



# **MSWA – MONTARIO QUARTERS**

## **SUSTAINABLE STRATEGY**

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**EMERGEN**



## DOCUMENT REVISION

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## DISCLAIMER

The intent of the Sustainable design strategy is to demonstrate targets can be achieved based on further discussions with service consultants, an update of performance modelling and a cost/benefit analysis of all items for consideration. It is not the intent of the strategy to provide certainty of credits instead identify sustainable opportunities that may be integrated in the design. The integrated approach allows for multiple members of the design team to work together for a common goal to maximise efficiencies. The approach will increase flexibility in design, save money and provide higher performing buildings than traditional approach.



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## 1 INTRODUCTION

EMERGEN has developed a sustainable strategy on the proposed building for MSHA at Montario Quarter, Lot 46 (No 33) Guttman Approach.

The intent of this report is to support the development application by identifying the principles incorporated in the design that meet sustainable objectives and targets for the site and furthermore address global issues including.

- Climate Action
- Resources & Circularity
- Health and Wellbeing



## 2 DESIGN GUIDELINES

The development has been designed to exceed the standard set by Montario Quarters Design Guidelines as detailed below.

**Table 1 Montario Quarters Design Guidelines**

<b>7.1 Climate Responsive Design Objective</b>			
To provide high performance building that maximise energy use, conserve water, reduce waste and maximise comfort for occupants.			
To ensure indoor and outdoor areas have adequate access to sun during winter effective shading in summer.			
To ensure building operate at a high level of efficiency with individual apartments from a reduction in mechanical cooling and heating costs.			
<b>Response</b>			
The project has set a number of targets to minimise energy, conserve water, reduce waste and maximise comfort (and health and wellbeing).			
A solar analysis has been undertaken to ensure adequate winter sun and reduced summer solar gains.			
The development has optimised window to wall ratios, incorporated high performance glazing to allow for an improvement over Section J building fabric requirements of the NCC. This will reduce the need for heating and cooling.			
Credit	Requirement	Design Response	Achieved
<b>7.1 Sustainable Design</b>			
DC9,3	The development shall achieve a minimum 4 star Green star Design as As built rating	The development will be targeting a <b>5 Star Green Star Buildings Rating</b> Demonstrating Australian leadership over the required 4 Star best practice.	✓
<b>7.1 Energy Efficiency</b>			
DC102	All air conditioning systems shall be a minimum 3-Star energy rating and sized	All heating and cooling systems will exceed 3-star energy rating and aim for COP of 3.5.	✓
DC103	An energy efficiency hot water system shall be installed	The development will install a central heat pump hot water system. This will create reliability year-round and remove the need for gas to future proof the asset	✓
<b>7.3 Water Efficiency</b>			
DC104	All kitchen, laundry, bath and basin tap fittings must be a minimum 4 Star WELS	The design will specify 5 Star tap fittings (+1)	✓



DC105	All shower fittings must be 3 Star WELS rating	The design will specify 3 Star shower fitting	✓
DC106	All WCs shall be a minimum 4 Star WELS rating	The design will specify 4 Star WC's	✓

### 3 BENCHMARK

Green Star Building is the current benchmarking tool by the Green Building Council of Australia for the design and construction stages of a project. A 5 Star rated building demonstrates Australian Excellence by being a high environmental performer that addresses social issues relevant to the building owner.



Figure 1 Green Star Buildings Criteria

The development will be targeting 41 points as per Green Star Pathway (refer to appendix 1). This equates to a 5 Star Green Star Rating with a healthy 15% buffer.



Figure 2 Star Rating and Point Allocation



## 4 TARGETS

EMERGEN has undertaken a review of the current site, building layout and sustainable initiatives for inclusion within the project and provided targets for the development.

Table 2 Targets and Initiatives

Category	Target	Comment
<b>Energy Efficiency</b>	50% Reduction in operational energy compared to NCC compliant building	Provision of solar PV array (Est 30kW) Central Heat pump hot water Metering and monitoring. Battery backup (Est 49.2kW) High performance building fabric
	20% renewable energy	30kW PV system
<b>Water Efficiency</b>	20% reduction against GBCA reference	Provision of water efficient appliances and equipment. Water tolerant landscaping, moisture sensors
<b>Health and Wellbeing</b>	Low exposure to pollutants	Selection of low VOC finishes
	Increased Fresh air	Due to functionality of building increased fresh air would be via mechanical system, this will be 50% greater than minimum required under AS 1668.2
	60% of the nominated floor area has been designed to high levels of daylight	Design of shading schemes and orientation to minimise the need for tinted glass Use of glass with a high VLT
	Connection to Nature	Elements that provide differing natural sensory experiences. Elements that reflect natural and cultural patterns and forms. Using natural materials
<b>Resource Management</b>	>90% Recycling in construction	Careful consideration of demolition to facilitate high capture of materials from existing facility. Use of high efficiency resource recovery facility to sort waste in construction.
<b>Transport</b>	Bicycle Racks EV Charging Stations	EV Charging station x 2 with infrastructure to allow future EV charging bays



## 5 RESPONSIBLE

MSWA – Montario quarters will incorporate activities that ensure the building is designed, procured, built and handed over in a responsible manner.

### 5.1 RESPONSIBLE CONSTRUCTION

**Sustainable Development Goals** Goal 11 (Sustainable Cities and Communities); Goal 12 (Climate Action)

The tender requirements will require that the builder's construction practices reduce impacts and promote opportunities for improved environmental and social outcomes. Not limited to the below:

- head contractor has an environmental management system in place to manage its environmental impacts on site.
- The builder diverts at least 90% of construction and demolition waste from landfill.
- The head contractor provides training on the sustainability targets of the building.

### 5.2 VERIFICATION AND HANDOVER

**Sustainable Development Goals** Goal 11 (Sustainable Cities and Communities)

The building will be commissioned and will be tuned in accordance with a best practice standard. The building will be set up for optimum ongoing management due to its appropriate metering and monitoring systems.

An independent level of verification will provided to the commissioning and tuning activities through the involvement of an independent commissioning agent

Air tightness testing will be undertaken.

#### 5.2.1 Metering and monitoring

The building will have accessible energy and water metering for all common uses, major uses, and major sources.

The meters will be connected to a monitoring system capable of capturing and processing the data produced by the meters.

#### 5.2.2 Independent commissioning agent

An ICA will be appointed to advise, monitor, and verify the commissioning and tuning of the nominated building systems throughout the design, tender, construction, commissioning and tuning phases.

### 5.2.3 Airtightness testing

The project will undergo airtightness testing across a sample area. Creation of an air barrier system in schematic design will be designed to space conditioning requirements, and delineation of the extent of the conditioned building envelope.

The design criteria will include:

- test to at least 50 Pascals
- aim to achieve leakage target: suggest permeability  $3.0 \text{ m}^3 \cdot \text{h}^{-1} \cdot \text{m}^{-2}$

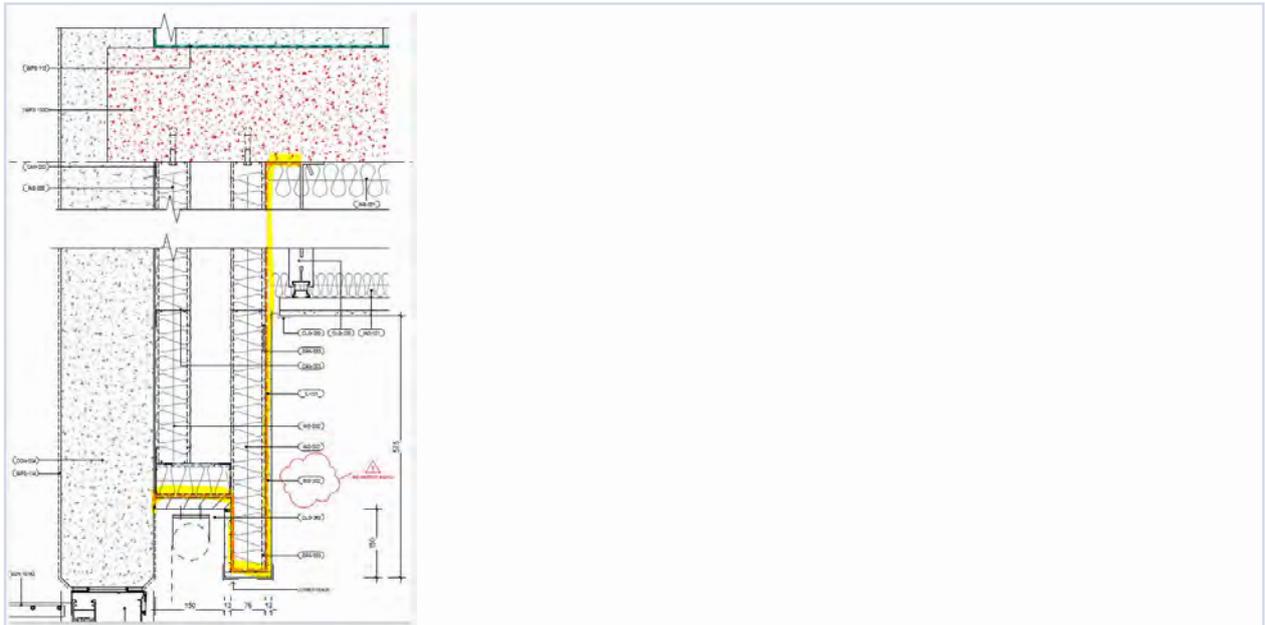


Figure 3 Air tight barrier

## 5.3 OPERATIONAL WASTE

**Sustainable Development Goals** Goal 12 (Responsible Construction and Production); Goal 13 (Climate Action)

A Waste Consultant has been engaged for the building

The building design allows effective management of operational waste by:

- Separating waste streams;
- Providing a dedicated and adequately sized waste storage area; and
- Ensuring easy and safe access to waste storage areas for both occupants and waste collection contractors.



## 6 HEALTHY

Through the enhancement of indoor environment quality, occupants will see improvements to health along with benefits to thermal comfort resulting in a more inviting and liveable internal environment.

Ample external views have been provided to residences through the utilisation of dedicated solar passive design principles.

A high performing building façade with double glazed window for the project will assist with providing comfortable conditions.

