Contact: Joshua Mollison

Email: greenstar@LBSconsult.com.au

LBSconsult.com.au

Phone: 0422 649 295

**LBS REFERENCE NUMBER:** LBS30299

**DATE:** Friday, 5 December 2025

**PROJECT ADDRESS:** 260 Franklin Street, Adelaide SA 5000

# PRINCIPAL'S PROJECT REQUIREMENTS - ESD

260 Franklin

**BUILDING CLASS:** Class 2 | 6

**REPORT COMMISSIONED BY:** BeauSight Investment | Construction

**ON BEHALF OF:** -

**CLIENT REFERENCE NUMBER:** TBC

Living Building Solutions Pty Ltd | 135 Greenhill Rd, Unley SA 5061 | www.LBSconsult.com.au | ABN. 66 619 063 633

# CONTENTS



# DOCUMENT CONTROL

| Revision | Date | Description | Author | Reviewed |
|---|---|---|---|---|
| v1.0 | 11th Nov 2025 | Preliminary | JM | NM |
| v1.2 | 2nd Dec 2025 | For Submission | JM | NM |
| V1.3 | 5th Dec 2025 | Revision \| For Submission | JM | NM |

# 1.0 INTRODUCTION

The project team is committed to creating an environmentally sustainable and liveable project by incorporating environmentally sustainable design into the development.

This Principal's Project Requirements (ESD) document has been prepared to establish how the proposed development will incorporate sustainability and address the below objectives, outlining the relevant stakeholder/s and project stage/s for each initiative to assist the project team during the design, construction, and operation process.

The following key elements of sustainability have been identified:

*Construction & Building Management*

*Integrated Water Management*

*Operational Energy*

*Indoor Environment Quality*

*Transport*

*Waste & Resource Recovery*

*Urban Ecology*

## ENVIRONMENTALLY SUSTAINABLE DESIGN (ESD) ASSESSMENT TOOLS

The following sustainability benchmarks have been used to assess the proposed development against the objectives outlined above.

- Sustainable Design in the Planning Process (SDAPP)
- Built Environment Sustainability Scorecard (BESS)
- Green Star Buildings v1.0
- Green Star Design & As Built v1.3
- NCC 2022, Vol. 1
- Australian Standards
- ASHRAE
- Walk Score

## ESD STRATEGY

The project team collaboratively applied ESD principles during the design phase, adopting the Green Industries SA Waste Hierarchy as a holistic sustainability framework extending beyond waste management.

