



JCU's newest student accommodation is Buralga Yumba located at JCU Townsville, Bebegu Yumba campus, Douglas. Derived from the Birrigubba language of the Bindal Plife-cycle approach to improve performance and promote resource efficiency, and to mitigate the urban heat island effect through high-reflectance roofs (except where this might cause glare to residents), rooftop garden, solar panels, light coloured pavement, planted areas and shaded areas.

Construction and material selection

Examples of measures introduced to reduce environmental impacts of Buralga Yumba include:

- Greener concrete through use of additional supplementary cementitious material additives such as fly ash or slag by-products
- Responsibly sourced timber and steel
- Structural design elements to reduce concrete volume such as through pre-tensioned slabs.

Additionally, materials used within the indoor spaces of Buralga Yumba were selected to optimise indoor air quality. This is accomplished by reducing or eliminating the presence of materials, adhesives and sealants (among others) which emit gasses or volatile organic compounds which have adverse effects on human health. Air quality testing after construction was undertaken to ensure that spaces are performing to a high standard.

Water efficiency and landscape design

Achieving high levels of indoor and outdoor water efficiency was an important focus for the development. Landscape plant selections have focused on the use of native, adapted, and drought-tolerant plants which significantly reduces the need for irrigation while better integrating the building site into its natural surroundings and attracting native wildlife.

Burrallga Yumba will further reduce potable water consumption by supplying landscaping irrigation requirements 100% with recycled water once this connection is available.

Energy efficiency

Burrallga Yumba is energy efficient, and includes the following design features:

- Renewable energy: provided by an 87 kW rooftop solar panel system
- Passive design: maintaining comfortable indoor temperatures through high performance glass, insulation and shading
- Air conditioning using the JCU Townsville, Douglas 12.5 megalitre energy-efficient chilled water air conditioning system
- Efficient LED lighting
- A domestic water system with highly efficient propane-fired instant hot water heaters.