### 6.1 LIGHT QUALITY

**Sustainable Development Goals** Goal 3 (Good Health and Wellbeing)

The building provides good daylight, and its lighting is of high quality.

#### 6.1.1 Lighting comfort

Lighting within the building must meet the following criteria:

- All lighting will be flicker-free;
- Light sources will have a minimum Colour Rendering Index (CRI) average R1 to R8 of 85 or higher, and have a CRI R9 of 50 or higher;
- Light sources will meet best practice illuminance levels for each task within each space type with a maintained illuminance that meets the levels recommended in AS/NZS 1680.1:2006 series applicable to the project type and including maintenance;
- The maintained Illuminance values will achieve a uniformity of no less than that specified in Table 3.2 of AS/NZS 1680.1:2006, with a maintenance factor method as defined in AS/NZS 1680.4.; and
- All light sources will have a minimum of 3 MacAdam Ellipses



**6.1.2 Glare**

Glare from light sources will be limited within the nominated area through the use of external shading and internal blinds

**6.1.3 Daylight**

For the residential component, 60% of the combined living and bedroom comply with the daylight requirements. For other spaces 40% of the combined area of comply with the daylight requirements.

High levels of daylight have been deemed to have at least 160 lux due to daylight during 80% hours of the nominated hours.

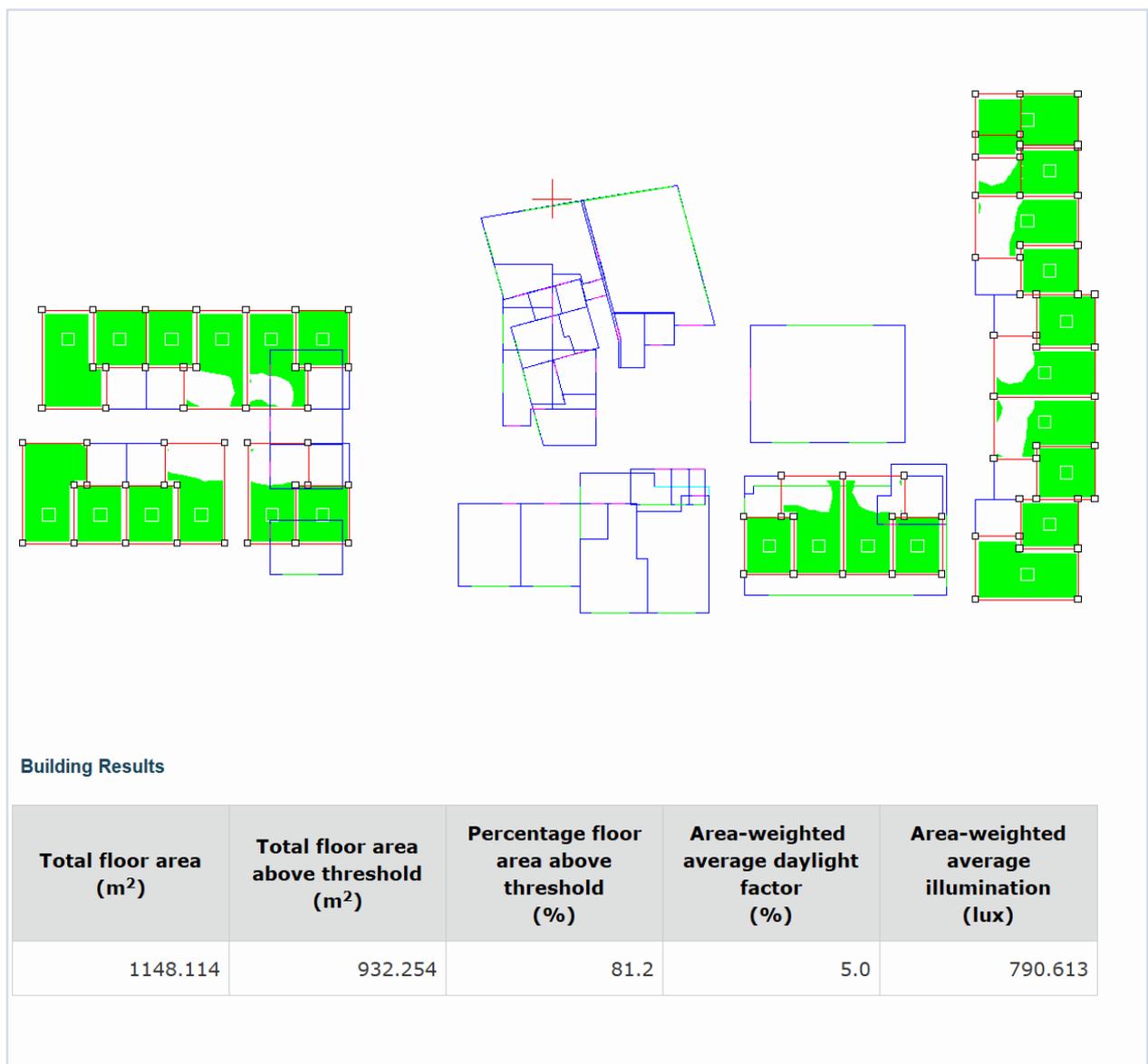


Figure 4 Daylight analysis



## 6.2 EXPOSURE TO TOXINS

**Sustainable Development Goals** Goal 3 (Good Health and Wellbeing)

### 6.2.1 Paints, adhesives, sealants, and carpets

At least 95% of internally applied paints, adhesives, sealants (by volume) and carpets (by area) must meet stipulated 'Total Volatile Organic Compounds (TVOC) Limits' below.

**Table 3 Indoor Pollutants TVOC Content**

Product Category	Max TVOC content in grams per litre (g/L) of ready to use product.
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
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75

All carpets used within the project shall be certified under a recognised Product Certification Scheme. The certificate must be current at the time of project registration or submission and list the relevant product name and model.

### 6.2.2 Engineered wood products

All engineered wood products shall have no formaldehyde or meet the limits of the relevant testing protocols. These have been specified below:

**Table 4 Indoor Pollutants Formaldehyde Content**

Test Protocol	Emission Limit/ Unit of Measure
Plywood - AS/NZS 2269:2004 & AS/NZS 2098.11:2005	< 1.0 mg/L
Particle Board - AS/NZS 1859.1:2004 & AS/NZS 4266.16:2004	< 1.5 mg/L
Plywood & Particle Board – JIS A 5908:2003	< 1.0 mg/L
MDF - AS/NZS 1859.2:2004 & AS/NZS 4266.16:2004	< 1.0 mg/L



MDF – JIS A 5905:2003	< 1.0 mg/L
Laminated veneer – AS/NZS 4357.4	< 1.0 mg/L
ASTM D5116	< 0.1 (+/- 0.005) mg/m <sup>2</sup> /hr
ISO 16000	< 0.1 (+/- 0.005) mg/m <sup>2</sup> /hr
ASTM D6007	< 0.12 mg/m <sup>3</sup>
ASTM E1333	< 0.12 mg/m <sup>3</sup>
EN 717-1	< 0.12 mg/m <sup>3</sup>
EN 717-2	< 3.5 mg/m <sup>2</sup> /hr

The following materials are to be accounted for:

1. Particle board;
2. Plywood;
3. Veneer;
4. Medium Density Fibreboard (MDF); and
5. Decorative wood panels.

The following applications are excluded:

1. Exterior applications;
2. Formwork;
3. Internal carparks;
4. Re-used engineered wood products; and
5. Raw timber.

### 6.3 AMENITY AND COMFORT

#### Sustainable Development Goals Goal 3 (Good Health and Wellbeing)

The building provides internal amenities that improve occupant experience of using the building. The building includes rooms designed to promote either inclusivity, mindfulness or exercise for staff or occupants.





Figure 5 Amenity

## 6.4 CONNECTION TO NATURE

### 6.4.1 Nature-inspired design

**Sustainable Development Goals** Goal 3 (Good Health and Wellbeing); Goal 15 (Life on Land)

The building provides views and incorporates nature-inspired design including

- Elements that provide differing natural sensory experiences;
- Elements that reflect natural and cultural patterns and forms;
- Using natural materials; and

KEY PLAN



Diagram showing the shrub areas for the public open space and streetscape

KEY PLAN



Diagram showing the shrub areas for the public open space and streetscape flowing into our site, influencing the space with a similar palette

KEY PLAN



Diagram showing the internal shrub spaces

KEY PLAN



Diagram showing the internal courtyard

TREES



SHRUBS



SHRUBS



TREES



SHRUBS



Figure 6 Nature Inspired design



### 6.4.2 Views

At least 60% of primary spaces occupied for more than two hours must have a clear line of sight to a high quality internal or external view. All floor areas within 8m from a compliant view meet this credit criterion.



Figure 7 Views



## 7 RESILIENT

### 7.1 CLIMATE CHANGE RESILIENCE

**Sustainable Development Goals** Goal 11 (Sustainable Cities and Communities); Goal 13 (Climate Action)

The building has been built to respond to the direct and indirect impacts of climate change.

### 7.2 HEAT RESILIENCE

**Sustainable Development Goals** Goal 11 (Sustainable Cities and Communities)

At least 75% of the whole site area comprises of one or a combination of strategies that reduce the heat island effect.

Strategies include to:

- Vegetation;
- Roofing materials, including shading structures, having the following:
  - For roof pitched <math><15^\circ</math>– a three-year SRI of minimum 64; or
- Unshaded hard-scaping elements with a three-year SRI of minimum 34 or an initial SRI of minimum 39;
- Hardscaping elements shaded by overhanging vegetation; and

### 7.3 GRID RESILIENCE

**Sustainable Development Goals** Goal 7 (Affordable and Clean Energy); Goal 13 (Climate Action)

The building has the capacity to reduce its electricity peak demand by 10% of the building's annual peak electricity demand for at least a one-hour period.

#### 7.3.1 Active generation and storage systems

The peak demand reduction occurs through electricity storage solutions (batteries) and through renewable on-site generation.(see Section 7.1 Energy Use)

## 8 POSITIVE

The IPCC report highlights two critical aspects that the built environment must pursue to be on a 1.5°C trajectory: Reducing our energy consumption and switching to renewable energy. It’s imperative to ensure both conditions are met, and not trade one off the other.

The *Positive* addresses allows buildings to meet this goal and sets the trajectory for the built environment to address its emissions fully through all scopes of emissions.

