4.0 MASTER PLAN STRATEGIES

STRATEGIES INTRODUCTION

MASTER PLAN THEMES

The Master Plan Strategies section establishes campus-wide themes and strategies that underpin the Melbourne Campus Vision for the establishment of a thriving University Town. Each theme and strategy has been incrementally developed through a process of research, consultation, testing, review and approval throughout the masterplanning process.

The Master Plan Themes were established at project inception and have formed a framework around which the Master Plan has developed.

Each Master Plan Theme and its focus is noted below:

ACCESS, WAYFINDING & HUMAN MOVEMENT

- Sustainable transport initiatives and the campus arrival experience.
- Regional and campus public transport.
- Private vehicle access road infrastructure, car parking and deliveries.

UNIVERSITY TOWN

- The neighbourhoods that make up the University Town.
- Student, staff and private sector housing.
- Teaching, learning and research environments.
- Campus life, arts and cultural offerings.
- Sports and recreation facilities.

PUBLIC REALM

- Formal and informal campus landscapes.
- Ecology and biodiversity matters.
- Campus amenity, safety and security.

BUILT FORM & SERVICES

- Campus building conditions.
- Space planning throughout the campus.
- Heritage precincts and conservation matters.
- Energy and water infrastructure requirements.

MASTER PLAN STRATEGY COMPONENTS

The Master Plan Strategies provide a campus-wide approach to resolving existing issues and aligning future development so that it best achieves the institutional and campus vision. Each Master Plan Strategy consists of the following elements:

CONTEXT

- Details the context, including discussion on current issues affecting the campus.

VISION

- Outlines the vision of the Strategy – an ambitious statement of intent.

DIRECTIONS

- Provides a list of directions, or actions, that will over time combine to realise the vision.

EARLY WINS

Early Wins are listed for each Strategy and align with the following categories:

- A project that can be delivered in the early stages of the Master Plan.
- An inexpensive project or initiative.
- A project with considerable support from the University and broader community.
- Processes or behaviour-change projects that can be delivered with limited resources.

ALIGNMENT WITH RFAs

In order to fulfil its ambitious research goals, the University has developed five Research Focus Areas (RFAs):

- Building healthy communities.
- Securing food, water and the environment.
- Sport, exercise and rehabilitation.
- Transforming human societies.
- Understanding disease.

The Master Plan Strategies have been developed through the distinctive lens of the RFAs to ensure that the physical development of the campus is aligned with the University's core teaching and research agenda.

KEY MOVES

The Key Moves diagrams (adjacent and overleaf) act as a summary of the Master Plan Themes and Strategies, outlining the moves that will help the Melbourne campus transform into a thriving University Town.

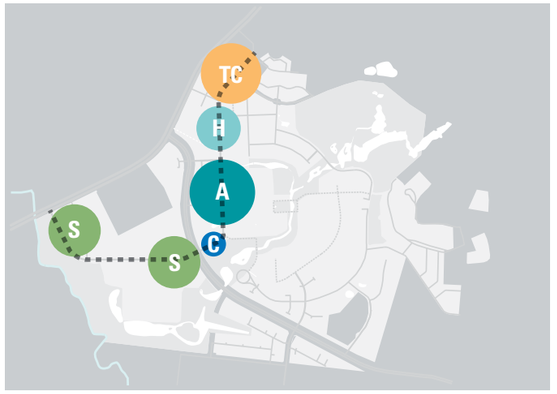
The Key Moves are aligned with internal and external consultation undertaken to date and are a simplification of the Master Plan Priorities diagrams developed during previous stages of Master Plan development.

A VIBRANT UNIVERSITY TOWN POSITIONED AT THE CENTRE OF MELBOURNE'S EMERGENT NORTH

DEVELOPING STRONG EAST-WEST & NORTH-SOUTH REGIONAL PUBLIC TRANSPORT CONNECTIONS

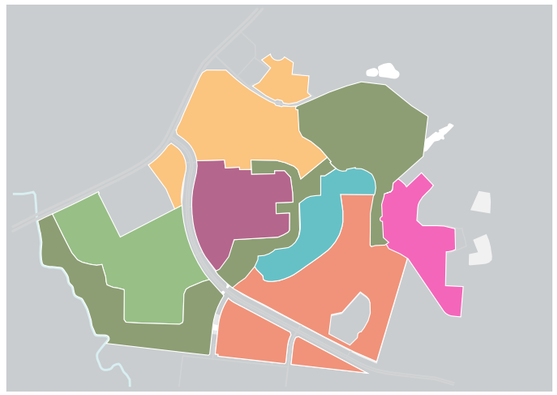
CONNECTING WITH THE COMMUNITY

A UNIFYING ECO-CORRIDOR NETWORK THAT PROVIDES ECOLOGY BENEFITS & REGIONAL CONNECTIONS



A STRING OF REGIONAL DESTINATIONS BASED ON SCIENCE DRIVE

DEVELOPING A PRIMARY PEDESTRIAN NETWORK; AN ARMATURE FOR DEVELOPMENT



AN INTEGRATED NETWORK OF UNIVERSITY TOWN NEIGHBOURHOODS

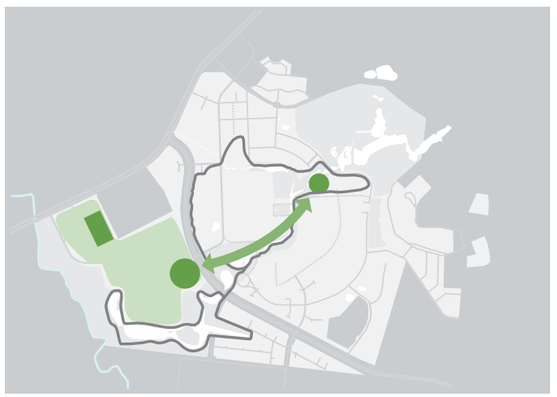
NORTHERN ACADEMIC EXPANSION & TOWN CENTRE SOUTHERN EXPANSION

A GROWING RESIDENTIAL COMMUNITY THROUGH NORTHERN EXPANSION

A VIBRANT EMPLOYMENT CLUSTER & R&D PARK SOUTHERN EXPANSION

A STRONG UNIVERSITY TOWN PRESENCE ON MAJOR ARTERIALS

ENHANCING FORMAL LANDSCAPE AXES & DEVELOPING NATIVE BUSHLAND CORRIDORS



A REGIONAL SPORTS & RECREATION DESTINATION

A NETWORK OF SHORT & LONG-TERM CAR PARKING NODES

4.1 ACCESS, WAYFINDING & HUMAN MOVEMENT

ARRIVAL EXPERIENCE STRATEGY

CONTEXT

In a competitive tertiary environment where many prospective students decide on their preferred University within the first 15 minutes of being on campus, it is more important than ever to create a positive arrival experience for students, staff and visitors.

While the Melbourne campus is blessed with wonderful natural environments and buildings, it suffers from poorly resolved interfaces to surrounding road networks and neighbourhoods. The campus is largely hidden from view and is ringed by significant road infrastructure, reducing its presence in the region. The University is poorly promoted at the campus' interfaces, with the exception of some signage at major vehicle gateways.

Owing to the campus' mid-20th Century planning, major campus gateways are generally designed for vehicles and the Plenty Road public transport arrival experience is poorly resolved. A number of issues adversely affect the Plenty Road/Kingsbury Drive gateway to the campus:

- Insufficient or poorly located pedestrian crossing facilities (e.g. waiting areas at the intersection are insufficiently sized and offer little pedestrian amenity).
- Multi-staged crossings optimised for vehicles not pedestrians.
- The path network between Plenty Road and the Core Campus is insufficiently sized to cater for pedestrian volumes and offers little amenity.

VISION

The arrival experience will be enhanced as the Melbourne campus transforms from its current introverted character to a University Town that fully engages with the surrounding community. Campus interfaces will evolve to better integrate with surrounding streets and neighbourhoods, and will celebrate and promote the University's presence, core values, regional role, and connection with the natural landscape.

A more legible vehicle entrance to the campus will also be developed, providing direct access to visitor and executive car parking off Kingsbury Drive.

DIRECTIONS

IMPROVE THE CAMPUS ARRIVAL EXPERIENCE

- Engage with the broader community by locating community-focused uses strategically along campus interfaces, main promenades and axes.
- Situate iconic buildings and/or public spaces at the end of major shared pathways to create memorable focal points.
- Improve the public realm around major pedestrian, bicycle and public transport gateways to enhance the sustainable transport arrival experience.
- Progressively remove the mounds that block sight lines into the campus from Plenty Road and Kingsbury Drive.
- Establish a hierarchy of gateways to the campus.
- Develop and enhance the Darebin Creek bicycle trail and extend its network to and through the campus.
- Create a visitor vehicle entrance directly from Kingsbury Drive that provides clear sight lines to visitor car parking and the Core Campus beyond.

