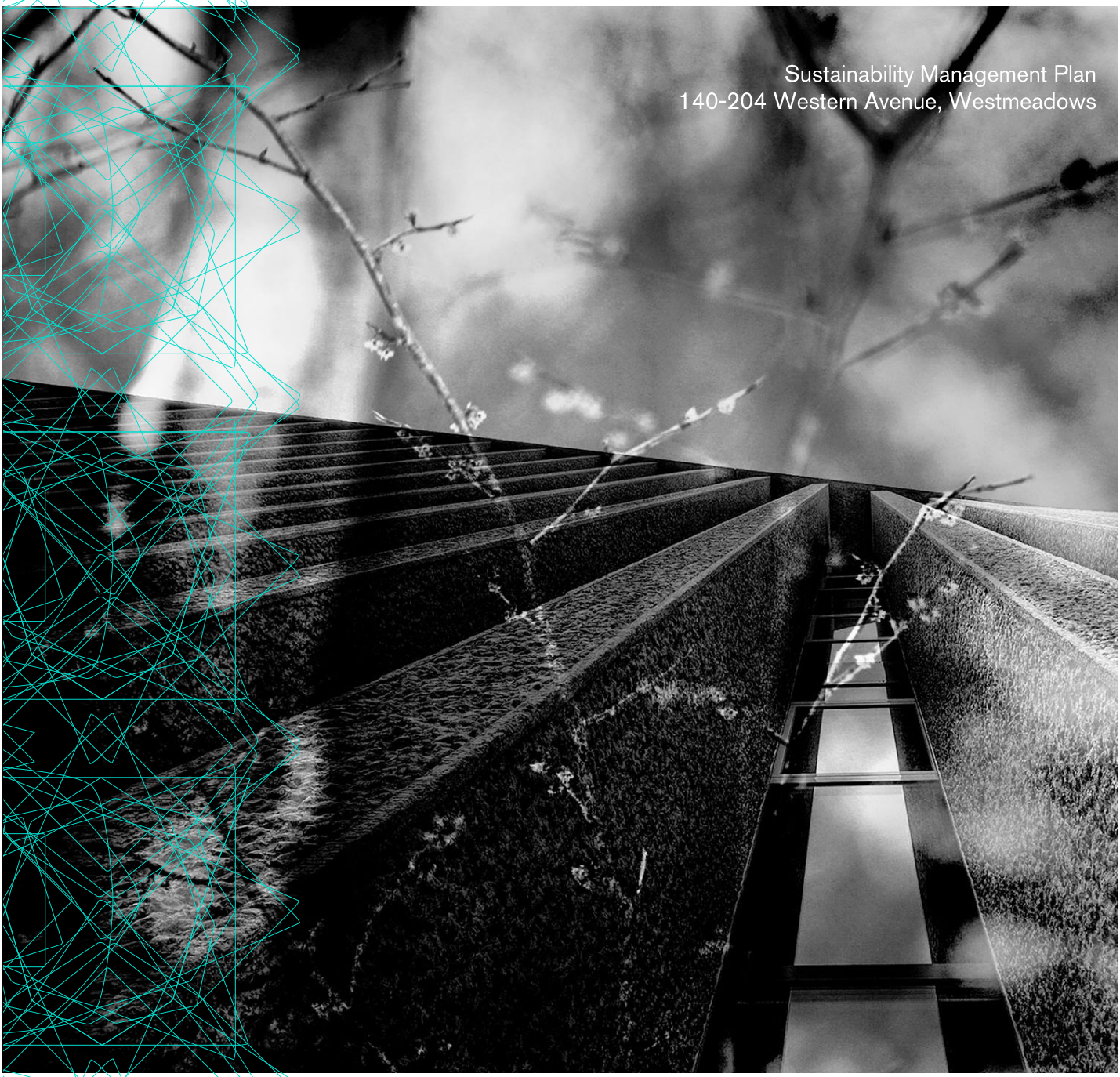
SUSTAINABLE DEVELOPMENT
_CONSULTANTS

CREATE A BETTER PLACE TO LIVE.



