

# LA TROBE UNIVERSITY BENDIGO FLORA HILL CAMPUS MASTER PLAN REPORT

## 4.3 PUBLIC REALM

PREPARED BY MGS ARCHITECTS  
JUNE 2015



# ECOLOGY AND BIODIVERSITY STRATEGY

## CONTEXT

Native vegetation forms an important part of the landscape as it is valuable for biodiversity, provides visual amenity, shelter from wind and sun and a habitat for local fauna.

Approximately one third of the campus carries natural vegetation, classified as Ecological Vegetation Class (EVC) 61 Box-Ironbark Forest, developed on shallow stony soils – sandstone, siltstone and mudstone. Dominant native species include Red Ironbark (*Eucalyptus tricarpa*), Grey Box (*E. microcarpa*), Red Box (*E. polyanthemos*) and Red Stringybark (*E. macrorhyncha*). Most of this vegetation occurs in the south of the campus and is largely fenced to protect this important asset. Most trees on the rest of the campus have been planted and are consequently not remnant native vegetation.

The condition of Box-Ironbark forest ranges from poor to moderately good. The indigenous vegetation is currently undocumented in terms of the types of species present and their location. It is important to document such vegetation and fauna habitats in order to protect them from development and manage them to retain and enhance their values.

Fire is a normal event and indigenous vegetation and fauna is generally highly adapted to survive or recolonise following a fire. The Bushfire Management Programme includes the campus and managing flora for bushfire management has a positive impact on native vegetation.

## VISION

The campus will appropriately manage and celebrate the richness of its native vegetation and local fauna, and its proximity to One Tree Hill Regional Park.

Indigenous trees, shrubs and sandstone will be used in campus landscaping where appropriate to revegetate the campus, improving its role as a fauna habitat, reducing soil loss and strengthening the environmental narrative of the campus.

## DIRECTIONS

### Inventory, management plans and asset protection

- Complete a flora and fauna survey at an optimum time of the year, ideally spring. This survey will document, describe and map the vegetation and fauna habitats of the campus, which will identify threats and management requirements.
- Investigate the need for a Vegetation Management Plan.
- Ensure that any development proposal for the campus is made in the context of asset protection, specifically the flora, fauna, and other identified values such as significant horticultural attributes (e.g. rare species in cultivation or well-developed specimens).
- Review the Fire Management Plan for the campus to ensure that in the event of unplanned fire (or wildfire), fire control or suppression measures, such as clearing breaks, do not adversely impact on vegetation and fauna habitat values.

### Management of flora and fauna

- Instigate the revegetation of the campus in order to upgrade indigenous vegetation or fauna habitats and enhance landscape amenity. Indigenous species should primarily be used for revegetation.

- Substitute invading weeds into the indigenous vegetation on campus or the adjoining Greater Bendigo National Park, especially readily manageable weeds such as woody weeds.
- Ensure that the plants and shrubs used in campus landscaping are not environmental weeds that may interfere with indigenous vegetation both on and close to the campus.
- Introduce appropriate wetland and dryland plantings of indigenous species to the existing dam to enhance its wildlife habitat value.

### Water and soil management

- Harvest, retain and manage water on site to provide an extremely valuable supply of water for use on campus, in addition to improving visual amenity and creating a wildlife habitat.
- Replant understory vegetation and improve the porosity of the site to address soil compaction, erosion (soil loss) and reduced moisture infiltration issues on campus.
- Clearly define pedestrian routes to limit trampling of vegetation.

### Landscaping and horticulture

- Use local sandstone in any rockeries or features on the campus which would link to the environmental narrative of the campus, its landscape setting and geological history.
- Similarly, identify and use local flora in landscaping to tie the campus to its setting, environmental narrative and the legacy of its name 'Flora Hill'.

For a full report on the ecology of the campus refer to *La Trobe University Bendigo Campus Master Plan: flora, fauna and environmental issues* (2014) by Ecology Australia.

## EARLY WINS

- Undertake a detailed survey of existing vegetation and fauna habitats, resulting in a Vegetation Management Plan.
- Revegetate the campus with indigenous plant species to tie the campus to its environmental narrative and its name 'Flora Hill'.
- Retain and use water run-off on-site.

## ALIGNMENT WITH RFAs

### SECURING FOOD, WATER AND THE ENVIRONMENT

- Enhance ecology and biodiversity.
- Improve stormwater outcomes.
- Improve drought resilience.
- Educational and research opportunities.
- Student and wider community engagement.
- Improve amenity and land value.











