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1 Introduction

Urban Initiatives Pty Ltd, Landscape Architects and Urban Design Consultants were engaged by the University of Tasmania to prepare a Landscape Subject Plan for the lower section of the Sandy Bay Campus in Hobart.

The Sandy Bay Lower Campus Landscape Subject Plan contained in this report (henceforth, the Landscape Subject Plan) builds on the policies and planning principles established by the Sandy Bay Framework Plan 2000. The Landscape Subject Plan is intended to provide a strategic basis for the ongoing development and maintenance of the non-building elements of the Campus and to direct and encourage viable landscape and urban design solutions which build on existing strengths and assets, and improve the vitality and amenity of the Campus.

The report was compiled by Urban Initiatives Pty. Ltd, under the guidance of University Architect, John Webster. Three site visits were conducted between April 2002 and June 2003 to assess and review existing issues on the Campus. A further two site visits were made in February and June of 2004. Acknowledgement is also made for the valuable input of Tom Beattie, the Sandy Bay Campus Grounds Liaison Officer, and other University Academic and Asset Services staff who contributed to this Report.

1.1 Study Area

The Sandy Bay Campus is the largest of the three main campuses of the University of Tasmania. It is located 3 km south of the CBD in Hobart and covers an area of approximately 118 ha, including sports grounds, buildings, open space and bushland. This Landscape Subject plan is the 1st of two volumes with the lower section of the Campus (approximately 15 ha) bounded by Sandy Bay Road and Churchill Avenue to the north and south, and Alexander Street and Earl Street to the east and west, respectively and the Faculty and Student Facilities Precincts immediately above Churchill Avenue, including Upper Campus Residential Precinct ‘Christ College’ (the study area, figure 1) comprising volume 1. The Lower Campus is the functional core of the Sandy Bay Campus with the majority of school/faculty buildings and teaching centres, as well as several major lecture theatres and public venues. It also contains student administration for the southern Campuses, and the central Administration for the University, and as such plays an important role in the context of the University as a whole.

The Student Union buildings and associated services and facilities (including bar, bookshop, post office, doctors surgery, bank and refectory) are located across Churchill Avenue to the west are also considered.

The Sandy Bay Campus extends across Churchill Avenue to the south and rises up toward Mt Nelson including a large tract of bushland reserve (the University Reserve), and sports grounds at Olinda Grove, Mt Nelson. The extent of the Upper Campus including Research Field Facilities, Rifle Range Creek gully, Hytten Gully and University Reserve including Olinda Grove Sporting Facilities comprise volume 2.
1.1.1 Precincts

For the purpose of the current Landscape Subject Plan, the study area has been divided into thirteen precincts, which correspond to distinct geographical areas with consistency of functionality and landscape management issues. These precincts are shown on figure 2 and include:

1. University Frontage (Churchill Avenue/Dobson Road).
2. Central Mall & Gathering Places.
3. Grosvenor Crescent & Clarke Road Precinct
4. Lower Campus Precinct.
5a. Herbarium Precinct
5b. TUU Precinct
6. College Road South- East Precinct
7. French Street South-East Precinct
8. Student Residential Precinct
9. Horticultural Research Precinct
10(a) Lower Rifle Range Creek Conservation Precinct
     (b) Proctor’s Gully Precinct
11. Reserve Bushland Precinct
13. Olinda Grove Recreation Precinct

1.1.2 Site Overview

Figure 3 provides an overview of the current layout of the study area, the main roads and buildings and a generalised review of existing surface coverage (paved, lawn or garden bed). More detailed review of the features of the study area are found in section 4 above.

1.1.3 Imminent Future Works

While this Subject Plan deals with the existing situation, some proposed changes to the layout and functioning of the study area are sufficiently imminent to be considered as part of the current Landscape Subject Plan. These include:

- relocation of the Main Entrance to the intersection of Churchill Avenue and French Street with installation of a new roundabout (in association with Hobart City Council), and alterations to vehicular flow in the upper sections of the study area; and

- redesign of the layout of the Grace Street carpark to improve vehicle and pedestrian circulation, increase the number of carparking spaces and enhance landscaping.

- Construction of new student residences above Economics and Commerce and adjacent to Christ College and John Fisher College.
Figure 2 – Precinct Plan
Figure 3- Site Plan
1.2 Planning Framework

1.2.1 Review of Previous Plans

A range of reports and plans have contributed to the development of the Sandy Bay Campus of the University of Tasmania. These plans are detailed in an appendix to the Sandy Bay Framework Plan and include:

- the initial plan for the layout of buildings at the Sandy Bay site produced by Wilkinson in 1944 (the Wilkinson Plan);
- reviews of the Wilkinson Plan by Stephenson in 1954 (the Stephenson Plan) and the Public Works Department in 1956 (PWD Plan), the latter provided the final locations for most buildings in the study area; and
- further revisions to the campus-wide plans by Stephenson in 1972 which recommended expanding the campus uphill to the south.

While the legacy of these plans is evident in building layout and structure of the Campus, much of the development of the Campus has been piecemeal, responding to ad hoc funding availability.

In 1995 Jackson, Teece, Chesterman, Willis & Partners Architects completed a Development and Strategy Plan (known as ‘the Chesterman Plan’) aimed at uniting development and maintenance with a strategic direction for the two main Campuses of the University: at Newnham in Launceston, and at Sandy Bay in Hobart. The report identified a range of challenges across both Campuses that resulted from the legacy of piecemeal development and set out five key objectives to redress these issues, namely:

- ensuring that the campuses function well and efficiently;
- providing stimulating and aesthetically pleasing settings for work, study and visits;
- improving accessibility to and ease of movement on the campuses.
- promotion of environmental sustainability; and
- enhancement of the University’s image and standing in the community.

The Chesterman Plan provides a useful policy direction for addressing landscape issues. However, it does not provide for the easy interpretation into the detail necessary to plan and design for on the ground works. Despite the Plan being adopted by the University Council, improvements and maintenance of the existing landscape has continued to occur on a piecemeal basis, responding to specific issues and needs as they arise.

1.2.2 The Sandy Bay Framework Plan 2000

The Sandy Bay Framework Plan produced in 2000 (the Framework Plan) provides the current planning basis to guide the development and
maintenance of the University’s buildings and grounds at the Sandy Bay Campus. While the broad thrust of objectives and principles of the Chesterman Plan are recognised (and, where appropriate integrated), the Framework Plan redefines and structures the strategic development of the campus under a ‘Framework-Planning’ approach. This approach sets out values to define a philosophical position which underpins development decisions; goals to encapsulate the visions for the Campus’ development; and principles and policies to govern the planning process and define the means of applying the values.

This Framework Planning approach outlines the need to develop: Action Area Plans, for defined zones or precincts within the Campus; Subject Plans, to provide for the detailed treatment of a particular planning aspect; and Design Standards, for design elements for Campus-wide application. It is envisaged that Design Policies, Operational Policies and Project Briefs then flow from the preparation of these documents. This type of tiered approach to campus masterplanning aims to ensure that improvements are implemented in a staged and well-considered manner as funds become available.

The framework planning structure is described on chart 1 below. The chart has been adapted from the Sandy Bay Framework Plan to include a new level (1a) for masterplanning of the landscape and building elements of the Campus. This proposed adjustment allows the issues, objectives, and key directions to be determined at a general ‘masterplanning level’ such that detail standards and plans can flow from these in a directed fashion.

**Chart 1 – Revised Framework Planning Structure for the Sandy Bay Campus**

Included in the revised framework is provision for the Design Standards and the compilation of a suite of ‘Technical Notes’ to guide the day-to-day activities and management of the Campus. These Technical Notes would expand the proposed Design Standards to cover a range of issues including outdoor furniture elements, pavements and surfaces, lighting, and civil engineering elements such as kerbs, steps and drainage pits.
1.2.3 Purpose of this Landscape Subject Plan

The Landscape Subject Plan fits within the Campus Framework-Planning approach of the Sandy Bay Framework Plan by defining strategies for the future development and maintenance of the non-building elements of the Campus. These strategies aim to build on the values, goals and principles outlined in the Framework Plan as they apply to the lower section of the Sandy Bay Campus.

In particular, the Subject Plan:

- outlines principles behind the landscape masterplanning of the Campus;
- addresses the need to consider the core campus-wide landscape issues (legibility, public presentation, vehicle and pedestrian circulation, landscape management etc.);
- defines a precinct-based approach for addressing issues and opportunities for the Lower Campus; and
- develops policies and recommendations which respond to identified issues and opportunities, and guide future works and management.

The Landscape Subject Plan provides guidance for landscape designers and the University’s management staff in dealing with issues related to the external fabric of the University. However, this Subject Plan does not attempt to address major structural changes to the site layout (e.g. demolition or construction of new buildings) nor modifications to existing buildings. Instead, it is recommended that a separate Building Subject Plan be prepared provide direction for future requirements for building and structural planning on the Campus. This should include:

- a review of carparking requirements and possible options for incorporation of carparking with any new major construction work.
- A review of internal pedestrian circulation in order to identify campus wide circulation ‘breaks’ and identify opportunities to create pedestrian linkages, particularly vertical linkages across the Campus.

1.2.4 Objectives

The University Strategic Plan outlines the University’s commitment to “manage and improve its buildings landscape and infrastructure to provide an environment for academic and related social, cultural and community use…”.

The objectives of the current plan reflect this commitment and focus on the role of landscape planning, management and works in achieving a functional, attractive and vibrant Campus. Based on the Sandy Bay Framework Plan this Landscape Subject Plan aims to:

- maintain landscape assets;
- use landscape character and planting themes to unify the Campus;
- recognise the importance of outdoor space;
resolve disabled access and personal security issues;

provide guidelines for appropriate plant selection; and

direct quality hard landscape design and material selection.

From this basis, the objectives of this Landscape Subject Plan are to:

**Build** on the principals and values identified in the Framework Plan including amenity, safety, equity, efficiency and environmental sustainability.

**Address** the existing site planning issues to physically and visually integrate the campus.

**Develop** a distinct landscape character that establishes an easily identifiable image for the University.

**Utilise** strong landscape elements as a way of unifying the campus and creating a sense of identity.

**Provide** a sense of arrival at the main entrances to the University.

**Rationalise** vehicle and pedestrian circulation so that vehicles do not obtrude into pedestrian areas.

**Establish** clear routes between facilities and ensure that “addresses” are easy to find.

**Resolve** issues relating to disabled access and security.

**Establish** some typical treatments for common problems in the study area that could be extended or adopted in other areas.

**Develop** an approach to incorporating ecologically sustainable practices in Campus improvements and landscape management.

**Provide** a strategic framework for management of the external areas of the campus which reduces ad-hoc decision-making.

**Establish** a design framework for external areas in which consultants can develop individual projects (including checks to compliance with documents and policies).

**Identify** areas where further development (such as design standards for furniture, hard landscape elements, irrigation strategies, tree management etc) as required.

**Identify** projects that could be immediately developed (to design and documentation stage) to reflect and implement the recommendations of the Landscape Subject Plan.
1.3 Structure of this Plan

The Landscape Subject Plan is structured in the following sections:

- This general **introduction** to the study area, planning context, and purpose and objectives of the Plan (section 1)
- Establishment of a **philosophical basis** for landscape masterplanning of the Campus (section 2);  
- Discussion of **issues and opportunities** across the whole study area and within each Precinct, providing the basis for development of more detailed issues plans, and Action Area Plans in the future (section 4);
- A suite of Landscape Management Strategies for implementation across the study area and Campus (section 5); and

The document is supported by 6 Appendices:

- Appendix 1. An Action Plan, summarising the opportunities and key directions detailed in the preceding sections.
  - Appendix 2. Existing Furniture Elements
  - Appendix 3. Environmental Weed List
  - Appendix 4. Tree Planting Guidelines
  - Appendix 5. Suggested Plant List and Planting Guidelines
  - Appendix 6. Talloires Declaration
2 Philosophical Basis

2.1 Philosophical Context

In conceptualising the study area as a subject of masterplanning, volume one of this report considers three tiers of setting and function for the Lower Campus:

*The first* takes the study area as a landscape, and a component of a greater landscape of the lower Derwent Estuary, and Hobart City.

*The second* considers the study area as a whole, and its role as the administrative and symbolic centre of the entire University.

Finally, *the third* recognises the study area as a functional space comprised of distinct local areas used for movement and access, meeting and gathering, and recreation and activity.

It is from an appreciation of these layers of context that the issues, opportunities and directions detailed in the following sections of the report have been derived.

To a large extent, the first tier is considered through the landscape and historical/cultural context given in section 2 above. Nonetheless, the implications of the role of the study area within a broader landscape extend to a range of issues considered in the following sections, including the public address and presentation of the Campus and the choice of plants and planting themes. Landscape masterplanning also has a role to play in and as such issues such as traffic management, the provision of parking, and on-site environmental management (including waste and stormwater management) become relevant considerations.

The role of the study area as a functional core of the university (the ‘second tier’) is considered in section 4.1. The ‘whole of area’ masterplanning issues which correspond to this role including circulation, presentation, management and function are considered.

Precinct level identification of issues and opportunities cover the third tier. Here, the role of spaces, paths, entries and gardens are considered within their local context, and a role for each sub-precinct within the whole Campus is articulated.
2.2 Principles of Landscape Masterplanning

“Universities exist in a social and educational dynamic that has to be experienced by both students and staff who together determine its academic merit and signify its cultural substance. The role of each generation of planners and administrators is to ensure that the imagination involved is expressed, and that the soul of the place remains identifiable and memorable”.

Campus masterplanning is an ongoing strategic process that aims to facilitate decision-making, promote efficiency in the utilisation of physical infrastructure and uphold the quality of that infrastructure.

Both the Issues and Opportunities sections of the report draw strongly from some basic Principles that underpin Campus Masterplanning.

These cover three main areas related to the purpose and objectives of this Subject Plan: the use and functioning of the campus, design or aesthetic elements and maintenance issues.

2.2.1 Principles

Use and function:
• Ease of movement
• Safety
• Equity of access
• Durability
• Comfort

Design and aesthetics:
• Definition – Allan B. Jacobs describes one of the requirements for outstanding streetscapes in his book Great Streets: “They have boundaries … that communicate clearly where the edges of the street are, that set the street apart”. The same applies to the University Campus, which should present boundaries that aid the definition of the Campus as the physical embodiment of the University institution. Boundaries and frontages should provide a positive impression from the outside, and an attractive, comfortable and appropriate to setting to the functioning of the University within.

• Presentation – The presentation of the Campus is important to the identity of the University. It should have consistent and high quality presentation across the Campus, and punctuated sites of important features that enhance the overall landscape character

• Layers of interest – The landscape fabric of the University is simultaneously a movement space, a discussion space, a gathering space and a contemplation space. It is a place for visitors to perceive the University, and for staff and students to go about daily activities. It has history as a landscape, as a place and as an educational institution, and a present and future, which gives it an important role

1 Daryl Jackson Architect, University of Melbourne. Masterplan 2000
in Tasmanian, and Australian society. Landscape themes, interpretation, art and sculpture carefully designed, considered and sited can help define and enhance these ‘layers of interest’ across the Campus.

Built:

- **Maintenance**– Well maintained external spaces and landscape areas are important to the presentation and image of the University.

- **Materials** – “The issue then becomes not only one of maintenance, but of the use of materials of good quality that are relatively easy to maintain.” Great Streets. The selection of materials needs to consider the context, usage levels and aesthetics of the locality or application.

- **Durability** – Consideration should not be given just the initial costs of elements or materials, but the anticipated life span and durability in a high use environment.

The box below provides a further layer of direction to designing and managing the external fabric of a University Campus, and build on the principles outlined above. These generic descriptions were originally presented to The Association of Higher Education Managers Conference in Virginia, USA in 2002 but have been edited to focus on landscape-specific principles and relevance to the current study.

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**The Garden Within**

1. Campus spaces should be thought of as outdoor rooms, in which buildings are the walls, walkways and lawns are the floor, and trees are the ceiling.

2. The common ground of the campus quadrangle, surrounded by simple non-competing buildings, should define a space that is both a point of destinations as well as a place of passage.

3. Accept the limitation of the human eye to recognize objects and activities as the basis to establish human scale. Urban spaces not wider than 24 metres across are perceived as ‘intimate,’ at 140 metres feet they are ‘civic,’ and at 1220 metres they are ‘monumental.’ The eye can recognize facial expressions at 12 metres distance, faces at 24 metres, body motions at 140 metres.

4. Make the landscape, the choice of trees, and the sequence of open spaces the essential elements of coherence and continuity. Preserve significant vistas; make the visual sensations of the pedestrian scholar the measurement of design satisfaction.

5. Make a ‘lawn of grass and trees’ the primary design element sheltering campus spaces. Where appropriate, introduce intermediate landscape groups, but avoid ‘prettifying’ the campus with landscaping schemes more fitting to a private home. They are perishable and expensive to maintain.

6. Design campus spaces that are pleasant to experience and easy to understand. Upon entering a campus space, a pedestrian needs to see and understand the size of the open space, the height of the buildings, the number of floors, the entrances to buildings, and the walkways across the open space.
3 Site Context and Values

This section briefly describes the context for the study area by describing its historical development, and setting within the landscape. From this context, particular values and constraints can be inferred, which have relevance to landscape planning issues, policies and recommendations contained in the following sections. Information is drawn from a review of secondary sources and background reports; site visits and observation; and discussion with University staff.

3.1 Site History

The Sandy Bay site was chosen for the development of the University Campus in 1944 by the Wilkinson Plan (see diagram). Prior to the establishment of the University Campus, the study area was used as part of a larger rifle range which had operated on the site since the early 1900s.

Piecemeal construction and development of buildings and open spaces took place throughout the 1950s until the official opening in 1961, by which time most of the buildings in the upper part of study area were complete. The structure and layout of the Lower Campus reflects the aim of the Wilkinson Plan to develop buildings around a central corridor (the Central Mall), providing a vista to the River Derwent. Amendments to the plan altered the original alignment and the main vista was lost, although the Central Mall area remains.

Early photographs of the site show that there were few existing trees on the site when the campus was established. The original structure plantings from the late 1950’s and early 1960’s were mostly exotic and ornamental. These were supplemented over the years by Australian natives, with much planting dating from the1980’s. After a brief period where some exotic trees were planted, more recent plantings have shifted back to Australian natives, often with an emphasis on Tasmanian plants.

The shift in the approach to planting on the site over time has been influenced by a broad range of factors including gardening trends, plant availability, maintenance levels, and the personal preferences of the grounds staff. The resulting landscape is a mix of exotic and native trees of varying age and types, with a broad range of understorey shrubs and groundcovers.

Changes to landscaping in the study area has generally occurred gradually, or associated with the development of new buildings, most notably the University Centre at section of the Central Mall (19XX), the Centenary Building at the lower terminus of the Central Mall (1991), and the Law Faculty, Sport Centre and Information Technology buildings below Grosvenor Crescent (19XX, 19XX and 2002 respectively).
3.2 Landscape Setting

3.2.1 Physical Values

The Campus is located on a moderate to steep slope with a northerly aspect rising from 4 m above sea level at Sandy Bay Road in the north to 42 m at the highest point on Churchill Avenue in the south (a distance of around 700m). Gradient increases with altitude, with lower parts of the study area (notably the sports fields) largely flat, while the slope of the Central Mall area generally exceeds 1:14, making disabled access difficult. Many areas of the site have been artificially filled and flattened for building, carparking and open space uses.

The study area is underlain by heavy clay, dolerite-derived soils, although soil conditions vary widely between dryer, well-draining upper slopes to poorly draining lower areas. Existing soils consists of a thin layer of silty-loam over mostly heavily compacted clay. Prior to the establishment of the Campus, Rifle Range Creek ran through the site, meeting with an unnamed creek (arising in the vicinity of Hutchins School to the south) at the location of the present rugby field. The sports fields lie on the former wetlands created at the confluence of these creeks, both of which are now piped underground to an outlet near the Wrest Point Casino. Stormwater from the paved upper services flows through a series of (mostly underground) pipes and drainages into this main drainage line. Significant soil and drainage improvements have occurred across both sports fields although they still experience problems with water-logging.

3.2.2 Biological Values

The present site of the Lower Campus was substantially cleared of native vegetation prior to the establishment of the University. Some indication of the former vegetative composition of the Lower Campus may be provided by the extant native forest in the University Reserve, uphill of the study area to the west and south. This forest is predominantly dry grassy woodland dominated by *Eucalyptus globulus*, *E. pulchella*, and *E. ovata* with understorey consisting of, among others: *Allocasuarina verticillata*, *Banksia marginata* and *Acacia dealbata* on the dryer slopes; and *Bayeria viscosa*, *Pomaderis apetela* and *Bedfordia salicina* in wetter areas. The wet forest in the lower section of the reserve is dominated by *E. globulus* and is of conservation significance, with stands among the few in Hobart to escape the widespread 1967 bushfires.

Vegetation in the study site is a mixture of indigenous Tasmania species, Australia native species and exotic (largely European) plantings. In recent years, a concerted effort has seen the establishment of many more garden beds with Tasmanian indigenous plantings (particularly grasses and ground-covers).

3.2.3 Cultural Values

The Aboriginal people of the South East Tribe are the traditional owners of the land on which the Sandy Bay Campus now sits. The Eucalypt-dominated vegetation of the University Reserve is likely to be a relict of periodic firing of...
the landscape prior to European invasion, although the cultural values of this landscape are diminished owing to a history of use as a farm, rifle range and now University Campus. There are no features in the study area identified as being of heritage or ongoing significance to the contemporary Aboriginal community, although some potential exists to develop themes that recognise and enhance the Aboriginal history of the landscape.

3.2.4 Landscape Values and Vistas

The Sandy Bay Campus of the University is an important element in the regional landscape of Hobart. In particular the University Reserve provides part of the significant vegetative backdrop to the city, and owing to its slope, siting and aspect, is a highly visible element of the lower Derwent Estuary. The Lower Campus is less prominent, and as appears as part of the development belt in the slopes below Mount Nelson. However, the Lower Campus too has some visual presence in the local landscape with its concentration of academic buildings and commanding slope.

The Campus itself has the potential to offer outstanding views to the surrounding landscape, dominated by treed hillsides, Mount Wellington and the River Derwent. The Central Mall was originally designed to provide visual links to the Derwent (refer to figure 3 above) but adjustments to building layout shifted the alignment and the remaining vista was substantially blocked by the establishment of the Centenary Building in 1991. Nonetheless, ‘the River’ and ‘the bush’ are important elements in defining the landscape of the Campus, and many open spaces and buildings in the study area provide views that include these features. Ironically, the best views tend to be available at the periphery of the study area, where outdoor usable spaces are less well defined.