BLUR CAMPUS BOUNDARIES & MAKE CONNECTIONS

- Blur the edges of the campus, linking traditional academic uses with community and commercial uses beyond.
- Create a seamless transition between the campus' future Town Centre uses and the emerging Polaris Town Centre to the north.
- Improve connections between the Eastern Interface, especially the Mont Park Terraces and grounds, and the surrounding residential community of Springthorpe.
- Improve physical connections between the R&D Park and the West Heidelberg Industrial Estate, paving the way for high impact industry and research partnerships.

ADOPT A PLACE-MAKING APPROACH TO REINFORCE & ENHANCE CAMPUS IDENTITY & PRESENCE

- Provide University branded gateway markers at major campus gateways.
- Enhance existing identity markers with new memorable places, iconic buildings and gateways.
- Facilitate medium scale built form within and in proximity to the Core Campus to ensure the continued visual prominence of the original academic buildings, which are synonymous with the Melbourne campus identity.
- Support the development of higher built form and development intensity along the Plenty Road Corridor and within the expanded University Town Centre as a southern expansion of the existing Polaris Town Centre.
- Ensure the interfaces between the Core Campus, Town Centre, and the Eco-corridor continue to facilitate a dominant and generously scaled environmental character.

PROMOTE THE UNIVERSITY'S COMMITMENT TO SUSTAINABILITY AT CAMPUS GATEWAYS

- Imbue campus gateways with a variety of environmental initiatives in built form, public realm and technology. Promote these projects through the use of branded educational storyboards or engaging demonstration projects.
- Ensure where appropriate that key Research Focus Areas of the University are manifested in the identity, organization and land uses evident to visitors when arriving at the campus.

EARLY WINS

- Improve the pedestrian path between the Plenty Road/Kingsbury Drive intersection and the Core Campus.
- Improve the campus arrival experience of those travelling by bus by relocating the major bus interchange to the Science Drive transport corridor (adjacent to the Thomas Cherry building) and enhancing the public realm accordingly.
- Develop a series of interim gateway markers at major campus gateways, which promote the University and the neighbourhood they are located within (e.g. Town Centre marker, R&D Park marker). Gradually replace these markers with iconic gateway buildings.

ALIGNMENT WITH RFAs

ENSURE THAT THE UNIVERSITY'S RESEARCH AGENDA IS PROMOTED AT CAMPUS GATEWAYS

- Promote major University RFA breakthroughs at gateways and along key interfaces.
- Regularly update RFA promotion signage on campus interfaces to keep it up-to-date and convey the fast pace of research at the University.

REFERENCE DOCUMENTS

- *Melbourne Campus Vision 2012*, January 2013.
- *La Trobe University Transport Strategy: Final Report*, May 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS ARRIVAL EXPERIENCE STRATEGY

0 50 100 250m

Primary Pedestrian Network

Secondary Pedestrian Network

Campus gateway

Gateway marker

Gateway pedestrian plaza

Gateway building

BUNDOORA PARK

POLARIS TOWN CENTRE

GRESSWELL GRANGE ESTATE

HABITAT LINK

MAIN DRIVE

BUS FROM RESERVOIR STATION

ROUTE 86 TRAM

LA TROBE WILDLIFE SANCTUARY

SPRINGTHORPE ESTATE

KINGSBURY DRIVE

PRESTON GENERAL CEMETERY

PLENTY ROAD

ROUTE 86 TRAM SPUR LINE

DAREBIN CREEK

DAREBIN CREEK ENVIRONS

WEST HEIDELBERG INDUSTRIAL ESTATE

WATERDALE ROAD

MONT PARK

TERRACE WAY

FORENSIC DRIVE

VICTORIAN POLICE FORENSIC SERVICES CENTRE

MACLEOD STATION

WAIORA ROAD

MACLEOD RESIDENTIAL

CHARLES LA TROBE COLLEGE

PEDESTRIAN STRATEGY

CONTEXT

The campus has a number of highly used pedestrian pathways and public realm spaces, but it is clear that this network will need to be enhanced and expanded if the University Town is to grow in a sustainable manner by generating more trips by foot.

From a human movement perspective, one of the great initiatives of the original campus Master Plan has been the two-level pedestrian network within the Core Campus. This network is highly valued today, not only because it disperses pedestrian congestion and reduces the dependence on lifts, but because the upper level walkways provide much needed weather protection at ground level.

However, a number of elements throughout the existing campus reduce the amenity of the pedestrian, bicycle and public transport user environment. These issues largely relate to:

- Regular vehicular conflict points with vehicles moving at excessive speed and a lack of pedestrian priority.
- Inadequate pedestrian facilities with poorly scaled pathways and a lack of a coherent campus wayfinding system.
- Poor quality lighting between the Core Campus and key precinct destinations
- A lack of direct connections between neighbourhood destinations.
- Accessibility throughout the campus and to public transport facilities.
- An absence of connecting land uses linking the Core Campus with nearby destinations.
- A lack of nighttime presence and weekend activity on the campus, leading to perceived security concerns and a lack of vitality.

In order to improve connectivity and wayfinding and make the campus more legible for first time visitors, these issues must be resolved.

VISION

The University Town will be characterised by a series of memorable pedestrian promenades, transit-focused linking streets and high quality boulevards connecting the Core Campus and community to emerging neighbourhoods and surrounding communities.

Over the duration of the Master Plan, a strong network of campus linkages will be developed. This network of generously-scaled paths will help to create a more permeable campus and facilitate direct connections with surrounding neighbourhoods. As well as providing a safe, efficient and cohesive movement system throughout the campus, the pedestrian network will also accomplish the following goals:

- Create strong and visible connections with the neighbourhoods surrounding the campus.
- Fully integrate the campus with the regional path network, making convenient links to surrounding park and open space networks.
- Deliver a safe, secure and vibrant pedestrian environment in which pedestrians will experience a unique University Town experience invested with outstanding landscape values.

DIRECTIONS

DEVELOP A PRIMARY PEDESTRIAN NETWORK

- Develop a Primary Pedestrian Network (PPN) on the campus to improve accessibility, wayfinding, safety and provide a rich University Town experience.
- Deliver the PPN in stages by developing new and improving existing pedestrian connections into and throughout the campus.
- Ensure the PPN is consistent in proportion and material and includes pedestrian facilities at regular intervals (e.g. seating, shade and shelter, lighting, drink fountains, and bicycle parking).
- Ensure that PPN intersections are highly visible destination points that act as meeting places and landmarks for students, staff and visitors.
- Ensure that new and redeveloped built form addresses the PPN with activated frontages and major building entries.
- Ensure that the PPN provides direct and efficient pedestrian connections between major campus destinations, increasing the viability of walking and cycling throughout the campus.
- Ensure that the PPN complies with universal access standards, creating an accessible pathway network throughout the campus.
- Develop a building identification system based on where buildings are positioned on the PPN. Buildings will be numbered according to the major pedestrian path they are located adjacent to (e.g. 10 La Trobe Avenue, 25 Science Drive).
- Develop a memorable pedestrian network and facilities within the Eco-corridor and environs connecting the campus network of neighbourhoods.

Examples of high quality pedestrian environments from La Trobe University's Melbourne campus, Australia and international locations.

PEDESTRIAN STRATEGY

DEVELOP A SECONDARY PEDESTRIAN NETWORK

- Develop a Secondary Pedestrian Network (SPN) to complement the PPN, providing access to secondary building entrances and more discrete landscape spaces.
- Ensure the scale of the SPN is smaller to that of the PPN, consisting of lanes and alleyways, as well as small courtyards.
- Ensure the SPN is consistent in proportion and material and includes pedestrian facilities at regular intervals along each path.

ENHANCE THE UPPER LEVEL PEDESTRIAN NETWORK

- Enhance the existing upper level pedestrian network and provide further activation where possible.
- Extend the network to new infill buildings throughout the Core Campus where possible (e.g. new development in the north-east quadrant).
- Utilise upper level pedestrian links to create a network of sheltered walkways between popular Core Campus destinations.

EMPLOY WAYFINDING & HUMAN MOVEMENT TECHNIQUES TO PROVIDE A HIGH QUALITY PEDESTRIAN EXPERIENCE THROUGHOUT THE CAMPUS

- Ensure clear view lines along pedestrian paths to aid in wayfinding.
- Locate major campus destinations at key intersections of the PPN.
- Ensure consistent surface treatments and pedestrian amenities are provided along the length of the PPN.
- Integrate wayfinding elements into path surfaces rather than exclusively relying on pole signage.
- Ensure that the PPN and public realm spaces are appropriately scaled (adopt a human scale). Invest path networks with a University Town interpretive strategy that informs users around themes connected to the RFAs, place, community and campus history.

