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Project: **29-33 Market Street Merimbula**

Report: **Sustainability Management Report**

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SECTION 1 - BASIS OF ASSESSMENT

1.1 The Project

The proposed development at 29-33 Market Street, Merimbula is a five storey mixed use development comprising ground floor commercial/retail spaces and four levels of residential units above.

The Sustainable Design Management Plan is a holistic review of the design to identify beneficial, easy to implement and best practice initiatives that have been incorporated into the design, which reflect the approach and guidelines used during the design phase of the project.

This SDMP is based on the Bega Valley Development Control Plan guidelines and highlights ESD initiatives included in the design using the structure outlined in the control plan guidelines.

SECTION 2 – ESD Initiatives

2.1 Energy Efficiency

Objective: to ensure the efficient use of energy to minimise total greenhouse gas emissions, to reduce energy demand and reduce ongoing energy costs.

2.1.1 Operating Energy

LED lighting will be specified for all lighting within the development along with specific clauses in the fit-out specifications for high energy efficiency appliances.

The HVAC system(s) will have a high energy efficiency ratings and will incorporate automatic turn off options (time switches, motion sensors and key card access) to ensure any air-conditioning is not operating when the area is not being used.

Energy efficient fittings and fixtures will be used through the project.

2.1.2 Metering

All the residential and Commercial/Retail units will be separately metered to ensure energy usage data is available or software to facilitate the accounting of usage by individual units.

2.1.3 Lighting

The use of LED lighting through out the building will be specified.

Time switches and motion sensors are included in the car park levels

2.1.4 External Shading

Fixed Shading devices and balconies are included in the design to minimise summer glare and summer sunlight penetration into the units, while maintaining good daylight access all year round.

2.1.5 HVAC zoning and control

All the residential units and Commercial/Retail spaces will have individual air-conditioning controls to maximise the efficiency of the HVAC system

2.2 Water Efficiency

Objective: to ensure the efficient use of water and minimise potable water use, and to encourage the collection and reuse of rainwater.

2.2.1 Water conservation

Water conservation strategies will include water efficient fittings and appliances

2.3 Ecology

Objective: to enhance biodiversity, natural landscapes, visual amenity and neighbourhood character, through ecological sustainable landscapes, indigenous vegetation and productive gardens

2.3.1 Landscape Design

The design of the landscaping and public domain has been undertaken with an eye to the SPIIRE Landscape Masterplan and Council's vision for the future of Market Street.

Street trees have been provided along Market Street to tie in with the LMP and provide amenity for the building and pedestrians alike.

The building has been purposefully setback from the boundary along Market Street to extend and augment the public domain in this area, giving precedence to pedestrian activities.

The greening of the façade through cascading planting and climate and location suitable plant selection landscaping.

2.3.2 Indigenous vegetation

The site is comprised of commercial premises which is the predominant built form or hardstand. Due to the site's current uses, all native vegetation has previously been cleared however the landscaping has been design with a view to indigenous vegetation planting

A mixture of low maintenance plants and trees with an extensive range of native and indigenous plants have been used.

2.3.3 Productive Gardens

The level 1 garden will accommodate zones for composting of food waste the provision of herb/ vegetable gardens in the communal open space.

2.3.4 Natural Landscapes

The apartments are in close proximity to the foreshore and Lake Merimbula to the east of the site, providing further access to green space and recreational facilities.

2.4 Storm Water Management

Objective: to reduce the impact of and improve the quality of storm water run-off with water sensitive urban design and stormwater re-use.

2.4.1 Storm water capture and use

Water tanks will be included in the final design to capture rain water for the use in landscape watering

2.5 Transport

Objective: to minimise car dependency and ensure the built environment is designed to promote the use of public transport, walking and cycling.

2.5.1 Provide Bike Storage

Dedicate bike storage areas for residents have been allocated in the car park area.

2.5.2 Public Transport

The mixed use design will assist with discouraging car dependence with ground floor retail and residential units above and close proximity to services, facilities and public transport.