As the elevation of the Campus increases above Churchill Avenue, so too does the level of Visual Sensitivity. The site profile becomes markedly steeper and the potential impact of development upon the visual catchment of Hobart increases. While a comprehensive visual sensitivity analysis is beyond the scope of this project a number of plans prepared by HCC as part of the ‘Planning Guidelines’ for Urban Skylines and Hillfaces are reproduced in this study that indicate the viewsheds and sensitivity of the site under a process based upon the State Forests Visual Planning Process.

2 ‘Visual Sensitivity’ as classified under the ‘Visual Management System’ (VMS) Forestry Tasmania. A system developed to provide theoretical principles for assessing visual values and their implications for development. Increasingly being used to evaluate other land uses within Tasmania.

4 Issues and Opportunities

4.1 Review of Study Area Issues and Opportunities

Considering the study area first as a whole, this section outlines twelve elements essential to the consistency, presentation and functioning of the Campus, these being:

- entrances and addresses;
- pedestrian circulation
- equity of access;
- vehicle circulation and parking;
- open spaces and gathering places;
- paving, surfaces and lighting;
- outdoor furniture;
- signage;
- art, sculpture and interpretation;
- locating services; and
- planting; and
- landscape planning and maintenance.

This section presents a background to the importance of each issue, details the existing conditions and issues, provides a policy statement and presents a strategic approach to addressing these challenges through key directions. In general, key directions will be restricted to policy prescriptions aimed at better planning and management of the Lower Campus, or recommendations of general application. More detailed issues and opportunities are presented for each Precinct in the following section. Issues ‘Indigenous Vegetation and Habitat Management’, ‘Fire Management’, ‘Access/ Community Links and Trails’, ‘Scenic Value’ and ‘Stormwater and Site Hydrology’ are considered in Volume two.

4.1.1 Entrances & Addresses

BACKGROUND

The point of arrival strongly defines how the University as an institution and a landscape are perceived by staff, students, visitors and the general population. High profile public addresses with considered landscaping can help promote the University as a landmark, while integrating with the local landscape. Entrances can frame a ‘sense of arrival’ that is appropriate to the importance and standing of the University within the community.

The study area is the logical location within the University to develop public frontages and highlight entry points, as it borders two high-use roads, has
central role in both teaching and administration of the University, and is the most visited part of the Sandy Bay Campus, and the location of the majority of facilities.

EXISTING CONDITIONS / ISSUES

The Lower Campus has four main vehicular entry points, and a significant frontage onto two major roads. The main vehicle entrance to the Campus falls within the study area (at Churchill Avenue) while three secondary entrances occur elsewhere in the Lower Campus. There are plans to relocate the Churchill Avenue entrance to the intersection with French Street (with the installation of a new roundabout). Pedestrian entry to the Lower Campus can be made from any of the road frontages and vehicle entry points, with additional high use nodes including Churchill Avenue (particularly the underpass from the Student Union buildings, the overpass from the life sciences buildings and bus stops), Grosvenor Street (including the Alexander Street bus stop) and Sandy Bay Road.

Existing presentation, landscaping and signage at the entrances generally fails to create a coherent presence which defines a 'sense of arrival', while the two major frontages (Sandy Bay Road and Churchill Avenue) are largely 'low-key', and little attempt has been made to use them to present a strong image of the University. The secondary addresses (Alexander Street and Earl Street) also require landscaping improvements, although the historic hawthorn hedgerow along Earl Street currently provides a useful definition of the boundary and improves the presentation of the Earl Street approach.

Specific issues for the entrances and frontages at the Lower Campus include:

- There has been no attempt to define a hierarchy of entry points (except the Churchill Avenue entry which has become known as the 'Main Entrance' due to its proximity to the administration buildings and the University Centre).
- Aside from basic signage, there is no consistency in landscaping across the four vehicular entrances.
- Signage and landscaping at entrances do not provide a high level of visual impact.
- The Churchill Avenue frontage of the Campus is poorly landscaped and does not provide a strong or consistent identity.
- The Sandy Bay frontage is dominated by the fencing for the rugby pitch and poorly structured native plantings meaning views into the site are blocked rather than framed or emphasised.
- Pedestrian entry is ad hoc and pathway linkages into the Campus are not always in place.
- Little consideration given to pedestrians or cyclists at the four vehicle entrances.
- Many crossovers and pathways at the entrances do not adequately provide for disabled access.
- Traffic speed on Churchill Avenue creates safety issues for vehicles entering or exiting the University via the main entrance, Union carpark or Alexander Street.
• Traffic management issues with the turning maneuvers at the Earl Street access are difficult and require further liaison with Hobart City Council.

• The boundary planting is generally of a variable condition and in most instances does not provide coherent transition to neighboring areas.

• Paving materials used at each of the entrances are not generally consistent or unified, and often in poor condition.

• The existing entry at Grace Street is excessively wide, poorly landscaped and provides a poor interface with the adjacent residential streetscape and does not visually link with the remainder of the Lower Campus.

Specific issues for the entrances and frontages at the Upper Campus include;

• Low level of provision for pedestrians and cyclists at Major entrances off Churchill Avenue and via College Road.

• Combined entry and service areas access points confuse legibility and present the Schools of Zoology, Agriculture, Medical Science and Library and Information Science poorly as well as creating points of pedestrian / vehicular conflict.

• Pedestrian as well as service entrances along the Mt Nelson frontage are not consistently presented.

• The residential areas of Christ College are accessed directly for the Car Parks with little definition of pedestrian access and presentation of entrances.

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**Photo 1**
The ‘Primary Address’ at Churchill ave. also serves as the transition between ‘Lower’ and ‘Upper’ Campus and the ‘address’ for facilities on the Upper Campus and University Reserve

**Photo 2**
Connections to Mt Nelson Community not defined
POLICY STATEMENT

Present the Lower Campus as the symbolic centre of the University through high-profile public frontages and entrances.

KEY DIRECTIONS

Undertake a co-ordinated review of existing issues with the entrances and frontages of the Lower Campus. Develop strategies which attempt to reinforce and strengthen the image of the University to the public and its own community.

Plan for landscaping according to a hierarchy of entry points: The landscape treatment of each entrance will be defined by its relative importance to the presentation of the Campus as a whole. The above entrance plan above designates one main entrance, three minor entrances and two pedestrian-only entry points. These are of highest priority in the study area, and all are significant for the Campus as a whole. Other minor entrances are either service vehicle entrances, or minor pedestrian entry points, the prescriptions for which are sufficiently covered under prescriptions for appropriate vehicle and pedestrian circulation.

Improve ‘sense of arrival’ signage and landscaping at all four vehicle entrances to the study area: Priority should be given to upgrading the landscaping and signage of the Main Entrance at Churchill Avenue, (in conjunction with proposed relocation of vehicular entrance and roadworks should this occur in the short to medium term). This may also include major art or sculptural elements. Improvements to the Grosvenor Street, Earl Street and Grace Street entrances should also be undertaken, with the intention of establishing significant signage and distinct plantings with identifiable themes at all entrances.

Develop road frontages as major public addresses: The development of high profile public addresses along Sandy Bay Road and Churchill Avenue road frontages is important in defining the landscape of the University. These locations could be the subject of major sculptural and signage works in conjunction with landscaping.
Figure 4 Entrances and Frontages
4.1.2 Pedestrian Circulation & Access

BACKGROUND

Pedestrian circulation is essential to the functioning of the Campus. Both circulation between locations within the study area, and into the Lower Campus from the Upper Campus, or outside the University needs to be considered.

The University Campus has traditionally been a place dominantly pedestrian in nature, in recent years featuring centralised parking on the periphery, and maintaining the traditions of the pedestrian Mall, Walk or Quadrangle. The key ‘origin’ points for pedestrian circulation include the pedestrian entry points, and faculty, school and administration buildings, while ‘destinations’ include major points of general use (libraries, sports centers and cafeterias) and the larger lecture theatres. Access to destinations within the study area assumes greater importance because many are central facilities serving the wider Campus (e.g. the Morris Miller Library, the University Centre, University Administration, Student Administration and the Sports Centre).

Issues common to the Lower Campus are exacerbated by steeper topography of the Upper Campus. While the majority of the Lower Campus has significant extents that are less than 1 in 5 slope, the Upper Campus features grades typically 1 in 5, significant extents 1 in 5 to 1 in 3 and areas that are greater than 1 in 3 slope.

Other issues relate to the extent of car parking in and around buildings that has isolated pedestrian access to and between buildings. Partly this is due to the manner in which development of facilities has occurred, with car parking provided directly adjacent each building as it is established, an adhoc process which has led to poor public address/pedestrian access.

There are important issues for pedestrian circulation which relate to the access and movement opportunities of sight and mobility hampered staff, students and visitors on the Campus. These issues are addressed under the following ‘Equity of Access’ section (4.1.3).

EXISTING CONDITIONS / ISSUES

Pedestrian circulation in the upper precincts of the study area (between Grosvenor Crescent and Churchill Avenue) is defined by the Central Mall, and its off-shoots which provide the major axis for pedestrian movement. The Dobson Road footpath has also recently been improved to accommodate high levels of pedestrian traffic. Other pedestrian connections within the Lower Campus have evolved as a series of formalised desire lines rather than a co-ordinated or planned network of connections. Similarly the pedestrian connections with the area above Churchill Avenue are typically utilitarian and reactive to changing site issues rather than any formalized pedestrian structure or network.

There are particular issues with the movement of pedestrians through the lower precinct which are discussed later.

4 These terms are designated for discussion only, as clearly a flow to and from all locations must be considered.
Figure 5 depicts the primary and secondary pedestrian flow routes, and major destinations within the study area. The Upper Mall area (Morris Miller Library/Student Administration/Lazenby’s forecourt) is the largest pedestrian traffic generator in the Lower Campus, while the Sport Centre also attracts visitors from around the Campus. In the Upper study area, the facilities at the Student Union complex across Churchill Avenue also comprise a major destination, and the flow of people between this and the Upper Mall cluster is likely to receive the highest rate of pedestrian traffic on the Campus (although no figures were available for this study).
Figure 5 - Pedestrian Circulation
Specific issues for pedestrian circulation and access in the Lower study area include:

- No single well-defined system of circulation or hierarchy of pedestrian pathways has been designated through the Lower Campus.
- Many path widths are too narrow to accommodate the high level of pedestrian movements (although recent improvements have been made, e.g. Dobson Road).
- In parts of the study area, patterns of pedestrian movement are dominated by vehicular roadways, and parking often takes precedence over pedestrian access and conflicts between pedestrians and vehicles for circulation space often arise (e.g. Churchill Avenue and Grace Street carparks).
- The path network is often disjointed and orientation to key campus facilities is unclear (e.g. to the Student Union facilities from the lower sections of the study area).
- Traffic speeds on Churchill Avenue are a particular barrier and safety concern, particularly for pedestrians heading to the Student Union facilities from the lower two-thirds of the Campus.
- The mix of pavement materials types further exacerbates the disjointed nature of the existing paths.
- Pedestrian connections between Churchill Avenue and Dobson Road are confusing (gravel tracks and multiple access points across, see Photo 1).
- Connection from existing bus stops into the Campus is often poor (particularly Alexander Street, Churchill Avenue and Sandy Bay Road bus stops).
- Pedestrian crossovers in many areas are not defined with tactile indicators.
- The existing overpass to the Herbarium and Life Sciences Buildings on the Upper Campus has poor connections back into the Lower Campus (no disabled access, disjointed path connection though carpark).
- The existing pedestrian connection between the upper precincts of the study area and Sandy Bay Road is narrow, poorly defined and does not provide disabled access.
- Links between important (and often related) facilities on the Lower Campus are not always obvious and there are poor linkages from Sandy Bay Road through the Grace Street Carpark to the Sport Centre and the Campus proper. (In particular the route between the Law buildings and the Sport Centre skirts the sports pavilion, is indirect and confusing and does not provide obvious connectivity with the other areas of the Campus.

Specific issues for pedestrian circulation and access in the Upper study area include:

- Steep paths-south of Life Sciences; incline (combined with steps) greater than 1:14/ 1:10 without handrail. Paths accessed directly from Churchill Avenue, turning lanes and carpark entries/egress's.
• Paths entering directly into service road and service area from AMS buildings.

• Steps adjacent carparks between Life Sciences Faculty’s- ad-hoc placement of steps are a public risk issue in some instances.

• Service areas adjacent carparking at rear of School of Medical Science and Hytten Hall lack definition of ; access and disability access provision.

• Informally used areas between Plant Science and Agriculture feature disused paths and entrances to buildings without paving or provision for access. Presently area partly used as plant nursery.

• Entrances through carparks- indirect / unclear access, typically result in poor disability access at Zoology, Medical Science and Plant Science.

• The existing overpass to the Herbarium and Life Sciences Buildings on the Upper Campus is the main connection between the Upper Campus, University Reserve and the Lower Campus has poor connections (no disabled access, disjointed path connection though carparks)

Photo 3
Pedestrian connections between Churchill Avenue and Dobson Road are confusing (gravel tracks and multiple access points across)

Photo 4
Lack of definition of access an issue at entries, via carparks

Photo 5
Steps directly entering carpark / vehicle traffic lane.
POLICY STATEMENT

Provide a continuous high quality and legible path network that provides for safe, equitable and efficient movement of pedestrians, gives precedence to pedestrians over vehicles and improves access to all areas of the campus.

KEY DIRECTIONS

Develop and maintain a network of primary and secondary pedestrian pathways based on identification of high-use areas and major links should be identified with management proceeding on a priority basis.

Improve pedestrian access from parking areas and bus stops.

Upgrade and rationalise existing paths and desire lines: High priority routes should be upgraded to cope with the volume of pedestrian traffic, and provide clear, legible pedestrian flow routes. The connection to the Churchill Avenue underpass from the Morris Miller library/Lazenby’s forecourt is well defined, conforms to disabled access requirements and is a good model for other major-use areas in the Campus. The recently constructed pavement works on Dobson Road utilises similar detailing and provides a good connection to the Law Building. Key pedestrian entry points, including bus stops should be more clearly and formally linked with the internal circulation.

Improve High priority linkages include Sandy Bay Road through to Grosvenor Crescent, and access into the Campus from bus stops.

Important new facility links are presently being developed with the expansion of Accommodation adjacent to the Residential Colleges that will require careful placement of pathways and the opportunity to clearly define management edges. (also refer section 4.1.12 Landscape Planning and Maintenance, regarding ‘defining management edges’)

4.1.3 Equity of Access

BACKGROUND

As a service provider, the University is required to comply with the requirements of the Commonwealth Disability Discrimination Act 1992 (DDA). The DDA requires that all people are given equal access to and use of public facilities and that people with disabilities be given equal opportunity to participate in, and contribute to, the full range of social, political and cultural activities.

The University Policies mandate the provision of access opportunities for people with mobility difficulties. An Architectural Access Brief developed by the Offices of the University Architect and the Disability Service details the relevant standards for buildings, paths and access.

The rights and responsibilities of building designers and managers under the DDA are further explained by the Advisory Notes on Access to Premises prepared by the Human Rights Equal Opportunity Commission (HREOC). The Notes provide further understanding on the objective of the DDA and the Australian Standard. In 1997 the HREOC recommended that, where appropriate, the enhanced requirements of the Australian Standard, Design for Access and Mobility, AS 1428 Part 2 are to be applied over the minimum requirements of Part 1. The current Advisory Notes are can be downloaded from: http://www.hreoc.gov.au/disability_rights/
The Building Code of Australia (BCA) and the Australian Standards for Access and Mobility Design (AS 1428) provide for minimum design requirements for access provisions. It is essential that architects and designers regard accessibility as a design issue and not as an add-on feature.

The objective of creating equality of access is to ensure that the facilities and spaces to which the public enters and uses, are connected by accessible paths of travel. The design elements of particular concern are:

- **Building Entrances** – Entrances must be accessible to all users. Steps and separate ramps should be avoided wherever possible.

- **Ramps** – Where a change of level is introduced internally or externally to a building, an accessible path of travel must be maintained or provided. Access ramps should be designed as an integral part of the main building entrance.

- **Steps** – Steps should be avoided wherever possible. Kerb ramps to footpaths should be provided outside external doors for ease of travel. A step ramp can be provided in the place of a single step if any difference in level is unavoidable.

**Existing Conditions / Issues**

Many parts of the Lower Campus study area, including the primary access corridor through the Central Mall, have a gradient of 1:14 or greater (see figure 6), which exceeds the guidelines for Equity of Access. There are also a number of steps within the landscape areas which restrict disabled access. Recent improvements to the Student Union Link Path (between the Morris Miller Library and the Churchill Avenue underpass) have provided good disabled access with improve surfacing, gradient, handrails and tactile indicators (Photo 6)

Due to the exceptionally steep nature of the topography, there are considerable barriers to the establishment of equitable access throughout the Upper Campus area. In this regard, the numerous small carparks adjacent building do provide a level of equity.

Other issues include the extent of infrastructure in the areas between and adjacent to facilities that would be required to provide the grades required for equitable access under the codes and standards. Such regrading and construction of ramps where possible can result in consequences such as loss of vegetation, steep batters and interruption of site hydrology. The need for equity of access is not questioned, however there has been a tendency to resolve Campus wide circulation issues within the landscape as a secondary consideration. Consideration must be given to improvement of campus-wide circulation when planning any new building works.

Some specific issues for equity of access across the Lower Campus include:

- The steep grades and level changes through sections of the Campus (particularly within the Central Mall area) exceed disabled guidelines.

- There are very few tactile indicators in place on the Campus (although recent additions have improved this situation).
• A number of important areas are not presently accessed by paths which meet disability access guidelines (e.g. the Administration courtyard).

• Path accesses from bus stops are often poor, and unformed.

• Path surfaces are poor due to poor maintenance or gravel base.

Some specific issues for equity of access across the Upper Campus include:

• Disability access from Churchill Avenue is limited. Steep path from Churchill Avenue, opposite the Humanities Department carpark inclines (combined with steps) at greater than 1:14/1:10 without handrail. Path is accessed directly from Churchill Ave, adjacent to busy turning lane and multiple carpark entries/egress’s without providing for safety margin, recess. Path enters directly into service road and service area at the rear of Zoology / Plant Science.

• A number of gathering areas exclude disability access. Eg; Economics/Commerce. Front/East entrance discourages disability access, with steep ramps (far exceeding disability standards), tall riser steps to grassed raised lawn.

• Access from Mt Nelson residential area Extremely steep 1:5 – 1:10 ramped steps along boundary. Links Mt. Nelson residential area, with Lower campus via most direct route.

• Important new facility links are presently being developed with the expansion of Accomodation adjacent to the residential Colleges that will require careful placement of pathway links to campus facilities.

• Inadequate provision of sight lines for disability access; opposite the Student Union. The medians are in low/poor visibility corner of road or carpark.

• Significant desire lines/routes effectively exclude disability access. Extremely steep grades such as the connection from Hytten Hall to Life Science via the Rifle Range Creek Gully, are a significant constraint.

Photo 6
Recent improvements to the Student Union Link Path have provided good disabled access with improve surfacing, gradient, handrails and tactile indicators
Photo 7
The ‘Primary Address’ at Churchill ave. Landscape presentation limits legibility particularly for persons with visual impairment

Photo 8
Access to Building (Riawunna Centre) directly through a carpark.

Photo 9
Landscape presentation has an critical role in establishing access legibility on a steep site
Figure 6  Slope/ Access
**Policy Statement**

*Plan for ‘equity of access’ to all Campus locations and facilities.* Given the sloping nature of the lower Sandy Bay Campus, the provision of complete unassisted access to all areas is a constraint that may take some time to achieve. However, improving access and information for people with disabilities should be a priority and considered at the earliest stages of all project and Action Area improvements.

*The design of any new elements (including the selection and siting of furniture) should consider the needs of people with disabilities, and should be designed in accordance with the requirements of relevant Standards.* This is particularly relevant to the design of outdoor handrails, steps, disabled ramps, and other external elements not associated with building works or covered by the Building Code of Australia (BCA). In these instances the standards relating to disability access apply. ‘AS 1428 Design for Access and Mobility’ establishes the requirements for the design of ramps and facilities to accommodate people with disabilities. This includes specific requirements relating to ramp grades and widths, landings, the diameter and offset of handrails, etc.

**Key Directions**

*Undertake and implement a campus wide Disability Access Action Plan* to plan for access upgrades to all external areas. Develop a program to continue to improve access to locations and facilities within the study area: in the short term, access should be improved to high use areas such as the Administration Courtyard, while in the longer term, substantial works may need to be undertaken on the Central Mall, to provide benching or terracing which makes disabled access easier.

*Ensure that all new works (or modifications to existing site elements) are carried out in strict accordance with the requirements of AS 1428.* The location, design, detailing and finishing of all furniture items shall maximise accessibility to people with disabilities (this should be considered in the preparation of the proposed Technical Notes). In narrow spaces, outdoor furniture elements should be located adjacent to pathways or in positions to minimise obstructions. Where construction works temporarily restrict or prohibit access to a path of travel for people with disabilities, alternative access shall be maintained and provided for the duration of the works.

*Improve Equity of Access with all new landscape works.* Continue to include disabled access ramps, pram crossings and tactile indicators in all upgrades to external areas. Ensure replacement and repair of pavements meet with equity of access requirements.
4.1.4 Vehicle Circulation & Parking

BACKGROUND

A large proportion of staff, students and visitors to the Campus arrive by car. For this reason, safe and efficient vehicle circulation, and the supply of adequate car parking, in convenient locations, with links to key facilities and internal pedestrian circulation are important. However, the car parking can have significant implications for the layout and planning of the Campus by affecting the amount of available open spaces, and the movement of people in and around the campus.

This Subject Plan has not undertaken to assess demand for parking or recommend any major changes to the existing layout. However, as the study area is the most visited part of the University, it is recognised that supply of parking is a significant issue, the impacts of which extend beyond the study area into the remainder of the Campus and surrounding streets. While parking may appear under-supplied, it should be noted that in this case greater supply can lead to greater demand, with those who presently do not drive because of difficulty parking, choosing to do so.

Bicycle usage is also high at the Campus and as such the supply of, and access to, bicycle parking is also an important consideration.

Vehicle circulation and parking in the Upper Campus is problematic. Parking layout is largely influenced by the manner in which development of facilities has occurred, with car parking provided directly adjacent each building as it is established. This adhoc process has led to an inefficient network of small car parks. Also due to it’s relative remoteness from the rest of the Campus facilities and the steepness of grades, car parking adjacent buildings has replaced pedestrian access as the dominant means of circulation.

