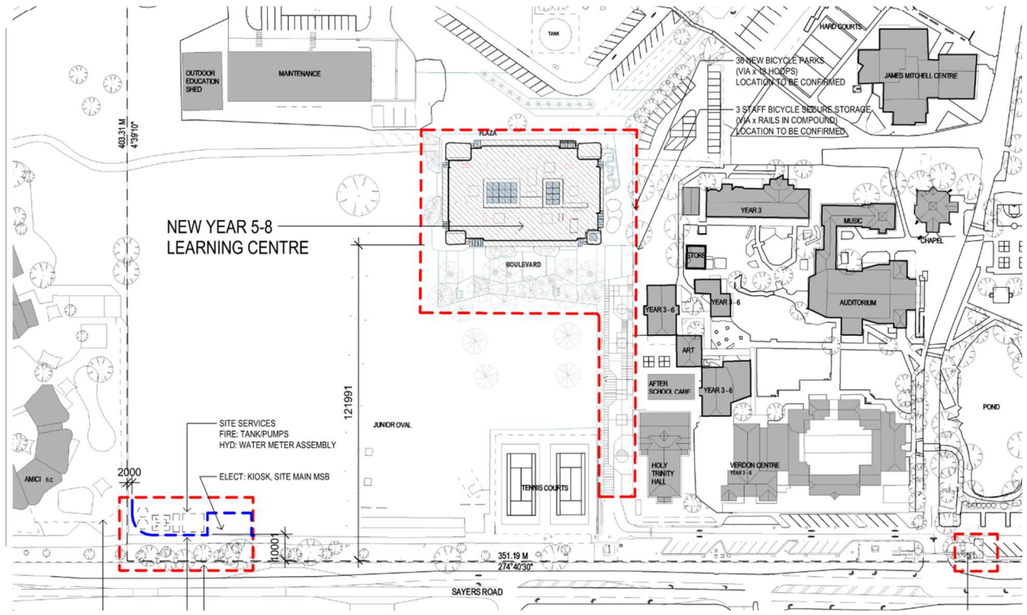



*Figure 1.1 – Site Location Plan(from Baldasso Cortese, A-TP101 Rev B)*

The facility shall contain approximately 5,800m$^2$ of new learning, collaboration, staff and wellbeing areas located over three floors:

*Ground Floor*

- General learning areas.
- Collaboration and breakout areas.
- Staff offices and meeting rooms.
- Health and wellbeing centre.
- Student café.
- Staff and student amenities.
- New main communications room.
-

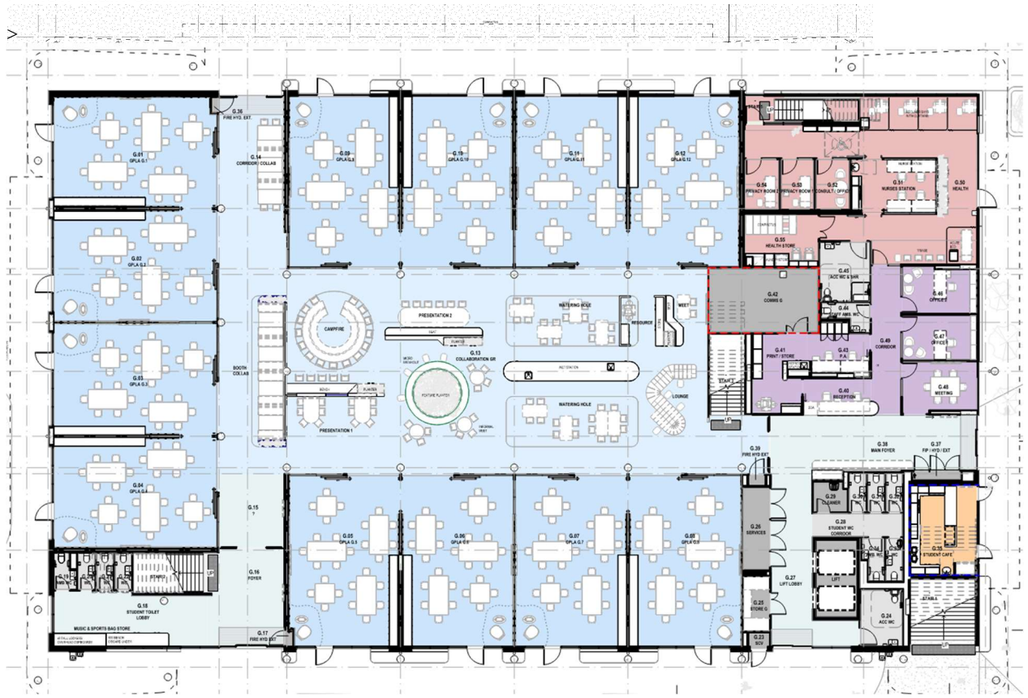


*Figure 1.2 – Proposed Ground Floor Plan (from Baldasso Cortese, A-TP201 Rev B)*

*Level 1*

- General learning areas.
- Innovation Hub.
- Collaboration and breakout areas.
- Staff offices and meeting rooms.
- Health and wellbeing centre.
- Multipurpose room.
- Staff and student amenities.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