Sustainability Management Plan
140-204 Western Avenue, Westmeadows

SUSTAINABLE DEVELOPMENT
_CONSULTANTS

Proposed Industrial Development 140-204 Western Avenue, Westmeadows

Sustainability Management Plan

August 2022

S4735 SMP.D2

PREPARED BY:

Sustainable Development Consultants
2nd Floor, 555 Riversdale Rd.
Camberwell VIC 3124

T: (03) 9882 9967 F: (03) 9882 9969
info@sdconsultants.com.au

sdconsultants.com.au

Table of Contents

Version	Date of Issue	Description	Author	Approved
D1	22-07-2022	For Client Review	NC	LR
D2	10-08-2022	Updated as per client comments	NC	BdW

1. Introduction

This Sustainability Management Plan (SMP) has been prepared to assist the design, construction and operation of the proposed industrial development at 140-204 Western Avenue, Westmeadows, comprising of three warehouse spaces with adjoining offices.

Sustainable Development Consultants have assessed the proposed development and provided input to the design team. This SMP captures initiatives necessary to ensure that the development meets the sustainability requirements of the Hume City Council including clause 22.21 of the planning scheme, as outlined in Section 1.3 of this report.

This document has been prepared by Sustainable Development Consultants with reference to the concept plan drawings prepared by Watson Young.

1.1 Site Description

The site at 140-204 Western Avenue, Westmeadows is located within an expanding industrial area with a total site area of approximately 31,219m². The site can be accessed via the Tullamarine Freeway and lies approximately 18km North of the Melbourne CBD, close to Melbourne Airport. The land is currently undeveloped, which will facilitate construction. The proposed development will feature three warehouses, each with dock office and office spaces, and on-site parking, with access throughout the site made possible via a central shared private driveway to be developed.

