

**Ecologically Sustainable Development (ESD) Report  
Eastern Creek Retail Centre, Stage 1  
Corner of Rooty Hill Road (South) and Beggs Road Eastern Creek**

This report has been prepared to support State Significant Development Application SSD 8588 for the detailed design and construction of a convenience retail shopping centre, medical centre, gym and associated car parking on Lot 2, Rooty Hill Road South, Eastern Creek. The assessment undertaken in this report has been prepared to address the following Secretary's Environmental Assessment Requirements (dated 26 July 2017) and the relevant conditions of consent under Concept Approval SSD 5175

This ESD Report provides details of the design initiatives adopted in order to reduce the environmental impact of a proposed retail shopping centre. This report will specifically address:

- How ESD principles will be incorporated in the design, construction and ongoing operation phase of the development
- How the proposed development responds to sustainable building principles and best practice, and improves environmental building performance through energy efficient design, technology and renewable energy.
- The measures that would be implemented to minimise consumption of resources, water and energy, including an Integrated Water Management Plan which details any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.

The subject site has a total building area of approximately 10,000 m<sup>2</sup>. The proposed building is a suburban retail centre that includes a large format retail centre and speciality tenancies.

The development is targeting a Green Building Council of Australia 6 Star Green Star rating (Design and As-built v1.1). This represents world leadership in sustainable design. The Green Star framework will provide a strategy to ensure that the design considers sustainability, best practice management processes are implemented during the construction phase and that commissioning and building tuning is implemented to ensure that development operates optimally.

The sustainability concepts of the development are based on 4 categories, and the key initiatives that will be considered are:

1. Energy and Greenhouse gas emissions
  - Passive design solutions including façade optimisation, with good day lighting, glare control and appropriate shading to reduce energy consumption
  - Use of LED lighting and automatic sensor controls
  - Use of a centralised HVAC system to improve energy efficiency opportunities
  - Maximise the use of renewable by considering the use of solar panels
  - Future proofed design with a battery storage room for future capacity

## 2. Water

- Water demand reduction through the use of high WELS rated urinals, dual flush WCs and low flow tap ware
- Rainwater collection to provide non-potable water to service WC and urinal flushing and landscape irrigation
- Sub-soil landscape irrigation system to minimise evapotranspiration from the soil
- Use of air cooled chillers to eliminate the use of water in HVAC
- Use of native plantings for landscaping

## 3. Material use

- Prioritise the use of sustainable products such as ones with low embodied energy, recycled content or are certified with a third party sustainability label.
- Use of FSC certified timber
- Use of responsible PVC

## 4. Construction Phase

- Diversion of construction and demolition waste from landfill of at least 80% by mass
- A comprehensive Environmental Management Plan that aligns with the NSW EMS Guidelines will be developed to provide a framework to reduce the environmental impact of the development

This report has been prepared by Andrew Thai (Sustainability Manager, Development) from Frasers Property Australia. Andrew is a Green Star Accredited Professional and has over 6 years of experience.



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