**LA TROBE UNIVERSITY  
BENDIGO FLORA HILL CAMPUS  
ECOLOGY AND BIODIVERSITY STRATEGY**



0 50 100m



-  Existing remnant Box - Ironbark Forest
-  Expanded remnant Box - Ironbark Forest
-  Existing Significant Landscape Overlay (SLO1) protecting remnant forest on residential properties
-  Indigenous plantings around dam
-  Bushland path and connection to Greater Bendigo National Park
-  Running and walking 'tan' track
-  Existing car park as gateway to the Greater Bendigo National Park
-  Elevation / Contour internals (1 metre intervals)





# LANDSCAPE STRATEGY

## CONTEXT

La Trobe University Bendigo has a series of small courtyard spaces, each with differing characters. The spaces have evolved over some time as a result of the dedicated grounds staff. Whilst each of these landscape spaces are valid in their own right, there is no over-arching guide to the landscape character of the campus. The courtyard spaces are disconnected, and have been designed on an ‘as needed’ basis.

The south of the campus is directly adjacent to One Tree Hill Regional Park and hosts a number of quality Ironbark tree stands. The residential precinct is set in the bushland but currently lacks a substantial connection to its bush setting.

The quality of the existing trees across the campus are medium to good. The vegetation is mostly native to Australia, with the main exceptions of the plane trees in the small plaza north of the student services centre and the succulent garden near the arts building. There is a high-quality fern garden in the library courtyard, yet it is visually disconnected from the surrounding open spaces.

The Bendigo Student Association runs a vegetable garden ‘The Patch’.

There are a multitude of different surface materials across the campus making legibility of spaces, and hierarchy of paths difficult.

## VISION

The Landscape Vision is to create a campus with a unified aesthetic. The campus will respond to its surrounding environs, drawing upon the ecologies of the region, and contribute back to that ecological system.

Existing spaces will be refreshed, and new spaces will utilise a robust and sustainable palette to create a distinctive ‘La Trobe University Bendigo’ character.

High-quality public spaces will be introduced to the campus to help create a more ‘sticky’ campus, with staff, students and visitors benefiting from an increased sense of vibrancy on campus.

The bushland character of the adjacent One Tree Hill Regional Park will infiltrate the south of the campus, defining a unique student residential experience.

La Trobe University will be transformed into a market-leading example of integrated built form set within a network of high amenity open space.

Pedestrians will have priority on campus, with vehicles restricted to key access roads. Additional shared paths will be implemented across the site encouraging staff and students to walk or cycle to campus. This will reduce the requirement for large amounts of car parking on the site, and enable the transformation of proportions of this land back into public open space.

The campus will be green: avenue planting will line key access corridors and facilitate campus orientation. A mix of high-quality urban and garden courtyards will occupy the spaces between buildings, encouraging outdoor learning and recreation. Water sensitive urban design and rain gardens will be important components of the landscape strategy.

## DIRECTIONS

### Governance

- Introduce a landscape strategy and design guidelines to bring coherence to both the hard and soft landscaping. This would allow incremental improvements to create a more cohesive whole. Such a strategy would greatly improve the legibility of public spaces and pedestrian paths.
- Consolidate surface materials and define a materials palette across the campus that sets up a consistent language for paths, plazas, roads and shared spaces.

- Extend the campus materials palette to include street furniture such as benches, rubbish bins and lighting and will facilitate wayfinding on campus, and give clearer message to pedestrians, cyclists and vehicles.
- Integrate fire protection measures such as fire breaks into the landscaping.

### Key public spaces

- Introduce a new public open space, the arrival plaza, to host University activities and events, and define an active heart for the campus at the front of the library.
- Revitalise existing open spaces and, by the removal of extraneous asphalt roads and car parks, create new open spaces for the staff and student population.
- Programme uses into proposed courtyard spaces, including outdoor learning, casual sport and passive recreation.

### Key pedestrian spaces.

- Create two key pedestrian spines that act as linear parks, focusing pedestrian activity in the campus and improving wayfinding and orientation in the campus.
- Introduce secondary and tertiary pedestrian networks with a consistent material palette assisting with wayfinding.

### Sports and recreation spaces

- Introduce informal sports such as table tennis to appropriate outdoor public spaces.
- Introduce a running and walking ‘tan’ track to the campus to increase access to informal recreation and improve the edge treatment of the campus and connect adjacent bushland to the University.

### A greener campus

- Create a greener campus to mitigate the hot dry climate in summer, and winter frost conditions.
- Use vegetation and tree canopies, to assist in managing the climate and make a more liveable environment around buildings and outdoor spaces.
- Work with the community, the City of Greater Bendigo, and the Bendigo Botanic Gardens to use the campus as an exemplar landscape in this rural environment. The University should showcase plants suited to this climate, and share a story of dry climate gardens.