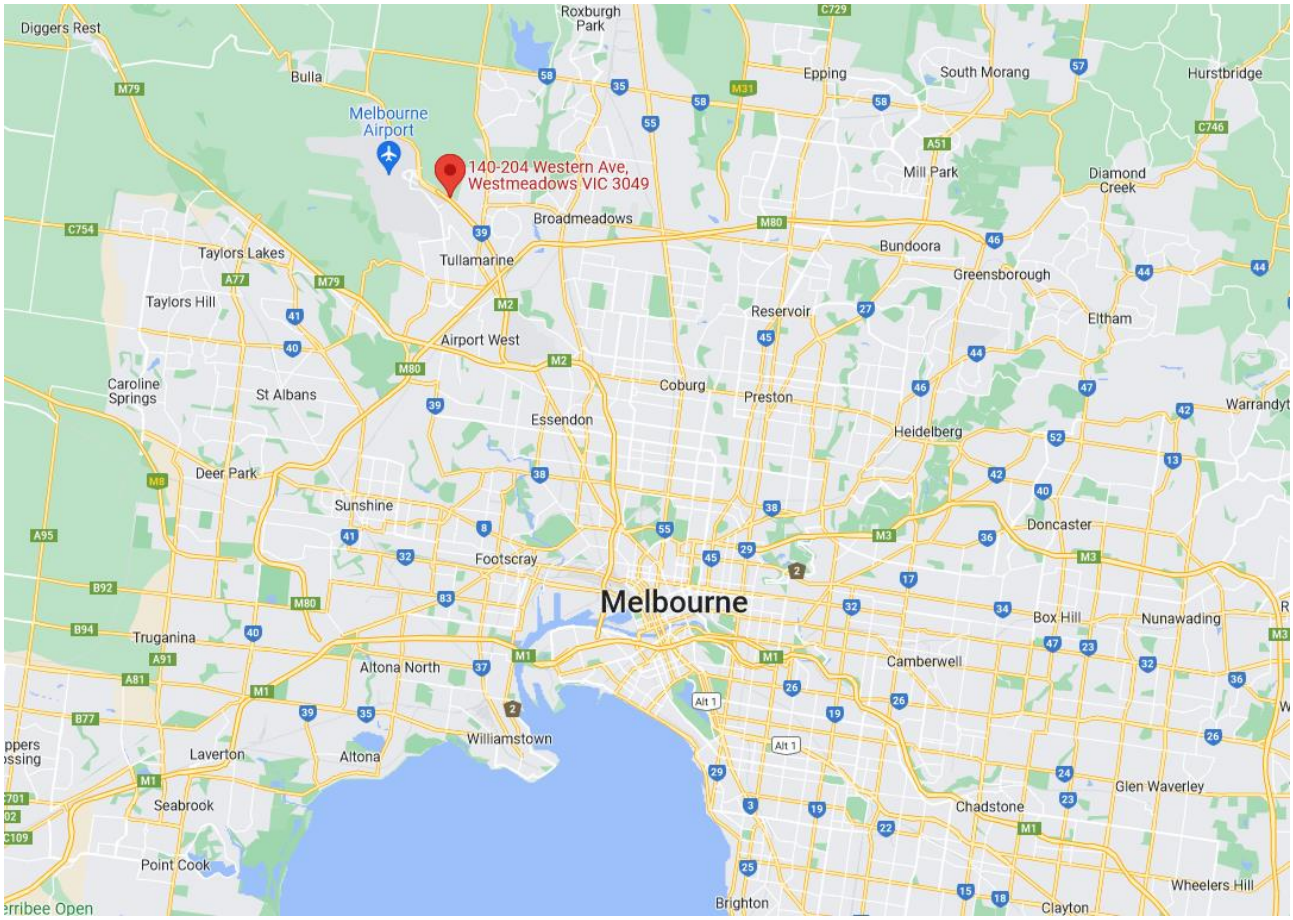


Figure 1: Location of 140-204 Western Avenue, Westmeadows in relation to the Melbourne CBD (Source: Google Maps)

Figure 2: Aerial image of the development site at 140-204 Western Avenue, Westmeadows (Source: Google Map, mark-up by SDC)

1.2 Development Summary

Set out in Table 1 below is a development summary for this project.

Table 1: Development Summary

Development Information			
Total Site Area	31,219m²		
Carparking Spaces	137 on-site car spaces		
	1	2	3
Warehouse Floor Areas (m²)	4,282	4,593	4,190
Total Warehouse Area (m²)	13,065		
	1	2	3
Office Floor Areas – Ground and First Floor (m²)	400	397	394
Dock Office (m²)	30	30	30
Total Office Area (m²)	1,281		

1.3 Hume City Council Requirements

Hume City Council is committed to achieving best practice in environmentally sustainable development from the design stage through to construction and operation. Critical to achieving this commitment is for development to meet appropriate environmental design standards.

To comply with the Local Planning Scheme including Clause 22.21 *Environmentally Sustainable Development,* this project is required to satisfy the objectives as set out within the following categories, where applicable:

- Energy Performance
- Integrated Water Management
- Indoor Environment Quality
- Transport
- Waste Management
- Urban Ecology

This requires a Sustainability Management Plan (SMP) which demonstrates how for this project, the relevant policy objectives will be achieved.

Hume City Council also requires that this project addressed the following planning scheme provisions:

- Clause 22.19 *Industrial Stormwater Management Policy*
- Clause 53.18 *Stormwater Management in Urban Development*

1.4 ESD Assessment Tools

There are several calculators and modelling programs available in Victoria to assess proposed developments against benchmarks for ESD, as set by the Victorian government, local councils and the Building Code of Australia.

Set out below are the assessment tools that have been adopted for this project.

1.4.1 BUILT ENVIRONMENT SUSTAINABILITY SCORECARD (BESS)

BESS was developed by the Council Alliance for Sustainability in the Built Environment (CASBE). This tool assesses the energy and water efficiency, thermal comfort and overall environmental sustainability performance of new buildings or alterations. It was created to demonstrate that new development meets sustainability requirements as part of a planning permit application.

A BESS assessment has been conducted for the proposed development. This provides a guide as to the level of sustainability achieved by the proposed development in line with the Council's ESD requirements. Each target area within the BESS tool generally receives a score of between 1% and 100%. A minimum score of 50% is required for the energy, water, stormwater and Indoor Environment Quality (IEQ) areas. An overall score of 50% for the project represents 'Best Practice' while a score over 70% represents 'Excellence'.

1.4.2 DESIGNBUILDER V7

DesignBuilder is a comprehensive analytical software package that analyses the energy and economic impacts of building-related selections such as architectural features; heating, ventilation and air-conditioning (HVAC) systems; HVAC equipment; building utilisation or scheduling, and financial options. DesignBuilder includes weather data including, latitude, longitude, altitude, time zone, and summer and winter design conditions; hourly observations information such as dry-bulb and wet-bulb temperatures (OADB, OAWB), humidity ration (HR), cloud cover (CCM), wind velocity, and outdoor air pressure (OAP). DesignBuilder was used for both the thermal performance modelling (verification method JV3) and daylight modelling of the regularly occupied components of the building.