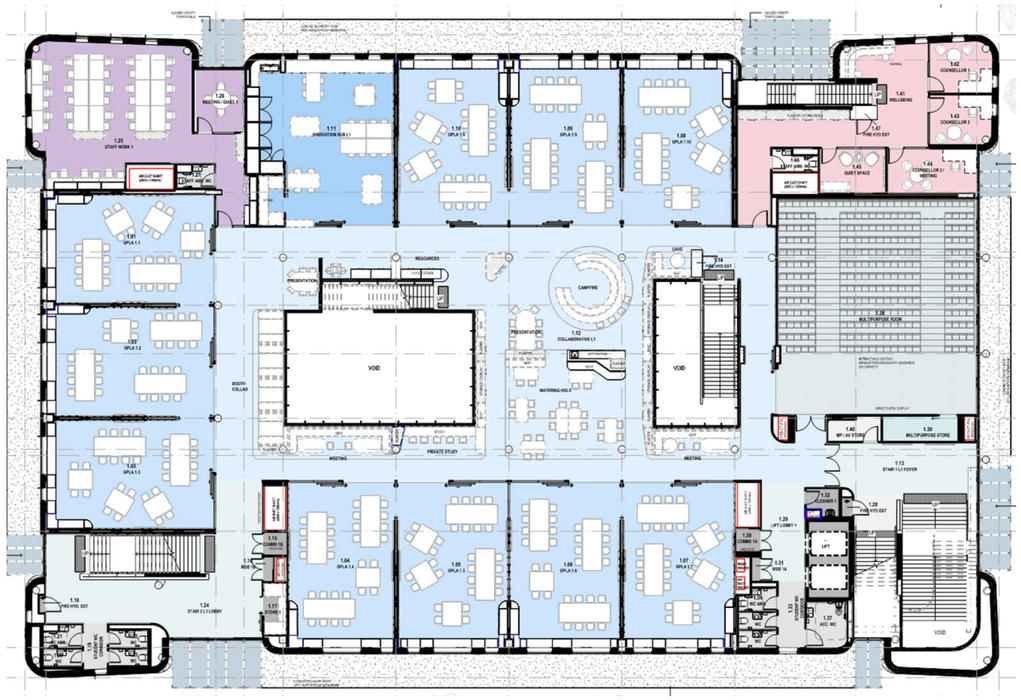


*Figure 1.3 – Proposed Level 1 Plan (from Baldasso Cortese, A-TP202 Rev B)*

*Level 2*

- General learning areas.
- Innovation Hub.
- Collaboration and breakout areas.
- Staff offices and meeting rooms.
- Staff lounge.
- Staff and student amenities.

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

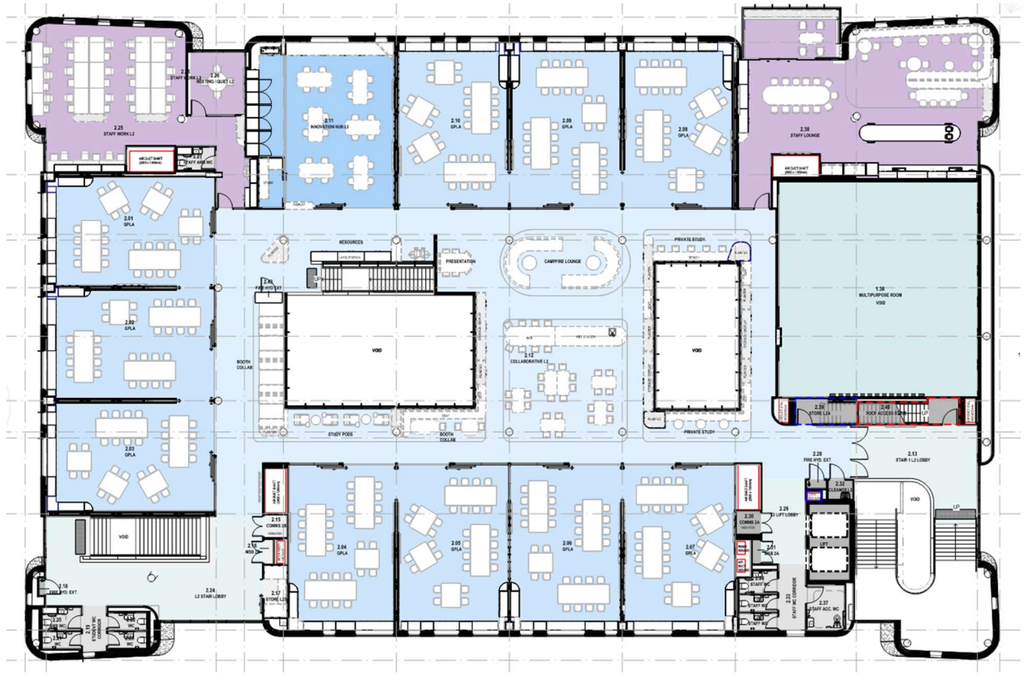
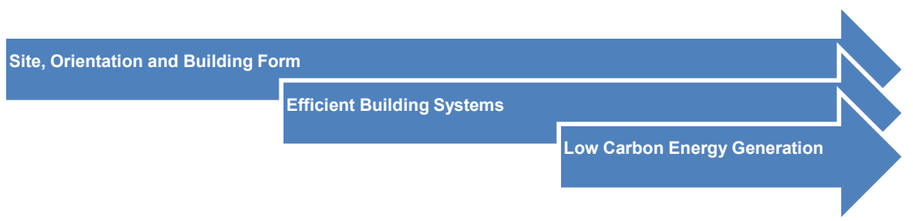


*Figure 1.4 – Proposed Level 2 Plan (from Baldasso Cortese, A-TP203 RevB)*

## 1.3 Design Philosophy

Sustainability has been integrated into the heart of this development with careful consideration given to sustainable outcomes from the initial siting, massing and orientation of the building.

In addition to these core features, this project has included wide ranging initiatives to ensure the building is a healthy, energy and water efficient building with a minimal ecological footprint.




The proposed building services arrangements presented within this report have been based on the above briefing information, discussions / directions from the Client, and our relevant experience in comparable facilities.

## 1.4 Statutory Framework

This Sustainability Management Plan benchmarks the project against the relevant planning requirements of the relevant authority.

For this project, the relevant authority is the City of Wyndham and the following benchmarks are required to be satisfied.

| Planning Control | Project Response |
|---|---|
| **LPP 15.01-2L-01 Environmentally sustainable development**<br><br>The application requirements apply to the "development of a non-residential building" which including;<br>• A Sustainability Management Plan including an assessment using BESS/Green Star, STORM/Music or other methods.<br>• A Green Travel Plan | The project achieves a score of 52% under the BESS scorecard, which achieves the overall minimum required score for the Best Practice outcomes for the project sustainable design.<br>The BESS report is attached as Appendix A.<br>The BESS IEQ requires a minimum 33% of regular use floor area achieving a target Daylight Factor of not less than 2% as one of the mandatory requirements.<br>A preliminary daylight modelling assessment has been undertaken and is currently indicating 31% of the regular use areas are achieving a Daylight Factor of 2.0 or more. This is in line with general expectations given the room depth requirements of modern education facilities.<br>As the design is further refined in conjunction with the thermal performance modelling for the building, it is expected that the additional 2% required to achieve the compliance threshold of 33% will be achieved.<br>It is expected that these refinements will include aspects such as shading design, resolution of the final glass specification and internal material selections and colours.<br><br>All roof and exposed flooring forming the thermal envelope are to achieve an increase of 10% from the minimum Section J requirements.<br><br>A summary of the NCC Section J DTS assessment results and BESS Energy minimum requirements to the building fabrics is attached as Appendix B.<br><br>20% of non-trafficable roof area, 1,500m², is recommended for solar PV panel installation and as such, a minimum of 28kW solar PV array is recommended to the project on-site renewable energy generation.<br><br>A STORM rating assessment has been undertaken. The report is attached as Appendix C and a minimum of 36,000L of rainwater tanking is recommended.<br><br>A Green Travel Plan has been prepared by T&TS Transport and Traffic Solutions. Please refer to sperate document included within the Town Planning submission. |

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

## 1.5 Sources of Information and Limitations

This report has been based on the following architectural information:

> Baldasso Cortese Architecture. Job Number: 20220008. Town Planning Drawing Set – Revision B. Date: 24.05.2023.