PURSUE REGIONAL SOLUTIONS

- Leverage the commitment of state and local government to support strategic investment in the La Trobe National Employment Cluster, helping to drive the development of improved sustainable transport infrastructure.
- Partner with public transport authorities and providers to improve end-of-trip facilities and environments to improve the attractiveness of sustainable transport access into the campus.
- Partner with local government to improve path connections between the campus and local destinations, as well as regional trail networks (e.g. the Darebin Creek trail).

ENSURE PATH NETWORKS ARE SUPPORTED BY APPROPRIATE & SUPPORTIVE ADJOINING LAND USES

- Develop land uses along primary spines that ensure heightened levels of informal surveillance and activity along the PPN.

EARLY WINS

- Improve the pedestrian connection between Science Drive and the Plenty Road tram stop at Kingsbury Drive.
- Reprioritise Moat Drive for walking and cycling.
- Begin a staged roll-out of pedestrian crossings at key intersections throughout the campus.
- Reclaim road space within the Core Campus for pedestrians and cyclists where possible.

ALIGNMENT WITH RFAS

BUILDING HEALTHY COMMUNITIES

- Improve the health and wellbeing of students, staff and the general community by providing sustainable transport, improving choice, and reducing carbon emissions.
- Reduce the need to convert economically and environmentally valuable land into additional road infrastructure for private vehicles.

SPORT, EXERCISE AND REHABILITATION

- Create opportunities for walking and running throughout the campus.

TRANSFORMING HUMAN SOCIETIES

- Challenge the notion that car dependence is the status quo in middle and outer ring suburbs.

UNDERSTANDING DISEASE

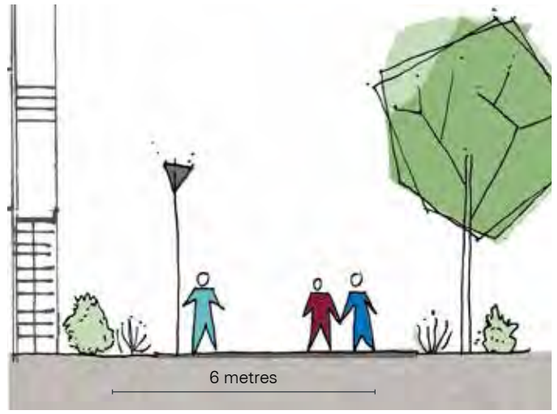
- Promote and facilitate walking and cycling to reduce the risk of heart disease.

ACCOMPANYING DOCUMENTS

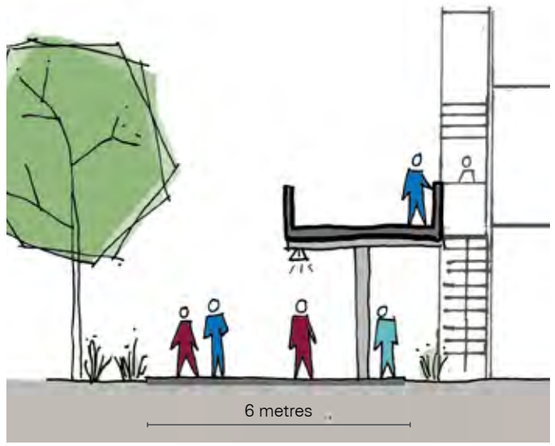
- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

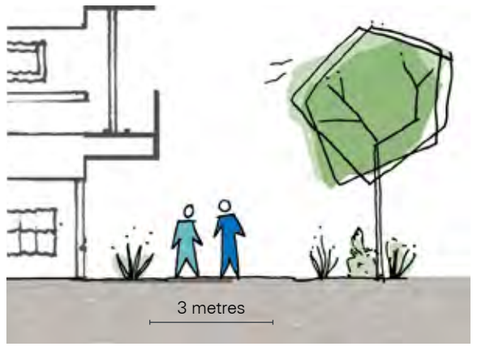
- *Melbourne Campus Vision 2012*, January 2013.
- *La Trobe University Transport Strategy: Final Report*, May 2012.



Typical cross-section of the Primary Pedestrian Network



Typical cross-section of the level 1 Primary Pedestrian Network



Typical cross-section of the Secondary Pedestrian Network

LA TROBE UNIVERSITY MELBOURNE CAMPUS PEDESTRIAN STRATEGY

0 50 100 250m

Improved crossing point

Primary Pedestrian Network

1	Science Drive	8	Glenn Walk
2	Sports Drive	9	Terrace Way
3	La Trobe Walk	10	Campus Crescent
4	La Trobe Avenue	11	Library Walk
5	Centreway	12	Medical Walk
6	Research Walk	13	Menzies Walk
7	Moat Drive	14	Forensic Drive

Secondary Pedestrian Network

Existing accessible pathways

The La Trobe Tan

Level 1 Pedestrian Walkways

Future Level 1 Pedestrian Walkways

Plaza

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
CHARLES LA TROBE COLLEGE
MACLEOD RESIDENTIAL

CYCLING STRATEGY

CONTEXT

CYCLING IN THE REGION

The Darebin Creek corridor provides a high quality north-south cycle experience that provides connections to major attractions in the region.

Cycling along Plenty Road, while providing direct access to a number of attractions, is considered to be dangerous, with little cycling infrastructure available.

CYCLING ON CAMPUS

The Melbourne campus has parking and storage available for approximately 550 bicycles. There are approximately 138 full size bicycle lockers available for hire throughout the campus. Two CycleSmart Centres are also located on the campus, which provide end-of-trip facilities for cyclists (e.g. showers and change rooms).

A bike share programme has been introduced on campus. Registered users are given access to the full fleet of bicycles, which are available at 11 bike share docking stations across the campus.

Current issues for cyclists on the campus include:

- Cycling paths between the campus and nearby train stations are incomplete or difficult to navigate.
- The steep terrain between Macleod Station and the campus reduces riding between these destinations.
- There is no formalised, direct cycle access between the Core Campus and the Polaris Town Centre (a popular destination for students, especially those that live on campus).
- Cycling facilities along the campus Ring Road are not consistent in their application, which creates uncertainty for cyclists and motorists.

VISION

A safe and generously scaled cycle network will be developed throughout the campus, connecting with the already established regional bicycle path network.

As the campus population grows, bicycle end-of-trip facilities will be delivered in response to ensure that cycling is considered to be a convenient mode. The campus Bike Share programme will also be expanded in response to a growing population (e.g. increase in registered users, bicycles and docking stations).

DIRECTIONS

CONNECT THE CAMPUS WITH THE REGION

- Work with Darebin City Council and VicRoads to develop a safe and efficient cycle route to Reservoir Station (e.g. 'Green' lane or 'Copenhagen' lane design).
- Work with Darebin City Council and Banyule City Council to improve cycle connections between Macleod Station and the campus.
- Work with regional stakeholders, including Northland and Austin Health, to enhance the interconnectivity of major employment hubs within the La Trobe National Employment Cluster.

CONNECT DESTINATIONS WITHIN THE CAMPUS

- Develop a coherent, consistent, safe and generous cycle network throughout the campus, which connects to key destinations and regional path networks.
- Ensure that campus cycle paths align with the Primary Pedestrian Network, with the exception of the Core Campus 'dismount zone'.
- Ensure that north-south and east-west bicycle travel is not unduly inconvenienced by the central Core Campus 'dismount zone'.
- Close off Moat Drive to vehicle traffic and create a cycling and pedestrian corridor, which provides direct and easy access to the Core Campus, the Housing Neighbourhood, the Union Building, Indoor Sports Centre and the Moat environs.
- Link the cycle-prioritised Moat Path with the Darebin Creek Trail, via a simplified path network under Kingsbury Drive.

MAKE CYCLING CONVENIENT & COMPETITIVE

- Expand bicycle end-of-trip facilities in response to campus population growth, to ensure that cycling is considered to be a convenient mode.
- Expand upon the campus bike share programme in response to a growing population (e.g. increase in registered users, bicycles and docking stations).
- Ensure all new University Town partners incorporate a high level of bicycle facilities within development in excess of regulatory requirements.
- Provide bicycle repair stations throughout the campus.

Bike share bicycles are located at docking stations around the campus

Construct cycling paths along the campus' water corridors

Integrate Bicycle Arrival Stations (e.g. secure end-of-trip facilities) campus-wide, within new or redeveloped built form

'Copenhagen' lanes are now popular throughout Melbourne

EARLY WINS

- Provide inexpensive bicycle repair stations throughout the campus to increase the attractiveness and convenience of cycling.
- Work with Darebin City Council to repair the bicycle bridge across Darebin Creek.
- Close Moat Drive to private vehicles; creating a generous, north-south pedestrian and cycle path.
- Expand the campus bike share scheme and heavily advertise it amongst students and staff.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Improve the health and wellbeing of University students, staff and the general community.
- Improve campus connections and provide transport choice for staff and students.