### 8.1 ENERGY USE

A 30% reduction in GHG emissions will be targeted. This will be achieved through the following energy reduction hierarchy.

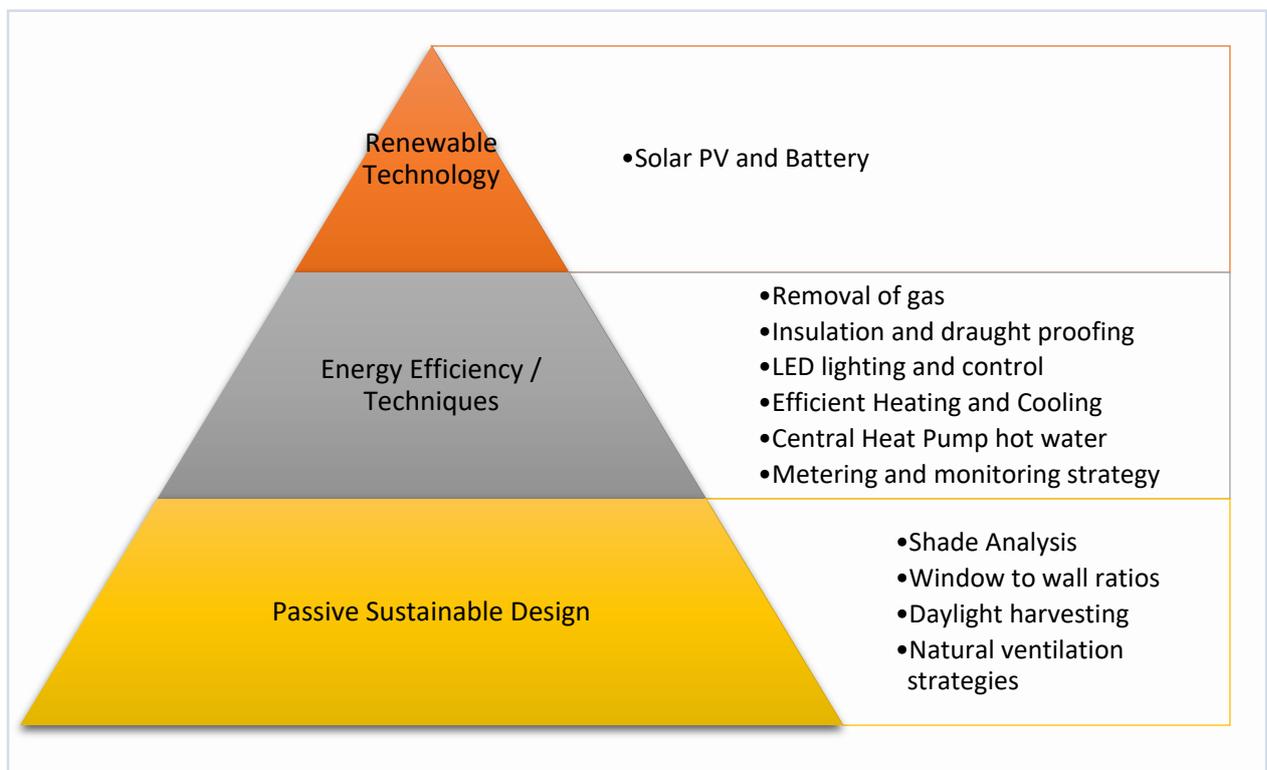


Figure 8 Energy Efficiency Hierarchy

### 8.1.1 Passive Design Measures

A fabric first approach has been prioritised for the building, with a focus on reducing the need for active energy systems and thus reducing the overall energy demand and emissions of the building.

- Shading optimisation - study and optimised shading design for the east and west façade
- Utilising high performance glazing and improved Insulation

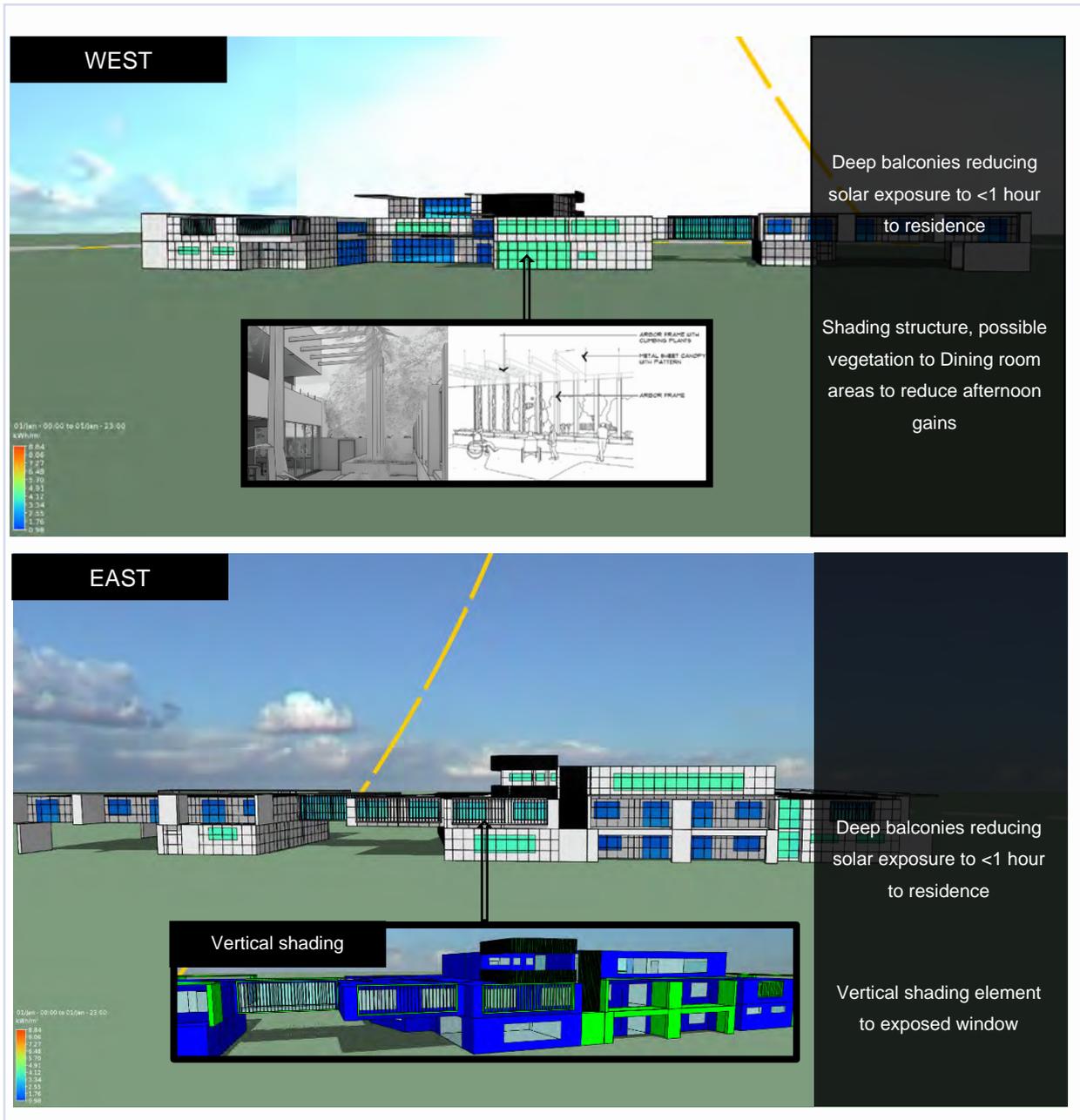


Figure 9 Solar Analysis

Table 5 Glazing Specification

Orientation	Glazing to façade Ratio	Glazing selection
North	38%	Double Glazed
East	45%	Double Glazed
South	24%	Double Glazed
West	43%	Double Glazed



**8.1.2 Active Design Measures**

Various Active design measures will be included:

- Heating and cooling services - high-efficiency reverse-cycle heat pump systems, COPs of greater than 3.5-3.6 should be targeted as a minimum performance requirement for the project.
- Cooking appliances to be Electric a replacement for gas-type cooktops.
- Energy metering empowering residents to better control their energy use. Studies show that energy monitoring can provide between a 5% and 20% saving in electricity.
- Use of water efficient fixtures Use of water efficient fixtures would result in water use reduction along with associated pump and heating energy reduction.
- Central Heat Pump Hot Water System

The design team to investigate a centralised hot water system reticulated throughout the building. This hot water system could consist of heat pump heaters connected to numerous storage tanks and electric storage heaters to provide additional peak load water heating on a needed basis. These systems shall utilise energy generated from the grid interactive roof mounted solar photovoltaic system.

For communal systems there will be significant heat losses in the pipe carrying the hot water around the building as well as from the individual water storage tanks. Based on the conservative assumptions of a 25mm pipe with 25mm of insulation (125mm total diameter) the heat losses are estimated to increase the hot water demand by 10%. Correctly installed 50mm pipework insulation could therefore reduce the losses through hot water pipe by approximately 5%.