This Sustainability Management Plan is based on our interpretation of the architectural documentation and project briefing requirements issued to us to date. It is also based on our understanding of the key design considerations that we believe are beneficial to a development of this type and size in order to reduce the development's impact on the environment. Initial feedback from the school has also been considered as part of this assessment.

This report has been specifically prepared for the organisation noted on the cover of the report.

No responsibility or liability to any third party is accepted for any loss or damage arising from the use of this report by any third party. Any third party wishing to act upon any material contained in this report should confer with Waterman for detailed advice to take into account that party's particular requirements.

This report is not to be used for any other project.

# 2 Summary and Conclusions

This report outlines a number of sustainable design initiatives which are to be integrated into the design and specification of the proposed development in order to reduce the development's environmental impact.

The performance outcomes presented in this report demonstrate that the proposed development meets the City of Wyndham standard for sustainable development.

## 2.1 BESS

The project achieves a score of 52% under the BESS scorecard, which achieves the overall minimum required score.

The project does however fail to achieve the Mandatory daylighting target as outlined within Section 1.4 of this report.

The project is currently achieving compliance for 31% of the regular use areas. This is in line with general expectations given the room depth requirements of modern education facilities.

As the design is further refined in conjunction with the thermal performance modelling for the building, it is expected that the additional 2% required to achieve the compliance threshold of 33% will be achieved which will demonstrate compliance with the Mandatory Credit Criteria.

It is expected that these refinements will include aspects such as shading design, resolution of the final glass specification and internal material selections and colours.

## 2.2 Project Commitments

A list of the initiatives proposed to be included within the design has been provided in the Implementation Plan section of this report.

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

# 3 Water Resources

## 3.1 Water Balance

A carefully designed, holistic water strategy can reduce the reliance of a building on potable water supply and local water catchment areas, while improving the local biodiversity. A typical water strategy will include the following objectives.

- Reduce water demand through efficient fittings and fixtures.
- Collect and reuse rainwater for irrigation in lieu of potable water supply.
- Treat outflows from the site to minimise pollutants in the local stormwater systems.

## 3.2 Water Efficiency

This project will incorporate efficient fittings and fixtures designed to minimise water use within the building.

| | |
|---|---|
| ***Kitchen Taps*** | *6 Star WELS* |
| ***Vanity Taps*** | *6 Star WELS* |
| ***WC's*** | *5 Star WELS* |
| ***Urinals*** | *6 Star WELS* |

## 3.3 Rainwater Collection and Reuse

This project includes various non-trafficable roof areas suitable for rainwater collection. This rainwater will be collected for reuse in a rainwater tank and used in landscape irrigation and toilet flushing to the building.

If a rainwater tank is too small for the collection area, it will often overflow and will not provide sufficient rainwater collection. If it is too large for the water demand, the extra water collected will not be used. The recommended size for this building is based on a holistic water balance where the water supply and water demand has been analysed and the optimal tank size has been selected.

Based on the results of the analysis in the STORM rating assessment, the optimal tank size for this building is **36,000L** at the minimum, which is expected to meet approximately 80% of the building's demand for non-potable water.

Melbourne Water

## STORM Rating Report

| | |
|---|---|
| TransactionID: | 1586609 |
| Municipality: | WYNDHAM (North/East of Skeleton Ck) |
| Rainfall Station: | WYNDHAM (North/East of Skeleton Ck) |
| Address: | 300 Sayers Road |
| | Truganina |
| | VIC 3029 |
| Assessor: | |
| Development Type: | Other |
| Allotment Site (m2): | 2,488.00 |
| STORM Rating %: | 101 |

| Description | Impervious Area (m2) | Treatment Type | Treatment Area/Volume (m2 or L) | Occupants / Number Of Bedrooms | Treatment % | Tank Water Supply Reliability (%) |
|---|---|---|---|---|---|---|
| Skylight Roofing West | 150.00 | Rainwater Tank | 4,000.00 | 10 | 170.00 | 82.00 |
| Skylight Roofing East | 80.00 | Rainwater Tank | 2,000.00 | 10 | 170.00 | 81.00 |
| Roofing North | 366.00 | Rainwater Tank | 7,000.00 | 30 | 162.80 | 78.00 |
| Roofing East | 202.00 | Rainwater Tank | 6,000.00 | 20 | 170.00 | 82.00 |
| Roofing South | 309.00 | Rainwater Tank | 7,000.00 | 30 | 167.30 | 80.00 |
| Roofing West | 229.00 | Rainwater Tank | 6,000.00 | 20 | 170.00 | 82.00 |
| North-West Tower Roofing | 55.00 | Rainwater Tank | 1,500.00 | 5 | 170.00 | 82.00 |
| North-East Tower Roofing | 51.00 | Rainwater Tank | 1,500.00 | 5 | 170.00 | 82.00 |
| South-East Tower Roofing | 25.00 | Rainwater Tank | 500.00 | 5 | 164.00 | 78.00 |
| South-West Tower Roofing | 36.00 | Rainwater Tank | 500.00 | 5 | 150.20 | 70.00 |
| Other imperious surface | 985.00 | None | 0.00 | 0 | 0.00 | 0.00 |

Date Generated: 26-May-2023 Program Version: 1.0.0

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

# 4 Summary of Initiatives and Implementation Plan

This development includes a wide range of holistic sustainability measures, which have been carefully integrated into the preliminary design of the development so that the occupants will have the opportunity to reduce their environmental footprint without compromising quality of life.

The initiatives in the Implementation Plan have been committed to as part of the planning process. In a typical design process, each initiative will need to be incorporated into the project at the project stages nominated in the table. The nominated Project Manager needs to ensure that all parties are aware of the project requirements and that the documentation reflects the design intent at each project stage. We note that all projects are delivered differently and the project manager may alter the responsibilities to ensure the plan remains relevant to the project.