Results of the thermal performance modelling are presented in Appendix 3.

Results of the daylight modelling can be found in Appendix 4.

2. Sustainability Initiatives

The following sections outline the initiatives that will be incorporated into the development throughout its design, construction and operation. Initiatives that are included to contribute towards the BESS benchmark have a reference next to them, e.g. (BESS Management 4.1). Some initiatives without the BESS reference have also been included as they also contribute to the overall sustainability of the development.

The following sections, as well as nominating the sustainability initiatives, also identify the party/parties responsible for implementation of the initiative, and the stage at which implementation will be demonstrated.

The following are the broad project stages:

1	Design Development	• Consultants develop conceptual design drawing to a detailed stage suitable as a basis for preparing working drawings - Integration of architectural, services, structure and site attributes • Checking compliance with all statutory requirements, codes and standards • Arranging special surveys or reports as required
2	Construction Documentation	• Architectural and services drawing sets completed • All specialist reports completed • All necessary planning and building consents obtained as required by authorities
3	Construction	• All work carried out onsite – site preparation, construction, alteration, extension, demolition • Purchase of all materials / certification • Evidence gathering from subcontractors • Commissioning
4	Post Occupancy	• Operation and Maintenance • Education – Building Users Guides

2.1 Energy Efficiency

Energy usage in the offices and warehouses will be minimised by the installation of an efficient hot water system, heating and cooling systems, lighting, and incorporating best practice building envelopes.

Design Requirements	Responsibility & Implementation	Project Stage
Building Envelope (BESS Management 2.3; BESS Energy 1.1, 2.1 & 2.3)		
Preliminary energy modelling has been undertaken to determine the appropriate level of thermal performance of building fabric elements for the envelope of the conditioned areas of the building. The development will achieve the requirements in HVAC energy demand when compared to a reference building, as per the energy modelling verification method of the NCC 2019 Section J. This is achieved with the specification of a thermally efficient building fabric and HVAC systems. One possible combination of these that is designed to achieve the required outcome is outlined in Appendix 3.	Architect	Construction Documentation
Heating and Cooling Systems (BESS Energy 2.1, 2.2 & 2.3)		
Heating and cooling systems within the office spaces will be provided by efficient air conditioning system with Coefficient of Performance (CoP) & Energy Efficiency Ratios (EER) to be at least 10% better than the minimum required by MEPS. No mechanical heating and cooling will be provided to the warehouse. The overall energy consumption of heating and cooling is predicted to meet the best practice standards for an industrial building of this type.	Mechanical Engineer	Design Development
Hot Water (BESS Energy 2.3 & 3.2)		
Hot water to the development will be provided via efficient electric heat pump systems with a minimum COP of 3.5 (at least 85% or better than the most efficient equivalent capacity unit). All pipework will be insulated to minimise distribution heat losses.	Services Consultant	Design Development
Indoor Lighting (BESS Energy 3.7)		
Energy consumption from artificial lighting throughout the development to be reduced by using LED lighting and optimising daylight diffusion via light-coloured internal surfaces (particularly walls, furniture and ceilings). Lighting levels must not exceed the maximum wattages listed in Table J6.2a of the 2019 BCA without the use of any adjustment factor. Typical use of artificial lighting is also to be reduced with optimised natural daylight in the warehouse areas through translucent roofing sections, which have been modelled as designed covering approximately 10% of the warehouse roof areas, with control of lighting via daylight sensors.	Electrical Engineer	Design Development
External Lighting		
External lighting will be LED and will have controls (e.g. motion detectors, and timers) to minimise consumption during off-peak times (e.g. 11pm-5am).	Electrical Engineer	Design Development