## SITE DESCRIPTION

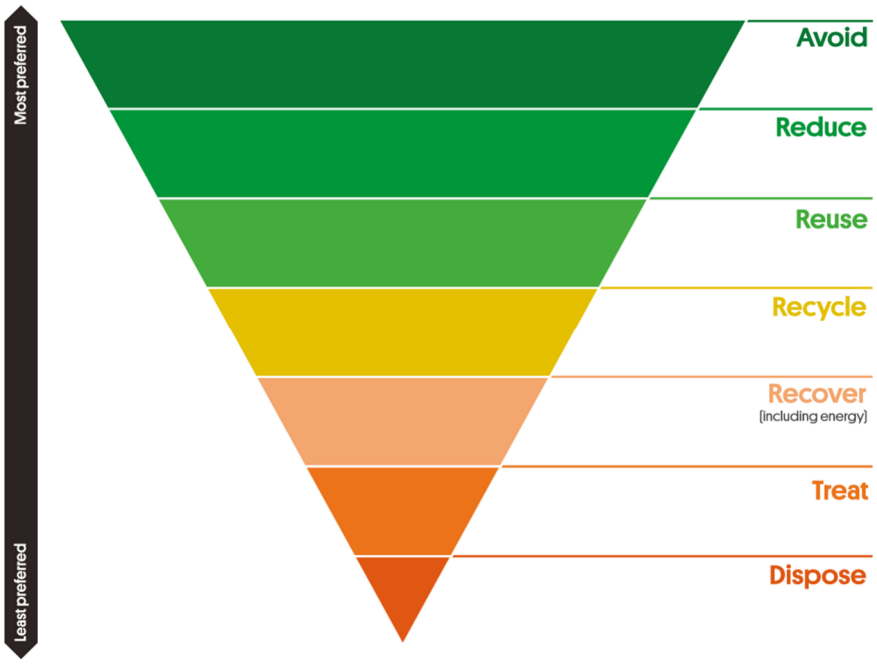


*Figure 1 – Waste Hierarchy (Source: Green Industries SA[1])*

| Proposed Building Works | Mixed-Use Residential |
|---|---|
| **Total Building Area** | 13,650 $m^2$ |
| **Ground** | Core, BOH, Lift, Retail, Bike (68), Car Staff (4) |
| **Level 1** | Car spaces (28), Core, Storage |
| **Level 2** | Car spaces (35), Core, Storage |
| **Level 3** | Apartments (11), Gym, Core |
| **Level 4-5** | Apartments (24), Core |
| **Level 6-11** | Apartments (54), Core |
| **Level 12** | Apartments (6), Core |
| **Level 13** | Plant & Equipment |
| **Total Site** | 1,328 $m^2$ |

*Figure 2 - Proposed Location*


*Figure 3 - Proposed Development*

# 2.0 SUSTAINABLE INITIATIVES

The following sections outline the sustainable initiatives that will be incorporated into the design, construction, and operation of the proposed development. In addition, this section outlines the relevant project stage and nominates the appropriate project stakeholder responsibility. **All responsibilities of the Architect are to be documented on the plans prior to council submission.**

## CONSTRUCTION AND BUILDING MANAGEMENT

**Objective**: To encourage a holistic and integrated design and construction process and ongoing high performance.

- ✓ Integrate sustainable principles into the development from concept through to construction and operation.
- ✓ Ensure the environmental impact of construction is managed.
- ✓ Future proof the proposed development for future occupants.
- ✓ Make key building services and sustainability information accessible for occupants.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **ESD Professional** | ESD | Concept-Design |
| *Green Star Buildings v1.0 – 1 Industry Development – Green Star Accredited Professional* | | |
| An ESD professional is to be engaged to provide sustainability advice during design stage. | | |
| **Construction Environmental Management Plan** | Head Contractor | Construction Documentation |
| *Green Star Buildings v1.0 Credit 2 Responsible Construction – EMS, EMP* | | |
| The builder or head contractor (responsible party) must have a formalised systematic and methodical approach to planning, implementing, and auditing in place during construction.<br>▪ The responsible party must have an Environmental Management System (EMS) certified to a recognised standard such as AS/NZS ISO 14001.<br>The EMS can be stand-alone or part of an integrated management system and must be valid for the duration of construction activities.<br>The Head Contractor is to implement a project-specific Environmental Management Plan (EMP) to manage the environmental performance and impact of excavation and construction activities. | | |

| **Construction Stormwater Management** | Development Manager | Construction Documentation |
|---|---|---|

*SDAPP Construction and Building Management Best Practice Standards*

The project team recognises that the construction of the proposed development creates potential environmental impacts associated with stormwater runoff, including erosion and sediment. A Site Management Plan will be developed in accordance with local authority and EPA Construction Techniques for Sediment and Pollution Control. Risks managed during construction may include but are not limited to:

- General erosion and site runoff
- Redirection or temporary storage of existing roof runoff
- Erosion and pollutants from vehicle access and work areas
- Erosion and deposition from stockpiles
- Waste and litter management

| **Metering** | ESD | Design Development |
|---|---|---|

*BESS Management 3.1 Metering - Residential / 3.3 Metering - Common Areas*

- Separate utility meters (electricity, water) will be provided for all individual Units.
- Utility sub-meters will be provided to all major common area services.
- Separate metering is to be provided for all energy and water uses. In addition:
  - Where an energy load exceeds 5% of total energy uses, or consumes ≥100kWh/annum, it must be independently metered.
  - Where a common water use consumes at least 10% of the project's water use it must be independently metered.

| **Building Users Guide** | Development Manager | Construction Documentation |
|---|---|---|