Typically, the following activities need to occur at each stage to ensure all initiatives are carried through to construction.
**Town Planning Documents** – ESD Consultant is appointed, drawings show relevant information
**Tender Documents** – drawings / contract includes all sustainability initiatives so that the builder prices accordingly.
**Construction Documents** – drawings and specifications are consistent with the design intent.
**Construction & Completion** – the builder is to carry out the design intent during construction.

## 4.1 Implementation Plan

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

| Initiative | Discipline(s) | Project Stage | | | |
|---|---|---|---|---|---|
| | | Town Planning Documents | Tender Documents | Construction Documents | Construction & Completion |
| **CONSTRUCTION AND BUILDING MANAGEMENT** | | | | | |
| Utility meters to be provided for energy, water and gas (if supplied) for the office tenancy. | Electrical | | Y | Y | Y |
| All major common area services to be sub-metered separately for energy. Major uses in this project are considered to be:<br>- General Power (each floor)<br>- Lighting (each floor)<br>- Mechanical Services<br>- Domestic Hot Water | Electrical<br>Mechanical | | Y | Y | Y |
| The builder will be required to implement a site specific Environmental Management Plan (EMP) for the project. The EMP will be required to include measures to limit stormwater impacts during construction, including but not limited to those listed in the WSUD Response section of this report. | Builder | | Y | | Y |
| Building Users' Guide to be developed and provided to occupants. | Builder | | Y | | Y |
| A 12 month building tuning process will be adopted for this project. | | | | | |
| **INDOOR ENVIRONMENT QUALITY** | | | | | |
| All areas are to have sufficient artificial lighting to achieve the minimum lighting levels in AS1680:2006. | Electrical | | Y | Y | Y |
| All windows to occupied spaces are to include an internal blind where direct sunlight is expected during occupied hours. | Architect | | Y | Y | Y |
| All paints, adhesives, sealants and carpets are to be low VOC, in accordance with the latest Green Star criteria. | Architect | | Y | Y | Y |
| All engineered wood products are to be E0. | Architect | | Y | Y | Y |

| Initiative | Discipline(s) | Project Stage | | | |
|---|---|---|---|---|---|
| | | Town Planning Documents | Tender Documents | Construction Documents | Construction & Completion |
| **ENERGY** | | | | | |
| 20% non-trafficable roof area, 1,500m², is recommended for solar PV panel installation and as such, a minimum 28kW solar PV array is recommended to the project on-site renewable energy generation. | Electrical | Y | Y | Y | Y |
| All roof and exposed flooring will achieve an increase of 10% from the minimum Section J requirements. If a JV3 performance solution is used the 'reference building' will incorporate an increase of 10% from the minimum Section J requirements | Architect ESD | | Y | Y | Y |
| Wall-glazing performance to meet the minimum Section J requirements. | Architect ESD | | Y | Y | Y |
| Lighting power density is to improve on the maximum allowance in the NCC by 10%. | Electrical | | Y | Y | Y |
| All heating and cooling systems are to achieve one of the following benchmarks:<br>- COP/EER not less than 85% that the most efficient equivalent capacity unit available.<br>- Energy rating within one star of the most efficient equivalent capacity unit available. | Mechanical | | Y | Y | Y |
| All common area lighting is to be controlled via motion sensors and/or a timer. | Electrical | | Y | Y | Y |
| All external lighting will be controlled via a time clock and daylight sensors. Motion sensors will be installed in applicable areas. | Electrical | | Y | Y | Y |
| All lifts will incorporate controls to power off the majority of systems when not in use. | Lift | | Y | Y | Y |
| The design will incorporate after hours control with minimum 2 zones, CO2 or occupancy based ventilation controls and full outside air economy cycles to base building air handling systems. | Mechanical | | Y | Y | Y |
| Domestic hot water will be provided by an electric source central heat pump hot water system | Hydraulic | | Y | Y | Y |
| All new lights will be LED type. | Electrical | | Y | Y | Y |
| Daylight and movement sensors will be included to external areas and internal areas such as storerooms, corridors, and other common areas in addition to other switching. | Electrical | | Y | Y | Y |
| Lighting in perimeter zones of higher daylight will be controlled by daylight sensors. | Electrical | | Y | Y | Y |
| **TRANSPORT** | | | | | |
| A minimum of 3 bicycle spaces to the staff members are required by the BESS Transport Credit. These will form part of the overall school Green Travel Plan activities. | Architect | Y | Y | Y | Y |
| A Green Travel Plan has been prepared by the Traffic Consultant. The Green Travel Plan considers the campus in a holistic manner and is not limited to the scope of the proposed building in isolation | Traffic | Y | Y | Y | Y |
| **WATER / STORMWATER** | | | | | |
| The following fixtures and fitting benchmarks are to be met:<br>- Kitchen Taps: 6 Star WELS<br>- Bathroom Taps: 6 Star WELS<br>- WC's: 5 Star WELS<br>- Urinals: 6 Star WELS | Architect | | Y | Y | Y |
| The following initiatives will be implemented in the design:<br>- Water will be collected from the non-trafficable roof, 1,500m².<br>- Water will be treated via a minimum 36,000L rainwater tank, connected to all toilets in the building.<br>- Water falling on other surfaces may be discharged directly to the council stormwater system without treatment. | Hydraulic Civil Landscape | Y | Y | Y | Y |
| All landscaping is to consist of low water use plant selections where practical, include mulching and use an efficient irrigation system (surface or sub-surface drip irrigation with moisture sensors). | Landscape | Y | Y | Y | Y |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

| Initiative | Discipline(s) | Project Stage | | | |
|---|---|---|---|---|---|
| | | Town Planning Documents | Tender Documents | Construction Documents | Construction & Completion |
| **MATERIALS & WASTE MANAGEMENT** | | | | | |
| All timber used onsite will be reused, recycled or from a sustainably managed forestry operation (*i.e.* FSC or PEFC certified timber). | Architect | | Y | Y | Y |
| Preference will be given to sustainable materials, and materials with a recycled content. | Architect | | Y | Y | Y |
| Preference is to be given to products with a third-party environmental certification such as Ecospecifier or GECA. | Architect | | Y | Y | Y |
| Waste storage to include a dedicated food and/or garden waste disposal. | Waste | Y | Y | Y | Y |
| Recycling is to be at least as convenient as general waste disposal. | Waste | Y | Y | Y | Y |
| The project will adopt a 90% diversion from landfill target during demolition and construction will be adopted. | Builder | | Y | Y | Y |
| **URBAN ECOLOGY** | | | | | |
| A Light roof colour is recommended to be provided where the roof upper surface is required to have a solar absorptance not more than 0.45. | Architect | | Y | Y | Y |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

