

Mortlake - Sustainable Design Statement

Concept Planning

Aust Equity Pty Ltd

Prepared for

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22 December 2010

Reference: 10094.01

Revision: 01

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Document control

Revision	Date	Revision details	Author	Verifier	Approver
01	22 Dec 2010	Final Issue – Design Statement	BMD	BK	BMD

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1. **Mortlake – Sustainability Design Statement - (Natural environment, People, Water and Energy)**

This Sustainable Design Statement has been prepared for the Concept Design Planning submission for Mortlake Development (MP10_0154). The status of the design indicated in this report reflects the developmental stage of the project.

The related DGR's for Mortlake (MP10_0154) are as follows;

1.1 **Ecologically Sustainable Development (ESD)**

- The EA shall detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development.
- The EA must demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.

Other reports interfacing with Sustainable Design and referenced in the DGR's draft requirements include;

- Transport Plan
- Contamination Report
- Storm Water (Sea Level Rise)
- Landscaping
- Heritage
- Architectural Design

Demonstrating how these outcomes may be achieved can be highly varied between and across projects and the use of an acknowledged Sustainable rating is proposed as an acceptable methodology for demonstrating compliance to the DGR's request.

2. Adoption of a rating Tool

Rating tools have been commonly adopted to demonstrate commitment to Sustainable outcomes for development projects for a number of years.

The use of such tools provides advantages through;

- Achieving and promoting better Sustainable practice
- Transparency, independence and accountability
- Consistent standard and benchmarking between projects
- Promotion of integration and collaboration across disciplines and elements provides an holistic approach.

However it is acknowledged that limitations exist in;

- Availability of tested tools for more complex developments
- Isolation, tools focus on either building typologies or infrastructure but not the combination
- Adaptability and application of principles for site specific context ie planning regulations, climate, technology etc

The use of a Community based assessment tool not only acknowledges the impact the development has on the wider community but is also inclusive of the Sustainable Performance of the individual buildings (as a prerequisite) and spaces while adopting planning and regulations.

The use of such Community based tools is consistent with the changes in international practice towards a more community and holistic focus for projects.

2.1 Proposed adoption

We propose that an accepted international Community tool amended for "equivalence" to reflect local constraints is adopted as the method for demonstrating Sustainable commitment for the proposed Mortlake development.

It is proposed that that internationally recognised LEED ND (Leadership in Energy and Environmental Design – Neighbour Development) tools is amended for local factors and adopted for the Concept Submission.

[Other tools such as the Green Building Council of Australia Communities tool is yet to be released (Framework only released August 2010) although it is understood that this tool will have a similar format to the LEED ND tool and the UK Sustainable Communities tool under BREEAM has recently been released.]

As an "equivalent" assessment is proposed no formal submission or accreditation is sought as the overall rating tool has strict compliance requirements. This does not however reduce the Sustainable Commitment of the development.

The proposed tool provides a level of what is considered best practice and facilitates a method of assessment for both the precinct / neighbourhood (Transport, Water use, Environment, etc) as well as the individual building performance (which is a pre-requisite under LEED) for energy performance, water and materials

2.2 Project Sustainable Commitments

The concept stage of the development does not permit a comprehensive assessment under the tool as the design is still in development. It does however facilitate the identification of key Sustainable attributes that form the Sustainable Commitments for the project

Below are some of the key Sustainable Commitments identified in the tool and planning requirements that are being adopted by the project;

- Employment of community wide Sustainable Design / rating assessment tool –it is proposed that the internationally recognised LEED ND (Leadership in Energy and Environmental Design – Neighbourhood Development) amended for principles of context is adopted – the use of the tool and commitment to an “equivalence” is fundamental acknowledgement of developments commitment to Sustainability for the development
- Treatment of the landscaping of the sites as one rather than separate and individual packages acknowledges the interrelated nature of communities and is promoted by the communities tool
- Walkable street and Connect and open communities are pre-requisites of LEED-ND with street networking access to public spaces and tree lined streets being promoted in a number of credit points– the proposed development achieves greater integration and amenity to natural resources through precinct wide landscaping comprised of native and endemic planting in a diverse mix of public and private spaces that will provide faunal habitat opportunities, introduce openness and access to nature and water ways.
- Conservation and promotion of wetland and water body is a pre-requisite of the tool - reducing and managed water runoff into Majors Bay through reduction in hard surfaces and introduction of Water Sensitive Urban Design features are proposed to be integrated into the landscape of the development.
- The communities' tool promotes an integrated transport network and the use and storage of cycles – the proposed development is committed to cycle storage facilities and the construction of a cycle way along Hilly Street and the foreshore to link up with the City of Canada Bay cycle network.
- Both the tool and SEPP 65 promote Solar orientation to optimise solar access - the massing, set back and site planning of the buildings have paid particular attention to optimising Solar access throughout the site– providing amenity to daylight, optimising solar gain in winter and exclusion in Summer – aiding low energy design strategies for individual buildings.
- The proposed design replaces a number of existing hard surfaces with increased planted areas promoting the use of natural shaded areas under the tree canopy- this is best practice and will result in reducing Heat Island effect which is acknowledged in the LEED-ND credit rating.
- Selection of the building massing and proximity so as to optimise air flow in, between and around buildings so as to promote natural ventilation and healthy design – this site wide approach aids in the BASIX design of individual buildings.
- Water efficient landscaping is promoted by the Community tool as part of the resource efficiency credit – is it identified in the landscape design report that the development is committed to water efficient planting.
- Meeting minimum Energy and Water efficiency targets for the buildings are mandatory for the tool – local and state regulations require minimum performance under BASIX – while the local method of assessment (AccuRATE) will not meet the rating tools requirement it is proposed that equivalence is demonstrated through promoting a best practice approach with targets for Energy and Water Efficiency assessed under BASIX exceeding minimum performance (relevant to the time of design) plus 20% are adopted.
- During the course of the design and construction each of the buildings and spaces will be designed individually with the form, building fabric and relevant technologies to affect the most appropriate environment performance available at that time. Each component will address energy, water and waste as required.
- Construction Activity Pollution Prevention which is mandated in the tool will be managed through construction
- These initiatives outlined above reflect the concept stage of the design and acknowledge the staged nature of the project. They demonstrate that a Community based tool can provide a relevant, effective and holistic measure for the development. Each of the initiatives will be developed as the future design develops.