The site location within the Merimbula town centre is in close proximity to a range of current services and public transport options.

Bus stops to the east and west are located nearby along Market St and Park St respectively and provide access to the Sapphire Coast on demand bus routes and good access and proximity to public transport.

2.6 Waste Management

Objective: to ensure waste avoidance, reuse and recycling during the construction and operation stages of the development, and ensure long term reusability of building materials

2.6.1 Construction Waste Management

A waste management plan has been developed by MRA consulting for the construction phase to separate waste for recycling and reuse where appropriate.

2.6.2 Operation Waste Management

A waste management plan has been developed by MRA consulting for the ongoing operation of the building and will include separation of recycling and landfill waste streams.

Allowance for waste storage has been made on the ground floor via a large BOH area near the loading dock area. Waste chutes and associated rooms have been included on the residential levels along with residential waste rooms at the ground level.

2.6.3 Storage for Recycled Building Waste

A waste management plan has been developed by MRA consulting developed for the construction phase to separate waste for recycling and reuse where appropriate

2.7 Indoor Environment Quality

Objective: to achieve a healthy indoor environment quality for the wellbeing of the building occupants, and to provide a naturally comfortable indoor environment that will lower or minimise the need for artificial lighting, mechanical ventilation and heating/cooling devices.

2.7.1 Apartment Design Guidelines (ADG)

The development has been designed to comply with the key design criteria in the ADG, including natural cross ventilation, solar access, and room layout and sizes.

2.7.2 Thermal Comfort

The building fabric and services have been designed to meet or exceed the Section J energy efficiency requirements and the BASIX requirements to provide a fit for purpose thermal environment across the whole year.

2.7.3 Natural Ventilation

All habitable room have natural ventilation with single aspect units maximising the natural ventilation with large opening where possible.

The building design splits the units into three separate blocks which enables a high number of units to have cross flow ventilation to improve the internal environment and enhance the thermal comfort of the units

2.7.4 Daylight & Sunlight

The building design and unit design allows for maximum natural light and appropriate direct sunlight penetration for each unit to ensure daylight is a significant feature of the design, and direct sunlight is used to enhance the indoor environment.

Direct winter sunlight has been incorporated into the unit design and the unit layouts to ensure the maximum number of units receiving direct winter sunlight.

Daylight (including from indirect sources) has also been maximised where direct winter sunlight is limited.
Shading and glare control has been incorporated where possible to reduce direct summer sunlight and glare impacts.

2.7.5 External Views

The building location and design will incorporate external views to the eastern vista to the lake. All units will have balconies and external views to the street or lake.

2.7.6 Hazardous Materials and VOC

The design will specifically avoid the use of high VOC materials in the construction and fit out specification

2.7.7 Acoustics

The design of the residential units and the proposed set backs at each level from the street will minimise noise transfer.

Noise treatments will be included where units are in closer proximity to or facing noise sources as required.

2.8 Innovation and Area

Objective: to encourage innovation technology, design and processes which positively influence the sustainability of buildings and the surrounding area.

2.8.1 - Oversize

In addition to the large communal open space at level 1 & 2, all apartments will have significantly oversized balconies with planters accessed off living areas.

2.8.2 – additional open space

The development includes an integrated landscape design featuring level 1 & 2 internal courtyards which provides a generous and verdant communal open space along with planters to balconies facing the street. The landscape design enhances amenity for residents and improves the building's appearance from the street.

2.8.3 – building longevity

The design proposal is structured around the concepts of sustainability and building longevity and incorporates a number of innovative strategies to achieve a positive environmental outcome:

- The quantity of northern facing units have been maximized
- The majority of apartments will receive at least 2 hours of sunlight in midwinter
- All apartments will be naturally ventilated with the majority of apartments cross ventilated
- Where possible the communal corridor spaces will be both naturally ventilated & lit
- Low-maintenance, long life-cycle, recyclable materials have been incorporated in the design wherever possible.

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