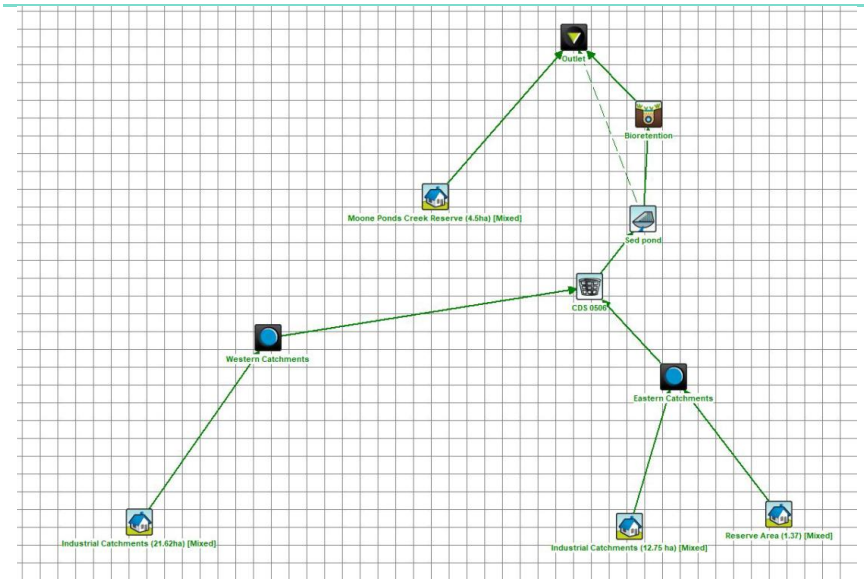
Design Requirements	Responsibility & Implementation	Project Stage
Metering and Monitoring (BESS Management 3.2, 3.3)		
The design includes electronic metering systems that will be integrated into the building to monitor and report on energy and water consumption and control the building central services. Tenancy types will be split and sub-metered to office, warehouse, major common area and mechanical designations.	Services Engineer	Design Development
Building Sealing		
All windows, doors, exhaust fans and pipe penetrations will be constructed to minimise air leakage as required by the provisions outlined in Section J3 of the NCC 2019. This will include the use of seals around operable windows and doors as well as caulking to pipe penetrations, and the addition of self-closing louvers or dampers to exhaust fans.	Architect	Design Development
Solar PV Systems (BESS Energy 4.2)		
Peak electricity demand to be reduced with the addition of roof-mounted solar photovoltaic arrays. This would generate green energy and help to offset the HVAC and internal lighting loads of the development. Space on the roof of each warehouse will be allocated for the provision of a minimum 99kW solar PV system (total). The location of the panels will be coordinated with the services penetrations during design development. These PV systems will reduce mains electricity use and the overall greenhouse gas emissions of the building by producing an estimated 135,319kWh of green electricity per year per warehouse, assuming an inclination of 10° and orientation to the north.[1]	Electrical Engineer / Structural Engineer	Construction Documentation

2.2 Water Resources & Stormwater Treatment

Water will be used efficiently in the offices and warehouses through efficient fixtures and fittings, and collection and use of rainwater which helps to reduce mains water requirements and diverts stormwater.

Design Requirements	Responsibility & Implementation	Project Stage
Water Fixtures and Fittings (BESS Water 1.1)		
Efficient water fittings and fixtures will be installed to reduce the volume of mains water used. The following Water Efficiency Labelling Scheme (WELS) star ratings will be specified: • Showerheads – 4 Star (>6.0 but ≤7.5L/min). • Kitchen and Bathroom Taps – 6 Star (5 Star in disabled toilets). • Toilet – 4 Star. • Urinals – 6 Star.	Architect / Services Consultant	Design Development
Rainwater Collection and Reuse (BESS Water 1.1 & Stormwater 1.1)		
A Stormwater Management Plan prepared by Dalton Consulting Engineers has been provided for the entire estate. Please see the image following for the MUSIC model layout and output extracted from the provided report.	Civil / Hydraulic Engineer	Design Development

[1] Solar PV annual energy generation calculated through PV Watts for the site located at 140-204 Western Avenue, Westmeadows.