EXISTING CONDITIONS / ISSUES

The present vehicle circulation system in the Lower Campus is based on a one-way internal loop around the upper sections of the study area, with three entry points. Permit parking is available around the loop and general voucher parking at the Main Entrance car park accessed from Churchill Avenue.

There is also a substantial carpark accessed from Grace Street in the lower precinct (available for free, all day parking), and a smaller voucher carpark between the School of Law and the University Sports Centre. Parking within the study area is shown on figure 7 below.

Outside the study area there is significant parking provided in other parts of the Campus and in nearby streets.

The University provides for special access parking with designated oversized parking bays (identified by a sign displaying a wheelchair symbol on a blue background) and by a number of standard size car park bays that are available for persons who do not require substantial mobility aids (e.g. wheelchairs) but still require parking in close proximity to buildings (identified by a sign stating “Access Parking - University Disability Access Permit Required”). All parking bays in the access parking system are designed to comply with current Australian Standards.
Figure 7 Parking Diagram,
Specific car parking related issues in the lower study area include:

- Insufficient parking at some areas leading to haphazard and illegal parking on grass and landscaped areas (e.g. in the lower precinct between the Grace Street carpark and the Rugby field, and in the vicinity of the Earl Street entrance).
- Landscaping and planting of carparks, is generally poorly designed and does not add to the landscape aesthetic of the Campus.
- Pedestrian circulation through carparks is often poor and conflicts between pedestrians and vehicles often arise (particularly the carpark adjacent to Churchill Avenue and the Grace Street carpark).
- Parking areas dominate the open space at the northern and southern extremes of the study area.
- Bicycle access and circulation is less clearly defined, but generally follows the roads, although most of the major pedestrian paths are also used for bicycle circulation. The Central Mall area is presently signposted to restrict bicycles and ‘small-wheel devices’ (skateboards, scooters, roller blades etc.).
- A recent post-graduate research project has reviewed some aspects of bicycle access and parking at the Campus. Existing bicycle parking racks are shown on the Parking Plan in figure 7.

Specific car parking related issues in the upper study area include:

- Carparks in Upper Campus have good tree storey generally-though ground storey is generally poor.
- Carparking along the main upper circulation road, College Road, is not well defined.
- Topography and the conservation value of surrounding bushland/ habitat is a considerable limitation to expansion of car-parking in the Upper campus.
- Residential parking at Christ College is informal, with overflow car parking not defined rear of college.

Some issues for bicycle circulation and access have been identified including:

- The number of bicycle ‘hoops’ supplied appears to exceed the demand, although some locations can become overcrowded on high-use days (e.g. Sport Centre), while a number of poles and hand rails continued to be used for ad hoc parking in different parts of the Campus.
- There are potential conflicts between pedestrians and bicycles entering the Campus at the bus stop on Churchill Avenue.
- Access to a number of bicycle parking racks is poor where paved paths do not service the racks directly (e.g. between Dobson Road and the Morris Miller Library.)
• Issues with illegal contra-flow of bicycles on Grosvenor Crescent.
• The security of bicycles parked in cycle parking areas after dark.
• OH&S and access issues with the chaining of bicycles to hand rails or in building foyers, or where they obstruct paths (see Photo 3)
• Provision for bicycle parking is generally poor for the Upper Campus.
• Steeper grades of the Upper Campus are a physical deterrent to cycling traffic. Consequently demand for bicycle access is less than for Lower Campus.
• Most bicycle ‘hoops’ / racks are located in carparks with little or no separation from vehicular parking/ access.
• Access to a number of bicycle ‘hoops’ / racks is poor where paved paths do not service racks directly. (eg. Some racks in front of Medical Science not usable.
• Security of bicycle parking areas is largely not considered in the Upper Campus.

Photo 10
OH&S and access issues with the chaining of bicycles to hand rails or in building foyers, or where they obstruct paths

Photo 11
General character of parking along College road. (non-permit parking)

Photo 12
Access to bicycle ‘hoops’ generally poor, unlit at night.
Photo 13
Poor transition from car-park to entrances. Carpark and access for persons with disability retro-fitted to existing entrances.
**Policy**

Provide for safe, efficient and appropriate vehicular flow and parking which reflects the important role of the study area within the context of the University, ensures priority is given to pedestrian access and circulation, and encourages the use of alternative transport options (such as public transport and bicycles).

**Key Directions**

Systematically upgrade vehicle and pedestrian flow within carparks. Within the study area, direct resources to implementing the proposed upgrade to the Grace Street Carpark and redesign and improvement of the Main Entrance carpark as a matter of priority.

Improve the appearance of the Campus through enhanced landscape treatments across carparks and internal roads: As part of a continued upgrade to landscaping which improves entrances and addresses and promotes discrete ‘themes’, the landscaping of carparks (e.g. Grace Street, Main Entrance) should be continued. Some improvement has been made with the recent landscape works on Dobson Road.

Review bicycle parking and circulation issues: Develop a circulation plan for bicycles, particularly identifying shared bicycle/pedestrian paths, and pedestrian only paths. Consider contra-flow possibilities on internal roads and linkages to cycle routes outside the Campus.

Review provision of carparking in the context of needs and the University’s commitment to principles of sustainability.

Overall objective for development of parking policy for the Upper Campus should be minimising built footprint on Upper Campus while rationalizing the number of small Carports.

### 4.1.5 Open Spaces & Gathering Places

**Background**

An important role of the University landscape is to provide spaces for gathering, meeting, sitting and recreating outside the Campus buildings. Such spaces provide an important fabric for exchange, interaction, contemplation and activity which is ancillary to, but an important part of, the teaching and administration functions of the University.

A range of different outdoor spaces servicing various demands for small and large gatherings, formal and informal activities, and passive and active recreation are needed in the study area. This is particularly true as the study area is a focal point and meeting place for people from throughout the University community. In addition, there is scope to build on this central function and provide a focal point for larger, organised massing (e.g. festivals, outdoor concerts, public gatherings etc.).

The Upper Campus has similar objectives to the Lower Campus. For reasons of development history, topography, remnant vegetation, this extent of the Campus is more decentralised. Gathering Places are likely to be more
dispersed, smaller and less developed. They are more likely to be discreet, informal and ‘natural’

**EXISTING CONDITIONS / ISSUES**

While weather conditions often dictate the use of outdoor spaces, the northerly aspect of the study area means that even in winter outside areas can be important places for the University community. Presently there are a number of outdoor spaces, many under utilised, which service a range of functions (figure 8). The following identifies some particular issues related to the present open spaces and gathering places in the study area:

- There is a lack of covered outdoor spaces for shade and weather (where there is shading, this is usually provided by trees and buildings).
- Useable space is dominated by the Central Mall and the sports fields with few spaces dedicated to providing intimate surrounds for passive recreation and contemplation.
- Gathering spaces have largely arisen as a result of different schools and centres appropriating ‘their patch’ of open area in front of their building, and as such many are too small or poorly equipped.
- Not all Faculty, School and Research Centres have their own outdoor space for gathering and activities.
- There are large areas of poorly utilised open spaces within the study area, particularly where they are not directly accessed from adjacent buildings (e.g. between Dobson Road and Churchill Avenue).

**Photo 14**

Many gathering spaces in the Upper Campus and periphery of the University reserve are informal or ‘appropriated’ space associated with Schools and research facilities.

**Photo 15**

Courtyards associated with the Christ College residential area. Irrigated grass but generally underdeveloped spaces formed by building footprint and utilitarian access.
Photo 16

Landscape presentation has an critical role in establishing and defining gathering space. The forecourt to Christ College is Utilitarian with no defined gathering space.
POLICY STATEMENT

Continue to provide for a range of high quality outdoor spaces small and large gatherings, formal and informal activities, and passive and active recreation.

Encourage the multi-use of open space areas.

KEY DIRECTIONS

Review the functionality of open space, gathering nodes and passive use areas. Systematically review the use different open space areas across the Campus, and assign priorities for improvement/rationalisation based on importance to the whole university community, and identified user groups. In a few circumstances, the transfer of open space to other uses (e.g. carparking or Habitat /conservation area) may be appropriate, however, aim to maintain the overall amount of useable open space available.

Develop a central ‘heart’ of the Campus within the study area:. In the longer term, part of the Central Mall area might be considered for redevelopment/landscaping as a location for large gatherings and activities, building on its central location, aspect and outlook.

Develop local usable gathering spaces in consultation with the main users of adjacent buildings: Many building forecourts have informally developed over time as gathering spaces for schools/faculties and research centres. These continue to be important part of social functioning of the Campus, and many could be upgraded. These should be defined and where appropriate form part of a management edge where these spaces border sites of Habitat significance adjacent to Rifle Range Creek ‘Wet Forest’ Conservation area.
Figure 8 ‘Useable Spaces’
4.1.6 Paving, Surfaces & Lighting

BACKGROUND

The provision of paved surfaces and lighting not only influence the appearance and functionality of the Campus landscape and outdoor spaces. The quality of pavement surfaces, layout and quality of lighting provides the functional fabric upon which much of the Campus’s activities take place. Provision of high quality pavements and lighting can improve the visual appearance, functionality, safety and assist with legibility and coherence. Lighting not only assists with the functional access of the Campus at night-time but also contributes largely the appearance of the Campus at night. The quality of these elements contribute toward the general presentation of the University and to many first time visitors and arrivals define the first impression of the University.

EXISTING CONDITIONS / ISSUES

Existing generalised pavement types and locations are shown on figure 9. The existing surfacing of pathways and pavements are generally disjointed with a wide range of surface types and pavement conditions.

Specific issues identified for surfaces and paving in the lower study area include:

- Numerous pavement types or surfacing are used within the study area (as well as many sub-types) including clay brick, brick tiles, bitumen, insitu and precast concrete, crib lock concrete block pavers and a range of gravel types. The use of these treatments is often mixed within small areas, which contributes to the sense of disparity on the Lower Campus.

- In many areas, including the central courtyards, the pavement type appears dated and worn, and is not appropriate to the use as vehicle access routes;

- There are a number of instances where the paved path network does not meet the desire lines of pedestrians which means people cut across garden bed or lawn areas (for example, accesses from the Alexander Street and Sandy Bay Road bus stops).

- Much of the existing paving does not cater well for people with disabilities or conform to current access guidelines (including tactile bands, pram crossings, etc). There are numerous cases of cracked or damaged sections of paving, tripping hazards etc.

- A number of pavement types have been used in the Upper Campus areas though not with the same sense of disparity as on the Lower Campus. The dominant surface material on Upper campus is bitumen pavement and grey concrete path links.

Specific issues identified for surfaces and paving in the Upper study area include;

- Numerous pavement types are used in the upper area, though not with the same sense of disparity. Recent use of coloured concrete unit pavers in the student services area contrasts with the general use of utilitarian grey concrete paths.
• For less well used paths, a limited range of alternative surface types should be considered, the recent ‘saw-cut’ concrete pavement to the forecourt of the new Uni Bar is a good example of an alternate yet consistent treatment, that could be used to renovate some existing areas of concrete pavement. Gravel is used only on very low-use routes these are more common in the Upper Campus.

**Photo 17**
Upper areas dominated by utilitarian concrete paths.

**Photo 18**
Concrete pavement associated with recent Uni Bar development. Economical surface given ‘feature’ treatment through saw cutting and contrasting ‘mastik’ joints.
Figure 9 - Pavement Surface Types
Issues with the existing external lighting include:

- There is no co-ordinated and strategic approach to outdoor lighting on the Campus.

- Several carpark areas have insufficient lighting (particularly Grace Street Carpark), as do some highly-used internal areas (e.g. the Central Mall).

- Bollard lights are used in some areas (these need to be closely spaced to provide adequate light levels).

- The existing pole mounted spherical lights which are used extensively around the Campus are dated in appearance and an inefficient light source (See Photo 5).

- Potential safety issues with screening of pole lights by tall shrubs.

- Flood lighting of existing buildings or elements does not appear to be used as a way of improving visual prominence of the Campus.

- Whilst no formal assessment of external lighting levels was carried out as part of this study, it appears that the provision of lighting many areas of the Lower Campus may not be adequate given the amount of after-dark usage of the Campus, and recent changes to the Pedestrian Lighting Code, AS 1158.3.1 (1999). Where lighting is provided, it is largely mundane and functional, and is not used to enhance the appearance of the Campus landscape, although the recent use of the new University standard pole-top luminaire (Photo 4) at Dobson Road and the Student Union Link Path is an improvement on the earlier pole mounted sphere (see Photo 5). Recent accommodation development adjacent to the existing Christ College will generate significant new pedestrian traffic and gathering spaces, and it is recommended that lighting provision for this area meet or exceed recent changes to the Pedestrian Lighting Code, AS 1158.3.1 (1999).

- The lighting of facilities within the Upper Campus and University Reserve can have significant impact upon habitat values in the adjacent bushland areas. The new residential development adjacent to Christ College may generate significant amounts of nighttime luminance which can have undesirable impacts on critical breeding / nesting sites and therefore considerable care should be given to the location of outdoor lighting.
POLICY STATEMENT

Provide, safe, efficient and high quality lighting and pavement surfaces throughout the study area by instigating improvement works which are based on strategic program of identified issues and priorities.
KEY DIRECTIONS

Utilise consistent paving materials and lighting along with other landscape and signage treatments to direct pedestrians into and around the Campus.

Undertake urgent pavement repair works. A Campus-wide list of issues and hazards related to paving and surfaces should be compiled and priorities determined based on existing issues and usage (i.e. higher priority works would be those in high use areas with identified hazards, or obvious wearing of the material), to make safe existing surfaces and remove tripping hazards etc. e.g. the Upper Mall area in front of Lazenby’s Café.

Prepare standard guidelines for the reinstatement of pavements, kerbs and edges following works. As part of a landscape technical notes document, standards This should include requirements to maintain building access, specifications for demolition, preparation, surface treatment and installation to ensure that pavements, which have been disturbed, are reinstated to match the standard. Incorporate recommendations from the Disability Access Guidelines as an integral part of any pavement reinstatement or building works.

Develop a University Standard material for major use paths: The choice of a single material for the primary and secondary pedestrian routes in the study area would aid legibility and continuity of paths within the Campus. The material should be attractive, relatively low maintenance, allow for disabled access and be able to withstand high levels of pedestrian traffic and occasional vehicle use, where necessary. The recent pedestrian path works at Dobson Road have used insitu concrete surfacing with an exposed aggregate finish. This type of homogenous pavement is a significant improvement on the block and brick paving installed elsewhere in the study area, and could be phased in across the Campus to create a consistent appearance. For less well used paths, a limited range of alternative surface types should be considered, with gravel used only on very low-use routes.

Develop policies for the design and location of lighting which encourage efficiency, minimization of light pollution and improvement to the appearance of landscape and building elements.

Develop policies for the design and location of lighting which limits pollutant luminence adjacent to Habitat conservation zones.

Explore the use lighting as a motif at the entrances to create a more dynamic and vibrant presentation to the landscape, buildings and main public addresses.

Carry out a review of existing lighting to pathways and courtyard areas and improve lighting in high-use areas as part of landscape improvement works: The University should aim to meet with the requirements of the Pedestrian Lighting Code by considering lighting improvements with all new works or developments. A number of areas with substantial use after dark may not to have sufficient lighting at present (e.g. carparks and the Central Mall). Lighting may also be used to help improve the pedestrian link between Sandy Bay Road/rugby field and the Campus proper.
4.1.7 Outdoor Furniture

BACKGROUND

The importance of consistent and high quality outdoor furniture (seats, tables, bins etc.) is similar in effect to the need for quality surfaces and lighting as discussed above. Consistent and appropriate designs reflect the needs of the users, and present an integrated and high quality image of the University.

Location of furniture must also respond to the needs of users, and be provided where appropriate, however, there is also scope for the establishment of furniture in previously under-utilised locations to encourage use. This would occur as part of the development of a system of usable outdoor spaces as discussed above.

EXISTING CONDITIONS / ISSUES

There is a large number of disparate furniture types on the Lower Campus. This includes approximately twelve different seat styles, four types of bin, two types of table settings and five types of bollard. An initial inventory of furniture types is provided in Appendix 2. There is an inconsistency of furniture types on the Upper Campus however the demand for public furniture is relatively low compared with the Lower Campus.

Recently the University has moved to standardize outdoor furniture types across all Campuses, however, a full suite of elements has not been selected and sufficiently documented to provide guidance for consistent installation.

A number of existing furniture types are in poor condition and/or are unattractive. The more recent alloy and timber seats (as supplied by Town and Park Furniture), Picnic Table and matching alloy bin are currently being phased in across each of the University of Tasmania Campuses. This simple and robust range of furniture elements is a substantial improvement on earlier furniture styles, and may provide for more consistent presentation.

Issues with the existing outdoor furniture in the study area include:

- Much of the existing older style furniture is in poor condition and in need of replacement.
- There are high levels of maintenance and management issues associated with having such an extensive range of furniture types.
- There appears to be no established guidelines for the siting and installation of furniture (some existing items are poorly installed or located).
- Furniture replacement appears to be occurring on a project-by-project basis. At the current rate replacement over the entire Campus will take many years.
- Most of the existing furniture items do not cater well for people with disabilities (there is a particular need for a picnic table and drinking fountain which allows for use by wheelchair bound people).
- In some cases bollards appear to be been over used creating obstacles to pedestrians (bollard numbers, locations and styles need to be considered campus wide).
• The appears a need for a well designed Café Table with matching chairs for the outdoor eating areas (existing tables and plastic chairs are inadequate).

• inventory of furniture types is provided in Appendix 1.

• The provision and selection of furniture for the Upper Campus should be considered carefully. In some instances provision of furniture may not be appropriate where use may have negative impacts on surrounding habitat / breeding sites.

• The provision and selection of furniture for the Upper Campus should be considered carefully where site is heavily shaded such as the picnic area in Rifle range creek. Wet shaded conditions have impacts on the durability of materials and will effect material choices.

![Photo 23](image1.png)
Furniture associated with picnic facilities near Rifle Range Creek ‘Wet Gully’

![Photo 24](image2.png)
Furniture associated with picnic facilities near Rifle Range Creek ‘Wet Gully’

![Photo 25](image3.png)
Furniture associated with picnic facilities near Rifle Range Creek ‘Wet Gully’
POLICY STATEMENT

Provide a consistent and complete suite of landscape furniture elements across the Campus which are of high quality, durable, and reflect the identified landscape themes and the needs of users.

KEY DIRECTIONS

As part of a series of design standards and technical notes, develop a University-wide Furniture Design Manual. To direct a consistent and strategic approach to Campus furniture a Furniture Design Manual (similar to the University’s Standard Signs Manual) should be produced to document a full suite of outdoor furniture elements and guide the consistent installation of these across all Campuses.

Continue to systematically replace old and degraded furniture items. Replace seating and tables in high use areas such as the Central Mall and courtyards.

Install new furniture items to improve passive use and gathering nodes. As part of the upgrading of open space areas in the Lower Campus, a number of new seating and other furniture elements may need to be installed to encourage the better use of under utilised spaces.

Improve provision of non-seating furniture elements. Drinking fountains, cigarette/small litter bins for building entrances and other non-seating furniture elements should be included in the furniture design manual and progressively installed across the Campus.

4.1.8 Signage

KEY DIRECTIONS

High quality and legible signage improves both the functionality and appearance of the Campus. Directional signage, identification signage, information, help and warning signage, and vehicle circulation and parking signage are all important components of the functioning of the study area.

In order to have effective signposting the need of the sign users or clients must be understood. According to the University Sign Manual, there are four clearly identifiable ‘user groups’: students, visitors, staff and special needs groups. Visitors to campuses include potential students, visiting academics, deliveries of services, emergency services as well as visitors to conference, theatre or gallery events. Special needs groups include the disabled students and staff and others with special mobility or visibility requirements.

EXISTING CONDITIONS / ISSUES

The University produced a Standard Signs Manual in 1998 to address external building and directional signage across all Campuses of the University. Vehicle circulation and parking signs are not covered by the manual and are installed to comply with the current Australian Standards.

Since the introduction of the Manual, there has been a significant improvement in the signage at the study area. New signs designating most buildings and locations have been installed and there is a consistent and
legible system of signage across the Lower Campus. However, some issues related to signage in the study area include:

- A number of signs are poorly installed, resulting in the exposure of concrete footings (Photo 8);
- The signs manual does not provide for more substantial or sculptural signs to be provided at key public addresses and entrances (e.g. Churchill Avenue and Sandy Bay Road);

**Policy Statement**

*Provide clear information to staff, students, visitors and special needs groups via a series of high quality, legible signs which improve the functionality and appearance of the Campus.*

**Key Directions**

*Continue to implement and update Standard Signs Manual.* The Signs Manual provides a strong basis for the ongoing provision of building signage at the Campus and should be continually implemented. Make provision within the Manual for more substantial ‘landmark’ signage at the Main Entrance and key public addresses. A technical note for the proper installation of signs (particularly footings) should be appended to the Manual.

*Replace and re-lay signs where footing has become exposed.*
4.1.9  Art, Sculpture and Interpretation

BACKGROUND

Art, sculptural elements and interpretation can all be used to improve the presentation of the University landscape, provide features of interest and complement the education and teaching of the Campus.

EXISTING CONDITIONS / ISSUES

Although not a significant feature, there is currently a range of sculptures, art objects and interpretation sites located around the study area. In the majority, these are located within the Administration and Central Courtyards and help to provide a visual focus within these spaces. Examples include one metal sculpture within the Administration Courtyard; several features within the Central Mall (e.g. Centennial Fountain, in the Upper Mall, a sculptural cart outside the Humanities Building, Photo 29, and a sun dial in front of the School of Mathematics, Photo 28).

Interpretive features are less common although there are some cut stones and drill-cores in the vicinity of the School of Earth Sciences/CODES buildings, which have been interpreted with a basic educational reference (Photo 30). These provide a good example of adding to the interest of the landscape, and are particularly meaningful being located outside the relevant Faculty.

There is relatively few instances of Art within the external spaces of the Upper Campus. These include:

- The Peter Taylor ‘pillars’ above Churchill ave. at the pathway toward the School of Plant Science is one of very few examples of professional standard.
- A large Ferro-cement (Elephant Seals?) sculpture is located at an entrance to the School of Zoology, however it’s condition, and the overall undefined presentation of this entrance leaves the impression that this interpretive (?) sculpture could be improved with sensitive relocation/ re-positioning.