SPORT, EXERCISE AND REHABILITATION

- Ensure that adequate bicycle facilities are available for the staff and student population.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University Transport Strategy: Final Report*, May 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS CYCLING STRATEGY

0 50 100 250m

- Regional bicycle path
- Campus bicycle path
- Existing Bicycle Share Docking Station
- Future Bicycle Share Docking Station
- Existing CycleSmart Centre (Bicycle Arrival Station)
- Future CycleSmart Centre (Bicycle Arrival Station)
- Bicycle Repair Station
- Core Campus Dismount Zone

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

PUBLIC TRANSPORT STRATEGY

CONTEXT

The campus accommodates a number of bus services that provide connections to, amongst other locations, key fixed rail transport hubs. Key transport hubs include:

- La Trobe University bus interchange (adjacent to Plenty Road).
- The Route 86 tram on Plenty Road.
- Macleod Station on the Hurstbridge Line.
- Reservoir Station on the South Morang Line.

While there are a number of public transport options within and adjacent to the campus, the general accessibility to these transport nodes is considered relatively poor when considered against the following industry access standards: bus/tram services within a 400 metre walk distance (5 minutes); train services within an 800 metre walk distance (10 minutes).

The analysis of public transport undertaken identifies an emphasis on north-south movements with poor accessibility to the west of the campus and very poor accessibility to the east of the campus. Local bus services provide some east-west connectivity between the radial routes. However, these services tend to be less favourable because of timetable, service frequency, journey times and legibility of route.

Public transport end-of-trip/waiting facilities throughout the campus are inadequate. The aforementioned conditions contribute to a strong student and staff reliance on the private vehicle for transport to and from the campus.

VISION

The campus will be linked into a convenient and effective public transport network, which provides a real alternative to the private vehicle.

High frequency public transport services, which are delivered into the Core Campus, will be provided in an effort to maximise accessibility to the campus.

More convenient public transport connections to metropolitan rail services at Reservoir and Macleod Stations will be created to strengthen regional connectivity.

DIRECTIONS

PROVIDE A HIGH FREQUENCY EAST-WEST SHUTTLE SERVICE

- Deploy a high frequency east-west shuttle between Reservoir Station and the campus.
- Increase the 561 bus frequency to improve access to Reservoir Station.
- Reduce layover delays on the 561 and improve journey times through bus priority measures.
- Supplement the 561 service with additional University shuttle services to Reservoir.
- Better link the shuttle service with the South Morang line rail service schedule.
- Provide more services on the South Morang line through timetabling revisions.
- Extend the shuttle service to Macleod Station in the medium to longer term, thereby providing a frequent east-west public transport link between two heavy rail corridors and dramatically increasing the catchment of the campus.

DEVELOP SCIENCE DRIVE AS A PUBLIC TRANSPORT CORRIDOR

- Create a high frequency public transport corridor in the heart of the campus (as well as removing the existing bus interchange on the campus' Plenty Road frontage).
- Introduce high quality bus waiting facilities, as well as enhancements to the public realm.
- Create a road with sufficient activity along it by consolidating bus stops and layovers.
- Help to promote personal safety through a combination of active and passive surveillance.
- Develop Science Drive as a high capacity, light rail corridor in the medium to long-term, as the campus population increases and regional attractors are developed.

All bus services within the campus will operate along Science Drive with a series of bus stops leading to a linear operation rather than the current bus-interchange layout.

This layout is preferred given the limited observed bus-service interchange that is occurring, combined with the reduced land required to accommodate linear operations. Analysis of current bus schedules and operations have concluded that a peak demand of 2 bus spaces is required at any one time based on current service levels. Allowing for substantial growth (doubling) of services in the future, this would require 4 bus stops/bays (2 in each direction). It is proposed that at least 6 bus stops (3 in each direction) can be accommodated along Science Drive, which would allow for bus services and waiting with substantial capacity for growth into the future.

By locating the bus services within the Campus Core, the services become a more attractive alternative while the waiting environment can be part of the natural street activation that occurs from bus patrons, pedestrians and cyclists.

Buses will operate along Kingsbury Drive and enter the campus via the new main entrance. The proposed Sports Drive will also provide access to the campus. Bus driver facilities and bus layover spaces would be provided within the Sports and Recreation Neighbourhood if necessary.

There will be an average of 1 bus every 3 minutes in each direction along Science Drive at the peak time (between 4 and 5pm). As a comparison, during peak hours, Bourke Street Mall accommodates an average of 1 tram every 3.2 minutes (200 seconds) in each direction.

During peak times, three bus spaces will be simultaneously required for a period of five minutes, whereas the majority of the time only two or less spaces will be required.

The design of Science Drive will include the removal of kerbs to deliver a 'shared surface' finish. Design implications include:

- Vehicle speeds must be much lower than a typical road at around 10 km/hr or less. This reduced vehicle speed will be more conducive to a pedestrian-friendly environment.
- Raised platform stops will be required to achieve universal access requirements.

In the medium to long-term, the Route 86 tram will run through the campus, on a Sports Drive and Science Drive alignment. Short-term public realm improvements to the Science Drive corridor will make this a largely seamless transition.

PROVIDE A SIMPLIFIED INTRA-CAMPUS SHUTTLE SERVICE

- Provide a simplified intra-campus shuttle service that connects key destinations within the University Town, once necessary population densities are reached in each neighbourhood.
- Ensure that the service runs in both directions and at a frequency that can compete with short private vehicle trips.

DEVELOP A FUTURE EAST-WEST RAIL CORRIDOR

In the longer term, create a new public transport corridor through the campus that better connects to the wider public transport network in an east-west direction. This strategy will:

- Deliver a premium-quality public transport connection into the heart of campus.
- Provide direct access to the regional public transport network, negating the need to walk a significant distance to reach existing nodes.
- Create a significant step-change towards encouraging public transport and help tackle private vehicle reliance.
- Create new alternative walk and cycle connections alongside the public transport corridor.

PURSUE SMALL-SCALE PUBLIC TRANSPORT PROJECTS

- Provide real time public transport information at activity hubs throughout the campus (this is already available within the Library).
- Improve public transport end-of-trip and waiting facilities (including the provision of WiFi access).

LEVERAGE GOVERNMENT INVESTMENT PRIORITIES

- Leverage the commitment of government to support strategic public transport investment within the La Trobe National Employment Cluster and Melbourne's north in general.
- Improve tram platforms and waiting facilities along the Route 86 tram corridor (in collaboration with state transport authorities).
- Improve local and regional bus routes to enhance connectivity and service frequency (in collaboration with state transport authorities).

EARLY WINS

- Provide and/or expand real time public transport information at activity hubs throughout the campus.
- Work with state transport agencies to introduce a high frequency east-west shuttle service from Reservoir Station to the campus (via Science Drive).

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Improve the health and wellbeing of students, staff and the general community by providing sustainable transport, improving choice, and reducing carbon emissions.
- Reduce the need to convert economically and environmentally valuable land into additional road infrastructure for private vehicles.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University Transport Strategy: Final Report*, May 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS PUBLIC TRANSPORT STRATEGY

0 50 100 250m

- Existing Route 86 Tram
- University Town light rail spur route
- Proposed Reservoir-Campus high frequency shuttle bus service
- Proposed Reservoir-Macleod high frequency shuttle bus service, via the campus
- Future intra-campus shuttle bus
- 5 minute (400m radius) walk from public transport stop
- 5 minute (400m radius) walk from intra-campus shuttle bus stop (indicative)
- Science Drive Transport Interchange
- Public realm improvements (short-term)
- Public realm improvements (longer -term)

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

VEHICLE ACCESS STRATEGY

CONTEXT

The Melbourne campus reflects the era of its construction, with many sections of road favouring private vehicle use and access at the expense of the pedestrian and the cyclist.

Modal conflict has been observed at a number of points throughout the campus. A prime example is the Ring Road North and the Science Drive roundabout intersection. Signs that direct pedestrians to give way to vehicles are symptomatic of the safety issues that affect this modal conflict zone.

Roads throughout the north of the campus and the R&D Park are engineered at a level that is beyond campus-style development, resulting in high speed environments that are dangerous for pedestrians and cyclists. Kingsbury Drive is a high speed environment that offers few convenient crossing points along its length. Pedestrians often cross the road at informal and dangerous points to access car parking on the western side of the road reserve.