*BESS Management 4.1 Building Users Guide*

A Building Users Guide and building information is to be developed and made available to the building owner, facilities management team, and occupants at the time of practical completion. This is to outline the following for all nominated building systems:

- Operations and maintenance information
- Building logbook
- Building user information:
  - Description of basic function of nominated building systems
  - Strategies to optimise the building's performance and efficiency, including operational strategies to reduce energy and waste use, and waste production.
- List of maintenance contacts

| **On-going Management** | Development Manager, Services Contractors | Post Occupancy |
|---|---|---|

*Green Star Buildings v1.0 Credit 3 Verification and Handover*

The building manager is responsible for the implementation, monitoring, maintenance, and review of all initiatives outlined in this report.
This report and all supporting ESD reports are to be included in all document packs for the building manager and tenants.

## INTEGRATED WATER MANAGEMENT

**Objective**: To ensure the efficient use of water, reduce total operating potable water use, encourage the appropriate use of alternative water sources, and incorporate the use of water sensitive urban design, including rainwater re–use.

- ✓ Use efficient fixtures and fittings.
- ✓ Capture and re–use rainwater.
- ✓ Connect to recycled water infrastructure (if available).
- ✓ Include indigenous/water efficient landscaping and irrigation methods.
- ✓ Minimise the use of mains water for toilets, urinals, and landscape irrigation by maximising on-site rainwater reuse.
- ✓ Reduce the impact and volume of stormwater runoff.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Water Fixtures** | Architect | Design Development |
| *BESS Integrated Water Management 1.1 Potable Water Use – Fixtures, Fittings, and Connections; Green Star Buildings v1.0 25 Water Use (Min. Expectation)* | | |

The development will include efficient fittings and fixtures to reduce the consumption of mains water. The following Water Efficiency Labelling Scheme (WELS) star rating products are required (within 1 star of best available):

- Taps: ≥ 5 Star WELS
- WCs: ≥ 4 Star WELS
- Showerheads: ≥ 4 Star WELS (≤ 7.5L/m)
- Dishwashers: ≥ 5 Star WELS

| | | |
|---|---|---|
| **Water Efficient Landscaping** | Architect | Design Development |
| *BESS Integrated Water Management 3.1 Water Efficient Landscaping* | | |

Retention rainwater tanks to irrigate landscaped pods (L2).[1]

- Water efficient/drought tolerant plants to be planted in all landscaped areas.
- If irrigation is required, drip or under mulch irrigation is to be used.

| | | |
|---|---|---|
| **Building System Water Use Reduction** | Development Manager | Construction Documentation |
| *BESS Integrated Water Management 4.1 Building Systems Water Use Reduction* | | |

- All HVAC system to use air cooled condenser components.

[1] Catchment areas and retention sizes to be developed during in Design Development

## OPERATIONAL ENERGY

**Objective:** To ensure the efficient use of energy, to reduce total operating greenhouse emissions, and to reduce energy peak demand.

- ✓ Ensure energy efficiency is incorporated into planning and design.
- ✓ Include effective shading.
- ✓ Enhance building fabric above minimum building code requirements.
- ✓ Install efficient appliances, lighting, and heating and cooling systems.
- ✓ Promote the use of alternative energy sources.
- ✓ Achieve or work towards net zero carbon emissions.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Energy Efficiency** | ESD | Design Development |

*NCC 2022, Vol.1; Green Star Buildings v1.0 – 22 Energy Use – Residential Pathway (Credit Achievement)*

The development will **target** a 10% improvement on NCC 2022 Section J requirements.