Some existing issues related to art, sculpture and interpretation elements in the study area include:

- There is no policy or strategy directing co-ordinate the procurement and placement of art objects within the Campus.
- The existing sculptures generally feel like they have been placed within an existing space rather than the space and the art piece being considered together.
- There are many areas or spaces around the Campus which could benefit from the addition of an appropriate scale art object or sculpture (particularly spaces which are highly visible but lacking a visual focus).
- Art objects do not need to be purely visual pieces and can include a function (such as a shelter, seat or wind break).
- While the existing sculptures within the Administration Courtyard do provide some character and context to this space, the addition
of further pieces could help to reinforce this character and provide a feature to this important space.

- There are sites or spaces around the Upper Campus which could benefit from the addition of an appropriate scale art object or sculpture. These site would benefit from site specific art work.

- Art objects in the Upper Campus could be utilitarian; (such as a shelter, seat or wind break).

**Photo 28**
sun dial in front of the School of Mathematics

**Photo 29**
sculptural cart outside the Humanities Building

**Photo 30**
cut stones and drill-cores in the vicinity of the School of Earth Sciences/CODES buildings, interpreted with basic educational reference

**Photo 31**
Concrete / ferro-cement ‘seals’
POLICY STATEMENT

Use art, sculpture and interpretation to emphasise locations or themes: Art elements can be used in to reinforce identity or character of different parts of the Campus, or to reflect the roles and foci of different Schools or Faculties.

KEY DIRECTIONS

Develop a policy for art, sculpture and interpretation at the Campus: In order to ensure art, sculpture and interpretation are sensitively and appropriately sited, the University should consider developing a policy for these elements which encourages their installation, provides guidelines and priorities for the location and number to be installed, and identifies potential funding/sources of artwork. The policy should encourage the installation of elements appropriate to identified themes or sub-themes and the functional use of art/sculpture elements.

Commission significant art/sculptural works to enhance public addresses and entrances. Particular focus locations for art and sculptural elements include entrances, public addresses and high-use internal spaces. In particular, the Sandy Bay and Churchill Avenue frontages to the Campus may be potential sites for significant sculptures or sculptural elements to help to define the Campus entrances and provide a greater sense of identity.

4.1.10 Locating Services

BACKGROUND

The external fabric of the University is an important conduit for a number of above and underground services including water, sewer, electricity and telecommunications, the location of which can influence the appearance and functionality of the landscape.

EXISTING CONDITIONS / ISSUES

There are a wide range of services within landscape areas on the Lower Campus. In many instances, other than a service lids, the locations are alignments are not obvious above ground. In other situations however services do create a visual intrusion within the landscape and provide a constraint to improvements. Issues associated with the location of services within the study area include:

•
• There currently seems to be no co-ordinated approach to service planning, placement or upgrading on the Lower Campus (considered on a project by project basis)

• There are numerous examples of services impacting on landscape areas including underground alignments which limit tree planting or service lids which are set above the ground, creating a visual intrusion or tripping hazard.

• There appears to be no consistent construction standards for service lids (such as drainage grates, vale boxes etc) which means the types used often vary between projects.

• Power supply is on Campus is largely undergrounded (except a short section above ground power supply extends past the Gymnasium and Child Care Facility).

• Significant service ducts are located below the surface of the Central Mall. Cost associated with lowering or relocating of services could limit development or changes to this area.

• There are currently no guidelines for the reinstatement of landscape after service repairs or installation.

• Garden taps are provided at various points around the Campus. They are useful for manual irrigation, responding to mulch fires etc. However there is currently no coordinated approach to siting or provision.

• A series of ‘Help Points’ (emergency buttons in view of security cameras) are located around the Campus. The location of these needs to considered in any proposed changes within each precinct.

Many of the issues of the Lower Campus are common to the Upper Campus. These are often compounded by the steeper topography and changes in geology. This can mean services are physically difficult to reticulate at appropriate grades for optimum function or difficult and expensive to excavate and install underground in rocky terrain. The steepness of slope can also mean services are more difficult to access for maintenance and emergency.

• Rear entry to Zoology/Agricultural Science. Exposed above ground services creates accessibility, risk management/ public risk and development/ enhancement issues. Adjacent the key entrances/ addresses also raises issues of public image and compromises marketing and enhancement of status/ image as an institution for academic excellence.

• Services not capped at ground level. Large above ground culverts with rusty make-shift mesh covers.

• Duplication of services- eg instances where 2No fire hydrants within 10 metres - one may be disused but this is not clear and should be capped/ demolished if the case.

• Finish/ completion of works;- The standard and quality of services particularly in public areas needs to be identified to all service authorities and contractors. Objectives for completion of works need to include effective stabilization of ground conditions to University of Tasmania ‘Technical Note’ standard.
• There are currently no guidelines for the reinstatement of landscape after service repairs or installation.

Photo 33
Above ground service ducting and ‘workshop’/research equipment at a highly visible public entrance.

Photo 34
Un-capped services above grade.

Photo 35
Service provision across steep slopes and through difficult geology – need for detailed guidelines for re-instatement, rehabilitation

Photo 36
Above ground service ducts.

Policy Statement

Provide for the efficient location of services in a manner which maintains the functionality and landscape character of the Campus.
KEY DIRECTIONS

Identify current and future service needs and develop a strategic and proactive approach to provision as part of planned works. Present and future needs should be clearly identified and the implications to the landscape fabric (garden beds, lawn, paved surfaces, views and aesthetics etc.) identified. Wherever possible, service conduits for potential future needs should be established during major landscape works. Selection of service routes should avoid established trees. In the longer term the University should aim to rationalise and reducing the number of underground service conduits.

Develop planning guidelines for service replacement including common trenching, and directions for reinstatement of landscape areas following repairs. This could become part of Design Standards/Technical Notes.

4.1.11 Planting

BACKGROUND

Existing plantings are important are important to the landscape character of the lower Campus. Planting on the Campus consists of a mix of exotic and native, predominantly with an informal character and emphasis given to Australian plants. While it appears to be never been carefully planned, the approach to planting on the site has changed since the Campus was originally established.

The shift to Australian native plants was partially based on the perception that Australian plants would need minimal irrigation, were otherwise hardy, and would attract wildlife (particularly birds). In part selection was also based on the misconception that Australian plants would easy to establish and would grow prolifically without high levels of care or maintenance. This has proved not to be the case and given that many areas of native planting are now over 20 years old, the maintenance levels and issues with these plantings are increasing.

Native and indigenous plantings in the past have been dominated by large evergreen trees and a shrub storey dominated by medium to large woody shrubs. In recent years trials of ground cover plant material has been relatively successful. A consistent issue is that the woody shrubs are coming into their senescent years, becoming increasingly 'woody' leaving large areas of garden/earth exposed and having consequent erosion, weed invasion and aesthetic decline. The areas that have been established with ground cover material, particularly indigenous, rhizomatous plants have been a significant improvement to the appearance of the campus. Once established these planting have successfully stabilised slopes, and have the ability to successfully re-generate themselves once disturbed and are able to compete well with weed species and prevent weed establishment.

EXISTING CONDITIONS / ISSUES

Landscape areas, including grass and garden bed make up a significant percentage of the site area of the lower Campus. This includes approximately 57,000 m² of grass (38% of site area), and approximately 20,000 m² of garden bed, (13% of site area). These areas require significant levels of management and resourcing. These areas of planting, grass and
mature trees are essential to the open landscape character of the lower Campus.

While there is no established theme for landscaping across the Campus, there is a basic pattern of existing planting character, with the Central Mall area and courtyard spaces containing a high concentration of exotic plantings, and the peripheries of the study area being dominated by Australian native plantings.

There are a broad range of issues with the existing planting and maintenance on the site including:

- Planting on the lower Campus generally lacks structure or consistent and legible themes, due in part to the shift in landscape styles over time. This contributes to disparate appearance many areas.

- There are approximately 600 trees on the lower campus. These are an important asset of the Campus and essential to the landscape character. They do however require a regular and ongoing management, the requirement for which will increase over time.

- There are currently no formal planting guidelines, establishment details or selection criteria for the Campus. The existing process of plant selection has been largely dependent on personal taste of gardening staff or the landscape consultant preparing a design for a specific area. This approach has meant that while some suitable species are not trailed, others are over used.

- Some of the plantings that have been used on the Campus are now not considered appropriate due to issues such as woodiness, short life span, poor drought tolerance etc.

- A number of commonly available garden plants that have been previously used on the Campus are now classified as environmental weeds and may spread into adjacent bushland areas.

- Visibility and security is an issue with regard to high growing dense shrubs, particularly adjacent to pathways and within Carpark areas.

- The historic treatment of the steep slopes at on the Campus has been short term and low cost. There are many instances of steep slopes with clay soils on which it is very difficult to establish planting. This also presents difficulties for maintenance and provides an increasing concern regarding duty of care responsibilities towards workers.

- There are interruptions of natural movement of water through the soil (caused by such things as services, roads, unnatural levels, footings of buildings. Also the loss of natural rainfall caused by buildings and impermeable surfaces adversely affects plantings.

- Gaps in mass plantings occur across the study area (due to wind damage, vandalism, old age, disease, drought etc.). Establishment of infill plantings is often difficult because of competition from other plants, and trampling of the garden bed by pedestrians making use of the planting gap as a thoroughfare.
• A range of mulches are used on the Campus. This creates management issues due to difference in their maintenance requirements. Existing coconut fibre mulches and coarse organic mulches have a fire risk (flammability) associated with them.

• Steep batters eg; adjacent Plant Science carpark and display garden. Extremely steep batter partially retained with stone pitching. Pitching consistent and typical of much of the established campus areas.

• Existing planting has had mixed results retaining soil. Some-excellent. Other areas exposed/ eroding. Display garden at rear of Plant Science good representation of Indigenous Tasmania that could be improved with better access structures, consistent hand railing, path and edging.

• Small areas of grassing eg; adjacent Ag science carpark are a management issue,- inefficient treatment requiring constant maintenance

• Difficult to manage and /or in-effective planting areas. Typically areas such as front entry to Med Science- Mulched areas won’t sustainably/ successfully support planting- maintenance cost.

• Steep slopes adjacent carparks are a common condition throughout the Upper campus. Where the loss of woody shrubs occurs on these slopes erosion and downstream water quality issues / problems have arisen.

• Visibility and security is an issue with regard to high growing dense shrubs, particularly adjacent to pathways and within Carpark areas.

• While growing conditions do vary across parts of the Campus, the lower study area predominately sits on heavy clay subsoil with a thin layer of silty-loam topsoil. The Upper Campus has skeletal soils, generally less topsoil, poor subsoil drainage and high levels of compaction adjacent paths and pavements present challenges to the establishment and maintenance of plantings.

Photo 37
Mass planting on indigenous ground cover adjacent a carpark provide good visibility and ability to regenerate after disturbance – reducing maintenance.
POLICY STATEMENT:

Implement a consistent planting palette primarily based on the use of locally indigenous and Tasmanian plants (see Appendix 3) to unify the broad range of landscape areas architectural styles and elements on the lower Campus. The continuation of exotic theme plantings is appropriate in locations where the existing landscape character is dominated by exotics or where they contribute to the appreciation of the historic development of the Campus.

KEY DIRECTIONS:

Develop Campus-wide planting themes and planting strategies within each Precinct or Action Area. Based on the continuation of establishment of Tasmanian native plants describe as a key direction above, a range of themes for landscaping and planting should be determined across the Campus. Each Precinct or Action Area, would have its own landscape strategy or concept plan which addresses specific issues in the area, demonstrates how proposed plantings relate to the overall theme and identifies replacement and maintenance issues.

Use feature trees to unify and define landscape character. The consistent use of feature trees to define connections and outdoor spaces within the study area gives the opportunity to promote a coherent landscape character across the Lower Campus.

Remove and replace problem plantings. A number of plantings across the Campus require urgent attention, prior to the development of planting replacement strategies. These should be identified and removed. Examples include:

- plantings which block access ways or paths;
- tall plantings which reduce visibility around paths, building entries or other areas used after dark; and
- trees which present safety risks (e.g. limbs falling);
Develop a series of ‘landscape vignettes’. A number of highly visible localities within the Campus lend themselves to the development of local landscape feature locations, or ‘vignettes’. These would become points of interest in the landscape and, at a relatively low cost, could improve the appearance and interest of the landscape. They would aim to promote identified landscape themes, and may include feature plantings, interpretation, art or sculptural elements or a combination of these. An example location is the undeveloped pocket of garden bed adjacent to the entrance of the new Information Technology Building.

Undertake a Tree Inventory. There is a need to identify and maintain an inventory of existing mature trees on the Campus to provide guidance for tree management and remedial works. The benefits in the establishment of a tree inventory include:

- an ability to better manage tree population (including planning for replacements);
- increase in work efficiency and planning; and
- ability to identify, prioritise and cost remedial tree works.

Each tree should be allocated with a number or code and information recorded on a data sheet to include species type, grid reference (location), height, spread, planting date, stock type, supplier, pruning works, and any planning related information such as likely replacement date, recurrent works etc.

The tree assessment works should be carried out by an experienced arborist and recorded on a data base which has the potential to link with to GIS mapping systems. It is imperative that once the tree inventory is established that it be kept up to date.

4.1.12 Landscape Planning and Maintenance

**BACKGROUND**

The standards of Landscape maintenance are important to the appearance, function and safety of the Campus. Much of the maintenance is however reactive. There is a need for strategic and pro-active planning of landscape development and management, to improve the visual appearance, longevity and provide more cost-effective maintenance. (the report represents a significant action toward the implementation of these strategies.)

While issues are consistent for the developed areas above and below Churchill avenue, the Upper Campus has a number of issues that are relative to the steepness of it’s topography as well as the extent which borders important remnant vegetation areas, that result in Landscape maintenance issues.

**EXISTING CONDITIONS / ISSUES**

The University engages contractors to perform the majority of grounds maintenance tasks. The standard of grounds maintenance is monitored by the University’s Grounds Liaison Officer. Under the existing contract, the services provided by the grounds contractor include:

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6 *Vignette*: “to describe or highlight something in a brief but elegant way”.
• mowing;
• turf care;
• irrigation;
• pruning;
• brushcutting;
• vegetation management;
• weed control and mulching; and
• sportsground maintenance.

A specialist arborist is contracted to undertake remedial works following incidents on existing trees on the lower Campus.

The trend towards outsourcing of landscape services and garden maintenance on the Campus has affected the resourcing levels and ability for the University to directly control how some aspects of the landscape are managed. Potential issues with the outsourcing of landscape maintenance include:

• loss of detailed site knowledge / history with the changing of a contractor (knowledge is not held within the institution)
• potential communication gaps between the user, asset manager and the Contractor.
• Possible inconsistencies in treatments, material supply and the like.
• Possible tendency do the easiest or the most cost affective treatment rather than the best solution.
• Technological and changes in work-place practices and safety standards influence maintenance requirements and standards. Planning for vegetation management and maintenance needs to consider time, budgetary, and resourcing issues.

There are a broad range of issues with Landscape Planning and Maintenance on the Upper Campus site including:

• Unclear or inconsistent maintenance objectives and /or physical extent of works;
• Some areas; such as remnant vegetation retained during construction of the CSIRO facility are now managed in a compromised manner. Often with weedy understorey mown/ slashed. Some good individual understorey remains but not clear what landscape management objective is. This site requires more specific landscape management guidelines and procedures in particular, management that recognizes the value of the remnant indigenous vegetation context and habitat value rather than a site in isolation.
• Unclear planting design objectives; No discernable structure or landscape design other than generic garden treatments make improvements difficult to measure,
• North of Christ College- Landscape design objectives should be in keeping with landscape value of site and surrounding landscape value and ecological value of the University Reserve.

• Definition of management edges must be key element of Landscape Design and all constructed improvements. Combinations of lawn and scattered mature native shrubs become difficult to maintain as many shrubs are relatively short lived, in senescence become woody with little understorey. Result is large areas of un-planted, bare woodchip and natural leaf-fall mulch and dead plants.

• Treatment of Steep batters; a consistent style/ treatment has be diverged from in recent development. This is a significant contributing factor to apparent visual inconsistency.

• Roof gardens- excellent opportunity for roof gardens to become informal gathering spaces across campus has been introduced with the construction of the new University bar roof-garden. Such spaces can be accessed via building services/lifts by people with disabilities. Sensitive site levels, can embrace opportunities of access, roof spaces can present visually sensitive development more consistently with the landscape.

Photo 39
Large areas of bare mulch after removal of senescent woody shrubs.

Photo 40
Representative style of batter retention using locally available bluestone pitching an attractive and significant aesthetic feature of the Sandy Bay Campus. Attention needs to be given to constructed drainage and planting type.
POLICY STATEMENT

Appropriately fund, plan and manage landscape maintenance of the study area to ensure continual improvement of the landscape fabric to improve the appearance, safety, and utility of the Campus. Objective of maintenance must always be a measurable improvement rather than slow progressive decline punctuated by one-off project based improvements.

KEY DIRECTIONS

Improve guidelines for landscape maintenance contracts. Maintenance contracts need to include clearly defined objectives and outcomes, be based

Photo 41
Use of crib-blocks has been a noticeable departure from a consistent style of retention walling. (A significant visual feature of the campus)

Photo 42
Inefficient areas of grassing at an inappropriate location resulting in poor presentation of a Faculty entry

Photo 43
The lighting of facilities within the Upper Campus and University Reserve can have significant impact upon habitat values in the adjacent bushland areas
on performance standards and should be a minimum of 3-5 years with periodic review.

**Review the requirements and scope of the existing landscape maintenance contract.** This should include a review of the tasks, procedures and costs to determine if sufficient funding and resources are being allocated to landscape maintenance.

**Prepare detailed landscape maintenance manual and technical notes** (to build on the outcomes of the review of landscape maintenance contract). This should clearly establish minimum requirements standards and procedures for the landscape maintenance contractor. It could also include landscape technical notes to cover things such as:

- advanced tree planting;
- shrub and groundcover planting;
- soil amelioration and mulching;
- planting of embankments; and
- grass establishment.

- Bushland-edge management

**Further strategic landscape masterplanning of the Campus.** The current Landscape Subject Plan should be extended to include the remainder of the Sandy Bay Campus while landscape Subject Plans which cover the Newnham Campus and North West Centre should also be produced. The current Landscape Subject Plan should be reviewed on a five-yearly basis to ensure directions and recommendations respond to changes on the Campus.

**Recognition of the value of the University’s Bushland and habitat assets** with the establishment of a ‘Committee of Management’ for University Reserve and other bushland assets would greatly assist the clarification of management direction and responsibilities. This would also help clarify the management objectives for zones of vegetation adjacent to Bushland zones that are part of immediate building or facility environments. These sites are often disturbed or prone to disturbance which is a significant source of weed / pest establishment. More effective management of these sites would have significant impact on the control of ‘edge effects’ adjacent bushland conservation zones.
4.2 Review of Precinct Issues and Opportunities

This section builds on the broader Campus-wide landscape issues identified above and details issues and opportunities across each of the four identified precincts. This approach allows the landscape masterplanning for each area to respond to the specific issues and assets of each locale, but also to its role within the overall presentation and functioning of the Campus.

In order to define objectives and address specific issues at a local level, the site has been divided into 13 sub-precincts, which are sufficiently different in location, assets, issues and features to warrant detailed review and analysis. These are:

1. University Frontage Precinct
   1a. Main Entrance and Carpark
   1b. Dobson Road (Chemistry and Library Frontage)
   1c. Dobson Road (Engineering Frontage)

2. Central Mall & Gathering Places
   2a. Administration Courtyard
   2b. Central Mall (Upper Terrace)
   2c. Central Mall (Lower Terrace)
   2d. Arts Lecture Theatre Courtyards

3. Grosvenor Crescent and Clarke Road Precinct
   3a. Grosvenor Crescent
   3b. Clarke Road

4. Lower Precinct
   4a. Law/Sport & Recreation Precinct
   4b. Grace Street Carpark/Sandy Bay Road Frontage

5a. Herbarium Precinct
5b. TUU Precinct

6. College Road South-East Precinct

7. French Street Precinct

8. Student Residential Precinct

9a. Horticultural Research Precinct*
9b. CSIRO Forestry Precinct*

10 Rifle Range Creek and Proctors Gully Conservation Precincts*
   10a. Lower Rifle Range Creek Conservation Precinct
   10b. Proctor’s Gully

11. University Reserve Bushland Conservation Precinct *

12. Mt. Nelson-Bend 7 Residence Precinct *

13. Olinda Grove Recreation Precinct *

* Precincts comprise volume 2
Within each sub-precinct, the key roles within the presentation and functioning of the Campus have been identified and specific issues that hinder the realising of these roles are articulated. The location of these issues are given on accompanying figures. In response, a range of opportunities have been outlined for each sub-precinct, including a number of ‘key action areas’, which are priority areas for substantial landscape works or improvements. It is envisaged that these key action areas become the focus of Action Area Plans, which would provide specific design and landscaping recommendations.

Summaries for each precinct are provided at the beginning of Section 6 – Implementation Plan.
4.2.1 Precinct 1 – University Frontage Precinct (Churchill Avenue / Dobson Road)

This area extends along the Churchill Avenue frontage of the Campus, and forms the main approach to the lower and upper sections of the Sandy Bay Campus, and internal circulation via Dobson Road. The high numbers of vehicles that enter or pass this section of Campus make this frontage very important to the public profile and address of the University. Within this area there are three distinct sub precincts.

1A Main Entrance and Carpark

Three key roles have been identified for this sub-precinct:

- **Entrance and Public Address** – The precinct contains the Main Entrance to the University and is the location at which most visitors enter the Campus. The Churchill Avenue boundary is an important and highly visible road frontage, while the front of the University Centre/Stanley Burbury Lecture Theatre is a high profile site used for public gatherings and graduation ceremonies.

- **Parking/Circulation** – This area contains a vehicular entry and exit, and an important carpark servicing the Campus University Centre, Arts Faculty, Administration buildings and upper study area generally.

- **Link between Upper/Lower Campus** – While an important public boundary, this area also forms the link between the Upper and Lower Campuses and as such plays a vital role in pedestrian circulation.

**Existing Conditions / Issues**

The following issues have been identified in the Main Entrance and Carpark sub-precinct (numbers in brackets refer to Figure 10):

- The presentation of the main vehicle entrance to the Campus is poor, with no defining landscaping and only basic signage. (The existing signage conforms to the University’s Standard Sign Manual, but is not in keeping with the high-profile status of this entrance) (1).

- There are existing traffic issues at both the entry and exit to the carpark from Churchill Avenue including vehicle speeds and sight lines (2).

- Carpark circulation is poor and there are no pedestrian connections through the carpark causing conflicts between vehicles and pedestrians (3).

- Pedestrian crossings over Churchill Avenue are problematic with no designated at-grade pedestrian crossing point from the carpark (with potential safety issues due to vehicle speeds, turning movements and sightlines) (4).

