

4.8 Sustainability plan

Sustainability is important for Varsity Station Village because the Village, as a transit oriented community, is part of the Queensland Government's policy solutions for achieving more sustainable transport and urban form in south east Queensland.

Varsity Station Village will embrace sustainability throughout its planning, design and development. In this way, the Village itself will exemplify the characteristics of sustainable communities introduced by the South East Queensland Regional Plan.

The Master Plan's approach is to reflect sustainability throughout the plan, not to treat sustainability as a separate component. Nonetheless, this section provides some detail about priorities for sustainability. This approach has been informed by advice provided by Maunsell consulting firm.

Sustainability within the Village will revolve around three integrating themes. Varsity Station Village will adopt:

- green choices - movement within the village, and to and from the village, should be mainly by walking, cycling and public transport
- green colour - incorporating a greening strategy that will make the village stand apart from other urban localities as particularly vegetated and lush
- green shape - built elements of the village will be perceived as being green in the sense of green buildings, infrastructure and development.



4.8.1 Transport sustainability

The efforts made in this Master Plan to promote a pedestrian scale development, provide for cyclist and pedestrian connectivity and establish land activities which support the rail station all aim to at achieve excellent sustainable transport outcomes.

A design priority is to make it clear that people-powered transport (walking and cycling) has the priority and will mix with traffic, while still ensuring an effective bus and train interchange. Green travel helps lower the community's and individual's carbon footprints, as well as contributing to an active and healthy community.

In our subtropical climate, and with the need to address the impacts of climate change, adequate shade and cover from occasionally intensive storm events is essential to make cycling and walking a day-to-day possibility. A high proportion of pedestrian movements within the Village will be possible under shade and weather protection. Those accessing the rail station or other Village businesses by cycling from neighbouring communities will need end-of-trip facilities.

The Village will be an 'oasis' in terms of its lushness - but it will not be an island. The Village needs to be well connected with its surrounding neighbourhoods. It should operate both as a hub for accessing public transport and as a destination in its own right.

The rationale for limiting and controlling car parking is to protect pedestrians, reinforce the priority on non-car transport and establish an urban form that is not dependent on private motor vehicles. As the Village becomes settled, it would be appropriate to explore and adopt car and bike sharing systems and a local delivery service for retail outlets.

Much of the movement should originate and terminate within the Village. Residents should be able to meet most of their weekly needs without leaving the Village, and workers or commuters passing through should be able to meet most of their convenience needs.

4.8.2 Building performances

The Village will take a 'green' shape through its buildings ('green buildings') and community infrastructure, and will include liberal provision of high quality public spaces. The Village aims to be a step ahead of where the local market is in terms of sustainability rating schemes.

Varsity Station Village will aim for all six 'leaves' in the Urban Development Institute of Australia's Envirodevelopment Scheme. When completed, the Village will also seek the equivalent of 'Australian Excellence' from the Australian Green Infrastructure Council rating scheme for overall civil works, including roads, services and water and wastewater.

At present, the Green Building Council of Australia has rating tools or pilot rating tools for nearly all of the building types that would be included in the Village – notably, office design, multi-unit residential and shopping centre. The five-star level equates to 'Australian Excellence' across all these tools. Accordingly, all buildings should be encouraged to achieve five stars (where Green Star tools apply). Also, the means by which land is provided to developers for development and other mechanisms (e.g. the Local Area Plan) should provide incentives for the achievement of at least one six-star building in each category. Developers will also be encouraged to score Green Star points between the star levels - that is, not cutting points back to the maximum achievable star rating.

In keeping with the Envirodevelopment Scheme, the Village will need to have effective community institutional structures (for example body corporate, coordinating committees, design review committees, and so on). These should be introduced at the earliest possible times to impose a whole-of-community viewpoint throughout the full development of Varsity Station Village.

These arrangements will allow for community-wide initiatives, such as those involving waste management. Recycling facilities for glass, paper, steel, aluminium, plastic and green waste (types 1-5) should be readily accessible by all residents, commercial operators and visitors. The development should include communal green waste facilities, ideally including mulching, compost, vermiculture and investigate opportunities for biomass energy.





4.8.3 Energy use

Climate change and the reduction of greenhouse gas emissions are dominant considerations for sustainability, and are likely to increase in importance over the development horizon for Varsity Station Village.

Carbon neutrality and the local physical reduction of greenhouse gas emissions are valid goals for the Village. The development should consider one or more significant scale renewable energy solutions. Conceptually, a biomass based co- or tri-generation plant (possibly using recycled biomass from within the community) with district cooling, would be an ideal way to support the achievement of high GreenStar ratings for buildings, and reduce the Village's carbon footprint. Whether or not biomass cogeneration is possible is yet to be determined, however, significant solar-electricity installations are suited to the site's location, together with solar hot water systems.

This energy opportunity should be investigated, including the possibility for third parties to provide and operate these facilities.

4.8.4 Water management

The Master Plan incorporates an overall concept for water resources in keeping with the notion that all water should be considered a valuable resource and the efficiency of its use should be maximised. The water infrastructure should include a recycled or non-potable grade of water for non-potable uses, such as toilet flushing, laundry and garden irrigation.

Where feasible, water should be treated to a standard suited to on-site uses (for example possible grey water treatment for re-use in subsurface irrigation).

A related opportunity for on-site water use is Green Roofs. Opportunities to accommodate up to 2,000m² of green roof areas should also be investigated.

