

Lots 1 and 3

In order to obtain a certified Green Star rating, a project must comprise at minimum 80% (by GFA) of the relevant building type. Lot 1 comprises less than 80% Class 6 retail and less than 80% Class 5 Office, and is therefore not eligible for a certified Green Star rating using the Green Star Office or Green Star Retail Centre tools. While Lot 1 is eligible for certification under the Green Star Mixed-Use rating, this tool is still in the PILOT stage and therefore certification is not available. Lot 3 is eligible for the Green Star Multi-unit Residential rating tool however this rating is similarly still in the PILOT stage.

As outlined in the following sections, however, many of the Green Star principles have been adopted including considerations of energy, water, materials, transport, emissions, indoor environmental quality and environmental management. These commitments exceed the minimum requirements for this development in terms of Environmentally Sustainable Design, and will ensure that the project will have a reduced environmental impact.

Statement of Sustainability Commitments

The following Environmentally Sustainable Development (ESD) initiatives will be implemented for the proposed Clemton Park Village development, located at 60 Charlotte St in Clemton Park.

Energy

- Hallways and lobbies will be partially naturally ventilated. Car park ventilation will be fitted with CO monitoring and VSD control;
- Enclosed car park areas should be designed with Variable Speed Drive (VSD) and carbon monoxide (CO) monitoring, as well as passive supply or passive exhaust where possible;
- A highly efficient lighting design and control strategy will reduce artificial lighting energy consumption and allow maximum advantage to be taken of daylight;
- Fluorescent lighting to the car park, common areas, hallways and plants rooms;
- Efficiency controls including timers and motions sensors to car park, common areas and plant rooms;
- Where air-conditioning is provided to residential units, efficient AC units will be installed;
- Residential bathrooms and laundries will be individually ducted to the façade, with efficiency controls, to avoid excessive fan use from central systems;
- Roof-mounted solar panels will provide hot water for all residential domestic hot water needs, as well as pool heating for the seniors living. These systems will typically deliver approximately 60% of yearly water heating energy, with a gas back-up for security of supply during night-time or cloudy periods;

- Building form and fabric have been carefully considered to balance solar heat gains, daylight, glare and views to outside. Passive design strategies include external shading, insulation for walls and ceilings, and high-performance glazing where necessary;
- All residential apartments to have energy-efficient fluorescent lighting for bedrooms, bathrooms, laundries, toilets and hallways;
- Gas cooktop with electric oven;
- 3.5 star rated dishwashers;
- 3.5 star rated clothes washers;
- 2.0 star rated clothes dryers.

Water

- Water efficient fittings will be installed across the development, including:
 - 4 star wash hand basins & kitchen taps;
 - 4 star WC's;
 - 3 star showerheads;
 - Low-flush urinals.
- 4-Star water efficient dishwashers;
- 4-Star water-efficient clothes washing machines;
- Where utilised, cooling towers to have 6 cycles of concentration or greater, reducing water consumed in air-conditioning by up to 50%, as well as reducing chemical use in treatment;
- Rainwater will be harvested from all residential rooftops for use in the following applications:
 - Common area landscape irrigation;
 - Private landscape irrigation;
 - Car-washing & wash-down.
- Native, drought-resistant planting will be maximised to reduce water consumption used in irrigation.
- Rainwater capture from rooftops for reuse in buildings will reduce stormwater runoff as well as mains potable water use;
- Extensive stormwater detention will minimise runoff quantities. The use of permeable surfaces will be considered where suitable - An area of planting between Precinct E and the culvert has been identified as a suitable location for a bioswale, to be further developed. There may also be potential for such an approach in other locations.

Amenity & IEQ

- Wall and roof insulation not only reduce heat gain and loss, but will also moderate radiant temperatures from the walls, floor and ceiling;
- Building facades with large areas of glazing will have a combination of external shading and high-performance glass to reduce heat transfer and radiant temperatures in proximity to the windows. Balcony overhangs provide effective external shading for residential buildings;
- Internal noise will be restricted to acceptable levels in accordance with Australian Standard AS/NZS 2107:2000, including general building and services noise;
- Indoor air quality will be maximised by selecting finishes with a low impact on indoor air quality including paints, carpets and adhesives with low VOC emissions and low-formaldehyde emissions in composite wood products.

Transport

- Bicycle facilities will be provided throughout the site to encourage active zero-emission means of transport. These are shown for the concept plan in the Basements of Lots 1 and 3;
- Car-parking has been minimised on-site to discourage the use of emissions-intensive private vehicle use;
- A new bus-stop will be provided to the site to encourage the use of public transport, a low-emissions mode of transport. A commitment is being sourced from the bus service provider to reroute a bus service to serve the site;
- A car-sharing scheme will be implemented for commercial and retail tenants to reduce private vehicle use and emissions.
- Please see the T-map for further details.

Emissions

In addition to the reduction in greenhouse emissions as a result of lower on-site energy usage, emissions to land, air and water will be minimised in the following ways:

- Where available, thermal insulation products will be selected which have a low Ozone Depletion Potential in their manufacture and composition, reducing the impacts of insulation on the atmosphere;
- 100% of refrigerants by volume will have an Ozone Depletion Potential of zero; and integrated refrigerant leak detection will ensure early identification of leaks;
- Estimated wastewater discharge to sewer will be significantly reduced relative to a standard building through the implementation of water efficiency measures;
- Stormwater management procedures such as OSD and gross pollutant traps will improve stormwater runoff quality and reduce peak stormwater flows from the site;
- External light pollution will be controlled by careful lighting design, in accordance with AS 4282-1997.

Materials Selection

Preference will be given to environmentally responsible materials during the selection process, according to the following principles:

- Avoidance of ecologically sensitive products (such as scarce minerals and old-growth forest);
- Selection of materials with a low embodied energy & high recycled content;
- Low toxicity material selection;
- Low impact on the indoor environment;
- Durability, flexibility and recyclability;
- Emissions in manufacture and composition, including greenhouse gases and ozone depleting substances;
- Waste reduction – utilising prefabricated construction can minimise construction work and waste on site.

The following initiatives will be implemented:

- Timber will be sourced from sustainable plantations such as FSC certified or reused products;
- Finishes will be selected with a low impact on indoor air quality including paints, carpets and adhesives with low VOC emissions and low-formaldehyde emissions in composite wood products;

Environmental Management

- Prior to construction, an Environmental Management Plan (EMP) will be developed to regulate the environmental impacts of the development during construction. This will identify potential environmental impacts and strategies to mitigate these impacts, as well as outlining methods for auditing and tracking the impacts and responsible parties;
- A building users' guide will be developed to inform and educate building users, residents and tenants on how to capture and promote strong on-going environmental performance;
- Remediation will be undertaken for areas of the site considered to be contaminated
- A waste management plan will be developed to reduce waste during demolition and construction. Waste recycling targets have been set for construction and demolition waste: A minimum of 60% of all demolition waste and 50% of all construction waste will be diverted from landfill.