- There are poor connections to the existing overpass (which has no disabled access and steps up to Churchill Ave footpath) (5).
• There is a narrow landscape buffer to Churchill Avenue (see Photo 12) and views into the Campus are dominated by the existing car park (particularly the parking spaces that face Churchill Avenue). Churchill Avenue lacks significant street trees (6).

• Landscape treatments to the existing carpark are generally poor and inconsistent. Landscaping shows no consistent theme, shrub planting creates visibility and maintenance issues and groundcover plantings often patchy with a loose gravel mulch (7).

• University Centre and Administration Buildings lack building address. This is an important symbolic ‘front door’ to the University, and there are limited forecourt and gathering spaces for graduation ceremonies etc. (8)

• The frontage of the Humanities Building is dominated by the existing carpark. There is no defined ‘front door’ or entrance area. A delivery bay occupies main entrance area (which creates access conflicts and difficulties). (9)

• Existing Jasmine climber to Humanities Building is an OH&S and maintenance issue. (10)

• Poor pedestrian access and connections to central courtyard and lower section of Campus (either side of Art Studio Theatre). Existing narrow/awkward stair connection between Arts Studio theatre and Administration Building. (11)
Figure 10 Existing Conditions / Issues 1A
OPPORTUNITIES

This area has the potential to provide a high profile and positive address to the University. Opportunities could include:

- Construction of the proposed roundabout at French Street would provide the opportunity to create a new, well-defined central entrance to both the upper and lower sections of the Campus. These works would help to slow traffic speeds and improve vehicle turning movements (entry and exit). Associated with these works opportunities would exist to improve internal vehicle circulation, pedestrian access, Campus signage, lighting and landscaping and install significant avenue planting along Churchill Avenue in association with Hobart City Council. There is also scope to develop a major art/sculptural element at the unused open space, which will be opposite the new entrance.

- Redesign and reconfiguring of the existing Administration and Humanities carparks to improve vehicle circulation, egress from Clarke Road, pedestrian connections and arrangement of parking spaces. Opportunities for new landscape treatments (including the Churchill Avenue frontage) could be incorporated in the redesign of the carpark.

- Improvements to the circulation and arrangement of carparks in this area would enable the Administration, Arts Studio Theatre and Humanities buildings to have defined entrance and forecourt space.

1B Dobson Road - Library & Chemistry Frontage

The key roles identified for this sub-precinct are:

Public Address – this area includes the important western frontage to Churchill Avenue.

Circulation and Access – This sub-precinct is part of the main internal vehicular circulation route (Dobson Road) and receives high volumes of pedestrian traffic accessing the Student Union Complex from the Lower Campus (through the Churchill Avenue underpass and the recently constructed link from the Upper Mall area).

Building frontages – the main access points for a number of buildings are in this precinct. There area also a number of building entrance and forecourt spaces are occasionally used as gathering spaces and a large area of poorly utilized open space between Dobson Road and Churchill Avenue.

EXISTING CONDITIONS / ISSUES

Although the recent path works provide a significant improvement to this precinct, there remain a number of site planning and management issues. The following issues have been identified in the Dobson Road sub-precinct (numbers in brackets refer to Figure 11):

- The Churchill Ave landscape frontage lacks structure or strong planting themes. Some planting areas are in poor condition or require supplementary planting. (1)
• The recently constructed pedestrian pathway and road narrowing to Dobsons Road provide a significant improvement to pedestrian circulation and streetscape presentation (improvements include insitu concrete paving, improved lighting, furniture, tactile bands, trees etc.). (2)

• The embankment below the new Student Union link path is devoid of low groundcover planting. (3)

• There are multiple path connections to the bus stop at Churchill Avenue (which detract from presentation), including dirt ‘desire lines’ and an eroded gravel surface, which are not appropriate for high levels of pedestrian traffic. The bus stop area is still used for a large number of pedestrian grade crossings to the Student Union, despite recent fencing works. (4)

• Bicycles entering the Campus at bus stop may conflict with pedestrians.

• The existing lawn area between Dobson Road and Churchill Avenue is under utilized (particularly adjacent to University Club) and is dissected by numerous formal and informal path connections to Student Union. Potential to enhance passive use / park-like setting. (5)

• Existing road and path drainage issues, including localised depressions, eroding pathway and landscaped areas (6).

• The existing western frontage to Library building is screened by the existing planting, which is mostly in poor condition. The space is under-utilised. Bicycle parking and seating requires upgrading (7).

• Recent path entry works to Chemistry Building improve presentation of frontage and provide disabled access (8).

• The service entry to the Chemistry building is used as a pedestrian thoroughfare; existing dense planting makes access for maintenance difficult and includes many woody weeds (9).

• The existing Chemistry Building seating terrace is harsh and uninviting (poor furniture and lack of shelter or enclosure) (10).

Opportunities

The extensive landscape buffer and frontage to Churchill Avenue provide good opportunities for improvements to this address to the Campus. Any improvements should consider broader precinct and extend to include connections to Union building and underpass area. Improvements could include:

• Strong landscape planting to define the frontage and frame views into the Campus.

• Rationalisation of pedestrian connections to improve connections to the recently constructed path works to Dobson Road.

• Improved forecourt spaces and definition of the buildings fronting Dobson Road.
1C  Dobson Road – Engineering Frontage

The key roles identified for this sub-precinct are:

Secondary Entrance/Address - Although not a high profile section of the Campus, there are a number of presentation and landscape management associated with the Alexander Street frontage and the Grosvenor Street entrance. The University Club is also a location of high-profile functions.

Circulation and Access - This area includes the lower section of Dobson Road (extending to Grosvenor Crescent), and the frontages to The Engineering Building and University Club. One location outside the engineering building is used for social gatherings.

Existing Conditions / Issues

The following issues have been identified in the Dobson Road sub-precinct (numbers in brackets refer to Figure 11):

- The recently constructed pedestrian pathway and road narrowing to Dobsons Rd provide a significant improvement to internal circulation and streetscape presentation (including insitu concrete paving, lighting, furniture, tactile bands etc.). (2)

- Existing traffic management issues due to vehicles cutting through Grosvenor Crescent to drop off at the neighbouring School (13).

- Existing access steps to University Club do not accommodate disabled access. Ramped access is required (14)

- Landscaping around the University Club is in reasonable condition. Possible issue with screening (visibility) due to dense shrub planting (15).

- Under-utilised grass area to the north of Club has potential for improvement (passive seating, better pedestrian connections) (16).

- Landscaping to western side of Engineering Buildings is in poor condition and does not define / enhance building entrances (17).

- The Alexander Street/ Grosvenor Crescent entrance to the Campus is not strongly identified with landscaping or signage. There are some existing large trees, further potential to upgrade / integrate with streetscape and landscoping within the University (18).

- The University Club fence extends over the property boundary at Alexander Road and does not leave space for a footpath (resulting dirt ‘desire line’ see Photo 13) (19).

Photo 45
**Opportunities**

Opportunities for improvements within this area relate primarily to improving the landscape presentation and definition of building entrances.

- Further improvements could build on the materials and detailing on the recent Dobson Road streetscape and path works. This could include the upgrading of the entrances to the Engineering and CenSIS buildings.
- The provision of a disabled access ramp to the University Club provides the potential for improvements to the adjacent landscape areas.
- Potential for improved landscaping and signage at the Alexander Street / Grosvenor Crescent entrance.
Figure 11 – Existing Conditions 1B/C
4.2.2 Precinct 2 – Central Mall and Gathering Places

This Central area forms the pedestrian heart of the Lower Campus. This precinct includes the central spine and a series of connected courtyard spaces that generally relate to specific faculty buildings. Largely enclosed by buildings, these courtyards provide an important passive function and often have a distinct landscape character or quality. The Central spaces afford the best vantage point from which to appreciate the significant views to Sandy Bay along the primary pedestrian spine of the Campus.

2A Administration Courtyard

The key roles for this sub-precinct are:

Access to Administration Facilities – This largely enclosed passive area, sits on the lower (northern side) of the main administration building. It provides an important introductory experience for many students and visitors to the Campus, and provides a direct connection to the Central Mall and Library area. Important access gateway to Student Administration. Used by all students.

Passive use/small gatherings – The area is used for a small number of gatherings and for passive use by staff and students alike. The area is also an important massing area for a range of administration activities and for graduation ceremonies.

Existing Conditions / Issues

Although a pleasant space with some good qualities there are a number of existing issues throughout this sub-precinct. The following issues have been identified in the Administration Courtyard sub-precinct (numbers in brackets refer to Figure 12):

- The existing space lacks structure and unity (mix of elements and styles) (1).
- The existing art elements provide some character to the courtyard consistent with passive use and significance of the Administration Building, however the grouping and arrangement of pieces appears largely arbitrary and there are insufficient numbers or scale of objects to have a significant impact (2).
- Existing wall to adjacent Library provides some enclosure to the space and offers the potential for the extension of Art elements (3).
- The existing mixed native/exotic planting theme is in fair condition although some senescent plantings occur. Grassed areas in poor condition (compacted with patchy grass cover) (4).
- Pedestrian connections to the Administration Building are poor: link path does not meet disabled access standards (old handrail and steep grade (5), brick/block paving in deteriorating condition (6).
- Existing furniture elements mixed and not current University standard (7).
• Due to high levels of patronage the condition / health of existing mature trees needs to be reviewed monitored (8).

**Opportunities**

This courtyard has significant potential for improvement as a high use and highly visible passive space that provides an introduction to the landscape character of the Campus.

Opportunities exist to build on the sculpture theme and to provide strong planting themes, improved path connections, pavement surfacing and furniture.

Provide disabled access through this space to the lower sections of the Campus should be paramount to the resolution of the designing this important area.

**Precinct 2B - Central Mall - Upper Terrace**

The key roles for this sub-precinct are:

*Central Gathering Space* – The Lazenby’s café forecourt is the default ‘heart’ of the Sandy Bay Campus. It sits on a major intersection of pedestrian circulation, and views down the main axis of the Lower Campus. The Café provides a focal point and has a north facing aspect, which makes it an inviting space, particularly in winter. Existing paving, seating and sculptural elements (e.g. Centennial Fountain) reflect this role.

*Primary circulation* – As well as being an outdoor café space and meeting point, this area is a major pedestrian thoroughfare. This is the most intensively used area on the Lower Campus, being adjacent to Lazenby’s café and at the intersecting axis to between the Humanities, Library and Student Union facilities. It is also has accesses to the Morris Miller Library, the University Centre (which is the site of major lecture theatres and graduation ceremonies), and spaces that are regularly used for public purposes.

*Photo 46*

Lazenby's café at the intersecting axis to between the Humanities, Library and Student Union facilities. High quality and well-detailed pavements, steps and terracing treatments would help to clearly define this as the pedestrian heart of the Campus.
Figure 12 – Existing Conditions 2ABCD
EXISTING CONDITIONS / ISSUES

The intensity of usage of this area means that it is subject to more pressures than most areas of the Campus. The effects of intensive usage are evident in the condition of many elements including paving, furniture, lawn, garden beds etc.

The following issues have been identified in the Central Mall - Upper Terrace sub-precinct (numbers in brackets refer to Figure 12):

- The existing brick pavement is laid on a flexible sub-base (rather than a concrete slab) and does not adequately accommodate service vehicle access (light vehicles have access on a restricted basis and heavy vehicles have a need for occasional access) and high volumes of pedestrian traffic. Accordingly paving material in this area is generally in poor condition, with undulations, numerous lips and potential tripping hazards. It also has a fairly domestic character and now appears dated (9).

- The paved seating area in front of Lazenby's Café has a good outlook and is well used by both café patrons and as an informal gathering space. Existing low steps form informal seating, but improved seating is warranted (10).

- There is an inconsistent range of styles of Café furniture (including plastic chairs which give a poor appearance) (11).

- The Centennial fountain located to the front of Lazenby's Café is a feature of this area, however it also divides the space and obscures views. There are a number of maintenance issues with this fountain (12).

- The existing pond adjacent to the entry to the Arts and Social Sciences Building has issues with water quality, planting and weed growth (13).

- The siting of existing Cypress trees block some vistas to the River Derwent and the treed hillsides on the Eastern Shore (14).

- The existing timber cart sculpture appears to be randomly sited to the lower grass terrace. Poor context. No interpretation provided (15).

- Sloped grass banks provide good seating / passive use and an open feel to the central space (16).

OPPORTUNITIES

This important area offers the potential for significant improvements that are consistent with the intensive level of usage and activity.

- The level of usage generated by the Café (and potential commercial returns) could justify a higher quality of materials and detailing to this area. High quality and well-detailed pavements, steps and terracing treatments would help to clearly define this as the pedestrian heart of the Campus.

- Rationalisation of the existing planting and elements within this area could improve the open character and views to the lower section of the Campus.
Precinct 2C - Central Mall- Lower Terraces

The key roles identified for this sub-precinct are:

Central Space – This is an expansive area that has a north facing aspect and views along the main axis. It is the largest open paved area on the campus and offers good potential for large crowds and gatherings. Presently these uses are unrealised.

Circulation – This part of the Campus is currently used more thoroughfare rather than a gathering space, and even though it has potential to be developed for such a purpose, it will remain an important central spine of the pedestrian circulation network.

Existing Conditions / Issues

The following issues have been identified in the Central Mall - Lower Terraces sub-precinct (numbers in brackets refer to Figure 12):

- Existing steps and grade changes create an issue for disabled access (natural slopes exceed acceptable disabled grades) and limit usage of space for gathering (17).
- There are numerous and mixed furniture styles across the middle and lower terraces. Not all meet with current University standard. Large sculptural bench seats with stone bases provide some interest. Existing pavement cross fall limits the potential usage of this space for large gatherings (18).
- Lighting to central area is poor (19).
- Existing planting lacks structure or consistent theme (20).
- Eastern seating terrace contains few facilities and could be further developed (21).
- Potential improvement or redevelopment of the Middle and Lower courtyards could have a high capital cost due to the significant level change, building access, and underground services (22).

Photo 47
The provision of strong planting themes, integrated furniture and lighting would help to define this important area and increase usage.

Opportunities

The lower sections of the Central Mall have significant potential for improvement. This area has the potential to become the primary gathering and events space within the Campus.
The existing level changes provide the potential for the creation of large paved terraces with sloping lawn banks and central steps and access ramps. The existing paved spaces on the southern side of the Centenary Building have the potential for as a market or events space.

The provision of strong planting themes, integrated furniture and lighting would help to define this important area and increase usage.

**Precinct 2D - Arts Lecture Theatre Courtyards**

*Passive use area* – This area is outside the main circulation area of the Lower campus and includes some enclosed well-planted and landscaped seating areas around the Arts Lecture Theatre. Primarily passive garden spaces they have the potential to be further enhanced and improved.

*Access to Arts Lecture Theatre and Amphitheatre –*

**Existing Conditions / Issues**

The following issues have been identified in the Arts Lecture Theatre sub-precinct (numbers in brackets refer to Figure 12):

- This area has a readily identifiable garden character with an assortment of intensive ornamental plantings and a largely shaded aspect (23).
- Poor path connections and inconsistent surfacing to pathways between Arts Lecture Theatre and Arts/Social Science building (24).
- Existing landscaping to eastern side of Arts Lecture Theatre is senescent and in very poor condition. Largely mixed Acacia and Eucalypt sp. (25)
- Amphitheatre is poorly sited and in very poor condition with apparent structural faults. This facility does not provide for disabled access or current building code requirements. Should be assessed for potential safety hazard (26).
- Mixed native planting to the northern side of the Arts Lecture Theatre is tall, senescent in some places, and creates poor visibility (potential security risk) (27).

**Photo 48**

Removal of the existing amphitheatre would provide the potential to relocate this facility to a more prominent location within the Campus.
OPPORTUNITIES

The existing garden like quality of these Courtyard spaces provides an established landscape character that could be strengthened and developed with any proposed improvements. Rationalisation of pathways, removal of senescent plantings, and the enhancement of the existing planting themes would improve this precinct.

Removal of the existing amphitheatre would provide the potential to relocate this facility to a more prominent location within the Campus.
4.2.3 Precinct 3 – Grosvenor Crescent and Clarke Road Precinct

This precinct includes two of the main internal roads within the Lower Campus. Grosvenor Crescent forms the main east west connection, while Clarke Road extends along the eastern boundary of the site. Common issues with Campus entrances, building forecourts and landscape frontages are evident both sub precincts.

3A Grosvenor Crescent & Centenary Building Forecourt

The key roles identified for this sub-precinct are:

Entry and Circulation – Grosvenor Crescent forms part of the one-way internal vehicular circulation and there is an important vehicle entry/exit at the intersection with Grosvenor Street/Alexander Street. The pedestrian access through the Centenary Building is a primary route for pedestrian circulation.

Access and Gathering – This area of the Campus has an open northerly aspect with excellent views over sports fields to the Harbour and beyond. Except for the Centenary Building, main entries are not accessed from this frontage and as a result much of the building forecourt space is under-utilised, despite the views and aspect. The minor courtyards accessed from Surveying and Geography are presently used for small, informal gatherings.

Existing Conditions / Issues

The following issues have been identified in the Grosvenor Crescent sub-precinct (numbers in brackets refer to Figure 13):

- The existing angled carparking and through traffic on Grosvenor Crescent dominates the area and interrupts the connection to the lower section of the Campus. The road and traffic related infrastructure (bitumen pavement, kerbs, bollards etc) overwhelm the pedestrian elements (1).

- The outdoor spaces around the base of the Centenary building have a northerly aspect and excellent views but suffer from lack of planting and glare from light coloured pavement and walls leaving them harsh and uninviting (2).

- Heath garden and water feature provides some interest and coherent planting theme at Centenary Building entrance, while the concrete bench seats are appropriate to this location (3).

- The existing concrete seating terraces are under utilised and have the potential to be further developed for passive use) (4).

- The Centenary Building internal courtyard space sits between the two tall buildings and although sheltered is often dark not an inviting space. The existing circular concrete plinth has no apparent function (5).

- Existing planting to the embankments around the Law building are generally sparse and in poor condition (6).

- The northern frontages of the Earth Sciences and Surveying Buildings have poor public address, with landscaping in poor
condition, and in places are dominated by carparking/service/waste collection (7).

OPPORTUNITIES

This area has the potential to be developed as a shared vehicle / pedestrian zone where pedestrians are given priority over vehicles to create a more pedestrian and bicycle friendly cross connection. The downplaying of vehicles offers the potential for Grosvenor Crescent to cater for large gatherings events, taking advantage of the association with the football field and available views and aspect.

Extension of the existing terraces to the embankments above the sports oval would improve spectator facilities.

The upgrading of quality of the spaces and the provision of facilities around the Centenary building would improve usage of this area. This could include low-key Café facilities, additional tables and chairs, shade canopies or umbrellas, barbeques etc. and a space for larger, organised activities (e.g. festivals, markets) associated with the existing paved terraces.

Precinct 3B - Clarke Road

The key roles identified for this sub-precinct are:

Circulation and Parking – Clarke Road forms an important part of the internal circulation system with an entry at Earl Street, and an exit at Churchill Avenue. Parking is also available along this stretch which boards Hutchins School and does not afford significant vista or public address.

Building access and front entrances – The Geography & Environmental Studies, School of Earth Sciences, and CODES have significant ‘front door’ entries to this sub-precinct. Accesses to the Physics building and the Information Technology Centre are primarily designed for service vehicle entry only but could be upgraded in the future.

EXISTING CONDITIONS / ISSUES

The following issues have been identified in the Clarke Road sub-precinct (numbers in brackets refer to Figure 13):

- Earl Street entrance to the Campus is has some landscaping (including a drill-core associated with nearby School of Earth Sciences) and basic signage (8).
- Poor pedestrian connection into the Campus at the vehicular entrance, and between Earl Street and Grosvenor Crescent (9).
- Neat historical landscape feature beside the Geography entrance (10).
- Internal courtyard spaces (particularly the rear of Earth Sciences) lack utility, include extensive shrub planting much of which is senescent and create potential visibility issues. Landscaping to these areas lacks a coherent theme (11).
- Geography building entry/address is well presented and provides disabled access (12).
• The planting to the existing steep embankment at the southern end of Clarke Road is in poor condition and difficult to maintain (access is potentially an OH&S issue). Existing erosion control matting helps prevent erosion of the bank, but contains little stabilising

• The eastern entrances to the Earth Sciences and Physics buildings have more coherent and established landscape treatment and planting themes and some good examples of interpretation within the landscape including ore-drills and rock faces (in front of the Earth Sciences/CODES building) (14).

• Clarke Rd eastern boundary fence in poor condition. This provides a negative interface with the adjacent school (15).

O P P O R T U N I T I E S

Opportunities for improvement within this precinct should build on the character of the existing plantings. Extending the existing native planting themes to frontage of the Information Technology Services and the steep batters to the upper section of Clarke Road would help consolidate the landscape character of this area.

Improvements to the Earl Street the entrance (including signage, landscape treatments and pedestrian access) would help to define this as an important access point.
Figure 13 – Existing Conditions 3AB
4.2.4 Precinct 4 – Lower Precinct

This area which extends from Grosvenor Crescent to Sandy Bay Road is the least intensively developed section of the Lower Campus. Largely a recreation and ancillary service precinct, this area has an open and less formal character with good aspect and views.

4A: Law and Sport & Recreation Precinct

The key roles identified for this sub-precinct are:

Open Space/Active Use – The sports fields (football oval, and tennis courts) provide open landscape character and important active use throughout the year.

Access – The western area of this sub-precinct is more densely developed and includes the Law Building, Information Technology and University Sports Centre, all of which have demands for vehicular and pedestrian access. It also forms part of the main circulation route from Sandy Bay Road/Grace Street Carpark to the Campus proper.

Existing Conditions / Issues

The following issues have been identified in the Law and Sport & Recreation sub-precinct (numbers in brackets refer to Figure 14):

- The existing café beneath the Law Building provides a focus and people attractor for this area, although it is awkwardly located. This area also serves as a social gathering space for the Law School (1).

- Landscaping around the café has strong native theme and good structure and integrates well with the building and surrounds. Recent steps improve access to the café, and improve the space for gathering opportunities (2).

- Existing planting to the embankments around the Law building are generally sparse and in poor condition (3).

- Circulation and path connections to and from the Sports Centre and Grace Street Carpark are difficult and indirect. Orientation is confusing and there are multiple possible routes through this area to the upper section of the Campus, none of which are discernable as being the primary connection. The existing steel mesh fence to the former schoolhouse and the sports ground pavilion form pinch points within this connection (4).

- Information Technology Building access is set within carpark: safety and presentation issues (5).

- Existing tennis court batters provide potential for seating terraces or mass groundcover planting (possible OH&S issues with mowing of batter) (6).