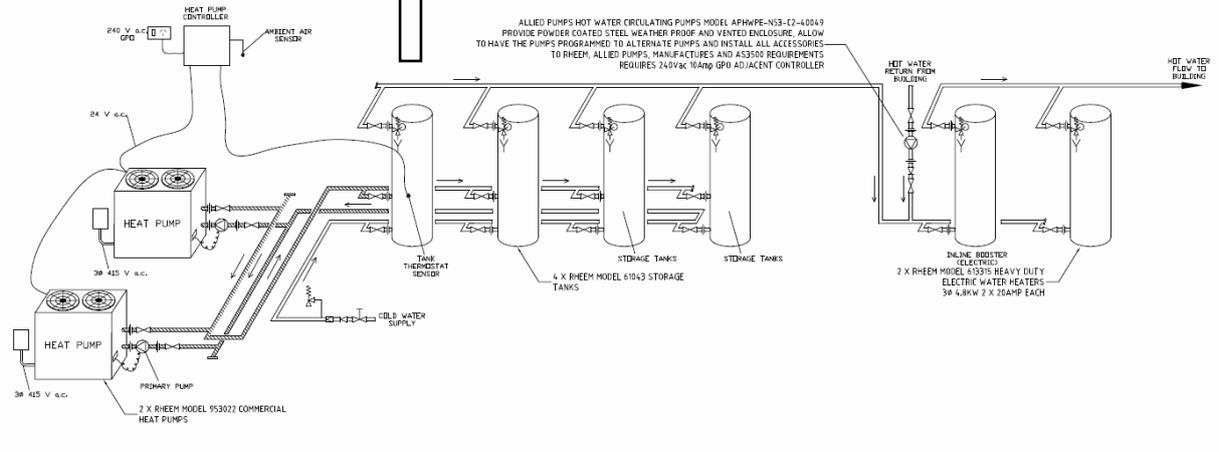
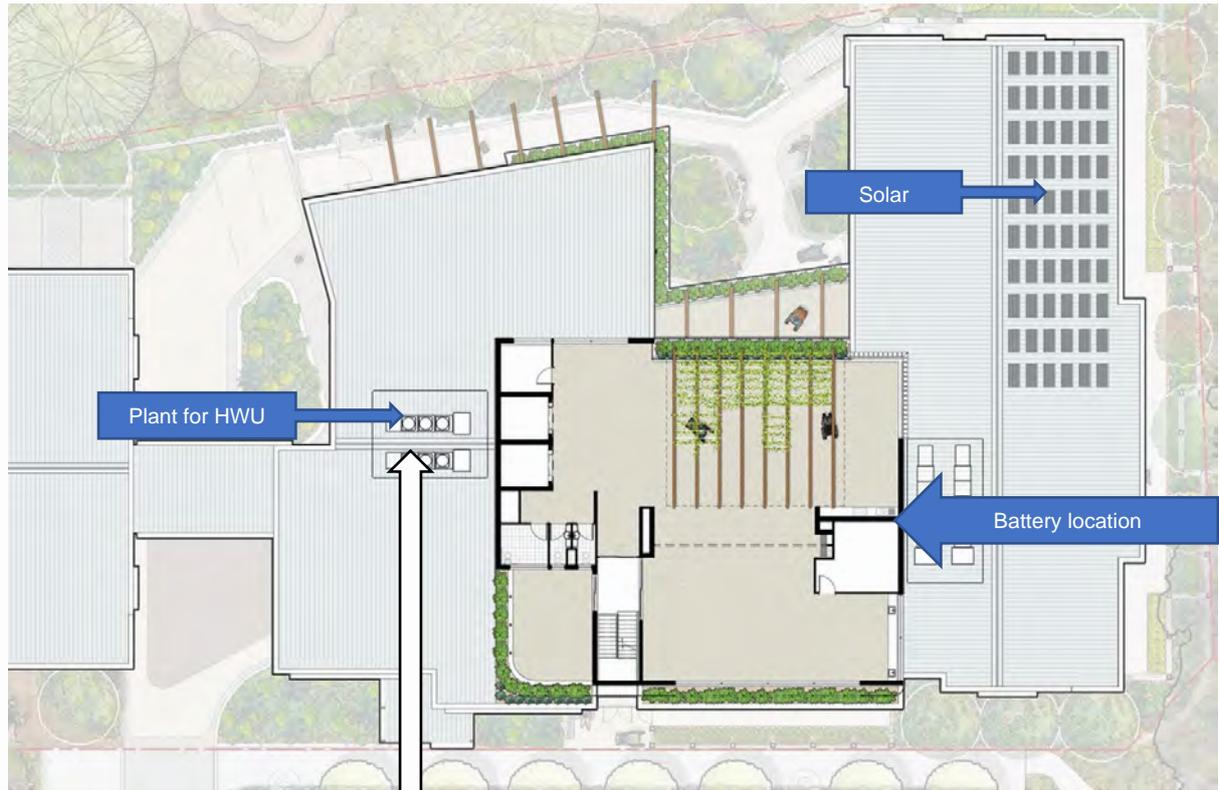
**Table 6 Hot water energy reduction strategy**

Energy reduction strategy	Percentage reduction to Global warming potential
<b>Central Heat Pump Hot Water Unit</b>	12%

**8.1.3 Renewable Technology**

A 30kW solar photovoltaic system installed on the roof deck. The peak demand reduction will occur through electricity storage solutions (batteries) and through renewable on-site generation.

Modelling predicts that xxxxx% of energy will be supplied by the PV system with battery back up





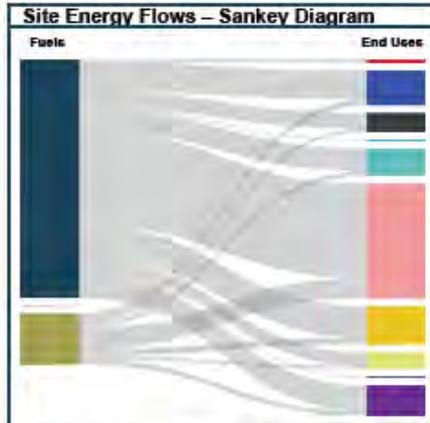
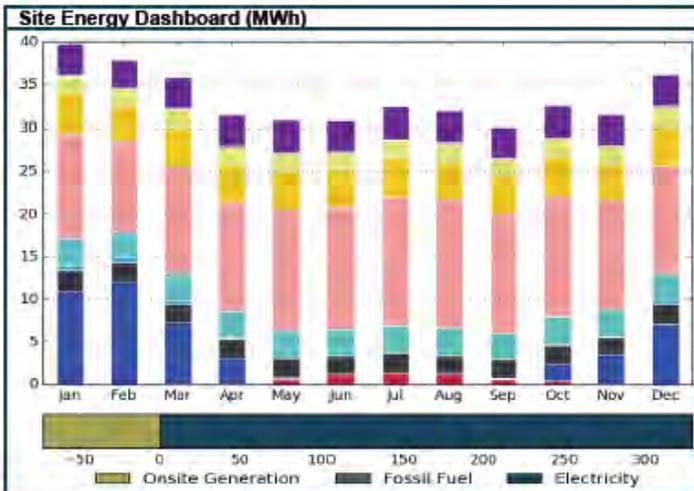
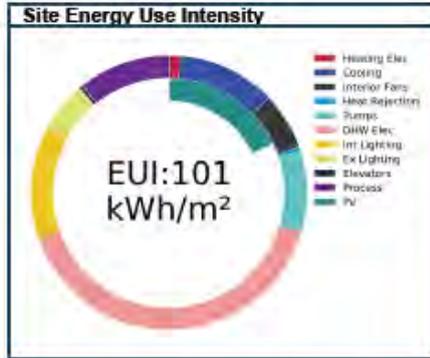
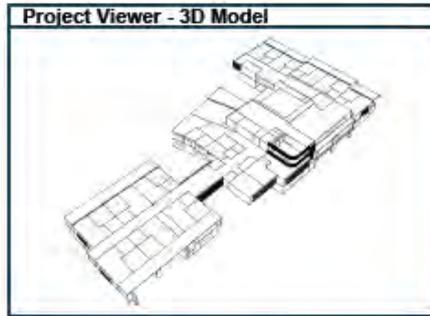
**INTEGRATED ENVIRONMENTAL SOLUTIONS**

## Energy Model Output Report

<b>Project:</b>	
<b>Address:</b>	
<b>Climate File:</b>	AUS_WA_Perth_946100_IWEC.epw
<b>Simulation:</b>	125390_Proposed_MSWA.ap5

<b>Design Team:</b>	
<b>Energy Analyst:</b>	
<b>Owner:</b>	MSWA
<b>Conditioned Area (m²):</b>	3232.9000

Annual Energy Consumption (kWh/m²/year) & CO2 kgCO2/m²/yr			
Energy End Use	Site Energy	Source Energy	CO2 Emissions
Heating Fossil Fuel	0.0	0.0	0.0
Heating Electricity	1.7	5.3	1.6
Space Cooling	14.2	44.6	13.3
Fans Interior	8.4	26.4	7.8
Heat Rejection	0.6	1.9	0.6
Pumps	11.9	37.5	11.2
DHW Fossil Fuel	0.0	0.0	0.0
DHW Electricity	49.5	156.1	46.4
Interior Lighting	16.6	52.3	15.6
Exterior Lighting	7.3	23.0	6.8
Receptacle	0.0	0.0	0.0
Data Center	0.0	0.0	0.0
Cooking Fossil Fuel	0.0	0.0	0.0
Cooking Electricity	0.0	0.0	0.0
Elevators & Escalators	0.6	2.0	0.6
Refrigeration	0.0	0.0	0.0
Process	13.3	41.8	12.4
<b>TOTAL (ex renewables)</b>	<b>124</b>	<b>391</b>	<b>116</b>



Annual Fuel Costs and Peak Demands				
Fuels	Cost (\$)	Peak Day	Peak Time	Peak Demand
Electricity	33,424.00	26-Feb	16:00	174.3 kW
Fossil Fuel	0.00	01-Jan	0:00	0.0 kW
<b>Total</b>	<b>33,424.00</b>	<b>01-Jan</b>	<b>0:00</b>	<b>0.0 kW</b>

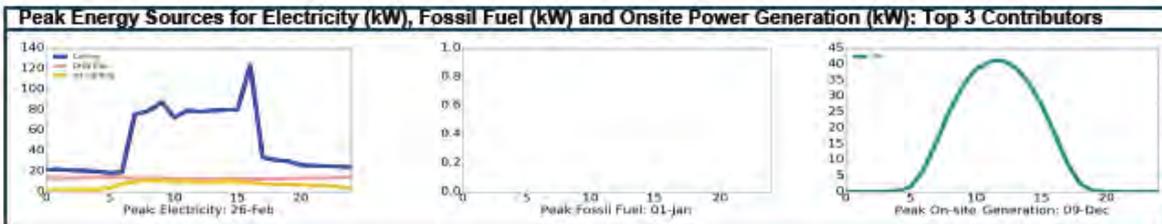


Figure 11 Energy Model Output

### 8.2 WATER USE

The building will target 45% less potable water compared to a reference building

All new water services are to ensure that high WELS rating fixtures and fitting are to be installed as appropriate.