Design Requirements	Responsibility & Implementation	Project Stage
 Treatment Train Effectiveness - Outlet Sources / Residual Load / % Reduction Flow (ML/yr): 148 / 140 / 5.3 Total Suspended Solids (kg/yr): 29500 / 2690 / 90.9 Total Phosphorus (kg/yr): 61.3 / 32.2 / 47.4 Total Nitrogen (kg/yr): 430 / 132 / 69.3 Gross Pollutants (kg/yr): 5740 / 125 / 97.8 Further to this, stormwater will be collected from a minimum 2,000m^2 of roof area per warehouse to be stored in rainwater tanks with a minimum storage capacity of 25,000L each, totaling 75,000L across the development. The tanks will be connected to all toilets and urinals in addition to being made available for irrigation.		
Water Efficient Landscaping (BESS Water 3.1)		
Landscaping will be designed and constructed in accordance with water efficiency principles. If required, a sub-surface drip irrigation system with moisture sensor override will be specified, however it is a requirement that some landscaped areas be designed so as not to require any watering after an initial establishment period.	Developer	Construction Documentation
Waterless HVAC System (BESS Water 4.1)		
Air-conditioning units will use air-cooled condenser components which will help to reduce the developments overall water usage, whilst also preventing the growth of legionella bacterium which thrive in warm stagnant water.	Mechanical Engineer	Design Development
Fire System Water (BESS Water 4.1)		
The fire protection system will not expel water for testing, this will be achieved via the large fire storage tank onsite which will pump all test water back into the tank during testing.	Fire Engineer	Design Development

2.3 Indoor Environment Quality

Indoor Environment Quality (IEQ) within the offices and warehouses will be improved through various initiatives which help to create a healthy indoor environment free from toxins with ample supply of daylight and outside air.

Design Requirements	Responsibility & Implementation	Project Stage
Volatile Organic Compounds (VOCs) (BESS IEQ 4.1)		
All paints, adhesives and sealants and flooring will not exceed limits outlined in Appendix 2. Alternatively, products with no VOCs will be selected.	Architect	Construction Documentation
Formaldehyde Minimisation (BESS IEQ 4.1)		
All engineered wood products will have 'low' formaldehyde emissions, certified as E0 or better. Alternatively, products with no formaldehyde will be specified. Emissions limits are listed in Appendix 2.	Architect	Construction Documentation
Acoustic Comfort		
Noise from any mechanical services will be kept to a minimum using good quality, suitably located and baffled mechanical plants and quiet air conditioners and fans.	Acoustic/ Mechanical Engineer	Construction Documentation
Daylight Access (BESS IEQ 1.4)		
Daylight Modelling has been conducted for the proposed development. A total of Tbc% floor area of first floor open office spaces will achieve more than 2% daylight factor and 100% floor area of the warehouse will achieve over 2% daylight factor. Refer to Appendix 4 for daylight modelling results based on one type of glazing that meets this requirement.	Architect	Design Development
Daylight Improvement		
Daylight penetration through windows/openings will be enhanced with the use of light internal colours, allowing for a better internal reflection of daylight.	Architect	Construction Documentation
Ventilation (BESS IEQ 2.3)		
Any kitchens and printer zones in the office will have a separate dedicated exhaust fan which will not be recycled to any enclosed space within the building; it will be ducted directly outside. The office HVAC systems will provide outside air at a rate that exceeds the minimum required rate per person outlined in AS 1668.2:2012, by a minimum of 50%, to provide a comfortable and healthy internal environment to the occupants. Warehouses are to be naturally ventilated through large roller shutter doors to the loading bays.	Mechanical Engineer	Design Development

2.4 Building, Construction and Waste Management

Initiatives included in building, construction and waste management promote adoption of environmental initiatives at different stages of the project – not just in the project design stage.

Design Requirements	Responsibility & Implementation	Project Stage
Operational Waste – Food & Garden Waste (BESS Waste 2.1, 2.2)		
Dedicated bin spaces will be provided for each of the office and warehouse spaces for general waste (landfill waste), organic & green waste, glass and commingled recyclables. This will assist to minimise the risk of food and garden waste, glass and commingled recyclables ending up in landfill. Recycling facilities will be just as convenient to access as general waste receptacles and will be signed appropriately to ensure no contamination.	Architect/ Building Owner	Design Development/ Post Occupancy
Construction Waste Management		
The builder will develop a construction waste management plan (CWMP) for the construction phase. This will include the following: • Waste generation; • Any waste systems; • Minimisation Strategy; • Performance / Reduction targets; • Bin quantity and size; • Collection frequency; • Signage; and • Monitoring and reporting including frequency and method. The CWMP will include a requirement for not less than 80% of all civil works and built form construction waste to be recycled or re-used. The CWMP will require that all hazardous substances, pollutants and contaminants must be managed and disposed of in accordance with all state regulatory requirements. Where these materials are treated, or used on site, they must be in accordance with a sanctioned remediation process. The CWMP may form part of a broader Construction Environmental Management Plan (CEMP).	Builder	Construction Documentation
Building Users Guide (BESS Management 4.1)		
A Building Users Guide (BUG) will be developed and made available to all owners/tenants. It will be comprehensive and will include descriptions of the systems installed in the development, sustainable transport in the area, and will include relevant sustainable operation suggestions.	Architect/ ESD Consultant	Construction Documentation

Figure 3: Examples of kitchen waste management bins incorporated into joinery

2.5 Building Materials

Materials initiatives help reduce the use of virgin materials and generating waste and promote the use of materials with lower embodied energy and environmental impacts.