- Recent landscaping to the Gymnasium entrance and ramp area is mixed and inconsistent (7).
• There are waterlogging issues with the sports field which affect its utility during winter (8).

• Organised sporting activities (particularly evening and weekends) are an important funding source for upkeep of the grounds, but can restrict the more general, multi-use of the sports field for informal play and festivals and gatherings (9).

• Pedestrian access to IT Building, and Sport Centre from Grosvenor Crescent/Alexander Street entrance is very poor with ‘pinch point’ at corner of Law Building and no alternative footpath. Potential safety issues (10).

• Historic hedgerow and gate are features of interest at the Earl Street boundary (11).

• Develop passive use area in underutilised open space between Law Building and Sports Oval (12).

Photo 49

Improve connections to the upper sections of the Campus. Consider developing formalised gravel path along eastern edge of sports fields.

Photo 50

 OPPORTUNITIES

To retain existing open character, improve and strengthen planting themes.

Improve connections to the upper sections of the Campus. Consider developing formalised gravel path along eastern edge of sports fields.
Figure 14 – Existing Conditions 4A
**Precinct 4B - Grace Street Carpark and Sandy Bay Road Frontage**

The key roles identified for this sub-precinct are:

*Public Address* – This precinct includes the Sandy Bay Road frontage to the Lower Campus and provides an important and public address to the University.

*Open Space and Linkages* – In the north/western edge of this sub-precinct, the Grace Street Carpark and Sandy Bay Road are important entry points to the Campus. Circulation to and from these (as well as the Child Care Centre, new student residences and Rugby Club).

**EXISTING CONDITIONS / ISSUES**

The following issues have been identified in the Central Mall - Upper Terrace sub-precinct (numbers in brackets refer to figure 15):

- No significant signage to signify the Sandy Bay Road frontage of the University (1).

- Vehicle turning movements into Earl Street are not well catered for with no separate turning lane (2).

- Landscaping at the front of the Campus is poor. A weld mesh wire fence runs just behind a sandstone wall along the front boundary. These are set back from the Sandy Bay Road with planting to the front with mixed native trees and shrubs. The sandstone wall is in poor condition while the boundary planting does not have a strongly identifiable character and screens views into the University (views into the site are blocked by the existing planting rather than framed or emphasised) (3).

- A narrow pedestrian gate provides access to the Campus and Grace Street carpark. This is not orientated with the direct link to the Sandy Bay waterfront path or the adjacent bus stops. The path connection to Sandy Bay Road includes a step and does not allow for disabled access (4).

- Recent landscape works associated with the retrofit of the former Administration Buildings include consistent landscape planting themes and materials (5).

- The concrete path adjacent to the Rugby Club does not extend to the Sandy Bay Road entrance (6).

- The existing Rugby Pitch dominates a large area of the lower section of the Campus (former gully and creek). Existing stormwater drains extend beneath sportsfields (7).

- A row of large Eucalypts form an edge to the existing carpark. These are important structural elements (8).

- There are a number of conflicts with the existing arrangement of the Grace Street carpark and vehicle access/drop-off at Child Care Centre. Drop off route is not separated from parking areas (9).
• The landscaping to the existing Grace Street carpark is in poor condition. Some existing native trees provide shade and structure, very little understorey planting (10).

• Pedestrian movement/access through the Grace Street Carpark is poorly defined (11).

• Vehicle entrance at Grace Street excessively wide and poorly defined as a Campus entry point. Pedestrian access is poor (12).

• A large grass area adjacent to the Rugby Pitch is underutilised and is presently used for illegal parking, and a pedestrian thoroughfare (13).

• Existing Hawthorn hedge provides strong edge to Earl Street (heritage element). Hedge requires ongoing maintenance and containment (14).

• The existing heritage gates fronting Earl Street have a historical connection to the University that is not interpreted (15).

Photo 51

OPPORTUNITIES

• Upgrade the Sandy Bay Road frontage to provide a positive address to the University and improve views into the Campus. This would include consistent landscape treatment and plantings which focuses views to the Campus, as well as substantial and significant signage. Explore the potential to replace existing retaining wall, and adding lighting to define this frontage. Potential to integrate with improved landscaping in vicinity of new residences.

• Upgrade pedestrian entry and path connections. Improve pedestrian gateway Co-ordinate frontage wok, with improvements to pedestrian linkages. Explore opportunities with Hobart City Council for linking to bike/pedestrian routes on Marieville Esplanade, and the potential relocation and redesigned bus shelter to link with the pedestrian entry and integrate with frontage improvements.

• Implement the proposed redesign of the Grace Street Carpark and improve pedestrian links.

• If an alternative location could be found for the Rugby Field in the long term, this area has significant potential for re-design of the open space as a feature of the Campus. Options include the establishment of the former wetland (as identified in the
Chesterman Plan), which could also be used to improve the stormwater management and environmental management roles of the Campus.
Figure 15 – Existing Conditions 4B
4.2.5 Precinct 5a – Herbarium Precinct

Key roles for this precinct are;

**Entrance & Public address:** Highly visible from Churchill Avenue this area is the most identifiable entrance to the University’s Sandy Bay Campus.

**Existing Conditions / Issues**

1) Herbarium lawn is in excellent condition offering excellent aspect. The backdrop of mature Eucalypts is a significant element of the aesthetic quality of this area.

2) Requires a consistent, integrated design approach to the whole of the Churchill Avenue frontage.

**Photo 52**
High visibility frontage, backdrop of mature Eucalypts is a significant element

**Photo 53**
Opportunity to improve the ‘sequence of landscape vistas’ along Churchill Avenue.

**Opportunities**

- Opportunity to establish strong, consistent landscape form, batter treatments and planting approach to Churchill Avenue landscape ‘sequence’ along the University frontage coordinated with HCC.

- Opportunity to improve the ‘sequence of landscape vistas’ along Churchill Avenue. Integrate entrance lawns, Herbarium lawn, Plant Science and landscape frontage to Churchill Avenue to establish a strong, significant landscaped Public Address.

- Opportunity to improve pedestrian link with Churchill Avenue overpass to establish a ‘primary’ pedestrian connection with lower and upper campus areas.
4.2.6 Precinct 5b - TUU Precinct

Key roles for this precinct are;

Access and gathering – as the site of the majority of student association services, health service and bar, the area is a significant generator of activity on the campus.

Public address: Highly visible from Churchill Avenue this area contributes to the entrance to the University’s Sandy Bay Campus.

Existing Conditions / Issues

1. Uni Bar.
2. Roof garden is an excellent development in terms of utilizing potential of roof gardens and building with existing topography. Project highlights sensitive site level, which embraces opportunities of access, roof spaces for landscape and visually sensitive development.
3. Student Union. Space has been unusually sub-divided by sail structure. Has disability issues. Concrete crib block retaining elements at odds with previous retaining treatments within Campus.
4. Student Health centre. Hebe hedges and grass. Hedges are impediment to access and use of frontage as gathering space. Informal student gathering space limited to tight space directly fronting Churchill Ave.
5. Major crossover point - Upper/ Lower Campus. Links with Lower Campus via the underpass and with the Upper Campus areas, Hytten Hall, Economics/Commerce and the Residential Colleges by crossing College road and stairs below Hytten Hall.

Opportunities

- Opportunity to improve the presentation and functionality of frontage to Student Health Centre and Student Union
- Potential to improve disability access provision, functionality and appearance of Student Facilities Courtyard.
- Improve pedestrian access / crossing point on College Road. Establish ‘Primary’ connection between Student Facilities Precinct and Upper Campus areas including Residential Precinct.

4.2.7 Precinct 6 – College Road South-East Precinct

Key roles for this precinct are;
Entry and Circulation
Access and Gathering

Existing Conditions / Issues

1. Steep batter adjacent plant science carpark and display garden. Extremely steep batter partially retained with stone pitching. Pitching consistent and typical of much of the established campus areas. Planting has had mixed results retaining soil. Some- excellent. Other areas exposed / eroding.
2. Display garden excellent representation of Indigenous Tasmania. Plants could be improved with better access structures, consistent hand railing, path and edging.
3. Small area of grass adjacent Ag science carpark is a management issue- easily incorporated into display, garden scheme.
4. Rear above Med. Science. Excellent remnant ‘Grassy Woodland’ featuring Themeda triandra, Dichelachne (crinita), Astroloma h? Cranberry heath, Dodonia cuneata. – Has had recent services disturbance creating drainage (run-off concentration- nutrient. has potential weed establishment.

Photo 56
Opportunity to improve Churchill Avenue frontage landscape presentation creating important new gathering space for the Upper Campus.

Photo 57
Potential to improve underutilized space between Agriculture and Zoology, combining passive open space, gathering spaces and potential to link future development and extension sites.
O P P O R T U N I T I E S

• Opportunity to improve Churchill Avenue frontage landscape presentation creating important new gathering space for the Upper Campus. Potential to create more permeable connections to other building entrances and other Department connections.

• Potential to improve access and landscape presentation to service area and parking areas between Plant Science, Agriculture and Glasshouse area. Opportunity to define pedestrian and vehicular access.

• Opportunity to improve presentation and maintenance of Agricultural Science entrance.

• Opportunity to stabilize steep slopes between Medical Science and Zoology and improve landscape presentation and maintenance.

• Opportunity to improve entrance presentation of School of Zoology. Potential to improve pedestrian and re-orientate carparking layout to remove pedestrian / vehicular conflict.

• Potential to improve underutilized space between Agriculture and Zoology. This space has Potential to become the primary connection and inter-school circulation space with connection to the main carpark below combining passive open space, gathering spaces and potential to link future development and extension sites.

• Opportunity to better define management responsibility for Bushland edge’ areas, consistent with volume two landscape values and management policies.

4.2.8 Precinct 7 – French Street Precinct

Key roles for this precinct are;

Entry and Circulation- as the site of the Faculties / Schools of Economics and Commerce, International House (Hytten Hall) Riawanna Aboriginal Centre and the Christ college residential area the area is a significant destination accessed by College road to the south, off Churchill ave and French street to the north. The Christ College is also accessed from Proctor’s road and while this entry is presently undeveloped, it has been increasingly used since the residential sub-division of Oberon Court and Baintree Avenue.

Access and Gathering - the Faculties / Schools of Economics and Commerce, International House (Hytten Hall) Riawanna Aboriginal Centre
and the Christ college residential area all incorporate areas for informal gathering. International House (Hytten Hall) and the Christ college feature significant areas of open grasses areas surrounding entrances. Riaawanna Aboriginal Centre has very little informal gathering space and has poor access via a carpark. Faculties / Schools of Economics and Commerce, have minor forecourts that are relatively exposed.

**EXISTING CONDITIONS / ISSUES**

1. Economics/ Commerce:
   - Carpark. Service corridor with new Christ Campus development.
   - Good planting/ mulch treatments at rear. Erosion around carpark batters with poor resolution of steps/path access.
   - No provision of outdoor facilities at Commerce building. Existing seating exposed, no shade.

2. Front/ East Forecourt of Economics/ Commerce Faculty
   - poor disability access, tall riser steps with grassed raised lawn. Not a useful or attractive gathering/arrival space.
   - Planting; Dead tree (Euc) at entry. Opportunity to soften entry façade of Building improve access and amenity. Some good ground cover planting. Eg Anigozanthus., Patersonia, Juncus sp.?

3. College Rd. app. Hytten Hall.
   - Important link with Lower Campus. Multiple paths converge at stairs confusing. Base of stairs does not align with medians in road. Medians in low/poor visibility corner of road opposite Student Union link.

3. Hytten Hall.
   - No outdoor facilities for Hytten Hall. Only timber tables outside Riaawunna (supplied by centre) which only cater for those users. Substantial proportion of students in Hytten Hall are international students. Evident demand for formalized external gathering space with shade/ shelter.

**Photo 59**

Opportunity to up-grade / stabilize steep batters/cutting adjacent carpark
OPPORTUNITIES

- Opportunity to up-grade / improve accessibility and presentation to front entrance of Economics / Commerce.

- Potential to improve pedestrian connection and crossing point on College Road. Opportunity to establish ‘primary’ pedestrian connection between TUU Precinct and Upper Campus including student residences.

- Potential to improve entrance presentation and pedestrian access with better definition of car spaces at Student Services.

- Considerable scope for improvement to presentation of entrance to Riawunna Centre. Propose main address should front ‘primary’ path link to Lower Campus. Remove car spaces from entrance.

- Opportunity to improve parking layout and define pedestrian access with better definition of car spaces at entry to Library and
Information Science building. Establish ‘primary’ path connection with Lower Campus via entry precinct lawn.

- Improve connection with College Road South-East Precinct via the Gully while controlling access to the Gully and stream.
- Improve management of picnic area. Remove grass from picnic area and other potential ‘edge effects’, establishing clear unambiguous management edges.

4.2.9 Precinct 8 - Student Residential Precinct

Key roles for this precinct are:

Entry and Circulation - as the site of the Christ college residences the area is a significant destination accessed by College road to the south, off Churchill Avenue and French street to the north. The Christ College is also accessed from Proctor’s road and while this entry is presently undeveloped, it has been increasingly used since the residential sub-division of Oberon Court and Baintree Avenue.

Access and Gathering - Christ college residential area and associated facilities all incorporate areas for informal gathering. Christ college features significant areas of open grasses areas surrounding entrances.

Existing Conditions / Issues

1. Christ College c.1971
   Heritage listed precinct
   Garden landscape- exotics with some remnant Eucalypts. In mown dry grass. Mostly small- med size exotic trees and some conifers. No discernable structure or landscape design other than generic garden treatments.

2. North of Christ College
   Entry to Christ College through carpark- Poor disability access. Informal overflow car parking not defined rear of college. Large Eucalypts in dry grass. More in keeping with landscape value of site and surrounding landscape value and ecological value of the University Reserve.

3. Path to creek via commerce and Hytten Hall. Heavy infestation of weeds. Good remnant canopy.
   - Ruby dock
   - Fennell
   - Black berry
   - Scotch Thistle
   - Dandelion
   - Briar Rose
   - Hawthorn and others
   Needs to share common access with Economics/ Commerce and rest of campus.

4. Economics/ Commerce: Carpark. Service corridor with new Christ Campus development will become an important link and possible management edge.
Opportunities

- Opportunity to improve pedestrian connection with Lower Campus facilities. New residence development landscape works must create a primary path link and establish management edge with Proctor’s Gully.

- Opportunity to rationalize treatment of landscape frontage to Christ College. Improve entrance and forecourt. Undertake tree inventory prior to landscape planning and design. Reduce irrigated grass areas to define courtyards.

- Opportunity to improve usage of internal courtyard spaces. Opportunity to coordinate landscape design with Landscape Development Plan for entire Student Residence Precinct.

- Review landscape / bushland edge treatment for new residential development. Ensure clear unambiguous management edges are established. Review placement of external lighting considering impacts on Habitat values in Rifle Range Creek Gully.

- Remedial treatment of batters to sports area required immediately. Opportunity to coordinate remedial treatments with Landscape Development Plan for entire College precinct.
• Establish maintenance responsibilities consistent with other ‘Bushland edge’ areas. Clarify maintenance policy for contractors. Maintain dryland grass in such a way as to control movement of broad-leaf weeds into adjacent bushland. Remnant Eucalypts within College precinct to be included in tree inventory.
5 Landscape Management Practices

5.1 Directions for Landscape Management

A key recommendation of this Report is that landscape management and maintenance across the University should be unified and standardised under a Design Standards and Technical Notes. This Manual would:

- Provide a sound framework for landscape management, reducing the ad hoc nature of decision making.
- Provide grounds staff / contractors / landscape consultants with a policies specifically suited to site conditions or issues.
- Reduce problems within the landscape areas and improve public safety and
- Reduce time taken advising or resolving on issues for individual projects.

5.2 Landscape Management Policies

In working towards a manual for landscape maintenance, a suite of policies for five key elements of landscape practices are presented here. These cover:

- sustainable landscape practices;
- existing trees;
- grass and lawn areas;
- irrigation;
- stormwater management; and
- weeds.

The policies establish a strategy and recommended methods of treatment for each element within the Lower Campus. They are intended to remain at a broad and strategic level and provide the policy framework for the preparation of more detailed guidelines through the proposed Design Manual and Technical sheets.

The sustainable landscape practices policy is presented first as it provides a basis for a number of the policies which follow.
5.2.1 Sustainable Landscape Practices Policy

**Context**

Through its Strategic Plan (2003 – 2005), the University has made a commitment to ensure that its Campuses are “developed in accordance with the values and principles of conservation and sustainability.”

This commitment has particular relevance to landscape management where a range of practices from the use of water for irrigation, to the choice of plants and the management of on-site impacts all contribute to sustainability outcomes. However, there are currently no guidelines or formal policy to integrate this commitment into the day to day management and practices on the Campus.

The Talloires Declaration is an international declaration of Universities which sets out a ten-point action plan for incorporating sustainability and environmental literacy into teaching, research, operations, outreach and services. This international policy document has adopted by many Universities worldwide to reinforced the role and importance of educational institutions in the promotion of environmentally sustainable practices. It provides a useful policy framework to form the backdrop of more detailed policies and guidelines aimed at achieving sustainability outcomes on the Campus.

**Policy Statement**

*The University should aim to utilise environmentally sustainable and sound practices in all aspects of landscape management, maintenance and construction. A process of trialing and exploring ways of implementing sustainable practices or initiatives should be encouraged across the Campus.*

*As a way of reinforcing this commitment to environmental sustainability, the University should become a signatory to the Talloires Declaration.*

**Directions**

Opportunities to incorporate sustainable practices within improvements or maintenance to all landscape areas should be explored. This could include the following:

- University Planning and Policy – Ratifying the Talloires Declaration and undertaking a process to integrate conservation and sustainability principles into University Planning and Policy.

- Work practices – work practices associated with landscape maintenance and management on the campus should minimise environmental impacts including:
  - The establishment of work practices and procedures that minimise wastage, damage the environment or the unnecessary use of chemicals.
  - The management of work practices and site impacts to ensure that there is no contamination of stormwater systems, materials are recycled on site, litter, dust and noise are minimised.
  - Avoiding the inefficient use of resources.
  - Consideration of life cycle assessment for materials.

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7 University of Tasmania, Draft Strategic Plan 2003-2005.
• Sustainable construction – the construction of landscape elements should consider:
  • The use of recycled materials wherever possible.
  • The use of materials from sustainable sources; and
  • The re-use of materials recovered from the site.

• Energy Efficient Design – Landscape projects should consider energy efficient layout and design for all external and landscape elements including:
  • The use of low energy light fixtures and electrical components.
  • The use of photo cells and timers on lights and electrical components.
  • Exploration of opportunities to utilise solar energy within projects.
  • The use of passive solar protection (including planting) to exposed building frontages.

• Landscape Design – Landscape projects should where possible consider:
  • Incorporation of water sensitive stormwater design (refer Stormwater policy for more detail).
  • The use of indigenous and low water use plants.
  • The maximisation of landscape areas that require less or no irrigation.

The proposed Design Standards and Technical Notes would encourage these principles, and include procedures and ways of reinforcing these policies and actions through design and maintenance.

5.2.2 Existing Trees Policy

CONTEXT

The existing trees on the lower Campus help to define spaces, provide shade, screening, wind protection, habitat, and a sense of scale. A total of approximately 600 mature trees are located on site survey plan. As each mature tree could be considered to have a commercial value ranging from several hundred to several thousand dollars (depending on the age, species, size and valuation method), it can be considered that the existing treescape is valuable in financial terms and is a major and physical asset.

Underground works, including excavation and service trenching, are frequently the major cause of damage to existing healthy trees. Consideration must be given to the protection of the critical root zones of existing trees.

While there have been efforts made within individual projects to retain and incorporate existing trees in improvements to areas within the Campus, there is currently no formal policy to guide this process. In the absence of a complete inventory or assessment of significance, tree retention or removal can become an arbitrary and even controversial process in response to development pressures.

POLICY STATEMENT

Existing native and exotic trees are important to the landscape character and a valuable asset of the Campus (this includes trees that are planted in groups and individual specimen trees). Where possible and appropriate, existing trees should be retained and incorporated into landscape improvements at the Campus.
DIRECTIONS

It is recommended that the University develop a Tree Management Strategy. This should include the preparation of an inventory of all existing trees on the site. A significance rating and maintenance programme to guide and plan the long term management (including replacement) of trees should be prepared as part of this study.

1. Pending a full inventory and assessment of all trees on the Campus, assessment of existing trees should be undertaken prior to development or improvement of specific areas of the Campus. The assessment should determine: species type, condition, required remedial works and a rating of significance. This should form the basis for any decisions on tree removal and inform Campus development and space planning.

2. Incorporation of this full inventory and assessment into a tree data base which is linked to a geographic mapping system would greatly enhance the University’s ability to forward plan tree management and forward replacement of senescent trees.

3. Develop ‘tree protection measures’ for inclusion in the Landscape Management Manual. This should be included in all contract specifications for external works, building contracts and service installation. This document should specify the preferred valuation method for any damage or illegal removal, provisions for temporary fencing, specification clauses to prevent root damage etc).

4. Consider the locations of existing trees in service planning or the upgrading of infrastructure. Excavation, the location of underground services and changes to drainage patterns should be planned to avoid disturbance of the root zones of existing trees.

5. In principle any tree with a trunk diameter of more than 150mm should be assessed by a qualified arborist prior to removal. This should not apply if the tree has major structural faults, is clearly senescent, an environmental weed or poses a health and safety risk.

5.2.3 Grass and Lawn Areas Policy

CONTEXT

Significant areas of the Lower Campus are surfaced in lawn or turf grasses (over 1/3 of the study area or approx 57,000m2). These areas contribute to the character of the Campus, and are important open space and passive recreation areas. However, they have high demands for maintenance, and require commitment of significant resources particularly in irrigation, fertilizing and mowing.

While the existing grass and lawn areas contribute to the landscape character of the Campus the maintenance and management of these area should be considered within the context of usage levels and resources.

The traditional European aesthetic that determines that grass should be kept lush and green all year round is gradually changing and many
people are now more accepting that in the Australian climate, lawn areas may be subject to seasonal change and browning off in summer.

Specific issues with the existing lawn and grass on the Campus include:

- There appears to be no established guidelines for species selection or establishment. A range of grass varieties are used for the various applications,
- In some high use areas, compaction caused by pedestrian and service vehicle traffic is an issue.
- Maintaining a complete grass cover under mature trees can be difficult.
- Maintenance of grass on steep embankments (e.g. above the Tennis Courts) is challenging and access for mowing is a potential occupational health and safety risk.