**Apartments:**

- Average 7.7-star NatHERS rating.
- Minimum 6.0-star rating.
- All-electric design

**Retail**

- 10% reduction in greenhouse gas emissions compared to a minimum DtS-compliant building.
- All-eclectic design

Ratings and targets to be confirmed during design development.

| | | |
|---|---|---|
| **Lift – Energy Recovery** | Services Engineer | Design Development |

*Green Star Buildings v1.0 – 22 Energy Use*

Residential lift will incorporate energy recovery technology to enhance operational efficiency and reduce overall energy demand. The regenerative drive system captures kinetic energy generated during lift braking or downward travel and converts it into reusable electrical energy, which can be redirected to the building's electrical network to power other services.

| **Lift and External Lighting** | Electrical | Design Development |
|---|---|---|

*SDAPP Energy Best Practice Standards; NCC 2022, Vol 1;*
*Green Star Buildings v1.0 – 35 Impacts to Nature – Managing Light Pollution Impacts (Min. Expectation)*

- Lift and external lighting to be high efficiency LED lighting with occupancy sensors and daylight control (external lighting only) fitted in accordance with NCC 2022, Vol 1.
- Light Pollution to neighbouring bodies: All outdoor lighting on the project complies with AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting to minimise the building's light pollution.
- Light pollution to night sky: The project will reduce light pollution by either:
  - Control of upward light output ratio (ULOR); OR
  - Control of direct illuminance.

| **Internal Lighting** | Services Engineer | Design Development |
|---|---|---|

*BESS Operational Energy 3.6 Internal Lighting – Apartments; SDAPP Energy Best Practice Standards*

- All indoor lighting to be LED warm white colour.
- Maximum illumination power density in at least 90% of the Class 2 area is to be ≥20% lower than NCC requirements (Table J7D3a NCC 2022, Vol.1).

| **Air Permeability Testing** | Services Contractors, Principal Consultant, Head Contractor | All |
|---|---|---|

*Green Star Buildings v1.0 – 3 Verification and Handover – Commissioning and Tuning (Min. Expectation)*

The project team must perform the following:

- Prior to construction:
  - Design for airtightness
- During construction and practical completion:
  - Test for airtightness

A suitably qualified airtightness practitioner (ATTMA Level 2 or AIVAA testing member) must be engaged from the pre-design to verification phase of the project to ensure best practice airtightness construction methods are implemented in the design and construction of the building. The development will target an average air permeability rate of ≤7.0$m^3$/h/$m^2$ @ 50Pa. Air permeability testing is to be completed on at least 10% of apartments (9 tests in total) to provide an accurate sample rate of the building. If the average air permeability target is not achieved a lesson learnt session will be held with the head contractor and design team.

| **All Electric, Renewable Energy** | Services Engineer | Design Development |
|---|---|---|

*BESS Operational Energy 4.2 Renewable Energy Systems – Solar; Green Star Buildings v1.0 Credit 23 Energy Source*

The proposed development is to incorporate a ≥20kW Solar PV system with ≥15kW inverter to reduce total electricity consumption of common areas and apartments. Solar PV panels are to be mounted on the roof of Level 13 to ensure minimum overshadowing.

## EMBODIED CARBON

**Objective**: Reduce energy consumption, embodied carbon, and water usage.

- ✓ Minimise energy consumption.
- ✓ Source the building's energy from renewables.
- ✓ Facilitate low water usage.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Upfront Carbon Emissions** | Architect, Head Contractor | Design Development |

*Green Star Buildings v1.0 – 21 Upfront Carbon Emissions; NCC Vol.1&2 2022*

The project team acknowledges that a significant portion of a building's embodied carbon is associated with structural concrete and steel components. In alignment with *Green Star Buildings v1.0 – Upfront Carbon Emissions*, the project will seek to demonstrate a reduction in upfront carbon impacts, these may include the selection of materials with verified environmental performance (such as Environmental Product Declarations) and/or undertaking an upfront carbon emissions calculation to compare the proposed design against an appropriate reference building.

LBS will provide further information and guidance to support the project team in identifying suitable materials and approaches to meet the intent of the credit.