CORE CAMPUS ACCESS VISION

ROAD NETWORK

Within the Core Campus, the road network will be simplified and focussed towards providing a high quality pedestrian, cycle and public transport network.

Access to the western car parks for visitors, students and staff will be provided entirely via Kingsbury Drive with no general traffic allowed along Science Drive, within the Core Campus Neighbourhood.

Science Drive will connect to Plenty Road via the new Sports Drive with new signalised intersection on Kingsbury Drive. Sports Drive will connect via a new intersection on Plenty Road providing vehicle and public transport access through the Sports and Recreation Neighbourhood.

A new vehicle entrance and secure access point will be provided on Kingsbury Drive to the western car parks (via a signalised entry). This will form the main campus entry point for visitors and can also facilitate bus access onto Science Drive (to support any bus turn around that may be required, buses are also able to access Science Drive via the new visitor entrance on Kingsbury Drive, allowing buses the option to turn left or right onto Science Drive).

Science Drive will become a linear public transport street with upgraded bus stops, cycle lanes and regular pedestrian crossings.

A section of the Ring Road between the CP8 and Science Drive will be removed to eliminate non-University vehicle through movements. Access to the remaining car parks will be provided via the southern access on Kingsbury Drive and the northern access on Main Drive.

Roundabouts across the campus will be phased-out in favour of priority or signalised intersections that provide an improved and safer pedestrian and cycle environment.

WALKING & CYCLING

All roads will be upgraded to provide dedicated cycle lanes and regular signalised pedestrian crossing facilities.

PUBLIC TRANSPORT

It is proposed that all bus services within the campus will operate along Science Drive with a series of bus stops leading to a linear operation rather than the current bus-interchange layout.

This layout is preferred given the limited observed bus-service interchange that is occurring, combined with the reduced land required to accommodate linear operations. Analysis of current bus schedules and operations have concluded that a peak demand of 2 bus spaces is required at any one time based on current service levels. Allowing for substantial growth (doubling) of services in the future, this would require 4 bus stops/bays (2 in each direction). It is proposed that at least 6 bus stops (3 in each direction) can be accommodated along Science Drive, which would allow for bus services and waiting with substantial capacity for growth into the future

By locating the bus services within the Campus Core, the services become a more attractive alternative while the waiting environment can be part of the natural street activation that occurs from bus patrons, pedestrians and cyclists

Buses will operate along Kingsbury Drive and enter the campus via the new main entrance. The proposed Sports Drive will also provide access to the campus. Bus driver facilities and bus layover spaces will be provided within the Sports and Recreation neighbourhood if necessary.

Any future plans to extend the current 86 tram route into the campus could be accommodated along Sports Drive and Science Drive.

TOWN CENTRE ACCESS VISION

ROAD NETWORK

The road network will provide a new intersection onto Plenty Road between the existing Kingsbury Drive intersection and Main Drive intersection.

Science Drive will be extended and realigned to create new connections to both Plenty Road and to Main Drive.

The proposed roads will provide continuous pedestrian, cycle and vehicle connections enabling more direct connectivity with the Polaris Town Centre development to the north of the campus.

The Science Drive extension and new Plenty Road connector road will provide the ability to support bus services in the short term and the future possible Tram Route 86 extension spur should that be delivered.

The existing Ring Road will be severed between the Science Drive extension and Car Park 8. This will require all vehicles accessing the northern car park to approach and exit via Main Drive.

The proposed extension of Science Drive will be open to private vehicle traffic. However the road design will result in a slow speed environment, which is biased towards pedestrians, cyclists and public transport services.

SPORTS & RECREATION NEIGHBOURHOOD VISION

ROAD NETWORK

The new Sports Drive will provide walk, cycle, public transport and private vehicle access to the neighbourhood connecting between Plenty Road and Kingsbury Drive via two new signalised intersections.

The new road will provide localised access as well as helping to better distribute the transport demands to and from Plenty Road via more than just the single Kingsbury Drive and Plenty Road intersection. This strategy will help to better balance traffic movements across the campus, providing improved permeability into the surrounding neighbourhoods.

Sports Drive will accommodate buses and the future proposed Tram Route 86 extension spur in the long-term.

The new Sports Drive intersection with Kingsbury Drive will facilitate better connectivity between the Core Campus and the Sports and Recreation Neighbourhood. The signalised intersection will facilitate pedestrian and cycle crossings, public transport and private vehicle movements.

HOUSING NEIGHBOURHOOD ACCESS VISION

Vehicle access associated with the Housing Neighbourhood will be available entirely from the secure-access roads and will therefore be required to enter via one of the secure entry gates (most likely by using an access pass). The approach will enable the University to restrict access and reduce the number of vehicles travelling along roads between the Housing Neighbourhood and the Core Campus, reducing barrier effects and promoting pedestrian and bicycle use.

Given the distance, the focus for movement between the Housing Neighbourhood and the Core Campus will be walking and cycling.

R&D PARK ACCESS VISION

The vehicle access to the R&D Park is provided via a publicly accessible road on its eastern edge and a secure access road on its western edge. The principle is to reduce the number of vehicles travelling along the road between the Housing Neighbourhood and the Core Campus (to reduce barrier effects and promote pedestrian and bicycle use).

Access to car parking associated with the R&D Park will continue to be available via the current Ring Road that will enable wider direct connections to the local road network to the south via Waterdale Road and east via Forensic Drive.

EASTERN INTERFACE ACCESS VISION

All roads to the Eastern Interface are publicly accessible. Access has been designed to provide vehicle access to and from the area to the east of the precinct via Forensic Drive and Terrace Way.

VISITOR ACCESS VISION

The main vehicle entrance to the campus has been relocated to a location accessible directly from Kingsbury Drive (via a signalised intersection). This new entrance location will provide a more legible access point for visitors with direct access to the redeveloped visitor car park. The location also provides a clear line-of-sight from the car park to the central campus core, via well-recognised footpaths (enhancing passive wayfinding).

The new entrance offers an opportunity to develop a more formal 'front door' from Kingsbury Drive to visitors coming to the campus for the first time. The entrance and vehicle access will be managed via a new secure access point (staffed or unstaffed) to be located at the new entrance. Visitor vehicle entry and exit will be managed at this location with alternative exit options via the western car park area to the south and north also available.

EARLY WINS

- Decommission Ring Road North between Science Drive Extension and CP8.
- Repurpose Moat Drive for walking and cycling.
- Establish new vehicle visitor entrance from Kingsbury Drive (in discussion with VicRoads).
- Facilitate the closure of Kingsbury Drive on-ramp and off-ramps (Western Entry).

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Improve the health and wellbeing of students, staff and the general community by providing sustainable transport, improving choice, and reducing carbon emissions.
- Reduce the need to convert economically and environmentally valuable land into additional road infrastructure for private vehicles.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University Transport Strategy: Final Report*, May 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS VEHICLE ACCESS STRATEGY

0 50 100 250m

- Existing road
- Controlled Access Road Network
- New road
- Repurposed road
- Demolished road
- Vehicle gateway
- Signalised intersection
- Future car parking node
  Refer to Car Parking Strategy for more detail (page 74).

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
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MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

FUTURE ROAD CHARACTER

PLENTY ROAD CORRIDOR

CHARACTER

Plenty Road will continue to operate as a major part of Melbourne's road network. The interface between the Plenty Road corridor and the campus will be upgraded with greater permeability created through the provision of new intersections with the proposed Sports Drive and Science Drive northern extension.

ROAD NETWORK

Two new intersections are proposed along Plenty Road to increase the network permeability to and from the campus. New intersections are proposed to reduce the over-reliance currently experienced at Plenty Road and Kingsbury Drive and provide localised access.

By coordinating the new intersections, it is argued that vehicular capacity along Plenty Road can be maintained, while improving connectivity to the campus and improving public transport opportunities.

PEDESTRIAN

Pedestrian footpaths will be maintained along the length of Plenty Road. Opportunities to improve access to the Route 86 tram stops will be investigated to improve access and safety.

PUBLIC TRANSPORT

Improved access to the Route 86 tram stops will be investigated. New intersections will provide the opportunity to accommodate a possible Route 86 extension spur line into the campus and new bus route options.

SCIENCE DRIVE CORRIDOR

CHARACTER

Science Drive will operate differently along two distinct sections of the road. The restricted-user section of Science Drive will operate from the new intersection with Kingsbury Drive to the south and with the previous Ring Road to the north. This part of Science Drive adjacent to the Campus Core will become a walking, cycling and bus-only corridor with all other road users physically restricted to other parts of the network. Buses will be able to access this part of Science Drive from the south via the new southern entrance at Kingsbury Drive and Sports Drive, and the north at the junction with the Ring Road and through the proposed Kingsbury Drive Visitor entrance (if necessary).

