Tyree Energy Technologies Building

University of New South Wales

Landscape Design Statement

Project Application, 1 December 2009

Overview

This report is prepared on behalf of the University of New South Wales for the proposed Tyree Energy Technologies Building development, located on the Kensigton Campus, adjoining both University Mall and Anzac Parade. This report should be read in conjunction with the Architectural Design Statement, prepared by fjmt for the development.

The following key strategies have been considered in the landscape design of the development:

- the desire to create a legible and welcoming sense of arrival to the building;
- the desire to create a welcoming gateway at the entry to the Lower Campus;
- respect for the Prof. Peter Spooner designed landscape of University Mall and surrounds;
- to create a public outdoor space with passive recreation opportunities featuring: quiet seating areas; 'meeting' spaces; additional tree planting; greater pedestrian access and enhanced interconnectivity;
- consideration of existing pedestrian movements through the site and incorporate these in the development (including the desire lines to New College, Village Green and Barker Street etc);
- to minimise the visual impact of the Service Court on the southern side of the building. Utilise planting to assist in screening views of the Service Court from the Village Green and Barker Street side of the campus;
- consideration of drought resistant and low-maintenance planting to improve the "ecological value" of the development and dependance intensive maintenance.

Consulting Arborist, The Ent Tree Consultancy has prepared an Arboricultural Assessment of the existing trees on site.

This report is to be read in conjunction with the Landscape Plan (drawing PA.03).

The following sections provide greater detail on the landscape areas identified above.

Existing Landscape

Dating from 1962, the major east-west walkway through the UNSW Kensington campus is The Mall designed by Associate Professor Peter Spooner, the Foundation Professor of Landscape Architecture at UNSW. It is undoubtedly the most significant and symbolic open space on campus creating an inviting and appropriate entrance for the wider community into the University.

The Mall was the formative formal landscape design for a fledgling campus, however subsequent building development, such as the Applied Science Building tower have unfortunately overshadowed and overpowered the human scale and amenity of this important green space. More recent buildings along the northern edge are more sympathetic in terms of scale and setback.

Our integrated design proposal for the Energy Technologies Building seeks to repair this disjunction along The Mall by as series of strategies to:

• maintain the primacy of the existing dual avenue of trees Cottonwoods (*Populus x canadensis* cv. 'Marilandica') and Figs (*Ficus rubiginosa*, *F. macrophylla* 'Hilli');

• restore a more human scale and character by moderating the scale and setback of the building against the existing tree canopy;

• create a new definition for the southern edge of The Mall in harmony with the existing landscape by transitioning the groundplane into the building

• align the northern edge of the building with Spooner's former 'sandstock' brick walls.

The data and recommendations contained within the arborists report has also informed the landscape design. The 'tree protection zones' (for trees to be retained) defined by the Arborist's report have been considered. The landscape design is predicated on maintaining the essence of the Spooner-designed landscape.

To this end, tree protection during construction will be implemented, including:

• trunk protection to reduce the risk of impact damage from machinery;

• soil compaction can have a detrimental impact on the health and condition of trees. A compacted soil limits gaseous exchange and moisture penetration into the soil. To address this, material stockpiles and access areas around trees with construction vehicles/machinery will be avoided to reduce the incidence of soil compaction. If required, timber battens fixed together with metal straps should be placed over the ground within the rootzone of the trees to be retained;

• the existing irrigation system will be maintained to ensure adequate soil moisture to the trees during construction.

Any tree pruning required to enable construction should be undertaken in accordance with the Australian Standard AS4373 - Pruning of Amenity Trees. This work should be done in conjunction with consultation of a qualified Arborist.

Public Domain

Description:
The footprint of the new building, it's presence from the Anzac Parade, address to University Mall and the position of adjoining buildings all reinforce the significance of this place on the lower campus. The open space is intended as a shared space for use by all on campus as well as borrowing the landscape as the forecourt of the new building.

The proposed landscape development includes the following features:

• a variety of formal and informal seating opportunities (including the long steps on the northern side of the building and the seating plinths and lawn area at the northern western side of the subject area);

• provision of equitable access (to both the building podium and around the eastern side of the subject area);

• creation of a flexible use open space for campus use,as a setting to the new building and giving presence on the lower campus;

• provision for passive recreation activities on the lawn area;

• new advanced tree planting to compliment the retained trees (and to remediate for those trees removed to enable the development);

• automatic drip irrigation systems will be installed with water sourced from a stormwater retention tank (located beneath the lawn area).

Landscape Elements Performance Objectives:
The 'success' of urban landscapes can be determined by the volume of usage that the space receives. A principle objective of the redevelopment is to maintain the 'setting' on lower campus with is a vibrant and highly used pedestrian and passive recreation zone.