POLICY STATEMENT

Restrict the provision of high quality, well maintained lawn to sports fields and premium passive use areas. Aim to reduce the amount of resources dedicated to maintaining lawn and grass areas.

DIRECTIONS

Designate ‘lawn maintenance zones’ for the Central Mall and Sports Fields. Within these zones grass may be irrigated, mown, fertilized and otherwise maintained as necessary to provide high quality lawn, suited to its uses.

In other areas, irrigation and fertilization should be restricted, and resources provided for maintenance reduced. Additionally, outside the lawn maintenance zones, the University should consider:

- trailing deep rooting, more drought tolerant grass varieties (further research required); and
- planting “Mowless” type grasses.

The use of tufting type native grasses may also be appropriate in some areas, however, it should be noted that these often have as great a demand for maintenance as lawn grasses.

More sustainable grass and turf management practices should be explored across the Campus, including:

- limiting the use of fertilizers;
- developing an irrigation masterplan to determine a strategic and water efficient approach to irrigation on the site (refer Irrigation Policy);
- using of lawn substitutes such as Dichondra repens or Viola hederacea on steeply sloping grass embankments (this would reduce mowing demands although weed management and maintenance still required); and

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8 Should an alternative location be found for the Rugby Field, this would no longer need high levels of maintenance and would revert be dropped out of these zones.
installing reinforced grass cells in high traffic or vehicle access areas.

5.2.4 Irrigation Policy

CONTEXT

Currently, the oval, rugby pitch and lawn areas within the Central Mall are the only grass areas irrigated in the Lower Campus. This accounts for over half of the total area of grass on the whole Campus and totals approximately 32,000m². While irrigation to these important areas does ensure they remain green all year, they require significant volumes of water to maintain.

Sections garden beds within the Central Mall and nearby courtyards are also irrigated, however the trend to native style plantings has reduced the demand for watering in these areas.

There are a number of issues with the current approach to irrigation in the study area including:

- The existing irrigation systems are largely stand-alone automatic systems for specific areas with no master controller or groupings of systems. While this gives flexibility controllers are located near the system, this does increase system management and maintenance.

- In some instances the exact location of pipework, valves etc is not known or documented.

- There is currently no masterplan or strategy for irrigation on the Campus. The inclusion of irrigation within landscape improvements is on a project-by-project basis, depending on budget and the planting style of the project. When irrigation systems are included, there are no standard specification requirements for system components and workmanship.

- Some of the existing irrigation systems appear to be made up of domestic type fittings and fixtures rather than high-grade commercial fittings. It is likely that some do not conform to current standards (including backflow prevention on each tapping point). The range of systems and fittings makes maintenance and part replacement difficult.

- In some instances, irrigation valve boxes are inappropriately sited or set above the surrounding ground level.

- While some landscape areas contain garden taps (as required under the new buildings brief), the existing network of watering points does not provide complete coverage of the Campus.

- It is likely that the cost of water will increase in the future, so while at existing usage levels irrigation may not be a major cost, this situation could change through the introduction of “user pays”, consumption based charging.

- Maintaining a complete grass cover under mature trees can be difficult. The slashing of grass below large remnant Eucalypts, south of Christ College is more in keeping with the surrounding landscape values and the ecological value of the University Reserve.
POLICY STATEMENT

The University should aim to reduce the amount of irrigation water used and use water within landscape efficiently and in an environmentally sustainable way. This should include the promotion of landscape improvements with low water requirements and the implementation of water saving initiatives within existing and future irrigation systems.

DIRECTIONS

It is recommended that the University undertake the following:

1. Engage a specialist consultant to prepare an Irrigation Masterplan to review the existing systems and determine and approach to the preferred extent and type of irrigation systems that should be used on the Campus. The Masterplan should be based on the need to conserve water and suggest ways that water consumption can be reduced, whilst maintaining irrigation to those areas where it is a functional requirement of the space (i.e. the sportfields, courtyard spaces, containerised landscapes and high visibility garden beds). Options for roof stormwater collection and sub surface irrigation systems should be considered.

2. Prepare standard specification clauses for components, materials and workmanship (including a requirement for "as built" drawings for all new systems).

3. Promote the use of plantings which have a low water demand (including indigenous plants).

4. Ensure that manual taps are be incorporated in all new building projects and external upgrades.

5. Investigate the collection and re-use of stormwater and runoff for irrigation purposes (see Stormwater Management Policy).

5.2.5 Stormwater Management Policy

CONTEXT

Prior to development, the lower sections of the Sandy Bay Campus included two creeks that extended from the higher section of the campus, above Churchill Avenue and joined near the existing Oval. It is likely that the lower sections (where the rugby pitch is located) would have contained a moderate sized wetland or swamp. Although the creek systems have been piped below ground in the process the developing the Campus, the natural topography is such that these natural gully areas do contain the overland flow path with drainage issues being evident in a number of areas.

The existing approach to stormwater management on the Campus is based on the traditional method of runoff collection by grated pits, piped directly into the stormwater system. It is widely recognised that this approach has inherent problems including:

- lack of ground water recharge;
- loss wetland ecosystems;
• concentration of peak flows and associated erosion issues;
• lack of filtration; and
• silting of discharge points.

Additionally, an increase in non-permeable surfaces (including roads, pavements, roofs etc.) has increased the peak flow of stormwater and collection of pollutants.

Within the context of the current water sensitive urban design (WSUD) movement a broad range of strategies have been developed for stormwater management. Many of these may be applicable to the Sandy Bay Campus.

**Policy Statement**

*Improve the management of stormwater on the Campus to reduce on-site problems such as erosion, pooling and flooding; and minimize off-site impacts which result from increased flow, siltation, and discharge of litter and pollutants (among others).*

**Directions**

In general, methods for reducing stormwater velocity, improving water quality and replenishing groundwater should be explored across the Campus. Each Action Area Plan, new building, civil or landscape project should consider possibilities for WSUD solutions to that replenish groundwater systems and minimise urban run-off should. These might include:

• the use of permeable pavements and drainage systems;
• installation of stormwater retention wetlands; and
• rainwater collection and reuse, among others.

The University should consider the following in order to improve stormwater management in the study area:

1. Investigating the use of building roof areas (approximately 30,000m² on the lower Campus) for collection of water for landscape use. (A detailed analysis of environmental and economic costs and benefits should be considered as part of any feasibility study).

2. Pursuing in the long term the re-establishment of wetland / stormwater retention area at the Rugby Field (subject to the finding of a suitable alternative location for the current users of the site).

3. Developing technical notes encourage the installation of features that are more stormwater sensitive such as litter trap inserts, drainage swales, soakage pits, recharge strips etc.

### 5.2.6 Environmental Weeds Policy

**Context**

Environmental weeds are non-local plants that can invade and change natural areas and threaten the survival of native plants and animals.
land clearing, environmental weeds are considered to be the next greatest threat to our indigenous biological diversity.\(^9\)

Although not currently a major problem on the Lower Campus, environmental weeds have the potential to readily invade garden bed areas and potentially impact on the adjacent areas of bushland, particularly the well vegetated sections of the upper Campus and adjacent creek reserves.

The University currently has a defined list of woody weeds that is included within the existing maintenance contract for the Campus. This list defines plants that are classified as weeds and should be removed from site and not planted in any new works.

This list provides a good basis for management and includes many problem garden weeds, however there are further species that have been identified under the *Weed Management Act (1999)* that should be specifically excluded from the site. Many of these plants are commonly available in the nursery trade so their use needs to be broadly discouraged.

An updated weed list has been compiled from a range of sources including the existing Grounds Contract for the Sandy Bay Campus, the DPIWE web site and handbook- Weed Control Guidelines for Native Bushland Areas. This is provided in Appendix 4.

**Policy Statement**

*As a significant land owner and manager, the University has an obligation to control recruitment and prevent the planting of environmental weeds on all areas of the Campus.*

**Directions**

Effective weed management requires landowners and managers to work closely to jointly determine weed control methods, strategies and priorities. The University should work with the Hobart City Council, the Department of Primary Industries Water and Environment (DPIWE) and other landowners to develop a district wide approach to weed management.

Any plants that are included on this list should not be planted or allowed to persist on the Campus.

Additionally, the University should implement the following recommendations:

1. Prepare a weed management strategy to determine a practical approach to the specific weed issues on the whole Sandy Bay Campus. This should target problem weeds, particularly those that could spread into the adjacent bushland areas. The weed list should be expanded to include further detail including recommended control methods, flowering times etc. This list should be provided to any consultants and contractors who may be involved in plant species selection or planting on the Campus.

2. Tackle low infestations first. Consistent with the “Bradley Method” of weed control, treat areas of low weed infestation prior to tackling substantially disturbed or weed infested areas. Ongoing follow-up vigilance and weed control is required following initial weed control

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activities. Care should be taken when undertaking manual weeding to ensure that ground disturbance does not open opportunities for further weed invasion.

3. Careful use of chemicals. Chemicals are an important tool for the management and control of weeds. Where chemical methods of weed control are required, careful application and safe handling practices are paramount to minimise potential damage to other plantings and the environment. Chemicals should be mixed and applied in accordance with the manufacturer’s instructions, including strict adherence to safety and preparation instructions. Weather conditions need to be taken into account prior to spraying of weeds. Spraying in windy conditions, very hot or cold weather or when rain is imminent will cause a less than desired result.
6 Implementation Plan

This section summarises the key directions and recommendations from the preceding sections of the report. It is divided into two parts:

- The first (table 6.1) summarises key directions associated with issues that apply across the study area, provides a preferred timeframe for implementation and outlines responsibility for implementation within the University.\(^{10}\)

- The second (table 6.2) outlines the main elements of the key action areas identified within each precinct, and suggests a timeframe for completion.

In the tables, the following schema has been used to designate timeframe:

- U – Recommendations which require immediate or urgent action due to potential safety and/or security risks.
- S – Recommendations which require short term funding and action (within 12 months), or which are already commenced or imminent.
- M – Recommendations which may be more substantial, or are contingent on the completion of other recommendations and are to be completed in the medium-term (i.e. 1-3 years).
- L – Large-scale, longer term projects which require substantial funding and are likely to be completed in greater than 3 years.
- O – Recommendations which are ongoing and continuous in nature.

  - Opportunities 1A
  - Opportunities 1BC
  - Opportunities 2ABCD
  - Opportunities 3AB
  - Opportunities 4A
  - Opportunities 4B
  - Opportunities 5AB
  - Opportunities 6
  - Opportunities 7
  - Opportunities 8

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\(^{10}\) In this draft responsibility for implementation of projects has not been assigned. Rather it is expected that the breakdown of responsibility between different sections and departments of the University will be a major outcome of consultation and discussion over this draft Subject Plan.
Table 6.1 - Summary of policy statements and key directions that apply across the study area.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Key Directions</th>
<th>Time Frame</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| **Entances and addresses**  
*Present the Lower Campus as the symbolic centre of the University through high-profile public frontages and entrances.* | • Undertake a co-ordinated review of existing issues with the entrances and frontages of the Lower Campus.  
• Plan for landscaping according to a hierarchy of entry points.  
• Improve ‘sense of arrival’ signage and landscaping at key entrances.  
• Develop road frontages as major public addresses: | S-M | O |
| **Pedestrian circulation**  
*Provide a continuous high quality and legible path network that provides for safe, equitable and efficient movement of pedestrians.* | • Develop and maintain a network of primary and secondary pedestrian pathways.  
• Upgrade and rationalise existing paths and desire lines.  
• Develop a pedestrian path hierarchy. | S  
O  
M | S-M
| **Equity of access**  
*Provide for ‘equity of access’ to all Campus locations and facilities.* | • Undertake and implement a campus wide Disability Access Action Plan.  
• Ensure that all new works (or modifications to existing site elements) are carried out in strict accordance with the requirements of AS 1428.  
• Improve Equity of Access with all new landscape works. | S  
O | |
| **Vehicle circulation and parking**  
*Provide for safe, efficient and appropriate vehicular flow and parking which reflects the important role of the study area within the context of the University, ensures Give priority to pedestrian access and circulation, and encourages the use of alternative transport options.* | • Systematically upgrade vehicle and pedestrian flow within carparks.  
• Improve the appearance of the Campus through enhanced landscape treatments across carparks and internal roads.  
• Review bicycle parking and circulation issues  
• Review provision of carparking in the context of needs and the University’s commitment to principles of sustainability. | O  
S  
M  
M |
Table 6.1

<table>
<thead>
<tr>
<th>Issue</th>
<th>Key Directions</th>
<th>Time Frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open spaces and gathering places</td>
<td>• Review the functionality of open space, gathering nodes and passive use areas.</td>
<td>O</td>
<td></td>
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<tr>
<td></td>
<td>• Develop local usable gathering spaces in consultation with the main users of adjacent buildings.</td>
<td>M</td>
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<tr>
<td></td>
<td>• Develop a central ‘heart’ of the Campus within the study area.</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Paving, surfaces and lighting</td>
<td>• Utilise consistent paving materials and lighting along with other landscape and signage treatments to direct pedestrians into and around the Campus.</td>
<td>O</td>
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<tr>
<td></td>
<td>• Undertake urgent pavement repair works outside Lazenby’s Café and other identified problem areas.</td>
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<tr>
<td></td>
<td>• Prepare standard guidelines for the reinstatement of pavements, kerbs and edges following works.</td>
<td>S</td>
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<tr>
<td>Outdoor furniture</td>
<td>• Choose a University Standard material for major use paths.</td>
<td>S</td>
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<tr>
<td></td>
<td>• Develop policies for the design and location of lighting.</td>
<td>M</td>
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<tr>
<td></td>
<td>• Carry out a review of existing lighting to pathways and courtyard areas and improve lighting in high-use areas as part of landscape improvement works.</td>
<td>S</td>
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<tr>
<td></td>
<td>• Develop a University-wide Furniture Design Manual.</td>
<td>S-M</td>
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<tr>
<td></td>
<td>• Continue to systematically replace old and degraded furniture items.</td>
<td>O</td>
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<tr>
<td></td>
<td>• Install new furniture items to improve passive use and gathering nodes.</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Improve provision of non-seating furniture elements.</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Signage</td>
<td>• Continue to implement and update Standard Signs Manual (include ‘landmark signage’ for entrances/addresses).</td>
<td>S</td>
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<tr>
<td></td>
<td>• Replace and re-lay signs where footing has become exposed.</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Issue</td>
<td>Key Directions</td>
<td>Time Frame</td>
<td>Responsibility</td>
</tr>
<tr>
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</tr>
<tr>
<td>Art, sculpture and interpretation</td>
<td>• Develop a policy for art, sculpture and interpretation at the Campus:&lt;br&gt;• Commission significant art/sculptural works to enhance public addresses and entrances.</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use art, sculpture and interpretation to emphasise locations or themes: Art elements can be used to reinforce identity or character of different parts of the Campus, or to reflect the roles and foci of different Schools or Faculties.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locating services</td>
<td>• Identify current and future service needs and develop a strategic and proactive approach to provision as part of planned works.&lt;br&gt;• Develop planning guidelines for service replacement including common trenching, and directions for reinstatement of landscape areas following repairs.</td>
<td>O</td>
<td></td>
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<tr>
<td></td>
<td>Provide for the efficient location of services in a manner which maintains the functionality and landscape character of the Campus.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planting</td>
<td>• Develop Campus-wide planting themes and planting strategies within each Precinct or Action Area.&lt;br&gt;• Use feature trees to unify and define landscape character.&lt;br&gt;• Remove and replace problem plantings.&lt;br&gt;• Develop a series of ‘landscape feature locations’&lt;br&gt;• Undertake a Tree Inventory&lt;br&gt;• Incorportion of full tree inventory and assessment into a tree data base which is linked to a geographic mapping system</td>
<td>S-M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implement a consistent planting palette primarily based on the use of locally indigenous and Tasmanian plants.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape Planning &amp; Maintenance</td>
<td>• Produce a handbook of landscape management policies and practices.&lt;br&gt;• Review the requirements and scope of the existing landscape maintenance contract.&lt;br&gt;• Prepare detailed landscape maintenance manual.</td>
<td>S-M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appropriately fund, plan and manage landscape maintenance of the study area to ensure continual improvement of the landscape fabric to improve the appearance, safety, and utility of the Campus.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 6.2 - Key Action Areas

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Key Action Area</th>
<th>Main Elements</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Proposed New Entrance/ Main Carpark</strong></td>
<td>• High quality landscaping, landmark signage and symbolic art/sculptural elements at entrance. &lt;br&gt;• ‘Sense of arrival’ &lt;br&gt;• Redesign of circulation and parking in main carpark. &lt;br&gt;• Opportunity to improve pedestrian linkages across carpark. &lt;br&gt;• Improve lighting and landscaping in carpark.</td>
<td>S</td>
</tr>
<tr>
<td>Precinct 1</td>
<td><strong>Administration/ University Centre Frontage and Forecourt</strong></td>
<td>• Redevelop as a high quality University ‘front door’. &lt;br&gt;• Potential to provide for gathering spaces/forecourt (e.g. Graduation photographs). &lt;br&gt;• Improve pedestrian links to Admin courtyard and Lazenbys forecourt.</td>
<td>S-M</td>
</tr>
<tr>
<td></td>
<td><strong>Churchill Avenue Frontage</strong></td>
<td>• Develop high profile frontage to the University. &lt;br&gt;• Improve edge / frontage landscaping. &lt;br&gt;• Opportunity for significant signage/ sculptural elements. &lt;br&gt;• Improve open space area between Dobsons Road and Churchill Avenue with landscaping, drainage, path rationalisation, and passive space features. &lt;br&gt;• Opportunity for avenue planting along Churchill Avenue in association with HCC.</td>
<td>S-M</td>
</tr>
<tr>
<td>Precinct 2</td>
<td><strong>Administration Courtyard</strong></td>
<td>• Develop strong planting and art/sculpture themes to promote as premium University courtyard &lt;br&gt;• Improve path connections and disabled access. &lt;br&gt;• Relay pavement (e.g. insitu concrete). &lt;br&gt;• Enhance location of existing sculptural elements. &lt;br&gt;• Develop better association with Morris Miller Library (potential for art/sculpture on southern wall).</td>
<td>S</td>
</tr>
<tr>
<td>Precinct 2 (cont.)</td>
<td><strong>Lazenby’s Forecourt</strong></td>
<td>• Replace existing block paving with concrete as used in Student Union Link Path. &lt;br&gt;• Improve furniture, steps and terraces to create an attractive courtyard. &lt;br&gt;• Upgrade and rationalise planting to enhance character and improve views. &lt;br&gt;• Replace plastic café seating.</td>
<td>M</td>
</tr>
<tr>
<td>Precinct</td>
<td>Key Action Area</td>
<td>Main Elements</td>
<td>Time Frame</td>
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</tr>
</tbody>
</table>
|          | *Middle Terrace (proposed ‘Campus Heart’)* | • Develop central space within the Central Mall for events, concerts and large public gatherings.  
• Provide terracing and access ramps to improve utility and allow disabled access.  
• Develop strong planting themes and consistent furniture.  
• Enhance visual links outside the Campus. | L          |
|          | Amphitheatre         | • Assess structural condition/safety issues.  
• Consider enhancing use as a ‘passive space’.  
• Improve landscaping to an identified ‘theme’.  
• Relocate Amphitheatre role to proposed ‘Campus Heart’. | L          |
| Precinct 3 | *Grosvenor Crescent* | • Improve as pedestrian and bicycle friendly zone.  
• Consider rationalising parking to provide for contra-flow bicycle lane.  
• Opportunity to extend improve terraces for spectator facilities and to provide markets/events space.  
• Potential to cater for large gatherings.  
• Potential for low-key café facilities. | L          |
| Precinct 4 | *Grace Street Carpark* | • Implement proposed car park redesign and improve landscaping/lighting.  
• Improve pedestrian connections.  
• Potential for expansion into unused open space adjacent to Rugby Field. | S          |
| Precinct 4. (cont.) | *Sandy Bay Road Frontage* | • Provide high-profile positive address with landscape features, major signage and sculpture.  
• Potential to use feature lighting to improve night-time appearance.  
• Upgrade pedestrian connections into the Campus. (Potential to relocate bus shelter to better link with pedestrian entry.)  
• Improve vehicular entry to Earl Street and pedestrian links to Marieville Esplanade in association with Hobart City Council. | M          |
| Precinct | Key Action Area | Main Elements                                                                                                                                                                                                 | Time Frame |
|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------Adam 6.2
|          | Law/Information Systems Carpark and Football Pavilion | • Improve pedestrian connections between lower precinct and upper sections of Campus, particularly around pavilion and the vehicular entry to the carpark.  
• Improve ‘front door’ to School of Information Systems which is access from the carpark.  
• Improve passive use spaces between Law and Sports Oval. | S-M |
|          | Rugby Field | • Consider redesign of open space as an educational/interpretive space in the longer term.  
• Options include the reinstatement of former wetland and potential to improve on-site stormwater management. | L |
<p>| Precinct 5a | Herbarium Precinct | • Establish strong, consistent landscape form, batter treatments and planting approach to Churchill Avenue landscape ‘sequence’ along the University frontage coordinated with HCC. | S |
|          |              | • Improve the ‘sequence of landscape vistas’ along Churchill Avenue. Integrate entrance lawns, Herbarium lawn, Plant Science and landscape frontage to Churchill Avenue to establish a strong, significant landscaped Public Address. | S-M |
|          |              | • Improve pedestrian link with Churchill Avenue overpass to establish a ‘primary’ pedestrian connection with lower and upper campus areas | S-M |
| Precinct 5b | TUU Precinct | • Improve the presentation and functionality of frontage to Student Health Centre and Student Union | S-M |
|          |              | • Improve disability access provision, functionality and appearance of Student Facilities Courtyard. | S-M |
|          |              | • Improve pedestrian access / crossing point on College Road. Establish ‘Primary’ connection between Student Facilities Precinct and Upper Campus areas including Residential Precinct. | M-L |</p>
<table>
<thead>
<tr>
<th>Precinct 6</th>
<th>College Road South-East Precinct</th>
<th>Key Action Area</th>
<th>Main Elements</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Precinct</strong></td>
<td><strong>Main Elements</strong></td>
<td><strong>Time Frame</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>College Road South-East Precinct</td>
<td>Improve Churchill Avenue frontage landscape presentation creating important new gathering space for the Upper Campus. Potential to create more permeable connections to other building entrances and other Department connections.</td>
<td>M-L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improve access and landscape presentation to service area and parking areas between Plant Science, Agriculture and Glasshouse area.</td>
<td>S-M</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Define pedestrian and vehicular access.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Improve presentation and maintenance of Agricultural Science entrance.</td>
<td>S-M</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Stabilize steep slopes between Medical Science and Zoology and improve landscape presentation and maintenance.</td>
<td>S-M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improve entrance presentation of School of Zoology. Potential to improve pedestrian and re-orientate carparking layout to remove pedestrian / vehicular conflict.</td>
<td>L</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Potential to improve underutilized space between Agriculture and Zoology. This space has Potential to become the primary connection and inter-school circulation space with connection to the main carpark below combining passive open space, gathering spaces and potential to link future development and extention sites.</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Define management responsibility for Bushland edge areas, consistent with volume two landscape values and management policies.</td>
<td>S</td>
</tr>
<tr>
<td>Precinct 7</td>
<td>French Street Precinct</td>
<td>Key Action Area</td>
<td>Main Elements</td>
<td>Time Frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>French Street Precinct</td>
<td>Up-grade / improve accessibility and presentation to front entrance of Economics / Commerce.</td>
<td>S-M</td>
</tr>
<tr>
<td>Precinct</td>
<td>Key Action Area</td>
<td>Main Elements</td>
<td>Time Frame</td>
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<tr>
<td></td>
<td><strong>Precinct 8</strong></td>
<td><strong>Student Residential Precinct</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Improve pedestrian connection with Lower Campus facilities. New residence development landscape works must create a primary path link and establish management edge with Hytten Gully.</td>
<td>S</td>
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<tr>
<td></td>
<td></td>
<td>• Rationalize treatment of landscape frontage to Christ College. Improve entrance and forecourt. Undertake tree inventory prior to landscape planning and design. Reduce irrigated grass areas to define courtyards</td>
<td>S</td>
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<tr>
<td></td>
<td></td>
<td>• Improve pedestrian connection and crossing point on College Road.</td>
<td>S-M</td>
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<tr>
<td></td>
<td></td>
<td>• Establish ‘primary’ pedestrian connection between Student Facilities Precinct and Upper Campus including student residences.</td>
<td>S-M</td>
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<tr>
<td></td>
<td></td>
<td>• Improve entrance presentation and pedestrian access with better definition of car spaces at Student Services</td>
<td>S-M</td>
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<tr>
<td></td>
<td></td>
<td>• Improve presentation of entrance to Riawunna Centre. Propose main address should front ‘primary’ path link to Lower Campus. Remove carspaces from entrance.</td>
<td>S-M</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improve parking layout and define pedestrian access with better definition of carspaces at entry to Library and Information Science building.</td>
<td>M-L</td>
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<tr>
<td></td>
<td></td>
<td>• Establish ‘primary’ path connection with Lower Campus via entry precinct lawn.</td>
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<tr>
<td></td>
<td></td>
<td>• Improve connection with Upper Developed Precinct – East via the Gully while controlling access to the Gully and stream.</td>
<td>S-M</td>
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<tr>
<td></td>
<td></td>
<td>• Improve management of picnic area. Remove grass from picnic area and other potential ‘edge effects’, establishing clear unambiguous management edges.</td>
<td>S-M</td>
<td></td>
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</table>

