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## **Schedule 2      Sustainability Principles**

The following sustainability principles apply to the extent that they are not inconsistent with the requirements contained in the Functional Design Brief. The Functional Design Brief takes precedence in the event of any inconsistency.

*Phase 2 Returnable Schedule 5: Design: Concept, design, approach and program - Continued...*

**Environmental sustainability**

The design of a building for environmental sustainability needs to address, but is not limited to, energy, water, waste and landscaping.

**Energy**

The design of the building maximises the use of passive energy and minimises the need for non-renewable energy.

The building includes passive solar design features such as orientation, ventilation, insulation and shading to ensure higher energy efficiency and help the environment, with less carbon emissions.

Optimisation of natural ventilation via breezeways and cross ventilation. Use of "Breezeway doors" to each apartment, a unique combination of ventilated screen doors and solid front door, an idea borrowed from the traditional lightweight coastal architecture (this feature has been successfully used by TVS in the Village Centre at Kelvin Grove, Brisbane)

Off street bicycle parking and bicycle storage to encourage low energy transportation;

Sunlight control to reduce glare and heat sinks creating thermal comfort for building users;

Deep covered external living spaces;

Cross ventilated residential corridors to promote well ventilated internal spaces

**Energy**

Naturally lit residential lobbies

Reduced lighting energy and water loads;

Minimum 4 Star BERS energy rating energy units;

Reduce reliance on power grid via gas cook tops, solar hot water heating and fans;

Sun screening and living walls to reduce heat loads.

**Water**

The design of the units and outdoor areas, and its fixtures and fittings, saves water.

**Materials and Waste**

The design of the units considers the efficient use of building materials. It takes future needs into consideration so that it minimises the requirement for modifications and consequent material wastage.

A refuse collection regime that allows separation of waste at the refuse collection point rather than use of a chute system. Rubbish is collected in general and recycling bins at a central refuse collection room for removal.

**Site Impact & Biodiversity**

The siting of the building and the landscaping considers the natural features of the site, including topography, the local climate, local flora and fauna, and natural and cultural features.

The landscaping requires minimum maintenance and water, inhibits soil erosion, and minimises storm water contamination.

*Phase 2 Returnable Schedule 5: Design: Concept, design, approach and program - Continued...*

Sustainability Goals that the criterion helps to achieve.

Innovative features proposed include the following:

Element	Goals
Social sustainability	The design of a building for social sustainability needs to address, but is not limited to, human health and comfort, safety, security and universal design, as well as addressing issues of the broader community.
Human Comfort & Health	The building provides an internal environment that is thermally comfortable while at the same time minimises the presence of toxic chemicals within the building. Improved air quality by increased use of natural ventilation and reduced need for air conditioning.
Safety	Ongoing maintenance is considered in the design to reduce risks of injury. Passive visual surveillance is integrated in the design. The likelihood of injuries occurring in and around the building for the aged is reduced. The design minimises the possibility of accidental falls, burns and poisoning.
Security	The building uses designs, fixtures and fittings to reduce crime and protect the building from malicious intruders. It enables informal surveillance of the street. Urban design elements to encourage community safety;
Universal Design	The building is versatile and comfortable for people with varying physical abilities and at different stages of their lives. It is easy to move around the building, and the operation of fittings and fixtures caters for people with varying abilities.
Community Building	The building contributes to an improved community identity, allowing for neighbour privacy, accommodating the neighbour's field of view, and contributing to safety. Edible gardens for community use; Green walls to soften the urban environment Artwork to engender community pride Internet/Intranet connections for increased community connectivity;



*Phase 2 Returnable Schedule 5: Design: Concept, design, approach and program - Continued...*

Economic sustainability	<p>The design of a building for economic sustainability needs to address, but is not limited to, initial construction, ongoing maintenance and running, and future modification costs.</p> <p>The design of the building considers the impact of the building materials on the initial construction cost.</p>
Initial construction	<p>The design considers standard sized products and the use of recycled and readily available building materials.</p>
Ongoing maintenance and running	<p>Selection of building materials considers the long-term maintenance and running costs. The design includes durable and low maintenance materials. Multi functional elements provide value added and flexible options for the future;</p> <p>Solar heating to water and pools to reduce electricity consumption;</p> <p>Rain water harvesting to offset water consumption costs;</p> <p>Building management initiatives to reduce body corporate costs.</p> <p>Solar power generation</p> <p>Off street bicycle parking and bicycle storage to encourage low energy transportation;</p>
Future modification	<p>The design minimises the need for future modifications to cater for the occupants changing mobility requirements.</p>
Community Costs	<p>The design of the building works, with the design of the wider community, to minimise the costs to the broader community, including for example utility costs and transport costs.</p>