Table 7 WELS Ratings

Fixture / Equipment Type	WELS Rating
Taps	5 Star
Toilets	4 Star
Showers	3 Star (not more than 7.5L/m)
Washing Machines	5 Star
Dishwashers	5 Star

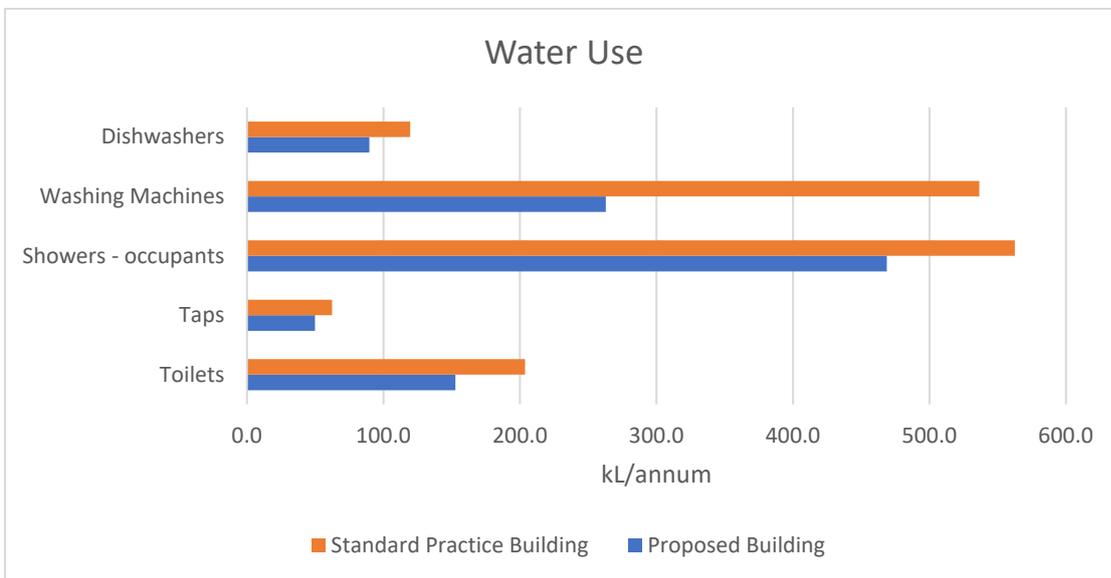


Figure 12 Water Use

### 8.3 LIFE CYCLE IMPACTS

The project demonstrates a 30% reduction in life cycle impacts when compared to standard practice.

The reduction in life cycle impacts must be demonstrated through a whole-of-building, whole-of-life (cradle to grave) comparative Life Cycle Assessment (LCA), as defined by EN 15978. All EN 15978 modules (A to D) must be included in the assessment

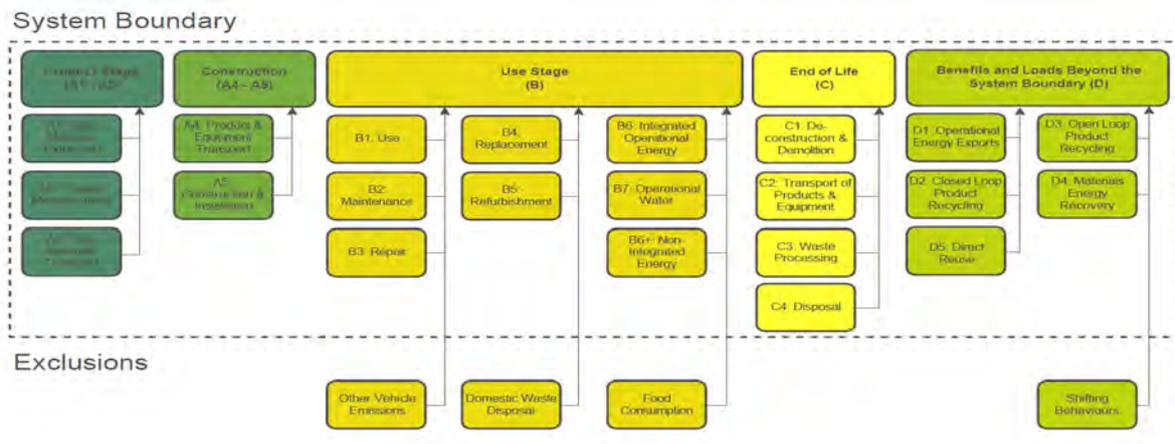


Figure 13 LCA boundary

## 9 PLACES

Buildings cannot be seen in isolation; they have an impact – positive or negative – on their wider surroundings. The *Places* category recognises this and seeks to maximise the positive impacts whilst limit any negative ones.

### 9.1 MOVEMENT AND PLACE

**Sustainable Development Goals** Goal 3 (Good Health and Wellbeing); Goal 11 (Sustainable Cities and Communities)

The building’s design and location encourage occupants and visitors to use active, low carbon, and mass transport options instead of private vehicles.

#### 9.1.1 Cyclist facilities

The project is providing cycle racks and there will be staff change/shower facilities side the building for end of trip facilities.

### 9.1.2 Sustainable transport

The building includes:

Infrastructure to allow for future of electric charging to each parking spot in the parking area. This means ensuring the building has EV distribution boards to allow for future connection for EV's. These distribution boards will be located so that no connection requires a cable of more than 50m from the parking bay to the connection.

The building will be fitted with an EV load management system. The EV load management system will be capable of determining how and when the electric vehicles should be charged to minimise building peak power demand whilst ensuring the vehicles are charged.

To encourage EV uptake the design will nominate 2 EV charging bays.



Figure 14 EV charging station

### 9.1.3 Encouraging walkability

The building’s design and location encourage walking to and from a number of amenities. This roads within the building boundary to prioritise pedestrians, and either providing within, or being located close to, a number of amenities.

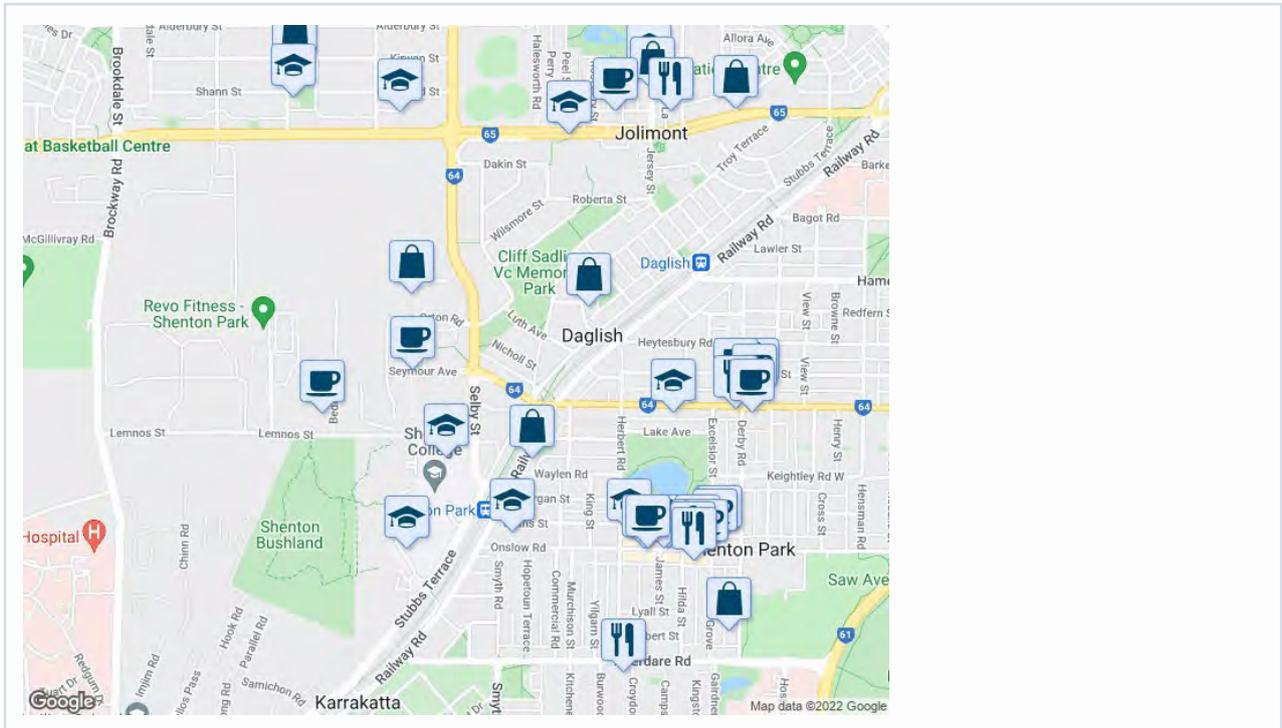


Figure 15 Amenities

The pedestrian and cycling circulation networks proposed for Montario Quarter as defined in the Montario Quarter Structure Plan. This network provides good pedestrian and cycling access in all desire lines from the Site. As the residents of the supported accommodation will be wheelchair users, any pathway levels that meet with a variation in height will be accommodated with ramps.



Figure 16 Cycling Facilities



## 10 NATURE

Worldwide and within Australia, rapid urbanisation is putting pressure on ecosystems and threatening biodiversity. Research and evidence demonstrating the positive impacts of green space and biodiversity on people and urban space is significant and continues to grow.

These principles shift the focus of the built environment from a passive observer seeking to minimize impacts to one that is actively bringing nature and biodiversity back into cities. It also ensures the built environment considers impacts beyond its boundary and takes responsibility for rebuilding our natural environment.

### 10.1 BIODIVERSITY ENHANCEMENT

**Sustainable Development Goals** Goal 13 (Climate Action); Goal 14 (Life Below Water)

The building's landscape enhances the biodiversity of the site.