All vehicles entering the Visitors Car Park via the proposed Kingsbury Drive Visitor entrance will exit via dedicated car park exits to the north and south. Service vehicles will be restricted to after hours.

The northern section of Science Drive connects the Core Campus to the Town Centre neighbourhood and is publicly accessible to all vehicles. This section of Science Drive will connect Kingsbury Drive via the existing Ring Road to Main Drive.

Science Drive is expected to be a 2-lane, slow-speed road with generous pedestrian footpaths and continuous cycle lanes along its length.

The new Science Drive corridor will feature upgraded pedestrian, cycle and public transport conditions to encourage and prioritise the use of these modes. The road character will be enhanced through use of consistent streetscape treatments along its entire length.

PEDESTRIAN

Footpaths will be upgraded with consistent surface treatment, width, pedestrian crossing facilities and provision of shade. Minimum widths of 2 metres will be achieved with a preference to provide 3 metres or more. Pedestrian crossing facilities will be provided at key desire line locations, providing priority over all other road users.

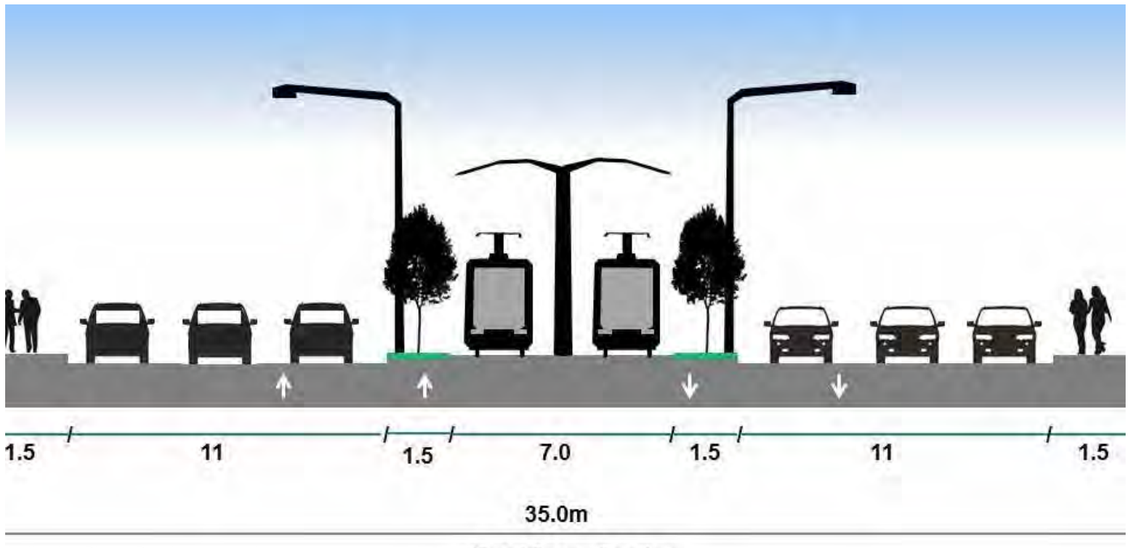
BICYCLE

On-road cycle lanes will be provided along Science Drive in both directions. The cycle lanes will ride up over the raised bus platforms stops consistent with tram platform stop configuration experienced elsewhere in Melbourne.

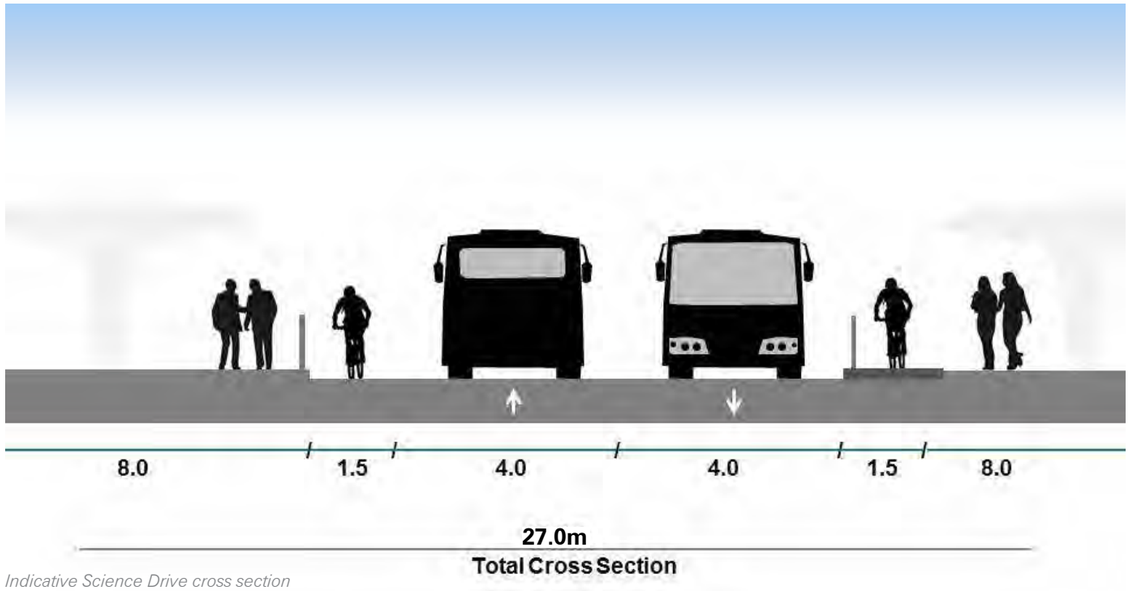
PUBLIC TRANSPORT

The two-lane road will provide sufficient space for buses to operate along its length. Bus overtaking will be possible, albeit not encouraged. Bus stop facilities will be high quality environments with shade, real time information and seating.

Bus interchange, Southampton University, UK.



Indicative Plenty Road cross section



Indicative Science Drive cross section

KINGSBURY DRIVE CORRIDOR

CHARACTER

The new Kingsbury Drive corridor will focus on creating a slower speed boulevard and evoking a different character for pedestrians, cyclists and drivers as they travel along its length. In the longer term, University activities will flank each side of the road, changing its character significantly. The increase in foot traffic in the area will necessitate a slowing of traffic, as well as an increase in crossing points.

Kingsbury Drive will be a multi-modal corridor where all users are provided with a high quality environment that acknowledges and responds to the academic campus on both sides of the road.

PEDESTRIAN

Footpaths will be upgraded with consistent surface treatment, width and provision of shade. Minimum widths of 2 metres will be achieved with a preference to provide 3 metres or more. Pedestrian crossing facilities will be provided at signalised intersections enabling students to easily access the campus on both sides of Kingsbury Drive.

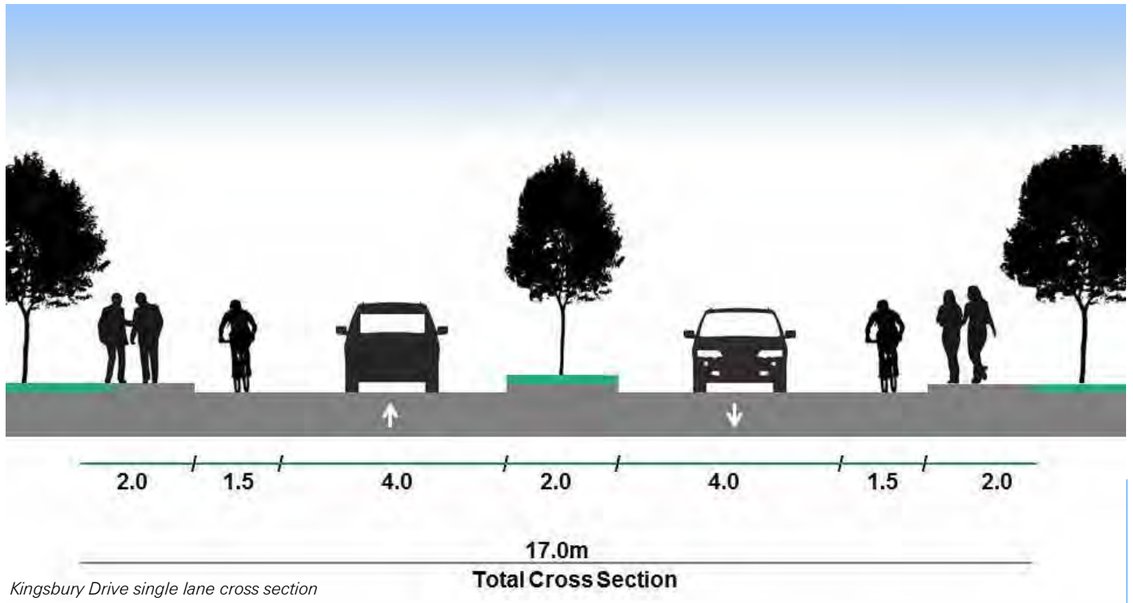
The extensive landscaped area on the central campus-side of Kingsbury Drive will be used to accommodate the La Trobe Tan running track.