Design Requirements	Responsibility & Implementation	Project Stage
Concrete		
A proportion of the concrete mix will contain non-potable water (rainwater or purchased recycled water) and include some supplementary cementitious materials (SCMs) aiming for a minimum 10% reduction in Portland Cement content.	Builder / Structural Engineer	Construction Documentation
Steel		
Wherever possible, steel for the development will be sourced from a Responsible Steel Maker[2]. Reinforcing steel for the project will be manufactured using energy reducing processes.	Builder / Structural Engineer	Construction Documentation
Timber		
All timber used in the development will be Forest Stewardship Council (FSC) or Program for the Endorsement of Forest Certification (PEFC) certified or recycled / reused.	Architect	Construction Documentation
Cables, pipes, floors and blinds		
All standard uses of cables, pipes, flooring and blinds within the development will either not contain any PVC or will be sourced from a manufacturer/supplier that adheres to the Green Building Council of Australia's *Best Practice Guidelines for PVC in the Built Environment*.	Services Consultant	Construction Documentation

[2] A Responsible Steel Maker must have facilities with a currently valid and certified ISO 14001 Environmental Management System (EMS) in place and be a member of the World Steel Association's (WSA) Climate Action Program (CAP).

Design Requirements	Responsibility & Implementation	Project Stage
Flooring		
All flooring will be manufactured from materials/products certified under any of the following: • Carpet Institute of Australia Limited, Environmental Certification Scheme (ECS) v1.2; • Ecospecifier GreenTag GreenRate V3.1; and/or • Good Environmental Choice (GECA); Alternatively, floor coverings must be durable, include some eco-preferred content, be modular and/or come from a manufacturer with a product stewardship program and ISO 14001 certification.	Builder/ Architect	Construction Documentation

Figure 4: Examples of approved environmental labels for products which may be incorporated for the development.

2.6 Transport

Design Requirements	Responsibility & Implementation	Project Stage
Public Transport		
The development has direct access to the following public transport options within a 1.5km walk: **Bus Routes** • 479: Airport West SC – Sunbury Station • 478: Airport West SC – Melbourne Airport • 484: Broadmeadows – Roxburgh Park • 477: Moonee Ponds – Broadmeadows Station • 902: Chelsea – Airport West • 901: Melbourne Airport – Frankston • 952: City – Broadmeadows	Inherent in Location	
Cycling Facilities (BESS Transport 1.4 and 1.5)		
Each warehouse will be provided with 4 secure bicycle parking spaces (12 spaces across the development) for visitors and employees. These spaces will encourage staff to consider more sustainable transport methods.	Architect	Construction Documentation

Electric Vehicle Infrastructure (BESS Transport 2.1)		
To enhance the development's ability to reduce vehicle emissions, 5% of car parking spaces per warehouse will be nominated for electric vehicle charging (and provided with charging infrastructure). This will encourage building users to consider purchasing electric vehicles by making their use more convenient. The design of charging infrastructure will take into consideration requirements for further expansion, with the provision made for at least 15% of additional spaces per warehouse to facilitate EV charging in the future, as electric vehicles become more prevalent.	Services Consultant	Design Development

2.7 Urban Ecology

Design Requirements	Responsibility & Implementation	Project Stage
Vegetation (BESS Urban Ecology 2.1)		
At least 12% of the site is covered with vegetation. It is recommended that a variety of native species be included in the landscaping of the site. This will help maintain/enhance local biodiversity and encourage native birds to visit the space.	Architect / Landscape Architect	Design Development
Refrigerant ODP		
All HVAC refrigerants used in the development will be selected to have an Ozone Depletion Potential (ODP) of zero.	Mechanical Engineer	Construction Documentation
Insulation Ozone Depleting Potential		
All thermal insulation used in the development will not contain any ozone-depleting substances and will not use any in its manufacturing.	Architect	Construction Documentation
Light Pollution		
No external luminaire on the project will have an Upward light Output Ratio (ULOR) exceeding 5%, relative to its mounted orientation. External lighting will be designed to avoid light spill off the site or into the night sky.	Architect/ Electrical Engineer	Schematic Design