The lawn area is intended as a pedestrian trafficable space. It is envisaged that the desvelopment of this end of the mall will encouraged passive recreation uses such lounging on the grass, as a 'meeting point' for social events, use for temporary events (campus displays, events), a setting for temporary art installations and as a threshold or forecourt to the new building.



Plant Species:
Possible tree, shrub and groundcover species that may be used in the planting design for the development are listed below. Final plant selection and planting design will consider issues such as:

• a preference for plants indigenous to the Sydney area;

• maintenance requirements of species selected (such as level of watering, fertilising and pruning required to maintain the species in the desired form);

• does the species have any known allergic or toxic potential?

• does the species grow well and look good as a mass planting?

• are the selected species readily available from local nurseries?

• does the species look good year round (i.e. does it become dormant or dieback etc)?

Possible species may include:

Specimen Tree Planting -
Ficus microcarpa "hilli' (Hill's Weeping Fig)

Ficus rubiginosa (Port Jackson Fig)

Lophostemon confertus (Brush Box)

General Tree Planting -
Corymbia maculata (Spotted Gum)

Eucalyptus microcorys (Tallowwood)

Hymenosporum flavum (Native Frangipani)

Melaleuca quinquenervia (Broad-laved Paperbark)

Syzigium paniculatum (Magenta Lilly Pilly)

Shrub Planting -
Callistemon viminalis (Weeping Bottlebrush)

Melaleuca thymifolia (Thyme Honey Myrtle)

Westringia fruticosa 'Zena' (Dwarf Coastal Rosemary)

Groundcover Planting -
Hardenbergia violacea (Native Sarsparilla)

Kennedia rubicunda (Running Postman)

Lomandra longifolia (Mat Rush

Poa Labillardieri (Tussock Grass)

Viola hederacea (Native Violet)

Materials:
A delicate balance between hard paved surfaces and soft landscape areas is to be achieved. Whilst hard paved surfaces are necessary and appropriate for a campus space with dense populations and high pedestrian traffic, the community expectation is that green open space will be retained around the subject area. It is with this expectation in mind that the landscape design provides a range of planted areas including retention of the extensive turfed area and supplementary tree planting through out the site. There are two distinct areas of the public domain - the open lawn area leading from University Mall and the planted area adjoining Anzac Parade. A range of textures, planting heights and geometries will bring a variety of choices for more passive uses such as small gatherings, reading and quiet reflection.

Open Space Technical Issues

Water Conservation:
The proposed landscape is predicated on water sensitive design. Various landscape design methods are proposed to reduce the development's reliance on potable mains water, such as, to plant native species where possible within mulched planting beds. The mulched planting beds control weed growth, reduce water demand by minimising water evaporation from the soil, which in turn reduces maintenance requirement. Prior to finalising the species in the plant schedule, consideration will be made for low water demand plants and/or locally indigenous species where appropriate. Exotic species are used where the environmental conditions are relatively harsh, requiring careful species selection that will cope with the conditions (this includes some on-structure areas or where access to natural rainfall is limited).

Although many of the plant species to be selected will have low water requirements (and therefore inherently water conserving), water-efficient subsoil drip irrigation systems are proposed to ensure that the landscape is maintained to a high level befitting a key campus building. Rainwater collected from the roofscape and hard paved areas of the development will be reused for the irrigation water supply. The irrigation system can be automatically scheduled via timer controls to ensure that any is undertaken after sunset, to further minimise any water loss to evaporation. To avoid any over-watering, soil moisture sensors can be installed to prevent the drip irrigation system from activating, overriding the timer controls if necessary.

Landscape Maintenance:
Whilst the campus has full time maintenance staff, the design of the landscape has considered ways to lessen the burden of maintenance requirements. Areas of mass planting are proposed to provide visual impact without requiring a high-frequency of attention.

Materials selection can also aid in decreased maintenance and resistance from vandalism etc. Surfaces that age well and require minimal maintenance are being considered (such a precast concrete edging to the lawn and natural stone paving).

Summary
Resolution of the various aspects of the proposed landscape work will continue. This refinement of the proposed works will continue based on the descriptions and performance objectives detailed above. Acknowledgment of ecological principles, provision of aesthetic and functional spaces and exciting design solutions will continue to guide resolution of the design.

External Materials & Finishes

The façade design for the ETB responds to the character and orientation of the site. The entire building is lifted up from The Mall groundplane on a plinth, with the ground floor proposed to be a transparent glazing system on the north and west elevations.

Key external materials and finishes are listed in the following schedule.

Metalwork	
Fencing & gates (to rear service area)	Flat bar palisade or powder coated closed space mesh system with matching automated sliding gate
Handrails, balustrades (where required) and bicycle racks	Stainless steel
External Works	
Podium stairs	Precast concrete or stone flag paving
Podium walls	Precast concrete panels. Refer facade system, type 6.
Landscape walls	Insitu concrete
Main pedestrian entry and side paths	Permeable paving system
Service area & loading	Insitu concrete