## INDOOR ENVIRONMENT QUALITY

**Objective:** To achieve a healthy indoor environment quality for the wellbeing of building occupants.

- ✓ Consider air quality, natural ventilation, and daylight access.
- ✓ Control shading, glare, and noise.
- ✓ Maintain thermal comfort.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Daylight Access** | ESD | Design Development |

*NCC 2022, Vol.1, Part F6P1 Natural Lighting*

Floorplates have been strategically designed for living areas and bedrooms to provide a high level of amenity through design for natural light, meeting the following requirement:

- All apartments to meet NCC2022, Vol.1 Part F6P1. To be confirmed via daylight modelling during design development.

| | | |
|---|---|---|
| **Ventilation Systems – Fresh Air** | Services Engineer | Construction Documentation |

*Green Star Buildings v1.0 – 10 Clean Air – Provision of Outdoor Air (Min. Expectation)*

The regularly occupied areas must be provided with good access to outdoor air, appropriate for the activities and conditions by using one of the following options:

- Where ventilation is by mechanical means, the building must provide outdoor air as per AS1668.2:2012 for the default occupancy.
- Where ventilation is by natural means, the building must meet natural ventilation requirements as per AS1668.4:2012.

| | | |
|---|---|---|
| **Ventilation System Attributes** | Mechanical | Design Development Construction |

*Green Star Buildings v1.0 – 10 Clean Air – Ventilation System Attributes*

Separation from Pollutants: Building ventilation systems to 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.

Cleaning Ductwork: All new and existing ductwork that serves the building must be either sealed until installation/project completion or cleaned prior to occupation in accordance with a recognised standard.

Maintenance: Mechanical ventilation systems will be designed/located to provide adequate access for maintenance to both sides of moisture/debris catching components within the air distribution system.

| | | |
|---|---|---|
| **Exposure to Toxins** | Architect, Development Manager | Construction Documentation |

*Green Star Buildings v1.0 – 13 Exposure to Toxins (Min. Expectation)*

>95% of all new paints, adhesives, sealants (by volume), and carpets (by area), and engineered wood products (by area) meet the total VOC or formaldehyde limits specified by Green Star (see Appendix A) or hold a relevant certification (e.g. GECA, Global GreenTag, GreenRate).

| **Thermal Comfort** | Architect | Design Development |
|---|---|---|
| *BESS IEQ 3.1 Thermal comfort – Double Glazing, 3.2 Thermal Comfort – External Shading* | | |

The following measures are to be included to assist in maintaining thermal comfort:

- All glazing is to be double glazing.
- Strategic balconies to the north, east, and west façade assist in glare and solar control.
- Strategies for adjustable shading and/or Low-E glazing will be investigated during design development to assist in solar/glare control of exposed (unshaded) glazed façades.
- Corner apartments have been designed with dual-aspect facades to assist in cross flow ventilation.
- Landscaping to balconies to assist in reducing heat island effect.

## TRANSPORT

**Objective**: To minimise car dependency and to ensure that the built environment is designed to promote the use of low-emission transport options such as public transport, walking, and cycling.

- ✓ Provide convenient and secure bike storage.
- ✓ Encourage use of lower emission transport options.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Bicycle Parking Facilities** | Architect, Development Manager | Design Development |

*Green Star Buildings v1.0 – 27 Movement and Place – Bicycle Parking Facilities (Credit Achievement)*

The building's access must prioritise walking and cycling options – well lit, weather protected, and separated from vehicles.

Bicycle parking facilities must meet the following criteria:

- Separated from the primary vehicle entrance to ensure safety.
- Ensure the cycling equipment is safely secured.
- The access points must connect to the relevant bicycle storage facilities.

The development includes 20 visitor and 48 resident bicycle parking spaces – provided at Ground Floor Level.

| | | |
|---|---|---|
| **Reducing Private Vehicle Usage** | Transport Planner, ESD | Design Development |

*Green Star Buildings v1.0 – 27 Movement and Place – Reducing Private Vehicle Usage (Credit Achievement)*

The building's design and location reduce emissions associated with transport with excellent access to essential amenities within walking distance, and excellent public transport options.