BICYCLE

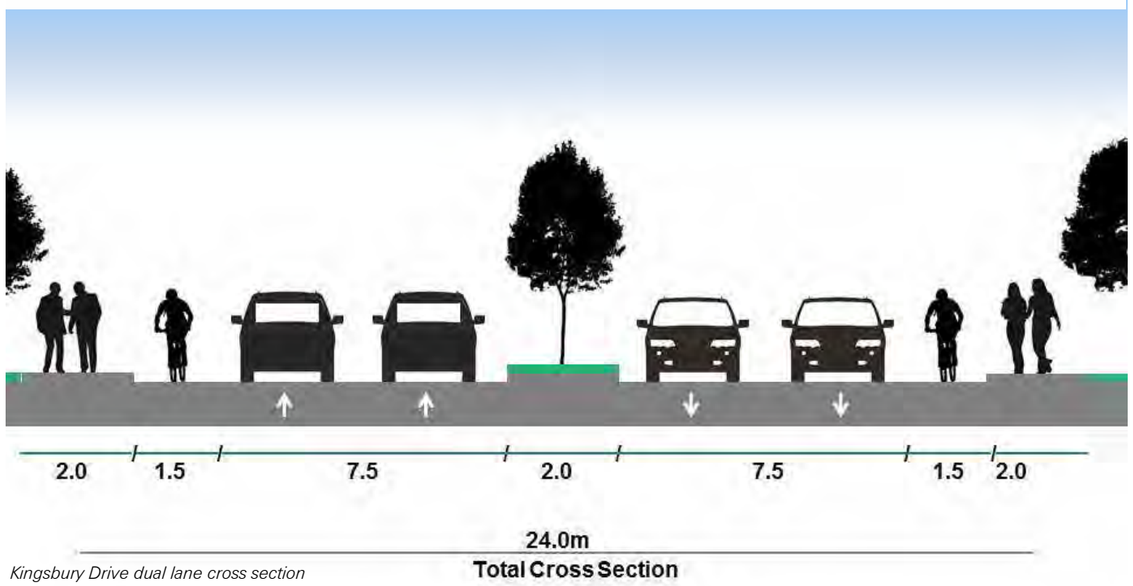
On-road cycle lanes will be provided in both directions. Seamless connections to regional off-road trails will also be provided (e.g. off-road cycle path connection to the Darebin Creek trail).

VEHICLES

The current two-lane road will be maintained with the option to increase to a 4-lane road as required. At intersections, turn lanes can be provided with sufficient space for operating buses.



Kingsbury Drive single lane cross section



Kingsbury Drive dual lane cross section

CAR PARKING STRATEGY

CONTEXT

The University's previous emphasis on providing for the private vehicle has led to a campus environment that has a significant proportion of the site dedicated to either roads or car parking. The Core Campus has been designated pedestrian-only, but vehicle-access generally dominates the spaces beyond this zone.

Based on growth projections, in a business as usual scenario, demand for car parking is expected to exceed supply in 2015, and approximately 600 spaces will be needed in 2021.

If the mode split of transport remains in a business as usual scenario, campus car parking would have to double on site by 2040. These figures are unsustainable for the Melbourne campus, both in terms of land availability and network capacity. An alternative approach must be adopted to encourage alternative modes of transport.

Car parking at the campus is cheap when compared against most other university campuses in Melbourne. For staff at the University, a range of different parking products exist with different pricing options. When compared with other campuses in Melbourne, it is evident that the University is providing markedly cheaper parking to its staff than other universities.

VISION

The vision for car parking within the University Town will be to cap car parking at 2013 levels (approximately 6,000 spaces) for the duration of the Master Plan. Existing at-grade car parks will be progressively replaced by network of short and long-term car parking nodes, developed on the campus periphery.

The amount of land dedicated to the use of parking cars will be reduced to free up University and University-partner development parcels. Greater vehicle occupancies will be encouraged to help reduce the future demands for car parking through travel demand management and/or pricing review. Better car parking design and the provision of an improved pedestrian environment will improve safety and security around existing and future car parks.

DIRECTIONS

DEVELOP A NETWORK OF SHORT-TERM & LONG-TERM CAR PARKING NODES

- Consolidate current at-grade parking into multi-deck car park nodes in key service destinations, via a staged process. These nodes will be wrapped by built form or located underground to ensure they do not become an eye-sore around the campus.
- Develop a pricing system based on the length of time users will occupy a car space for. Similar to an airport model, car parks will be divided into short and long-term spaces. Short-term car parking would be more convenient, but more expensive. Long-term car parking would be located further away (on less expensive land), but will be less expensive.
- As the campus grows and at-grade car parking is replaced by building stock or open spaces, a network of basement / multi-deck car parking nodes will be developed in tandem.

REMOVE CAR PARKING FROM THE CAMPUS CORE

- Remove all car spaces from the Core Campus; consolidating these spaces in nearby car park nodes within a convenient distance (a five minute walk).
- Ensure that disabled access car parks are accommodated close to prominent areas of activity.

RECONFIGURE CAR PARKS 1 & 2 AS A SHORT-TERM, VISITOR & EXECUTIVE CAR PARKING NODE

- Reconfigure Car Parks 1 and 2 as a short-term, Visitor and Executive car parking node, which is directly accessible from Kingsbury Drive. The existing car parks along the western-edge of the campus (Car Park 1 and 2) offer an opportunity to reconfigure access to the Core Campus and provide a more legible visitor entrance.
- Create a more clearly defined car park for visitors to the campus.
- Create a new Visitor Car Park entrance directly from Kingsbury Drive, via a secure access point (staffed or unstaffed).
- Introduce new car park entry control locations at the northern and southern entry / exit locations.
- Create a vehicle circulation option through CP1 and CP2 to the northern and southern entry/exit points as an interim solution.

DEVELOP SHORT-TERM CAR PARKING NODES IN THE TOWN CENTRE & SPORTS & RECREATION NEIGHBOURHOOD

- Develop a 1,000 space, multi-deck car parking node within the Town Centre. An interim at-grade car park may need to be developed in the short to medium-term before a multi-deck option is feasible.
- Deliver a 500 space, short-term car park as part of the Regional Sports and Recreation Centre development. This car park will cater to Sports Centre patrons and staff, as well as users of the Playing Fields and Core Campus.

DEVELOP LONG-TERM CAR PARKING NODES ON THE CAMPUS PERIPHERY

- Provide a 1,500 space car parking node south of Kingsbury Drive. Develop the car park at-grade in the short-term.
- Provide a 2,000 space multi-deck car park on the northern portion of CP6. There is potential for this car park to be constructed and operated by the private sector.

PURSUE SUSTAINABLE VEHICLE SOLUTIONS

- Locate car share spaces at prominent and easily accessible areas throughout the Housing Neighbourhood and on the Core Campus periphery.
- Provide electric car charging terminals at specific car parking nodes throughout the campus.

EARLY WINS

- Encourage greater vehicle occupancies through price increases for single occupancy vehicles.
- Begin to remove car spaces from the Core Campus and relocate spaces within the VCP, CP1 and CP2.
- Consolidate land parcels at the campus periphery to accommodate longer term car parking.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Improve the health and wellbeing of students, staff and the general community by providing sustainable transport, improving choice, and reducing carbon emissions.
- Reduce the need to convert economically and environmentally valuable land into additional road infrastructure for private vehicles.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University Melbourne Campus Car Parking Strategy: Final Report*, March 2014.
- *La Trobe University Transport Strategy: Final Report*, May 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS CAR PARKING STRATEGY

0 50 100 250m

Visitor, executive and short-term car parking node

1 1,000 spaces

Short-term car parking node

2 1,000 spaces

3 500 spaces

Long-term car parking node

4 2,000 spaces

5 1,500 spaces

Basement/upper level car park zone

Kerbside car parking zone

Private sector housing car parking

Primary Pedestrian Network

Secure Access Point (secure access to VCP from Kingsbury Drive)

10 minute walk from car park
800 m radius

5 minute walk from car park
400 m radius

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
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LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DARBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
CHARLES LA TROBE COLLEGE
MACLEOD RESIDENTIAL

DELIVERIES, DEPOTS & WASTE STRATEGY

CONTEXT

There are two zones of vehicle control on the campus:

- The Core Campus, Visitors Car Park and the Housing Neighbourhood exist within a controlled access zone with all access regulated through the Gatehouse, or the boom gate at the northern end of Science Drive.
- The outer extents of the campus are open to private vehicle traffic, largely catering for car park access.