# Appendix A

# BESS Report

ADVERTISED
PLAN

This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright

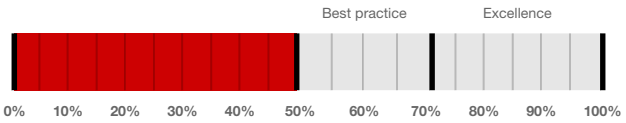
# BESS Report

Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 300 Sayers Rd Truganina Victoria 3029. 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 Wyndham 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

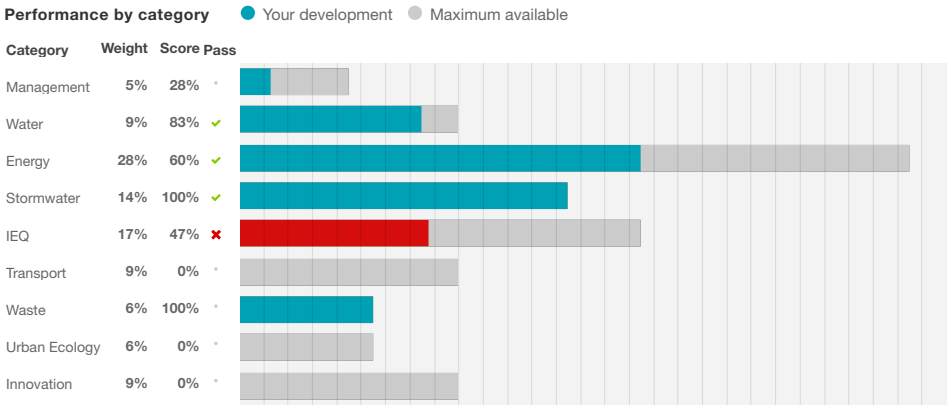



**52%**

### Project details

| | |
|---|---|
| **Address** | 300 Sayers Rd Truganina Victoria 3029 |
| **Project no** | 8FC9D108-R2 |
| **BESS Version** | BESS-7 |
| **Site type** | Non-residential development |
| **Account** | l.chen@waterman-australia.com.au |
| **Application no.** | |
| **Site area** | 2,488.00 m² |
| **Building floor area** | 6,000.00 m² |
| **Date** | 26 May 2023 |
| **Software version** | 1.7.1-B.396 |

### Performance by category








## Buildings

| Name | Height | Footprint | % of total footprint |
|---|---|---|---|
| 5-8 Learning Centre | 3 | 6,000 m² | 100% |

## Dwellings & Non Res Spaces

### Non-Res Spaces

| Name | Quantity | Area | Building | % of total area |
|---|---|---|---|---|
| **Other building** | | | | |
| 5-8 Learning Centre | 1 | 6,000 m² | 5-8 Learning Centre | 100% |
| **Total** | **1** | **6,000 m²** | **100%** | |

## Supporting information

### Floorplans & elevation notes

| Credit | Requirement | Response | Status |
|---|---|---|---|
| Energy 4.2 | Floor plans showing location of photovoltaic panels as described. | | - |
| Stormwater 1.1 | Location of any stormwater management systems used in STORM or MUSIC modelling (e.g. Rainwater tanks, raingarden, buffer strips) | | - |
| Waste 2.1 | Location of food and garden waste facilities | | - |
| Waste 2.2 | Location of recycling facilities | | - |

### Supporting evidence

| Credit | Requirement | Response | Status |
|---|---|---|---|
| Management 2.3a | Section J glazing assessment | | - |
| Energy 1.1 | Energy Report showing calculations of reference case and proposed buildings | | - |
| Energy 3.7 | Provide a written description of the average lighting power density to be installed in the development and specify the lighting type(s) to be used. | | - |
| Energy 4.2 | Specifications of the solar photovoltaic system(s). | | - |
| Stormwater 1.1 | STORM report or MUSIC model | | - |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

## Credit summary

### Management Overall contribution 4.5%

| | | |
|---|---|---|
| | **28%** | |
| 1.1 Pre-Application Meeting | 0% | |
| 2.3 Thermal Performance Modelling - Non-Residential | 50% | |
| 3.2 Metering - Non-Residential | N/A | ◈ Scoped Out |
| | No commercial tenants are to be included in the building. | |
| 3.3 Metering - Common Areas | 0% | |
| 4.1 Building Users Guide | 100% | |

### Water Overall contribution 9.0%

| | | |
|---|---|---|
| | **Minimum required 50%** **83%** | ✔ **Pass** |
| 1.1 Potable water use reduction | 80% | |
| 3.1 Water Efficient Landscaping | N/A | ◈ Scoped Out |
| | No landscaping area is included to the building design. | |
| 4.1 Building Systems Water Use Reduction | 100% | |

### Energy Overall contribution 27.5%

| | | |
|---|---|---|
| | **Minimum required 50%** **60%** | ✔ **Pass** |
| 1.1 Thermal Performance Rating - Non-Residential | 37% | |
| 2.1 Greenhouse Gas Emissions | 100% | |
| 2.2 Peak Demand | 100% | |
| 2.3 Electricity Consumption | 100% | |
| 2.4 Gas Consumption | N/A | ◈ Scoped Out |
| | No gas connection in use | |
| 2.6 Electrification | 0% | |
| 3.1 Carpark Ventilation | N/A | ◈ Scoped Out |
| | No Indoor carpark is included. | |
| 3.2 Hot Water | 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 | 0% | ⊘ Disabled |
| | No other (non-solar PV) renewable energy is in use. | |





### Stormwater Overall contribution 13.5%

| | | |
|---|---|---|
| | **Minimum required 100%** **100%** | ✔ **Pass** |
| 1.1 Stormwater Treatment | 100% | |

### IEQ Overall contribution 16.5%

| | | |
|---|---|---|
| | **Minimum required 50%** **47%** | ✖ **Not Passed** |
| 1.4 Daylight Access - Non-Residential | 0% | ✖ Not Achieved |
| 2.3 Ventilation - Non-Residential | 83% | ✔ Achieved |
| 3.4 Thermal comfort - Shading - Non-residential | 66% | |
| 3.5 Thermal Comfort - Ceiling Fans - Non-Residential | 0% | |
| 4.1 Air Quality - Non-Residential | 100% | |