Walk Score provides the following scores for the project location:

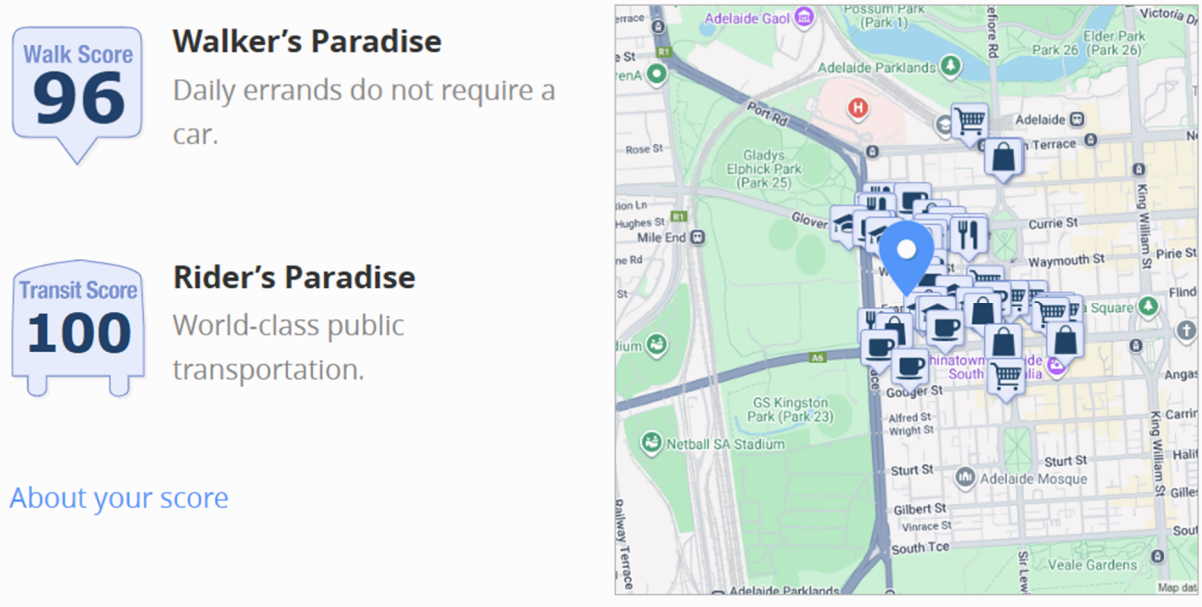


*Figure 4 - Walk Score*

| **Electric Vehicle Charging** | Services Engineer | Design Development |
|---|---|---|
| *NCC 2022, Vol.1, Part J9D4 Facilities for Electric Vehicle Charging Equipment* | | |

Apartment carparks to be provided with infrastructure provisions for electric vehicle charging in accordance with NCC 2022 J9D4.

| **Embedded Network** | Services Engineer | Design Development |
|---|---|---|
| *Green Star Buildings v1.0 – 20 Grid Resilience* | | |

The building's electrical infrastructure is being designed to accommodate a future embedded network configuration, with a single grid connection capable of supporting internal energy distribution across apartments and common areas should this approach be adopted at the operational stage. This design strategy provides flexibility for collective energy procurement, integration of on-site solar generation, and the potential incorporation of future battery storage or EV-charging infrastructure, while still allowing for individual metering arrangements if required during subdivision or property sales

## WASTE & RESOURCE RECOVERY

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

- ✓ Promote waste avoidance, re-use, and recycling during the planning, design, construction, and operation of the proposed development.
- ✓ Consider food and garden waste opportunities.
- ✓ Put construction waste and operational waste management plans in place.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Construction Waste** | Development Manager | Construction |

*Green Star Buildings v1.0 – 2 Responsible Construction – Construction and Demolition Waste (Min. Expectation)*

The project team will aim to reduce construction and demolition waste in line with the intent of Green Star Buildings v1.0 – Responsible Construction (Credit 2). The head contractor will target improved waste management performance by prioritising responsible material handling, separation, and recycling practices, and by engaging an approved waste contractor.

| | | |
|---|---|---|
| **Operational Waste** | Architect, Development Manager | Design Development |

*BESS Waste 2.1 - Operational Waste - Food & Garden Waste; 2.2 - Operational Waste - Convenience of Recycling*
*Green Star Buildings v1.0 – 2 Responsible Resource Management (Min. Expectation)*

The building must provide bins or storage containers to building occupants to enable them to separate their waste, in accordance with the following:

- Bins must be labelled, with all waste streams equally convenient to access.
- Waste Streams are to include general waste, co-mingled recycling, and organic waste.
- A dedicated and appropriately sized area(s) for the storage and collection of the waste streams are to be provided on Ground Floor.