- The building's site includes an appropriate landscape area.
- The landscaping includes a diversity of species and prioritises the use of climate resilient and indigenous plants; and

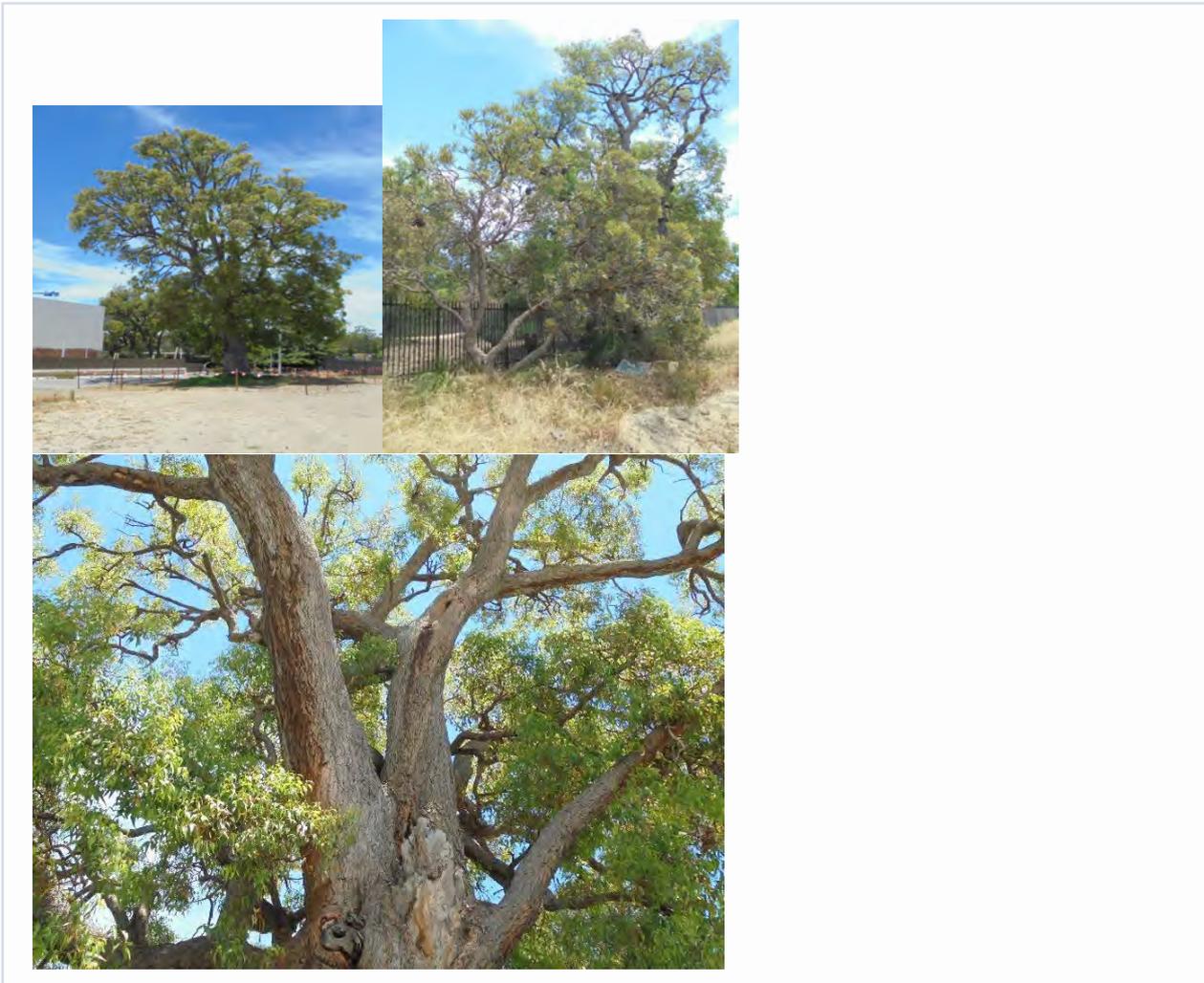


Figure 17 Retained Native Trees



## **APPENDIX 1 – GREEN STAR PATHWAY**

**GREEN STAR BUILDINGS STRATEGY**

CREDIT	ACHIEVEMENT	CODE	CREDIT CRITERIA	CREDIT DESCRIPTION	POINTS AVAILABLE	TARGET	ACTIONS
						Insert 'Y' for Minimum Expectations	
<b>RESPONSIBLE</b>							
Industry Development	The building owner or developer appoints a Green Star Accredited Professional, discloses the cost of sustainable building practices to the GBCA, and markets the building's sustainability achievements	CA1.1	Green Star Accredited Professional	At least one GSAP engaged as part of project team at time of registration or within one month following for duration of project. GSAP must act as project contact for purposes of communicating with GBCA; provide advice, guidance and support to project team through to certification; and ensures project team has access to info covering GS principles, structure, timing and processing including eligibility, GS strategy, technical Q's, the submission, certification process and GS branding/marketing rules.	1	1	CADDs Engaged as GSAP
		CA1.2	Financial transparency	Project team must complete and include in submission the <i>GS Financial Transparency disclosure Template</i> and project's financial data in Excel format.			Developer to complete and provide cost of Sustainability initiatives
		CA1.3	Marketing sustainability achievements	To achieve this criterion: project's marketing team must complete GS Case Study Template; project team must specify how building will detail its sustainability achievements to its stakeholders (i.e. typical occupants & visitors); and GS Certification achieved must be prominently displayed in location visible to public.			CADDs to create Case Study detailing sustainable initiatives
Responsible Construction	<ul style="list-style-type: none"> <li>The builder or head contractor has an environmental management system in place to manage its environmental impacts on site;</li> <li>The builder diverts at least 80% of construction and demolition waste from landfill; and</li> <li>The head contractor provides training on the sustainability targets of the building.</li> </ul>	ME2.1	Environmental Management System	Builder/ head contractor must have formalised systematic and methodical approach to planning, implementing and auditing in place during construction: for projects <\$10m, must have EMS that complies with either <i>NSW Environmental Management System Guidelines</i> or another recognised standard; and for projects >\$10m, must have EMS certified to recognised standard such as AS/NZS ISO 14001, BS 7750 or EC's EMAS.	Minimum expectation	Y	Contractor to be ISO 14001 accredited
		ME2.2	Environmental Management Plan	EMP must be project specific, cover scope of construction activities, be implemented from start of construction and include all works within project scope.			EMP plan to be prepared
		ME2.3	Construction and demolition waste	Must divert at least 80% C&D waste from landfill. Disclosure Statement required from waste contractors and processing facilities outlining how company and their reporting aligns with <i>GS C&amp;D Waste Reporting Criteria</i> .			Engage Waste Contractor that will divert 80% of waste
		ME2.4	Sustainability training	Head contractor must provide following training to 95% of all contractors/SCs present on site for at least 3 days: info on sustainable building certification sought incl. sustainability attributes of building and their benefits; the value of certification; and the role site workers play in deliver of a sustainable building.			CADDs to assist with Sustainable Training of Contractors
Verification and Handover	The building has been optimised and handed over to deliver a high level of performance in operation.	ME3.1	Metering and monitoring	Building must have accessible energy and water metering for all common uses, major uses and major sources. Meters must be connected to monitoring system capable of processing data produced by meters. Meters and monitoring systems must: provide continual information (up to 1hr interval readings); be commissioned and validated as per the most current "Validating Non-Utility Meters for NABERS Ratings" protocol, or NMI standards; be capable of identifying inaccuracies in meter network and producing alerts (see handbook for inaccuracies definition); be sufficient to support future achievement of NABERS rating.	Minimum expectation	Y	WinConnect to provide metering and monitoring
		ME3.2	Commissioning and tuning	Project team must perform following in accordance with the relevant subsections under "commission and tuning" pages 48-49 in handbook (see for details): - Prior to construction: set environmental targets (e.g. DSI or OPR document); and perform a services maintainability review addressing commissionability, controllability, maintainability, operability and safety of all systems with outcomes summarised in signed off 'Service and Maintainability Report'. - During construction and before practical completion: commission the building as per recognised standard (CIBSE or ASHRAE commissioning guidelines) incl. specification outlining systems' requirements and plan as well as air tightness consideration commencing at schematic design; and engage building tuning service provider. - After practical completion: tune the building over the next 12 months including quarterly measurements and adjustments/addressing specific tuning issues.			To be included as part of Service Consultant and Sub contractor requirements
		ME3.3	Building information	Project team must perform following in accordance with the relevant subsections under "building information" page 50 in handbook (see for details): - provide O&M info for all nominated building systems to building owner including: appropriate content developed and provided; user group access to required info to deliver best practice environmental outcomes; guidance on keeping info up-to-date provided to FM team. - develop log book in line with <i>CIBSE TM31: Building Log Book Toolkit</i> covering all nominated building systems and incl. links/references to relevant O&M info to present to building owner before project PC. - building user info must be able to be updated and edited by FM team, or other stakeholders, to ensure it remains current and relevant to users throughout life of building. Must be available at PC.			Building information to be generated by CADDs Group
Operational Waste	The project team must demonstrate the building is designed to allow effective management of operational waste by: <ul style="list-style-type: none"> <li>Separating waste streams;</li> <li>Providing a dedicated and adequately sized waste storage area; and</li> <li>Ensuring easy and safe access to waste storage areas for both occupants and waste collection contractors.</li> </ul>	ME4.1	Separation of waste streams	Building must provide labelled, easy to access and evenly distributed bins to allow occupants to separate waste, as a minimum into: general landfill waste, recycling streams to be collected by waste collection service (paper & cardboard, glass, plastic), and one other waste stream representing at least 1% of total annual operational waste (by volume) e.g. organics, e-waste, batteries. Any other waste stream (excl. food) >5% of total annual operational waste (by volume) must be accounted for.	Minimum expectation	Y	As per Design
		ME4.2	Dedicated waste storage area	Must provide dedicated area(s) for storage and collection of waste streams that is sized to accommodate at least one collection cycle. Calculations must be based on forecasted occupant waste generation and collection frequencies using figures outlined in third-party best practice guidelines. Area(s) must have easy and safe access by collection vehicles.			As per Design
		ME4.3	Signoff by waste specialist and/or contractor	A waste specialist and/or contractor must sign-off on the designs to confirm they are adequately sized and located for the safe and convenient storage and collection of the waste streams identified.			WMC engaged to provide WMP to sign off adequate sizing
Responsible Finishes	The building's internal finishes are comprised of responsibly manufactured products.	CA9.1	Responsible Products Value (RPV) Compliance	Using RPV table, 60% of all internal building finishes (by area) meet a RPV score of at least 7. Products can be compliant with one or more initiatives each adding to total score.	1	1	Paints, Carpets, Engineered wood products will meet RPV
<b>Total</b>						<b>2</b>	

