efficient LIVING

Ecologically Sustainable Design Report
Roseville RSL Club – 62-66 Pacific Highway, Roseville

Prepared for: Hyecorp Property Group
Attn: Adrian Giardina

Prepared by: Efficient Living Pty Ltd

Issue	File Ref	Description	Author	Date
A	21-2687	ESD Report	TD	30.11.2022

Sustainable Building Consultants
p. 02 9970 6181 e. admin@efficientliving.com.au
www.efficientliving.com.au

Ecologically Sustainable Design Report

Project summary

The proposed development is for the renewal of the current Roseville RSL into new club facilities as part of a mixed use project on the 1,375 sqm site.

The new building over 7 storeys with roof terrace, incorporates the new club on the ground floor together with six levels of apartments.

- Approximately 741 sqm of club facilities
- 37 apartments from 1-4 bedrooms
- All apartments to be at least silver level Livable Housing
- Four basement levels will be provided for club and apartment parking.

Figure 1 below is the proposed northern elevation of the mixed use apartment building.

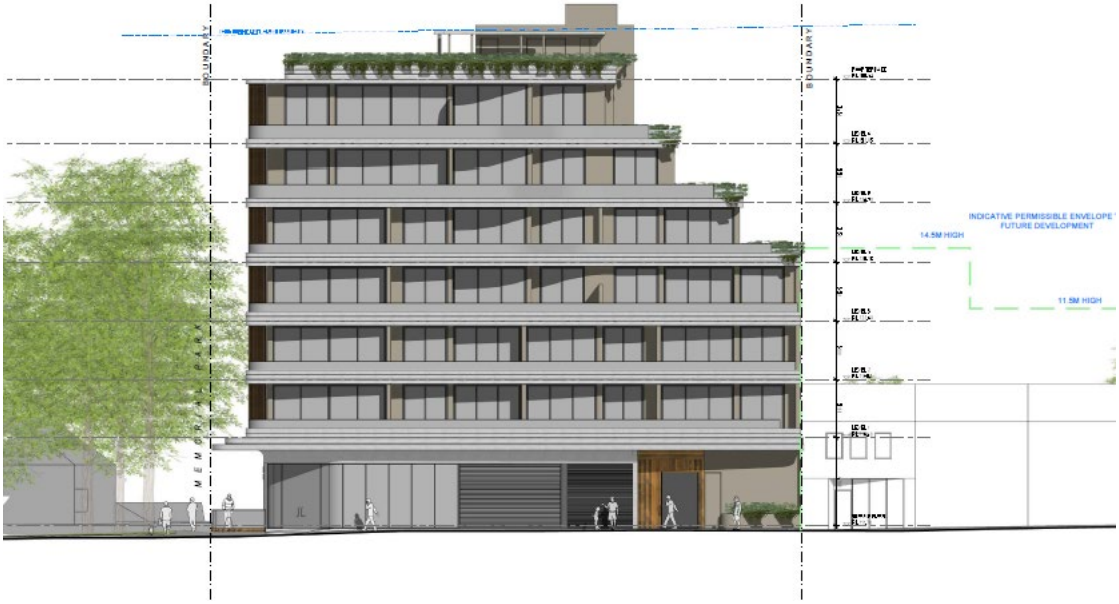

Figure 1 Proposed northern elevation

Purpose of this report

The aim of this report is to set out how the project can meet statutory and other development objectives and controls for ecologically sustainable development.

This Sustainability Statement has been prepared for the DA submission to Ku-ring-gai Council to affirm the project's commitments to the sustainable development aspirations of the local area.

Key state and local ESD requirements

NSW BASIX SEPP

The proposal must comply with NSW BASIX standards. The BASIX Index requires that all new and substantially renovated residential dwellings achieve improved ESD performance specifically in respect to improved thermal performance, reduced energy demand/ reduced carbon emissions and water efficiency/potable water savings.

The specific targets for this project include:

- Thermal performance of approximately 5.5 stars under the National Housing Energy Rating System
- Energy/carbon emissions savings of at least 25% compared to a 2005 NSW benchmark
- Water savings of at least 40% compared to a 2005 NSW benchmark

NSW Apartment Design Guide – SEPP 65

SEPP 65 requires apartment projects to consider the design objectives and guidelines in the Apartment Design Guide.

Part 4 of the Apartment Design Guides requires consideration of:

- Solar and daylight access and natural ventilation
- Energy efficiency
- Water management and conservation

NCC Section J

The non-residential RSL Club component of the development will need to comply with NCC Section J considering:

- J1 Building Fabric;
- J3 Building Sealing;
- J6 Artificial Lighting & Power;
- J7 Hot water & Pool Plant;
- J8 Facilities for Monitoring Energy.