### Transport Overall contribution 9.0%

| | | |
|---|---|---|
| | **0%** | |
| 1.4 Bicycle Parking - Non-Residential | 0% | |
| 1.5 Bicycle Parking - Non-Residential Visitor | 0% | |
| 1.6 End of Trip Facilities - Non-Residential | 0% | ⊘ Disabled |
| | Credit 1.4 must be complete first. | |
| 2.1 Electric Vehicle Infrastructure | N/A | ◈ Scoped Out |
| | No carparking facilities are provided. | |
| 2.2 Car Share Scheme | N/A | ◈ Scoped Out |
| | No carparking facilities are provided. | |
| 2.3 Motorbikes / Mopeds | N/A | ◈ Scoped Out |
| | No carparking facilities are provided. | |

### Waste Overall contribution 5.5%

| | | |
|---|---|---|
| | **100%** | |
| 1.1 - Construction Waste - Building Re-Use | N/A | ◈ Scoped Out |
| | No existing building on the site. | |
| 2.1 - Operational Waste - Food & Garden Waste | 100% | |
| 2.2 - Operational Waste - Convenience of Recycling | 100% | |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**Urban Ecology** Overall contribution 5.5%

| | |
|---|---|
| | 0% |
| 1.1 Communal Spaces | 0% |
| 2.1 Vegetation | 0% |
| 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% |

This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright

ADVERTISED
PLAN





## Credit breakdown

### Management Overall contribution 1%

| | | |
|---|---|---|
| **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** | | 50% |
| Score Contribution | This credit contributes 28.6% towards the category score. | |
| Criteria | Has a preliminary facade assessment been undertaken in accordance with NCC2019 Section J1.5? | |
| Question | Criteria Achieved ? | |
| Other building | Yes | |
| Criteria | Has preliminary modelling been undertaken in accordance with either NCC2019 Section J (Energy Efficiency), NABERS or Green Star? | |
| Question | Criteria Achieved ? | |
| Other building | No | |
| **3.2 Metering - Non-Residential** | | N/A ✣ Scoped Out |
| This credit was scoped out | No commercial tenants are to be included in the building. | |
| **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 | |

## Water

Overall contribution 7% Minimum required 50%

| Water Approach | |
|---|---|
| What approach do you want to use for Water?: | Use the built in calculation tools |

| Project Water Profile Question | |
|---|---|
| Do you have a reticulated third pipe or an on-site water recycling system?: | No |
| Are you installing a swimming pool?: | No |
| Are you installing a rainwater tank?: | Yes |

| Water fixtures, fittings and connections | |
|---|---|
| Building: | 5-8 Learning Centre |
| Showerhead: | Scope out |
| Bath: | Scope out |
| Kitchen Taps: | >= 6 Star WELS rating |
| Bathroom Taps: | >= 6 Star WELS rating |
| Dishwashers: | Scope out |
| WC: | >= 5 Star WELS rating |
| Urinals: | >= 6 Star WELS rating |
| Washing Machine Water Efficiency: | Scope out |
| Which non-potable water source is the dwelling/space connected to?: | Rainwater Tank 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 |

| Rainwater Tank | |
|---|---|
| What is the total roof area connected to the rainwater tank?: Rainwater Tank 1 | 1,485 m² |
| Tank Size: Rainwater Tank 1 | 43,000 Litres |
| Irrigation area connected to tank: Rainwater Tank 1 | 0.0 m² |
| Is connected irrigation area a water efficient garden?: Rainwater Tank 1 | Yes |
| Other external water demand connected to tank?: Rainwater Tank 1 | - |





| 1.1 Potable water use reduction | | 80% |
|---|---|---|
| Score Contribution | This credit contributes 83.3% 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 | 4763 kL | |
| Output | Proposed (excluding rainwater and recycled water use) | |
| Project | 2628 kL | |
| Output | Proposed (including rainwater and recycled water use) | |
| Project | 1884 kL | |
| Output | % Reduction in Potable Water Consumption | |
| Project | 60 % | |
| Output | % of connected demand met by rainwater | |
| Project | 64 % | |
| Output | How often does the tank overflow? | |
| Project | Never / Rarely | |
| Output | Opportunity for additional rainwater connection | |
| Project | 443 kL | |

| 3.1 Water Efficient Landscaping | | N/A ◇ Scoped Out |
|---|---|---|
| This credit was scoped out | No landscaping area is included to the building design. | |

| 4.1 Building Systems Water Use Reduction | | 100% |
|---|---|---|
| Score Contribution | This credit contributes 16.7% towards the category score. | |
| Criteria | Where applicable, have measures been taken to reduce potable water consumption by >80% in the buildings air-conditioning chillers and when testing fire safety systems? | |
| Question | Criteria Achieved ? | |
| Project | Yes | |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

## Energy

Overall contribution 16% Minimum required 50%

| | |
|---|---|
| Use the BESS Deem to Satisfy (DtS) method for Energy?: | Yes |
| Do all exposed floors and ceilings (forming part of the envelope) demonstrate a minimum 10% improvement in required NCC2019 insulation levels (total R-value upwards and downwards)?: | Yes |
| Does all wall and glazing demonstrate meeting the required NCC2019 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 |

| **Non-Residential Building Energy Profile** | |
|---|---|
| Heating, Cooling & Comfort Ventilation - Electricity Reference fabric & services: | - |
| Heating, Cooling & Comfort Ventilation - Electricity - proposed fabric and reference services: | - |
| Heating, Cooling & Comfort Ventilation - Electricity Proposed fabric & services: | - |
| Heating - Wood - reference fabric and services: | - |
| Heating - Wood - proposed fabric and reference services: | - |
| Heating - Wood - proposed fabric and services: | - |
| Hot Water - Electricity - Reference: | - |
| Hot Water - Electricity - Proposed: | - |
| Lighting - Reference: | - |
| Lighting - Proposed: | - |
| Peak Thermal Cooling Load - Reference: | - |
| Peak Thermal Cooling Load - Proposed: | - |

| **Solar Photovoltaic system** | | |
|---|---|---|
| System Size (lesser of inverter and panel capacity): | PV Panel Array 1 | 28.0 kW peak |
| Orientation (which way is the system facing)?: | PV Panel Array 1 | North |
| Inclination (angle from horizontal): | PV Panel Array 1 | 37.0 Angle (degrees) |