Bins must be sized and collected in accordance with third-party best practice guidelines such as:

- South Australia Best Practice Guide for Waste Management for Residential or Mixed-Use Development.

## URBAN ECOLOGY

**Objective:** To protect and enhance biodiversity and to encourage the planting of indigenous vegetation.

- ✓ Consider green spaces that focus on health, social, environmental, and economic benefits.
- ✓ Maintain and/or enhance the site's ecological value.

| DESIGN INITIATIVE | STAKEHOLDER | PROJECT STAGE |
|---|---|---|
| **Encouraging Green Spaces** | Architect | Design Development |
| *BESS Urban Ecology 2.4 Balconies, Courtyards, and Roof Terraces* | | |
| Balconies will be designed to accommodate a water supply (tap) and wastewater connection (drain), enabling these services to be included where selected by the purchaser and supporting the potential for vegetation on balconies | | |

# 3.0 CONCLUSION

This Principal's Project Requirements (ESD) sets a standard of sustainability for the project using the following recognised benchmarks:

- Sustainable Design in the Planning Process (SDAPP)
- Built Environment Sustainability Scorecard (BESS)
- Green Star Buildings v1.0
- Green Star Design & As Built v1.3
- NCC 2022, Vol. 1
- Australian Standards
- ASHRAE
- Walk Score

The proposed development will meet and/or exceed the objectives if it is constructed in accordance with the contents of the report, supporting documentation, and applicable drawings. This report is to be read in conjunction with any relevant reports written by third parties. It is the responsibility of the Principal Consultant to ensure the implementation, monitoring, maintenance, and review of all initiatives outlined in this report are upheld.

# DISCLAIMER

# APPENDIX A – VOC LIMITS

Compliance with Low VOC products is met the product meets the requirements of Table 3 or is recognised under a Product Certification Scheme - http://new.gbca.org.au/product-certification-schemes/

*Table 1 - Max TVOC Limits for Paints, Adhesive and Sealants*

| Product Category | Max TVOC content in grams per litre of ready to use product |
|---|---|
| General purpose adhesives and sealants | 50 |
| Interior wall and ceiling paint, all sheen levels | 16 |
| Interior wall and ceiling paint, all sheen levels | 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 |

Compliance with Carpets is met by demonstrating the carpet meets the requirements of Table 4 or is recognised under a Product Certification Scheme - http://new.gbca.org.au/product-certification-schemes/

*Table 2 - Carpet Test Standards and TVOC Emissions Limit*

| Compliance Option | Test Protocol | Limit |
|---|---|---|
| ASTM D5116 | ASTM D5116 - Total VOC limit* | 0.5mg/m2 per hour |
| | ASTM D5116 - 4-PC (4-Phenylcyclohexene)* | 0.05mg/m2 per hour |
| ISO 16000 / EN 13419 | ISO 16000 / EN 13419 - TVOC at three days | 0.5 mg/m2 per hour |
| ISO 10580 / ISO/TC 219 (Document N238) | ISO 10580 / ISO/TC 219 (Document N238) - TVOC at 24 hours | 0.5 mg/m2 per hour |

* Both limits should be met when testing against ASTM D5116

Compliance with engineered wood products is met by demonstrating the product meets the requirements of Table 5 or is recognised under a Product Certification Scheme - http://new.gbca.org.au/product-certification-schemes/

*Table 3 - Formaldehyde Emission Limit Values for Engineered Wood Products*

| Test Protocol | Emission Limit / Unit of Measure |
|---|---|
| S/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) | ASTM D5116 (applicable to high pressure laminates and compact laminates) |
| 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 |

*mg/$m^2$hr may also be represented as mg/$m^2$/hr.

**The test report must confirm that the conditions of Table 3 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.

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