HEALTHY							
Clean Air	Pollutants entering the building are minimised, and a high level of fresh air is provided to ensure levels of indoor pollutants are maintained at acceptable levels.	ME10.1	Ventilation system attributes	Demonstrate compliance with the following over 95% of nominated area (primary & secondary): - Separation from pollutants: building ventilation systems must be designed to comply with ASHRAE Standard 62.1:2013 or AS 1668:2012 (whichever is greater) regarding minimum separation distances between pollution sources and outdoor air intakes. If ASHRAE Standard 62.1:2013, must be in accordance with distances in Table 5.5.1 and any other requirement/guidance nominated in Standard. Analytical solutions acceptable by following Appendix F. - Cleaning ductwork: all new and existing ductwork must be cleaned prior to occupation in accordance with a recognised standard (see <i>Guidance</i> section pg.78 handbook).	Minimum expectation	Y	As per Mechanical specification
		ME10.2	Provision of outdoor air	Natural ventilation and Residential buildings: project teams must demonstrate how they have deployed a best practice strategy to reduce and eliminate mould.		Y	Mould prevention strategy to be provided
		ME10.3	Exhaust or elimination of pollutants	Must be demonstrated that pollutants from printing and photocopying equipment, cooking processes and equipment are limited from nominated area by either: removing source of pollutants (i.e. pollutant sources compliant with minimum emissions standards or not be present); or directly exhausting pollutants outside in accordance with recognised standard (see <i>Guidance</i> section pg.78 handbook) and/or physically separated from occupants.		Y	Kitchen exhaust and Vehicles exhaust designed in accordance with Australian Standards
		CA10.1	Ventilation system attributes	Any mechanical ventilation system within the building, must be designed to provide adequate access for maintenance, to both sides of moisture and debris-catching components within air distribution system (e.g. heating/cooling coils, FCUs, humidifiers, filters etc.). See handbook pg.76-77 for instances and criteria requirements where adequate access as above isn't possible.	2	2	Not possible to provide adequate access for cleaning and maintenance purposes [due to system], Provide dual heating/cooling with the coil assembly no more than 4 rows deep. MERV 8 filter to be provided
		CA10.2	Provision of outdoor air	Comparison to Industry Standards: outdoor air must be provided to each space in nominated area at a rate at least 100% greater than minimum in AS 1668.2:2012. HVAC system must be clearly sized to accommodate increased outdoor air rates and use design occupancy as defined by project team (if unknown use rates in Table A1 Appendix A AS 1668.2:2012). Natural ventilation: nominated areas must be provided with good access to outdoor air appropriate for the activities and conditions in the space and meet requirements under AS 1668.4:2012 under all likely weather conditions - must justify how nominated area will perform as a naturally ventilated space in these conditions.			Ventilation to be designed to common areas, tenancy with increase fresh air. Apartments to meet natural ventilation requirements.
Light Quality	The building provides good daylight and its lighting is of high quality.	ME11.1	Lighting comfort	All light sources must: be flicker free; have a minimum CRI average R1-R8 of >=85 and CRI R9 >=50; meet best practice maintained illuminance levels for each task within each space type as per AS/NZS 1680.1:2006 applicable to project type incl. maintenance; maintained illuminance values meet uniformity no less than that specified in Table 3.2 AS/NZS 1680.1:2006, with a maintenance factor method as defined in AS/NZS 1680.4; and have minimum 3 McAdam Ellipses.	Minimum expectation	Y	LED lighting selection to meet criteria
		ME11.2	Glare	Glare must be limited in nominated area via either prescriptive, performance or a combination of methods: - Pres. 1: Bare light sources must be fitted with baffles, louvres, translucent diffusers, ceiling design or other means of obscuring direct light from all occupant viewing angles, incl. upwards. Alternatively, for LED luminaires, UGR for standard room must not exceed maximum values stated in Table 8.2 AS/NZS 1680.1:2006. - Pres. 2: Where nature of tasks, layout and surface reflectance unknown, lighting must comply with Luminaire selection system as in Clause 8.3.4 AS/NZS 1680.1:2006. - Perf.: Lighting UGR on representative floor must not exceed maximum values listed in Table 8.2 AS/NZS 1680.1:2006. UGR must be calculated in accordance with Clause 8.3.3 AS/NZS 1680.1:2006.		Y	Glare modelling to be undertaken by CADDs to demonstrate achievable
		ME11.3	Daylight	Ensure building is providing daylight access above typical federal, state or local regulations by showing how building's design: maximises no. of occupants in or near daylight area during daily activities; ensure regularly occupied spaces are in reasonable proximity to glazed facades, windows or skylights; controls/mitigates glare in daylight spaces; maximises daylight to spaces that prioritise learning, healing and living (see pg.81); and provides occupants with unrestricted access to daylight indoor common spaces.		Y	Demonstrated through modelling
		CA11.1	Artificial Lighting and Daylight	Both CA11.1 Artificial Lighting & CA11.2 Daylight criteria achieved as specified: <u>Artificial Lighting</u> Demonstrate compliance with the following over 95% of nominated area (primary & secondary): - walls within occupant field of view must have average surface reflectance 0.7 and average surface illuminance of at least 50% of horizontal illuminance levels required for task - does not apply to green walls or to coloured/patterned/biophilic feature walls that make up <20% of occupant field of view. - ensure 50% of horizontal task illuminance reaches the average eye height for 90% primary spaces using vertical illuminance calculation grid. - should provide highlights of colour and contrast which should not exceed max. luminance ratios as in AS/NZS 1680.1 Table 3.2 for visual task, immediate and general surrounds. Illuminance values must be calculated as per AS/NZS 1680 for relevant task. <u>Daylight</u> Demonstrate compliance with following: - Non-residential buildings: >=40% of the principle averaged across building must receive high levels of daylight (160 lux during 80% nominated hours) with no less than 20% on any floor or tenancy. - Residential buildings: >=60% combined living and bedroom area (kitchens excl.) of apartment must receive high levels of daylight (160 lux during 80% nominated hours) with no less than 20% in each bedroom and living area. - Residential and hospitality buildings must provide room blackout blinds or curtains to all bedrooms.	2	2	Selection of paints and lighting to meet requirements Daylight modelling demonstrates achievable
		EP11.1	Artificial Lighting and Daylight	Both Artificial lighting and Daylight credits achieved	2	2	
Acoustic Comfort	The building provides acoustic comfort for building occupants.	ME12.1	Acoustic Comfort Strategy	An Acoustic Comfort Strategy must be prepared describing how building design will deliver this to occupants addressing criteria: quiet enjoyment of space; functional use of space; control of intrusive or high levels of noise; privacy; noise transfer; and speech intelligibility. See handbook pg.85 for specific strategy inclusions. Must be prepared by qualified acoustic consultant during design stage and design solutions in strategy must be incorporated into Contract Documents.	Minimum expectation	Y	Acoustic Report provided by Acoustic consultant

GREEN STAR GAP ANALYSIS

Exposure to Toxins	The building's occupants are not directly exposed to toxins in the spaces they spend time in.	ME13.1	Paints, adhesives, sealants and carpets	At least 95% of internally applied paints, adhesives, sealants (by volume) and carpets (by area) must meet TVOC Limits (handbook pg. 91-92). Compliance can be achieved via a recognised and current at time of purchase Product Certification Scheme; laboratory product testing; or there are none of these materials present at PC.	Minimum expectation	Y	As per ESD specification
		ME13.2	Engineered wood products	Either no new engineered wood products are used in the building, or at least 95% (by area) of all engineered wood products meet specified formaldehyde emission limits (handbook pg.92-93). Compliance can be achieved via a recognised and current at time of purchase Product Certification Scheme; or laboratory product testing. Excl. formwork, car parking applications and non-engineered wood products.		Y	As per ESD specification
		ME13.3	Lead, asbestos and PCBs	Comprehensive hazardous materials survey must be performed on existing structures on site in accordance with relevant Environmental and OH&S legislation (pg. 86). Where these materials identified, materials must be stabilised/removed and disposed of in accordance with best practice guidelines; or simply conclude none found on site.		Y	Requirement of Contractor
Amenity and Comfort	The building provides internal amenities that improve occupant experience of using the building.	CA14.1	Dedicated amenity rooms	Building includes one or several rooms designed to promote either inclusivity, mindfulness or exercise for staff/occupants. For room qualification, classification must be: parent room; relaxation, meditation or prayer room; exercise room or combination (pg. 100). Room must be sized at a ratio of 1m2 per every 10 occupants and >=10m2. Rooms must meet: CA11 Light Quality; CA12 Acoustic Comfort; and the 'Equal access to the building' criterion of the <i>Design for Inclusion</i> Credit. See handbook pg. 99 for occupancy, accessibility, separation, infrastructure and exclusions.	2	2	Common Area include Residence Gym, Meditation and Yoga Rooms
Total						8	

RESILIENT

Climate Change Resilience	The building has been built to respond to the direct and indirect impacts of climate change.	ME16.1	Climate Change Checklist	Must complete the climate change pre-screening checklist using historic and future data as per handbook pg. 108 considering, but not limited to, the following potential impacts: direct damage or failure of components; accelerated deterioration of project components/reduced design life; reduced operating capacity; climate hazard impacts to surrounding areas (e.g. access & egress); occupant & stakeholder health and wellbeing impacts; indirect impacts to other interdependent systems and services (e.g. transport, utilities). The project team must communicate the building's exposure to climate change risks to owner.	Minimum expectation	Y	CADDs to complete Climate Adaptation and Resilience Plan
Heat Resilience	At least 75% of the whole site area comprises of one or a combination of strategies that reduce the heat island effect.	CA19.1	Heat Island Effect reduction	At least 75% of the whole site area (excl. PV, SHW, skylights, translucent sheeting) comprises one or combination of strategies that reduce heat island effect. Such strategies may include: vegetation; green roofs; roof materials/shading structures pitched <15° - a 3 year SRI >=64, and >15° - a 3 year SRI >=34; unshaded hardscaping elements with a 3 year SRI >=34 or initial SRI >=39; hardscaping elements shaded by overhanging vegetation; and/or water bodies/courses. Site area shaded by permanent structures during summer solstice are deemed compliant.	1	1	Low SRI materials to be incorporated
Total						1	