## EARLY WINS

- Capitalise on the name ‘Flora Hill’ by using this concept as a landscape theme, celebrating the campus’ bushland location.
- Create landscape guidelines to assist in upgrading spaces in a uniform fashion.
- Restrict vehicle access on campus.
- Transform existing asphalt roads and car parks into ‘pop up’ parks to encourage the appropriation of outdoor spaces.
- Introduce a strong pedestrian network to the campus core with consistent pavement treatment.

## ALIGNMENT WITH RFAS

### BUILDING HEALTHY COMMUNITIES

- Provide spaces that encourage students and staff to spend time outdoors, thus improving the health and well-being of the University community.
- Provide landscape engagement opportunities with the surrounding community.

### SECURING FOOD, WATER AND THE ENVIRONMENT

- The development of landscape precincts of native vegetation within the campus will enable the study of local flora, creating a platform for learning and interaction.











### SPORT, EXERCISE AND REHABILITATION

- Provide spaces, facilities and connections that encourage students and staff to utilise the sports and recreational facilities of the campus.

**LA TROBE UNIVERSITY  
BENDIGO FLORA HILL CAMPUS  
LANDSCAPE CHARACTER STRATEGY**



0 50 100m

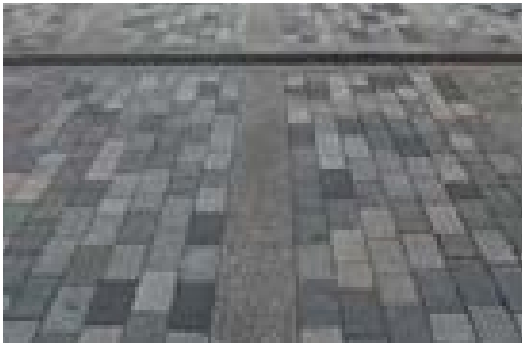
-  Pedestrian network
-  Bushland path and connection to Greater Bendigo National Park
-  Running and walking 'tan' track
-  Plaza spaces
-  Campus green courtyards
-  Additional planting to existing car park
-  Green edge treatment (north)
-  Bushland character (south)
-  Campus core landscape precinct
-  Sports and recreation landscape precinct



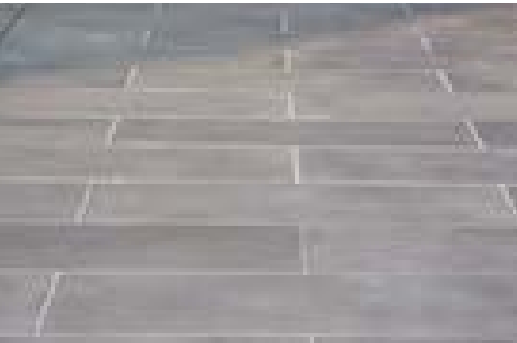
# CAMPUS LANDSCAPE MATERIALS

A consistent landscape palette for the campus will be established to build on the existing character of the public realm. The new palette will;

- Ensure that landscaping elements are of high quality and are durable.
- Integrated with existing landscapes
- Be cost effective to operate and maintain
- Derived from a limited palette of materials and finishes.
- Be both functional and aesthetic, and provide improved amenity where needed.