Prepared by Urban Initiatives
<table>
<thead>
<tr>
<th>Precinct</th>
<th>Key Action Area</th>
<th>Main Elements</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Opportunity to improve usage of internal courtyard spaces. Opportunity to coordinate landscape design with Landscape Development Plan for entire Christ College Precinct.</td>
<td>S-M</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Review landscape / bushland edge treatment for new residential development. Ensure clear unambiguous management edges are established.</td>
<td>S</td>
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<tr>
<td></td>
<td></td>
<td>• Review placement of external lighting considering impacts on Habitat values in Rifle Range Creek Gully.</td>
<td>S</td>
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<tr>
<td></td>
<td></td>
<td>• Remedial treatment of batters to sports area required immediately. Opportunity to coordinate remedial treatments with Landscape Development Plan for entire College precinct.</td>
<td>S-M</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Establish maintenance responsibilities consistent with other ‘Bushland edge’ areas. Clarify maintenance policy for contractors.</td>
<td>S</td>
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<tr>
<td></td>
<td></td>
<td>• Maintain dryland grass in such a way as to control movement of weeds into adjacent bushland.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Remnant Eucalypts within College precinct to be included in tree inventory.</td>
<td>S-M</td>
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<td>•</td>
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</tr>
</tbody>
</table>

‘Building Design for People with Vision Impairments’ – Peter Cronin, Royal Victorian Institute for the Blind.


Department of Primary Industries Water and Environment, Weed Control Guidelines for Native Bushland Areas (n.d.)


Melbourne University Disability Access Plan Unpublished Report to the University of Melbourne.

Standards Association of Australia, Design for Access and Mobility, 1428.3, Enhanced and Additional Requirements for Buildings and Facilities.


Appendix 1. Existing Furniture Elements
Appendix 2. List of Environmental Weeds

The Landscape Management Plan includes a policy to guide weed management on the lower Campus. To assist in the definition of which plants are considered as weeds under this policy, the following list of weed species has been compiled. This list has been generated from a number of sources including the existing Maintenance Contract, the Department of Primary Industry Water and Environment (DPIWE) handbook- *Environmental Weeds in Bushland Areas* and the DPIWE environmental weed list (including Declared Weeds under the *Weed Management Act 1999*).

Any plants that are included on the following list should not be planted or allowed to persist on the Campus. Other similar plants that produce volunteer seedlings or suckers and have the potential to spread widely should also not be planted.

More information on environmental weeds, including weed control and revegetation strategies, and weed information sheets refer to the DPIWE website:


<table>
<thead>
<tr>
<th>Botanical name</th>
<th>Common name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acacia baileyana</td>
<td>Cootamundra Wattle</td>
</tr>
<tr>
<td>A. decurrens</td>
<td>Early Black Wattle</td>
</tr>
<tr>
<td>A. floribunda</td>
<td>White sallow Wattle</td>
</tr>
<tr>
<td>A. howittii</td>
<td>Sticky Wattle</td>
</tr>
<tr>
<td>A. longifolia</td>
<td>Sallow Wattle</td>
</tr>
<tr>
<td>Acacia pycanantha</td>
<td>Golden Wattle</td>
</tr>
<tr>
<td>Acer pseudoplatanus</td>
<td>Sycamore</td>
</tr>
<tr>
<td>Agapanthus praecox</td>
<td>Agapanthus</td>
</tr>
<tr>
<td>Artemisia absinthium</td>
<td>Wormwood</td>
</tr>
<tr>
<td>Albizia lophantha</td>
<td>Cape Wattle</td>
</tr>
<tr>
<td>Asparagus asparagoides*</td>
<td>Bridal Creeper</td>
</tr>
<tr>
<td>Calluna vulgaris</td>
<td>Heather</td>
</tr>
<tr>
<td>Carex albula*</td>
<td>New Zealand Sedge</td>
</tr>
<tr>
<td>Carex buchananii*</td>
<td>Leather leaf Sedge</td>
</tr>
<tr>
<td>Carex flagellifera*</td>
<td>New Zealand Sedge</td>
</tr>
<tr>
<td>Carex testacea*</td>
<td>New Zealand Sedge</td>
</tr>
<tr>
<td>Chamaecutisus</td>
<td>Tree lucerne</td>
</tr>
<tr>
<td>Chrysanthemoides monilifera*</td>
<td>Boneseed, Bitou Bush</td>
</tr>
<tr>
<td>Clematis vitalba</td>
<td>Old Man’s Beard</td>
</tr>
<tr>
<td>Coprosma repens</td>
<td>Mirror Bush</td>
</tr>
<tr>
<td>Coprosma robusta</td>
<td>Karamu</td>
</tr>
<tr>
<td>Cortaderia spp*</td>
<td>Pampas Grass</td>
</tr>
<tr>
<td>Cotoneaster spp</td>
<td>Cotoneaster</td>
</tr>
<tr>
<td>Crapeagus monogyna</td>
<td>Hawthorn</td>
</tr>
<tr>
<td>Crocosmia crocosmiiflora</td>
<td>Monbretia</td>
</tr>
<tr>
<td>Cupressus macrocarpa</td>
<td>Monterey Cypress</td>
</tr>
<tr>
<td>Cuscata species*</td>
<td></td>
</tr>
<tr>
<td>Cynara cardunculus</td>
<td>Artichoke Thistle</td>
</tr>
<tr>
<td>Cytisus palmensis</td>
<td>Tree Lucerne</td>
</tr>
<tr>
<td>Cytisus scoparius*</td>
<td>English Broom</td>
</tr>
<tr>
<td>Digitalis purpurea</td>
<td>Foxgloves</td>
</tr>
<tr>
<td>Common Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>---------------------------------</td>
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</tr>
<tr>
<td>Pride of Madeira</td>
<td>Echium candicans</td>
</tr>
<tr>
<td>Paterson's curse</td>
<td>Echium plantagineum</td>
</tr>
<tr>
<td>Egeria</td>
<td>Egeria densa</td>
</tr>
<tr>
<td>Canadian pond weed</td>
<td>Elodea canadensis</td>
</tr>
<tr>
<td>Fennel</td>
<td>Foeniculum vulgare*</td>
</tr>
<tr>
<td>Tree Heath</td>
<td>Erica Arborea</td>
</tr>
<tr>
<td>Berry Flowered heath</td>
<td>Erica Baccans</td>
</tr>
<tr>
<td>Spanish Heath</td>
<td>Erica lusitanica*</td>
</tr>
<tr>
<td>Besom heath</td>
<td>Erica scoparia</td>
</tr>
<tr>
<td>Fleabane</td>
<td>Erigeron karvinskianus</td>
</tr>
<tr>
<td>Fuchsia</td>
<td>Fuschia magellanica</td>
</tr>
<tr>
<td>Ash Tree</td>
<td>Fraxinus excelsior</td>
</tr>
<tr>
<td>Montpellier Broom</td>
<td>Genista monspessulana*</td>
</tr>
<tr>
<td>Grevilleas</td>
<td>Grevillea ssp.</td>
</tr>
<tr>
<td>English Ivy</td>
<td>Hedera helix</td>
</tr>
<tr>
<td>Hawkweed</td>
<td>Hieracium species*</td>
</tr>
<tr>
<td>St Johns Wort, Tutsan</td>
<td>Hypericum (introduced spp)</td>
</tr>
<tr>
<td>Holly</td>
<td>Ilex aquifolium</td>
</tr>
<tr>
<td>Lantana</td>
<td>Lantana camara**</td>
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<tr>
<td>Spanish lavender</td>
<td>Lavandula stoechas</td>
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<tr>
<td>Elisha’s Tears</td>
<td>Leucesteria formosa</td>
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<tr>
<td>African boxthorn</td>
<td>Lycium ferocissimum*</td>
</tr>
<tr>
<td>Horehound</td>
<td>Marrubium vulgare*</td>
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<tr>
<td>Parrot’s feather</td>
<td>Myriophyllum aquaticum*</td>
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<tr>
<td>Soursob</td>
<td>Oxalis pes-capre</td>
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<td>Cape Leeuwin Wattle</td>
<td>Paraserianthes lophantha</td>
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<td>Banana Passionfruit</td>
<td>Passiflora mollissima</td>
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<tr>
<td>Feathertop</td>
<td>Pennisetum villosum*</td>
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<tr>
<td>Radiata Pine</td>
<td>Pinus radiata</td>
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<tr>
<td>Pittosporum</td>
<td>Pittosporum ssp</td>
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<td>Psoralea pinnata</td>
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<td>Pyracanthus ssp</td>
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<td>Salvinia molestia*</td>
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<td>Sparaxis tricolor</td>
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<td>Wandering Jew</td>
<td>Tradescantia color</td>
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<td>Ulex europaeus*</td>
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<td>Vinca major</td>
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<td>Watsonia ssp.</td>
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<td>White arum lily</td>
<td>Zantdeschia aethiopicum</td>
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Appendix 3. Tree Planting Guidelines

Introduction

Trees play an important role in the landscape character of the Campus. They define spaces; provide shade, wind protection, habitat, and a sense of scale.

Although there are good individual specimens and stands of trees the general arrangements and groupings appear to be largely ad-hoc and in many cases poorly structured. Trees in carparks and close to pedestrian or seating areas need to be managed to minimise public safety risks.

In a well-planned landscape, trees are used to spatially define areas or give character to particular precincts. They can be used to signify entrances, frame views, define elements or screen intrusive views.

Aims of Tree selection

The following tree planting guidelines are intended to be read in conjunction with the tree section of the Suggested Plant List.

Tree planting guidelines and suggested tree list aim to:

- Provide a sound framework for tree species selection, reducing the ad hoc nature of selection.
- Provide grounds staff / contractors / landscape consultants with a list of tree species that are specifically suited to site conditions.
- Reduce future maintenance costs by minimising failures and unsuitable tree species.
- Improve tree siting based on site conditions.
- Broaden palette of trees used on site, including new cultivars.
- Reduce time taken selecting trees for individual projects.
- Improve tree selection, procurement and establishment techniques

Background

There are a broad range of trees and planting styles on the Campus. This includes a mix native and exotic trees of a range of size and age. Early plantings appear to be largely exotic, with a shift toward largely native plantings in the 1980's, including many which are indigenous to the Hobart area. More recent planting include both exotic and native, although some areas have been developed with specific themes.

The existing process of species selection has been largely dependent on personal taste of gardening staff or the landscape consultant preparing a design for a specific area. This approach has meant some suitable species are not trailed, others are over used.

Tree species are often not suited to the physical conditions of the selected location. As part of the selection process a detailed site inspection was carried out to identify trees that are performing well. Trees that are performing below expectations or causing existing problems were also noted and excluded from the suggested plant list. Other trees that are not currently planted on the site, (including some new
cultivars) but are commercially available and suited to the site conditions have been included on the list.

Factors Influencing Tree Selection

Appendix 3 of this report includes a detailed list of suggested plants- including trees, which are suitable for use lower section of the Sandy Bay Campus. This list includes approximately 40 species of trees of exotic and native trees, many of which are Tasmanian in origin.

A broad range of tree types, sizes and have been provided. This includes a range of indigenous structure trees that are recommended for use on the landscape frontages, to integrate the Campus with the broader landscape context. In order to strengthen tree planting on the Campus, it is recommended that tree plantings be considered at a precinct or action area level rather than a project-by-project basis.

The list also includes a limited range of exotic deciduous trees that intended for use as specimen feature trees or to the Central Mall area and courtyard spaces, where the retention of winter sun and open views may be desirable.

Trees will need to be selected by the Landscape Architect associated with a new project or in the case of infill or replacement, the University Grounds Manager. Trees should be carefully selected to suit a particular application, site location or design requirement.

There are many factors that may be considered in selecting a suitable tree for a particular location. This includes:

**Aesthetic Considerations**

- Context of location
- Foliage colour
- Tree form and size
- Flower
- Uniformity of growth
- Evergreen or deciduous

**Environmental Factors**

- Climatic suitability
- Tolerance of soil conditions
- Tolerance of drought
- Tolerance of other factors (such as pests and disease, pollution etc)

**Functional Criteria**

- Availability of stock
- Longevity
- Risk of damage services or infrastructure
- Fruit and leaf fall issues
- Risk of limb shear
- Pruning and maintenance requirements
- Likelihood of becoming an environmental weed

Based on J.D. Hitchmough, Urban Landscape Management 1994.
SUCCESSFUL PLANTING

Successful tree establishment is dictated by the following:

• Identifying and selecting sound plant material
• Planting techniques
• Post planting maintenance

Without paying due consideration to these three points, successful tree establishment may not occur.

IDENTIFYING SOUND PLANT MATERIAL

Where possible it is recommended that trees be supplied in container. Where possible, the use of bare rooted trees be avoided as a substantial amount of the root system can be damaged in the digging process and they have to use existing reserves to survive to a point whilst the root system recovers.

When selecting it is not necessarily correct that the largest tree reflects the best value. Trees should be selected for their form and structure rather than simply the height or trunk calliper.

Tree selection should be influenced by the following:

• Select a tree with good foliage colour and density. Branches on most trees should be distributed along the upper two thirds of the trunk. Poorer quality trees lack branches along the lower half of the trunk.
• Select a tree good trunk taper and strong branch attachment (weak trunks often result from over-staking in the Nursery). Bifurcations with included bark are structurally poor and are likely to fail at maturity.
• Decurrent trees should be selected with a full canopy branches relatively evenly spaced along two thirds of the trunk.
• Decurrent trees lack a central stem and are composed of a system of co-dominant branches, which are similar in diameter and length.
• Excurrent trees should be selected with a single strong stem. Excurrent trees possess a strong central stem throughout most of their life. Stem or trunk should have good taper. If a tree is unable to support itself after planting it has poor trunk taper. Stakes should only be used to support the tree after planting until adequate root traction is achieved.

TIMING OF PLANTING

Ideally planting should take place in the cooler months. In some cases this may mean that the tree planting component of a civil project may need to be delayed to avoid summer plantings.

Natives can be planted in autumn which will allow them to establish prior to the following summer.
Exotics are best planted in early spring approximately September–October (preferably before bud burst). Planting later than this will require more maintenance i.e. watering. The planting of exotics in summer should be avoided.

**Procurement**

Tree establishment is usually more difficult and complex as container size increases. It is therefore recommend that container size selection be limited to a maximum of 40cm for native evergreen stock and 45 litres for exotic or deciduous stock. Prior to purchasing stock it should be checked that the tree is still actively growing in the container and check to ensure the root system is free from girdling roots.

Individual trees should be selected with good leaf colour and density, good trunk taper, actively growing without any structural defects or girdling roots.

**Planting & Maintenance**

Successful tree planting is dependant on the ability of the tree to rapidly initiate root growth in the backfilled soil and ultimately into the natural soil profile. It is essential that the physical conditions are ameliorated as much as possible to promote healthy root growth. Tree establishment will be enhanced where there is less penetrative resistance for roots to access adequate moisture and nutrients. A healthy tree is less vulnerable to disease and stress. Planting should consider the following factors:

- It is imperative that the tree is planted at the correct depth. Plant trees only as deep as the rootball and twice as wide. The top of the root ball should be level with the existing soil grade. It is recommended that trees be planted in a 50/50 ratio of site and quality imported topsoil.

- Form a berm or soil ring around the perimeter of the root ball to hold irrigation water. Add well composted mulch to insulate and decrease moisture evaporation. Do not place mulch around the stem or trunk.

- Water availability is essential for rapid root growth. It the recommended that in the first year of establishment trees be watered on a regular basis (depending on weather conditions). In low rainfall seasons this may need to continue during the summer period of the second year however in most cases this should not be required.

- The mulch ring should be maintained for at least two years, after which time weeds and grass should be kept clear of the trunk to prevent damage by mowers and whipper snippers.
Appendix 4.  Plant Selection Guidelines and Suggested Plant List

Suggested Plant List and Planting Guidelines

Introduction
The following is a suggested plant list for the lower Sandy Bay Campus. This includes a broad range of trees, shrubs, groundcovers and climbers that are suitable for use on the site. This list includes many plants that have previously been planted and are known to grow well in sections of the Campus. Consistent with the policies on sustainable landscape practices and irrigation, the majority of the plantings are indigenous to the local area or Tasmanian in origin.

These plants are generally well suited to the site conditions, and it is felt that consistent use of these plants will help to strengthen the landscape character and identity of the Campus as well as providing valuable habitat.

Selection Criteria
Plants have been selected to fulfill the following performance objectives:

Shrubs & Low Cover
• Robust – able to withstand frost, drought & physical damage
• Dense – foliage easily kept in good form through mechanical pruning.
• Manageable size – low shrubs to grow to not more than 1 metre or can be kept at that height due to potential security issues.
• Compact form and tight structure to minimise woodiness.
• Flower season- plant with long flowering times and colour that adds interest.
• Adaptable - to varying soil types, drought, prolonged dampness, shade/full sun
• Not likely to behave as weeds

Trees (refer Tree plant strategy for more details).
• Include a range of small species with interest (trunk & foliage features)
• Have reduced long-term maintenance cost (OH&S implications)

This list is intended to provide a guide only and it will be the role of the project Landscape Architect, or in the case of infill or replacement plantings the University Grounds Manager to select appropriate plants for the specific location or application.

Plant Groupings
The intention is that plants that are selected from the list are arranged in mass groupings to reduce maintenance and improve consistency. The emphasis is on clear-stemmed trees and low groundcovers rather than extensive areas of tall shrub plantings that tend to visually break up spaces and create potential security issues.

While the overall aim is for greater for consistency across the Campus, the Landscape Subject Plan does identify the opportunity to develop special landscape treatments within high profile spaces (referred to as "Landscape Vignettes" on the Opportunities Plans). These areas have the potential to be developed as themed garden spaces, which respond to the appropriate microclimate or locality. Special themes such as rainforest, heath, or coastal plants could be provided within this framework. It is felt that the development of
these highlight areas combined with a greater continuity in the general plantings will help to strengthen the landscape character of the Campus.

While the intention is that the landscape character will remain largely native in character, there are existing spaces on the Campus where the existing landscape character is influenced by the use of exotic plantings (such as the areas around the Arts Lecture Theatre). In these locations, the continued use of similar plants should be permitted. A range of suitable hardy exotic plants (which exist on the Campus) has been included in the suggested species list.
Plant Selection Guidelines

Plants should be selected to fulfill the following performance objectives:

Shrubs & Ground Cover

- Robust – able to withstand frost, drought & physical damage
- Dense – foliage easily kept in good form through mechanical pruning.
- Manageable size – low shrubs to grow to not more than 1 metre or can be kept at that height due to potential security issues.
- Compact form and tight structure to minimise woodiness.
- Flower season- plant with long flowering times and colour that adds interest.
- Adaptable - to varying soil types, drought, prolonged dampness, shade/full sun
- Not likely to behave as weeds

Trees (refer tree strategy for more details).

- Small species with interest (trunk & foliage features)
- Have reduced long-term maintenance cost (OH&S implications)

Aim for consistency some instances where special themes re appropriate microclimate. Special themes such as rainforest, heath, or coastal plants could be provided within this framework. There should flexibility to allow for special projects that may require a distinct theme. Where the landscape character is influenced by the use of exotic plantings (such as the areas around the Arts Lecture Theatre), the continued use of similar plants should be permitted.

Suggested Plant List

The following suggested plant list has been partially based on plants which were observed as growing well on the site, supplemented with appropriate plants which are likely to perform well in the conditions. A number of indigenous plants not previously trailed on the site have been included in this list. By virtue of their origins, these plants are ideally suited to the site and are consistent with the broader landscape context.

This list should be used as a starting point for any new or supplementary planting works. The selection of each plant needs to be carefully considered in the context of the actual site and project requirements.

Suggested Plant List- Schedule
Appendix 5. Talloires Declaration