POSITIVE

Upfront Carbon Emissions	The building's upfront carbon emissions from materials and products have been reduced and offset.	ME21.1	Reducing upfront carbon emissions	The building's upfront carbon emissions (i.e. from modules A1-A5 as in EN 15978) are >=10% less than those of a reference building excl. demolition works.	Minimum expectation	Y	As per LCA Modelling will be achievable. Use of Bubble deck to reduce material use
Energy Use	The building has low energy consumption.	ME22.1	Modelling Pathway: >=10% less than reference building	Base building operational energy consumption must be >=10% less than reference building - façade must also perform better. For residential buildings, no apartment can be less than the larger number of: the minimum NatHERS rating stated in the NCC; or 6.5 star NatHERS rating. Onsite RE cannot be used in calcs.	Minimum expectation	Y	
		CA22.1	Modelling Pathway: >=20% less than reference building	The building's energy use is at least 20% less than a reference building.	3	3	As per Energy model
		EP22.1	Modelling Pathway: >=30% less than reference building	The building's energy use is at least 30% less than a reference building.	3	3	As per Energy model
Energy Source	The building's energy comes from renewables.	ME23.1	Zero Carbon Action Plan	Must develop a Zero Carbon Action Plan prior to tender phase which: must be signed off by building owner; incl. in operational documents; incl. a target date; cover all energy consumption, procurement and generation and cannot rely solely on the latter; must incl. infrastructure provided for tenants/future occupants. See pg.142 for specific plan req.'s (e.g. scopes 1 & 2, net zero cost analysis etc.). Outcomes should be integrated with other credits during certification.	Minimum expectation	Y	Energy Model and Zero Carbon Action Plan to be developed
		CA23.1	100% Renewable Electricity	100% electricity under building owner/operator's control (excl. tenant loads) must be accounted for and sourced from renewables either: onsite; or off-site where there is a signed RE contract with min. length five years or three years when the building is owned and managed by entity who has signed to Global Commitment for Net Zero Carbon Buildings by WorldGBC. Contract can be apart of a PPA.	3	3	Engage Retailer to provide 100% Green Power to all common areas
Other Carbon Emissions	The building's emissions from refrigerants and remaining carbon sources are eliminated or offset.	CA24.1	Offsetting refrigerants emissions	Please select CA pathway and 'Y' if applicable	2	2	Commitment to offset refrigerants
Water Use	The building has low water use.	ME25.1	Sanitary fixture and appliance efficiency	Follow prescriptive approach and ensure all fixtures and water-using appliances installed within project's scope must meet minimum WELS ratings as in Sanitary fixture and appliance efficiency Table pg.150 handbook.	Minimum expectation	Y	Included as per ESD spec
		CA25.1	40-45% Potable water reduction compared to a reference building	GBCA's <i>Potable Water Calculator</i> and <i>Potable Water Calculator Guide</i> must be used to show either: 45% less potable water consumption compared to reference building; or 40% less in multi-unit residential buildings. The building must have infrastructure for recycled water in a location where authorities have planned for installation of these services.	3	3	Achievable based on water reuse
Life Cycle Impacts	The building has lower environmental impacts from resource use over its lifespan than a typical building.	CA26.1	30% reduction in life cycle impacts compared to standard practice	30% reduction in life cycle impacts cradle-to-grave (per m2 GFA) incl. all EN 15978 modules (A to D). Standard practice reference building as per EN 15978 must be used and entered into GBCA's <i>Life Cycle Assessment Calculator</i> for comparative analysis against the specified impact categories handbook pg.154. Credit cannot be claimed if the impact in any one category increases total normalised and weighted score for project by >10%. LCA must comply with relevant defined methodology, data and quality assurance req.'s (see pg. 154-155).	2	2	Life Cycle to be undertaken
Leadership		LE27.1	Leadership Challenge Point	When <i>Net Zero Carbon in Operations</i> path achieved, an additional leadership challenge point is available. This comprises credits: Energy Source, Energy Use, Upfront Carbon Emissions and Other Carbon Emissions.	1	1	
Total						16	

PLACES								
Movement and Place	The building's design and location encourages occupants and visitors to use active, low carbon, and mass transport options instead of private vehicles.	ME27.1	Changing facilities	Showers must be at least 900mm x 900mm and installed based on occupancy (see Guidance pg. 162) as per provided Table handbook pg.160. One secure locker per every 8 occupants must be provided in changing rooms. Showers and/or bathrooms provided to meet statutory accessibility requirements and lockers within tenancies, not changing rooms, are noncompliant. Must justify how facilities' location, sizes and privacy requirements are appropriate and encourage use. Applies to all buildings excl. residential.	Minimum expectation	Y	EOT included f	
		ME27.2	Accessible, inclusive, and located in a safe and protected place	Upon accessing, pedestrians and cyclists must be protected from the elements and other vehicles. Facilities' access must be: safe (i.e. avoid steep gradients, slippery surfaces, lack of visibility e.g. corners etc.); and well lit between entryway and bike parking, all amenities, lift lobbies and main access points. All regular occupants must have easy access to lockers, showers and building entry and be able to find facilities due to clear signage and access points. Applies to all buildings excl. residential.		Y		
		CA27.1	Cyclist facilities	Building's access must prioritise walking and cycling options meaning being well lit, weather protected and separated from vehicles. Cyclist facilities access must be separated from primary vehicle entrance for safety. Cyclist facilities must have signposted access to changerooms and ensure cycling equipment safely secured. In residential buildings, access points must connect to relevant storage facilities. If at unit level, show how won't be blocked by strata.	3	3		
		CA27.2	Sustainable transport	Must prepare (by a qualified transport planner) and implement a Sustainable Transport Plan where the consequent requirements and recommendations must then be reflected in design of building facilities and ongoing operations. See handbook pg. 161 for min. req's of plan (e.g. typical and target mode share etc.) inclusive of EV provisions (e.g. charging stations, distribution equipment, load management system).				Sustainable Transport Plan to be developed
		CA27.3	Reducing private vehicle use	Use inputs from Sustainable Transport Plan to complete GBCA's <i>Movement and Place Calculator</i> , to show compared to a reference building: 40% emissions reduction from transport, 90% active mode encouragement, >20% Vehicle Kilometres Travelled reduction.				
		CA27.4	Encouraging walkability	The building's design and location must encourage walking to and from amenities: - if there are roads within building boundary, must prioritise pedestrians over vehicles via designing roads to be low speed (10km/hr) and provide pedestrian right of way; - occupants should have access to diversity of amenities incl.: groceries; health and wellbeing; food and beverage; retail; bank services; education and child care; recreation; public facilities; and outdoor facilities. There must be at least 10 amenities across five of these categories within 400m radius excl. double-counting and those beyond an obstruction (e.g. highway - see Guidance pg. 163)				
Enjoyable Places	The building provides places that are enjoyable and inclusive.	CA28.1	Publicly accessible places	Provide new publicly-accessible spaces that are enjoyable and support community activity and interaction in accordance with provided Table handbook pg. 166. They must: accommodate community-based activities; have capacity and flexibility to operate in multiple modes of usage; demonstrate relevance for local people (demographics, social profile, current needs); demonstrate space designed for enjoyment (see Guidance); and be freely available and publicly accessible. In residential projects, may apply to residents & visitors only as public spaces may not be desired. Existing communal spaces are noncompliant.	2	2		
		CA28.2	Activation strategy	To ensure placemaking continues after PC, an activation strategy must be provided addressing following criteria: target of activation activities; how activation will be funded, managed for first 12 months and sustained afterwards; estimated timing of activation; potential suppliers, facilitators or initiators of activity commencement; how building occupants/wider community encouraged to initiate activations; demonstrate how strategy can be further implemented by future occupants; and assigned roles & responsibilities for implementation including M&E. Must be included in building's handover to ensure use.				
Total						5		
PEOPLE								
Inclusive Construction Practices	The builder's construction practices promotes diversity and reduces physical and mental health impacts.	ME31.1	Onsite gender inclusivity and discrimination, racism and bullying policies	Head contractor must: ensure availability of separate gender inclusive bathroom facilities and changing amenities with a high degree of privacy; provide gender-specific fit-for-purpose PPE for diverse body sizes and types; implement policies to address discrimination, racism & bullying onsite; introduce onsite redress procedures and corrective measures for any relevant breaches and/or incidents; empower a diverse lead team to manage onsite policies; provide training to 95% contractors and subcontractors present on site for >= 3 days on: relevant aforementioned onsite policies; and drug and alcohol awareness and mental health.	Nil	Y		
Design for Inclusion	The building is welcoming to a diverse population and is welcoming to their needs.	CA34.1	Inclusive Design and Construction	Building's design and construction must be able to be navigated and enjoyed by stakeholders of diverse ages, genders and abilities and must include: equal access to the building; diverse wayfinding; and inclusive spaces (see handbook pg. 193 for details). Applies to common spaces, bathroom facilities & amenities. Ongoing management is strongly recommended (See Guidance handbook pg.194)	2	2		
Total						2		
NATURE								
Impacts to Nature	Ecological value is conserved and protected.	ME35.1	Not built on, or impacted, a site with high ecological value	At date of site purchase/option contract, must not clear: old-growth forest, prime agricultural land, any wetland listed as 'High National Importance', aspects considered 'Matters of National Significance' under EPBC Act 1999 regardless if 'controlled action' or not. If site adjacent, within 100m, or contains above and protecting, must minimise impact as follows: both <i>Waterways Protection</i> CA and this credit's CA is met; light pollution impacts are managed; and where next to a wetland, implement Wetland Protection Measures (see handbook pg.197-198).	Minimum expectation	Y		
Waterway Protection	Local waterways are protected, and the impacts of flooding and drought are reduced.	CA39.1	Runoff volume	Must demonstrate an annual average flow reduction (ML/yr.) of 40% compared to pre-development levels.	2	2	MUSIC Modelling to be undertake, storage and filtering of water to be provided	
		CA39.2	Water pollution	Runoff discharged from site must meet specified <i>Credit Achievement</i> pollution reduction targets as outlined in the Table in handbook <i>Water pollution</i> pg. 214.				
Total						2		

LEADERSHIP							
Leadership Challenges	All credits	CA41.1	Project meets GBCA Leadership Challenge	Project teams can target as many Leadership Challenges as they wish. Leadership Challenges exist in handbook (i.e. LE27.1 Net Zero Carbon in Operations Path, LE31.1 Additional gender-specific facilities and PPE in this spreadsheet) and GBCA website as they are developed. All criteria listed must be met to claim points.	Unlimited	4	
Total							4

		REQUIRED	CONFIRMED
MINIMUM EXPECTATIONS		29	29
TARGETED CORE POINTS			36
LEADERSHIP POINTS			5
		35	41.0