Ku-ring-gai DCP (effective October 2022)

Part 7 – Residential Flat Buildings, Section 7C Building design and sustainability

- Compliance with NSW Apartment Design Guide and NSW BASIX
- Laundry and air clothes drying facilities

Part 8 – Mixed use development, Section 8C Building Design – non residential component

- Solar access and daylight controls for office spaces (including mitigating impacts on surrounding dwellings)
- Natural ventilation controls including operable windows for office spaces

Part 23.2 Green Buildings

Part 23.3 Sustainability of Building Materials

The proposal must consider opportunities for:

- recycled or recyclable materials with low embodied energy
- materials that come from renewable sources
- materials that generate a lower environmental cost over time
- materials with a low life cycle cost and/or high durability
- production methods with a low environmental impact

Part 23.7 Waste Management

ESD outcomes and initiatives

The following outcomes and initiatives either meet or exceed the required state and council requirements for the proposal.

Thermal performance and passive design – apartments

- Thermal performance has been optimised and modelled using NatHERS accredited software – the average NatHERS rating for apartments is approximately 6.1 stars and is compliant with BASIX (please refer to the BASIX certificate and report).
- 73% of apartments achieve Apartment Design Guide solar access – slightly exceeding the standard.
- 65% of apartments achieve Apartment Design Guide cross ventilation – slightly exceeding the standard.

Thermal performance - club and base building

- NCC Section JV3 modelling was carried out to optimise the thermal performance of the club spaces.
- The JV3 model showed an approximate 12% improvement in thermal performance verses a reference case.
- Please refer to the JV3 report for specific outcomes.

Energy efficiency – apartments

- The energy efficiency outcome for apartments exceeds BASIX requirements with a score of BASIX 29.
- Please refer to the BASIX Certificate and report for specific commitments.

Energy efficiency - club and base building

- Improved energy efficiency measures for the club and base building will include:
  - LED lighting throughout all common areas, carparks and outdoors areas
  - Common area lighting controls: daylight sensors, time clocks, motion sensors, dimmers and zoned switching
  - Carpark ventilation to be connected to CO^2 monitors and VSD fans
  - Minimum R1.0 piping insulation to all hot water ring mains
  - Provide separate energy meters allowing monitoring for; air-conditioning, lighting, appliance power, hot water heating, lifts and other ancillary power
  - On-going commissioning carried out to optimise buildings energy efficiency into the operational phase

Onsite renewable electricity

- A suitable north facing roof area has been nominated for installation of a PV array – final sizing and meter connections will be subject to detailed design proceeding construction certificate.

Water efficiency – apartments

- The water efficiency outcome for apartments meets BASIX requirements with a score of BASIX 40.
- Important BASIX commitments include:
  - Water efficiency rating of key appliances (dishwasher 4 star, toilet 4 star, taps 5 star, shower 3 star)
  - Implementation of under surface and timed irrigation (or moisture monitor controlled irrigation)

Water efficiency – club and base building

- Water efficiency rating for taps of 5 stars, urinals 5 star, showers with flow less than 7L/min, toilets 4 stars.

Green transport options

- The location of the proposal has excellent public transport links including:
  - 150m to Roseville train station providing frequent services to the Sydney CBD, Chatswood CBD and other major centres
  - Adjacent to the Pacific Highway providing multiple local and suburban bus services
  - Within easy walk of daily and weekly shopping needs and services
  - Within easy walk and/or bike to multiple passive and active recreational spaces
- Provision of 7 bike parking spaces.
- Electrical supply capacity to the project has been confirmed to support electric vehicle charging capacity for at least one parking spot per apartment (and assuming EV electrical demand will be load managed and timed to mitigate impacts on peak evening demand).
- Delivery of EV charging equipment will be subject to apartment purchaser demand.

Waste Management

- A Construction Waste Management Plan will be developed for the proposal targeting at least 80% recycling of construction related waste materials.
- Ongoing operational waste will be streamed and enter the recycling processes provided by Ku-ring-gai Council.
- Ongoing waste management will be facilitated by dedicated club and residential garbage rooms able to provide for separate waste stream collection.

Sustainable building materials

Sub structure and super structure

The sub structure and super structure of the building is predominantly reinforced concrete and masonry.

- In the detailed design/tender phase of the project options for reduced carbon intensity concrete (such as Holcim Ecopact and Boral Envisia) will be considered for application.

Other structural elements

Timber structural elements of the building will be targeted for FSC certification.

Supplier credentials for reduced and offset carbon processes will be considered in the detailed design/tender phase of the project (ie: Brickworks range of products benefiting from Brickworks overarching Climate Active Carbon Neutral certification).

Façade and external fittings and equipment

In the detailed design/tender phase of the project external fittings and equipment will be specified considering the following factors:

- Long life span durability
- Recyclable material content
- Supplier credentials for reduced and offset carbon processes

Internal fit out and finishes

- Key VOC risk finishes targeted for low VOC outcomes – carpets, engineered flooring, paints and other major internal surfaces
- Targeting products with established ability to be recycled at end of life
- Targeting products from suppliers with credentials for reduced and offset carbon processes