| **1.1 Thermal Performance Rating - Non-Residential** | 37% |
|---|---|
| Score Contribution | This credit contributes 40.0% towards the category score. |
| Criteria | What is the % reduction in heating and cooling energy consumption against the reference case (NCC 2019 Section J)? |





| **2.1 Greenhouse Gas Emissions** | | 100% | |
|---|---|---|---|
| Score Contribution | This credit contributes 10.0% 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 5.0% towards the category score. | | |
| Criteria | What is the % reduction in the instantaneous (peak-hour) demand against the benchmark? | | |

| **2.3 Electricity Consumption** | | 100% | |
|---|---|---|---|
| Score Contribution | This credit contributes 10.0% towards the category score. | | |
| Criteria | What is the % reduction in annual electricity consumption against the benchmark? | | |

| **2.4 Gas Consumption** | | N/A | Scoped Out |
|---|---|---|---|
| This credit was scoped out | No gas connection in use | | |

| **2.6 Electrification** | | 0% | |
|---|---|---|---|
| Score Contribution | This credit contributes 10.0% towards the category score. | | |
| Criteria | Is the development all-electric? | | |
| Question | Criteria Achieved? | | |
| Project | - | | |

| **3.1 Carpark Ventilation** | | N/A | Scoped Out |
|---|---|---|---|
| This credit was scoped out | No Indoor carpark is included. | | |

| **3.2 Hot Water** | | 100% | |
|---|---|---|---|
| Score Contribution | This credit contributes 5.0% 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 10.0% 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 J6.2a of the NCC 2019 Vol 1? | | |
| Question | Criteria Achieved ? | | |
| Other building | Yes | | |

| **4.1 Combined Heat and Power (cogeneration / trigeneration)** | | N/A | Scoped Out |
|---|---|---|---|
| This credit was scoped out | No cogeneration or trigeneration system in use. | | |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

| | | |
|---|---|---|
| **4.2 Renewable Energy Systems - Solar** | 100% | |
| Score Contribution | This credit contributes 5.0% 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 | 36,485 kWh | |
| Output | % of Building's Energy | |
| Other building | 21 % | |
| **4.4 Renewable Energy Systems - Other** | 0% | ⊘ Disabled |
| This credit is disabled | No other (non-solar PV) renewable energy is in use. | |

## Stormwater

Overall contribution 14% Minimum required 100%

| | | |
|---|---|---|
| **Which stormwater modelling are you using?:** | Melbourne Water STORM tool | |
| **1.1 Stormwater Treatment** | 100% | |
| Score Contribution | This credit contributes 100.0% towards the category score. | |
| Criteria | Has best practice stormwater management been demonstrated? | |
| Question | STORM score achieved | |
| Project | 101 | |
| Output | Min STORM Score | |
| Project | 100 | |

ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright





## IEQ

Overall contribution 8% Minimum required 50%

| | | |
|---|---|---|
| **1.4 Daylight Access - Non-Residential** | 0% | ✖ Not 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 | 31 % | |
| **2.3 Ventilation - Non-Residential** | 83% | ✔ 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 | 0 % | |
| Criteria | What increase in outdoor air is available to regular use areas compared to the minimum required by AS 1668.2:2012? | |
| Question | What increase in outdoor air is available to regular use areas compared to the minimum required by AS 1668:2012? | |
| Other building | 100 % | |
| Criteria | What $CO_2$ 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** | 0% | |
| Score Contribution | This credit contributes 5.9% towards the category score. | |
| Criteria | What percentage of regular use areas in tenancies have ceiling fans? | |
| Question | Percentage Achieved? | |
| Other building | 0 % | |
| **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 0%

| | | | |
|---|---|---|---|
| **1.4 Bicycle Parking - Non-Residential** | | 0% | |
| Score Contribution | This credit contributes 50.0% 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 25.0% 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 |
| This credit is disabled | Credit 1.4 must be complete first. | | |
| **2.1 Electric Vehicle Infrastructure** | | N/A | ✧ Scoped Out |
| This credit was scoped out | No carparking facilities are provided. | | |
| **2.2 Car Share Scheme** | | N/A | ✧ Scoped Out |
| This credit was scoped out | No carparking facilities are provided. | | |
| **2.3 Motorbikes / Mopeds** | | N/A | ✧ Scoped Out |
| This credit was scoped out | No carparking facilities are provided. | | |





## Waste Overall contribution 6%

| | | | |
|---|---|---|---|
| **1.1 - Construction Waste - Building Re-Use** | | N/A | ✧ Scoped Out |
| This credit was scoped out | No existing building on the site. | | |
| **2.1 - Operational Waste - Food & Garden Waste** | | 100% | |
| Score Contribution | This credit contributes 50.0% 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 50.0% 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 | | |

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

## Urban Ecology Overall contribution 0%

| | | |
|---|---|---|
| **1.1 Communal Spaces** | | 0% |
| Score Contribution | This credit contributes 12.5% towards the category score. | |
| Criteria | Is there at least the following amount of common space measured in square meters : * 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 | 0.0 m² | |
| Output | Minimum Common Space Required | |
| Other building | 212 m² | |
| **2.1 Vegetation** | | 0% |
| Score Contribution | This credit contributes 50.0% 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 | 0 % | |
| **2.2 Green Roofs** | | 0% |
| Score Contribution | This credit contributes 12.5% towards the category score. | |
| Criteria | Does the development incorporate a green roof? | |
| Question | Criteria Achieved ? | |
| Project | No | |
| **2.3 Green Walls and Facades** | | 0% |
| Score Contribution | This credit contributes 12.5% towards the category score. | |
| Criteria | Does the development incorporate a green wall or green façade? | |
| Question | Criteria Achieved ? | |
| Project | No | |
| **3.2 Food Production - Non-Residential** | | 0% |
| Score Contribution | This credit contributes 12.5% towards the category score. | |
| Criteria | What area of space per occupant is dedicated to food production? | |
| Question | Food Production Area | |
| Other building | 0.0 m² | |
| Output | Min Food Production Area | |
| Other building | 75 m² | |

## Innovation Overall contribution 0%

| | | |
|---|---|---|
| **1.1 Innovation** | | 0% |
| Score Contribution | This credit contributes 100.0% 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.