Trafficable granite



Pedestrian granite



Integrally coloured concrete



Granitic gravel



Hot rolled aggregate



Corten Formboss

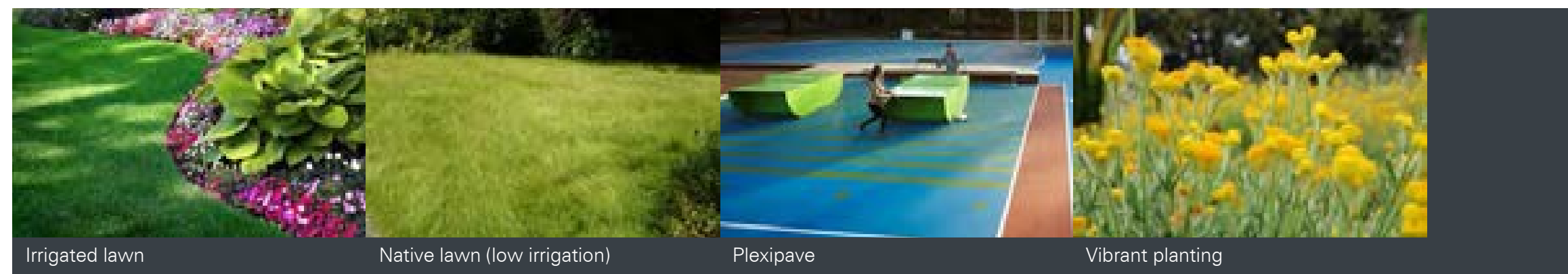


Steel Formboss



Timber decking





# SAFETY AND SECURITY STRATEGY

## CONTEXT

There are three main safety concerns on the campus: the lack of safe pedestrian routes at night, the conflict between vehicles and pedestrians on the campus’ extensive road network, and the risk of bushfire given the campus’ proximity to the National Park. Safety concerns should be understood and acted upon, as the campus precinct must be safe and secure for students, staff and visitors at all times.

As the campus is mainly active during the day and closes at 7pm, the main safety concern is providing safe pedestrian access during the evening. The campus core is largely empty and poorly lit at this time, which is not welcoming to those using the library or other facilities during the evening. The main activity at this time is in the student residences. In 2013, day and night managers were introduced for the students who live on campus. These managers are available at all times of the day and night to escort students across campus.

Additionally the campus favours private vehicle use and access at the expense of the pedestrian and the cyclist, reflecting the era of its construction. As the most direct pedestrian route is often along the service roads there is often a sense of conflict between vehicles and groups of students. The Keck Street roundabout is currently a safety concern as pedestrians are at risk of cars speeding around that intersection.

The entire campus sits within a Bushfire Management Overlay (WMO), given its proximity to the One Tree Hill National Park. Any new building requires a planning permit in order to ensure bushfire mitigation measures are implemented.

The campus became ‘smoke free’ in May 2014 with smoking only allowed in designated smoking areas. It is planned to remove these smoking areas in 2015, in order to make the campus entirely smoke free. There is however some concern that students and staff will then smoke in their cars, creating a potential fire hazard of cigarette butts being thrown out of car windows.

## VISION

The campus will become safer through improvements to the public realm such as well-defined, well-lit pedestrian paths. Increasing the resident population and extending the active hours of the campus will create a more vibrant and safe campus.

## DIRECTIONS

### Activate the campus day and night

- Introduce community facilities, cafes and diverse accommodation offers that activate the campus outside of regular teaching hours.
- Consider introducing teaching and learning spaces that are open in the evenings, both for evening classes and group study sessions.
- Ensure there are more ‘eyes on the street’ and heightened passive surveillance by increasing the day / night population on campus.
- Activate the major movement spines of the campus with day and night activities and uses.
- Ensure that new and redeveloped built form contributes to street activation, rather than ‘turning its back’ to the public realm.

### Green and Seen

- Provide high-quality, clear-trunk landscaping to streets and upgraded levels of lighting to key street networks, for both pedestrian and vehicle.

- Apply basic Crime Prevention Through Environmental Design (CPTED) principles when designing campus landscapes, especially in areas that are difficult to light and activate.
- Ensure priority pedestrian routes have generous lighting, low-level plantings, signage, be DDA-compliant and be equipped with CCTV.
- Ensure routes through buildings are provided for both safety (people gather in buildings, well-lit) and shelter.
- Liaise with the City of Greater Bendigo and VicRoads to light public road environments in proximity to the campus.

### Safety on display

- Provide an active and visible security presence on the campus, especially at times when street activity is reduced.

### Bushfire risk mitigation

- Consider building fire breaks into any proposed landscaping in order to reduce the risk of bushfires affecting the campus.
- Investigate the risk posed by removing designated smoking areas from the campus.

## EARLY WINS

- Roll out traffic calming measures throughout the campus, starting in the core campus and along key pedestrian and cycling routes.
- Develop a safe and secure route between the campus core and the student residences.
- Introduce fire breaks into new landscaping areas.

## ALIGNMENT WITH RFAS

### BUILDING HEALTHY COMMUNITIES

- Ensure the health and wellbeing of university students, staffs and the general community.
- Increase the attractiveness of active transport (and therefore health) by providing a safer environment to walk and cycle within.



**LA TROBE UNIVERSITY  
BENDIGO FLORA HILL CAMPUS  
SAFETY AND SECURITY STRATEGY**



0 50 100m

- Safety pedestrian route (additional lighting)
- Primary pedestrian network
- Bushland path and connection to Greater Bendigo National Park
- Additional lighting to public open space
- Key public buildings
- Residential buildings
- Bus routes
- Proposed pedestrian gateway





**NEW TEACHING AND  
LEARNING BUILDING**

**CONSOLIDATED LOADING ZONE**



NEW ACADEMIC BUILDING

VISUAL ARTS BUILDING