3. Conclusion

As noted within this report, the proposed warehouse and office development at 140-204 Western Avenue, Westmeadows complies with the objectives and requirements of the planning scheme of Hume City Council Clause 22.21 *Environmentally Sustainable Development*, meeting best practice requirements through the initiatives outlined in this report. This includes the use of energy efficient systems, rainwater tank(s) to service on site native landscaping and the use of low to zero VOC content materials, as well as reduced environmental impacts during the construction stage.

The initiatives that have been included within this SMP all have a proven track record of serving their individual purpose and can be easily maintained with any failures obvious to the occupants of the office and warehouse. This helps to ensure the ongoing sustainability of the development, as the systems installed in the beginning are maintained for purpose throughout the life of the building.

The implementation of this SMP requires a clear process that will include:

- Full integration with architectural and building services plans and specifications;
- Endorsement of the SMP Report with town planning drawings; and
- SMP Report initiatives to be included in plans and specifications for building approval.

Appendix 1 – BESS Assessment

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

BESS Report

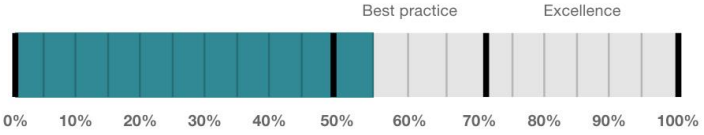
Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 140-204 Western Ave Westmeadows VIC 3049. 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 Hume City Council.

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

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

Your BESS Score



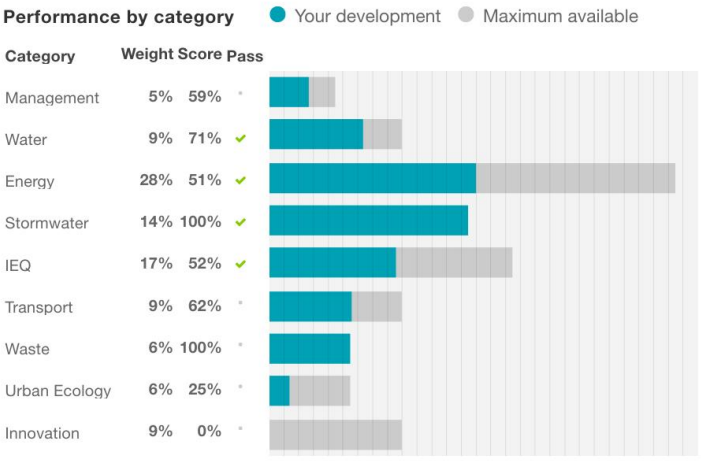
57%

Project details

Address	140-204 Western Ave Westmeadows VIC 3049
Project no	B4FE02D1
BESS Version	BESS-6
Site type	Non-residential development
Account	nyree@sdconsultants.com.au
Application no.	
Site area	31,219.00 m²
Building floor area	14,346.00 m²
Date	05 August 2022
Software version	1.7.0-B.386

DRAFT

Performance by category



Building Type composition

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**

Appendix 2 – Green Star VOC and Formaldehyde Limits

Table 5: Maximum Volatile Organic Compound Levels for construction materials (Source: Green Building Council Australia – Green Star Design and As Built v1.3 2019 Manual)

Product Type/Sub Category	Max TVOC Content (g/L of ready-to-use-product)
Paints, Adhesives and Sealants	
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100
Carpets	
Total VOC limit	0.5 mg/m^2 per hour
4-PC (4-Phenylcyclohexene)	0.05mg/m^2 per hour
ISO 16000 / EN 13419 - TVOC at three days	0.5 mg/m^2 per hour
ISO 10580 / ISO/TC 219 (Document N238) - TVOC at 24 hours	0.5 mg/m^2 per hour

Table 6: Maximum Formaldehyde levels for processed wood products. (Source: Green Building Council Australia – Green Star Design and As Built v1.3 2019 Manual)

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

Appendix 3 – Preliminary JV3 Modelling Report

To be completed.

Appendix 4 – Daylight Assessment

To be completed.