The Municipal Association of Victoria (MAV) and CASBE (Council Alliance for a Sustainable Built Environment) member councils do not guarantee, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of BESS, any material contained on this website or any linked sites

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright

# Appendix B

# NCC Section J DTS Assessment & BESS Fabric Requirements

ADVERTISED
PLAN

## NCC Section J Assessment and BESS Fabric Requirements

According to the NCC, the proposed development is a Class 9b school building and located in Climate Zone 6 for the location of Truganina, Victoria.

The proposed design is targeting to achieve compliance over the NCC 2019 Section J minimum requirements, and as such the performance targets recommended for the proposed design and the façade calculator results are summarized as follows,

- *Thermal performance requirements to be adopted for compliance for the proposed Building façade design assessed via NCC Façade Calculator Method 2:*

| ***Facade item*** | ***DTS Min. Compliance Requirements*** | ***BESS Min. Compliance Requirements*** |
|---|---|---|
| *J1.3* ***Roofing and Ceiling system*** *forming thermal envelope* | • **$R_T$3.2** m².K/W<br>• Solar absorptance: **0.45** | • **$R_T$3.52** m².K/W<br>• Solar absorptance: **0.45** |
| *J1.4* ***Skylights*** *forming thermal envelope to Stair Space* | • Max. skylight size: **5%** floor area served.<br>• Skylight: **$U_S$3.9** W/m²K & **$SHGC_S$0.29** | • Max. skylight size: **5%** floor area served.<br>• Skylight: **$U_S$3.9** W/m²K & **$SHGC_S$0.29** |
| *J1.5* ***Walls*** *forming thermal envelope including partition walls adjacent non-conditioned spaces* | • **$R_T$1.4** m².K/W | • **$R_T$1.40** m².K/W |
| *J1.5* ***External Glazing*** *forming thermal envelope including clerestory windows to Voids* | • **$U_W$4.0** W/m²K & **$SHGC_W$0.40** | • **$U_W$4.0** W/m²K & **$SHGC_W$0.40** |
| *J1.6* ***Concrete Slab On Ground*** | • No insulation requirements | • No insulation requirements |
| *J1.6* ***Floor slab system*** *above non-conditioned spaces or exposed to ambient forming thermal envelope* | • **$R_T$2.0** m².K/W | • **$R_T$2.2** m².K/W |

If any part of the building fabric cannot achieve the requirements (and is required to meet full compliance by the building surveyor) it may be possible to offset this element against the following via a JV3 energy modelling assessment.


ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

# Appendix C

# STORM Rating Report

ADVERTISED PLAN

This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright

# 1 WSUD Response

All developments in Victoria are required to meet the requirements of VPP 56.07 of the Victorian Planning Scheme, which requires that projects meet current best practice performance objectives for stormwater quality.

The objectives of these clauses are:

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

A development is required to demonstrate that they meet the objectives of the clause by either:

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

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

### Initiatives Proposed

The following initiatives will be implemented in the design:

- Water will be collected the non-trafficable roof, 1,500m².
- Water will be treated via a minimum **36,000L** rainwater tank, connected to all toilets in the building.
- Water falling on other surfaces may be discharged directly to the council stormwater system without treatment.

### STORM Benchmarking

The initiatives above comply with the councils WSUD requirements as demonstrated by achieving a STORM score of 101%

Melbourne Water **STORM Rating Report**

| | | | |
|---|---|---|---|
| TransactionID: | 1586609 | | |
| Municipality: | WYNDHAM (North/East of Skeleton Ck) | | |
| Rainfall Station: | WYNDHAM (North/East of Skeleton Ck) | | |
| Address: | 300 Sayers Road | | |
| | Truganina | | |
| | VIC | 3029 | |
| Assessor: | | | |
| Development Type: | Other | | |
| Allotment Site (m2): | 2,488.00 | | |
| STORM Rating %: | 101 | | |

| Description | Impervious Area (m2) | Treatment Type | Treatment Area/Volume (m2 or L) | Occupants / Number Of Bedrooms | Treatment % | Tank Water Supply Reliability (%) |
|---|---|---|---|---|---|---|
| Skylight Roofing West | 150.00 | Rainwater Tank | 4,000.00 | 10 | 170.00 | 82.00 |
| Skylight Roofing East | 80.00 | Rainwater Tank | 2,000.00 | 10 | 170.00 | 81.00 |
| Roofing North | 366.00 | Rainwater Tank | 7,000.00 | 30 | 162.80 | 78.00 |
| Roofing East | 202.00 | Rainwater Tank | 6,000.00 | 20 | 170.00 | 82.00 |
| Roofing South | 309.00 | Rainwater Tank | 7,000.00 | 30 | 167.30 | 80.00 |
| Roofing West | 229.00 | Rainwater Tank | 6,000.00 | 20 | 170.00 | 82.00 |
| North-West Tower Roofing | 55.00 | Rainwater Tank | 1,500.00 | 5 | 170.00 | 82.00 |
| North-East Tower Roofing | 51.00 | Rainwater Tank | 1,500.00 | 5 | 170.00 | 82.00 |
| South-East Tower Roofing | 25.00 | Rainwater Tank | 500.00 | 5 | 164.00 | 78.00 |
| South-West Tower Roofing | 36.00 | Rainwater Tank | 500.00 | 5 | 150.20 | 70.00 |
| Other imperious surface | 985.00 | None | 0.00 | 0 | 0.00 | 0.00 |

Date Generated: 26-May-2023 Program Version: 1.0.0

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright

ADVERTISED
PLAN

### Design Details

*Rainwater Tank*
A rainwater tank(s) is to be installed for the project with a minimum total storage capacity as noted within the Initiatives Proposed section of this report. This storage capacity is to be in addition to any onsite detention requirements for the project.

Water falling on the surfaces nominated in the Initiatives Proposed section of this WSUD Response are to be directed to the rainwater tank(s), with appropriate overflow measures when the rainwater tank(s) reaches maximum capacity.

A first flush diverter system and fine filter mesh is to be installed to treat water prior to entering the storage tank.

### Site Management Plan

The following requirements are to be met during onsite works to prevent excessive pollutants entering the local waterways. Prior to construction, the contractor is to develop these requirements into a site specific management plan, nominating locations of treatment facilities based on proposed construction activities.

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

### Maintenance Requirements

*Rainwater Tank*
The following maintenance measures are required to be undertaken at 6 monthly intervals, or when it is evident that a blockage has occurred. The building management is to be responsible for the maintenance of the stormwater system.

- Roof and gutters to be cleaned to remove leaves and other debris.
- All screens to be checked for blockages and cleaned if necessary.

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