Campus visitors arriving for University business must report to the CCO Gatehouse, where they are directed to their journey endpoint (often the Visitors Car Park).

Emergency access is generally available to all areas of the campus.

Currently, there are many loading zones scattered throughout the campus. Deliveries to the campus can be unregulated and difficult to manage. The current system can result in delivery vehicles accessing the campus at all times and driving 'directly to the door'. While this may be convenient for drivers, it can create a confusing and unsafe environment for pedestrians in the Core Campus.

VISION

Introduction of consolidated delivery/loading locations within the campus to limit the impacts of delivery vehicles on the central core.

All trucks will be directed to the loading centres located at key points around the campus with delivery trucks limited to certain routes to access the loading bays to minimise impacts with pedestrians and cyclists.

The University will strive to reduce general waste and increase recycling. Campus waste production and transportation will be reduced through a number of efficiencies measures and on-site recycling where possible.

A consolidated refuse and recycling transfer station will be developed at a campus-edge location, but will respect sensitive interface activities.

DIRECTIONS

DEVELOP AN EFFICIENT NETWORK OF LOADING FACILITIES

- Provide three centralised and one operations delivery locations on the campus to enable truck movements to be focused entirely onto dedicated, secure-access service routes only. Once received at central locations, deliveries will then be made via a network of appropriately sized University vehicles.
- Limit on-campus truck movements to appropriate roads only.
- Enable the University to self-manage delivery timing on campus to avoid conflicts with peak student movement times (0600-1800). Specialised deliveries that attract a premium for delivery outside regular business hours may need to be managed in an economical way. This should be subject to a more detailed campus deliveries strategy.
- Provide clearer signage and information to delivery drivers.
- Separate back-of-house functions from areas deemed to be front-of-house (or student facing public realm areas).
- Mask loading zones from view where possible to improve the amenity of the campus public realm, and separate pedestrians and cyclists from loading and services areas.

ENSURE THAT EMERGENCY VEHICLE ACCESS IS AVAILABLE TO ALL PARTS OF THE CAMPUS

- Ensure that emergency vehicle access is provided throughout the Primary Pedestrian Network and local roads.
- Ensure that the Primary Pedestrian Network is designed to be trafficable for 24/7 emergency vehicle access and University service vehicles. Centrally controlled bollards should be placed at strategic places to restrict access where necessary.

REDUCE & MORE EFFECTIVELY HANDLE WASTE

- Introduce organic waste stream collection throughout the campus.
- Introduce organic waste composting on site.
- Develop a waste transfer station on the campus periphery (avoiding sensitive residential interfaces).
- Investigate the introduction of an appropriate waste to energy system on campus (aligned with existing energy infrastructure).
- Investigate producing gas/biofuel on-site, using the waste created as part of University Town operations. There is also potential to import waste from other organisations, which may prove profitable for the University.
- Screen small-scale Core Campus refuse areas, incorporating these facilities within complementary development. Refuse areas will be designed to be out-of-sight in the future via a number of urban design techniques,
- Develop a comprehensive waste and depots strategy in the short-term.

INCREASE & MORE EFFECTIVELY RECYCLE WASTE

- Roll-out a campus-wide organic waste and recycling education programme.
- Reuse materials as much as possible, rather than disposal. Develop a comprehensive recycling strategy in the short-term.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University Transport Strategy: Final Report*, May 2012.
- *Vision for Future Generations: 2011–2020 (Environmental Sustainability Strategy)*, 2012.

EARLY WINS

- Undertake improvements to the Western Loading Area (to the north of BG Building), including enhancements to the Science Drive public realm interface.
- Instruct deliveries to occur outside of peak student movement times (0600-1800).
- Develop a more detailed waste, depots and recycling strategy for the short, medium and long-term.
- Introduce an organic waste stream into the waste collection system across the campus
- Expand the waste education programme to include organic waste and reinforce recycling throughout the campus.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Improve the environment in which we live, work and socialise to be more health enhancing and sustaining.
- Reduce delivery vehicle and pedestrian conflicts by redesigning delivery routes to avoid highly pedestrianised areas and concentrating deliveries outside of peak times.

SECURING WATER, FOOD AND THE ENVIRONMENT

- Reduce delivery vehicle carbon emissions by centralising deliveries and loading at a small number of easily accessible points throughout the campus.
- Investigate how the University can use its waste in a sustainable manner (waste reduction, waste recycling, waste to energy production).
- Develop cutting edge waste technologies through targeted research and industry partnerships.

LA TROBE UNIVERSITY MELBOURNE CAMPUS
DELIVERIES, DEPOTS & WASTE STRATEGY

0 50 100 250m

- Consolidated loading zones
- Landscape/playing fields depot
- Indicative major transfer station
- Indicative location for waste to energy plant
- Primary Pedestrian Network
  Trafficable for emergency and services vehicles
- Secure-access loading and deliveries route
  Utilised at off-peak times
- Primary entries for delivery vehicles

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POLARIS TOWN CENTRE
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WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

MODE SHIFT STRATEGY

CONTEXT

The existing mode splits are based on University Travel surveys from 2012 and show that nearly 70% of students arrive at the campus by private vehicle, around 20% by public transport and 10% walk or cycle.

It is assumed that with little or no change to the transport network and with the continued provision of parking on campus, the current mode split would continue in-line with the current observed split. This would include the current percentage of those people car-pooling.

The end result of this approach would require the provision of double (over 12,000) the number of car park spaces on campus.

Given this approach is unsustainable, in terms of land availability and adjacent network capacity if nothing else, then an alternative approach must be adopted to encourage alternative modes of transport.

WALKING

There is potential to grow the residential population of the Melbourne campus from 1,600 to 6,000 by the year 2040 (this represents an on-campus residential population that is 15% of a 40,000 EFTSL total campus population. It is assumed that all of these students will be accessing the rest of the campus as pedestrians.

CYCLING

Cycling is experiencing a substantial growth in popularity as people are increasingly recognising its benefits including cost, convenience, reliability and improved health. In coming decades, the rising cost of car parking and fuel will continue to drive this trend. A campus environment can be designed to be cycle-friendly with dedicated cycle connections and well located cycle parking and end of trip facilities such as showers.

PUBLIC TRANSPORT

To ensure alternative modes of transport become viable, train, bus and tram services and connections must improve dramatically to facilitate the required growth in students with the required mode shift.

The current bus services into the campus must improve in terms of frequency of services to ensure that sufficient bus capacity can be provided to the campus from a range of destinations including the metropolitan rail stations. The key to ensuring bus patronage grows will be strengthening connections to Metro Stations, such as Macleod and Reservoir, as well as to key suburbs surrounding the campus.

PRIVATE VEHICLES

It is not possible to continue to cater for private car access if the campus is to grow to 40,000 students. The car will continue to play a role for some who have limited mode choices based on their home location, however it is assumed that public transport access will have improved considerably, providing viable alternative modes for many.

To make better use of the space required on campus to park the cars that will still access the campus in 2040, the cost of parking will need to increase significantly for all cars and aggressively for single occupancy vehicles.

CAMPUS CAR PARKING

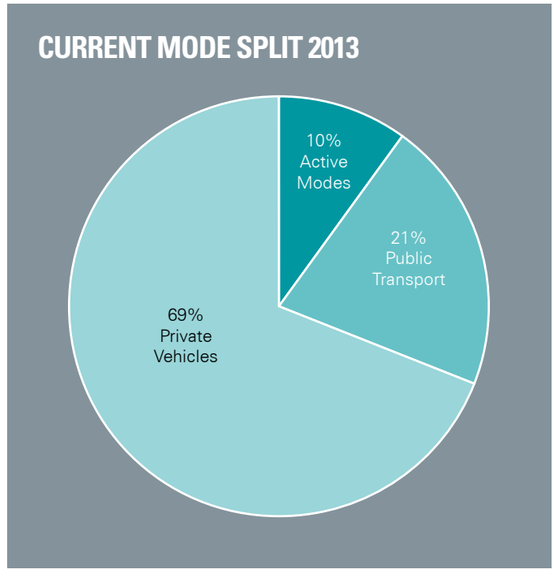
To enable the University to meet its growth aspirations, there will need to be a shift in the way people access the campus. If the campus population is to grow in size to potentially 40,000 students, the University will not be able to continue to meet the current extent of car parking provision, given the cost and land required to achieve it. In line with the desire to encourage alternative modes to the car, contribute to the sustainable transport agenda and align with international best practice in transport management at university campuses, it is proposed to establish a net zero increase in on-campus parking from 2013 levels.

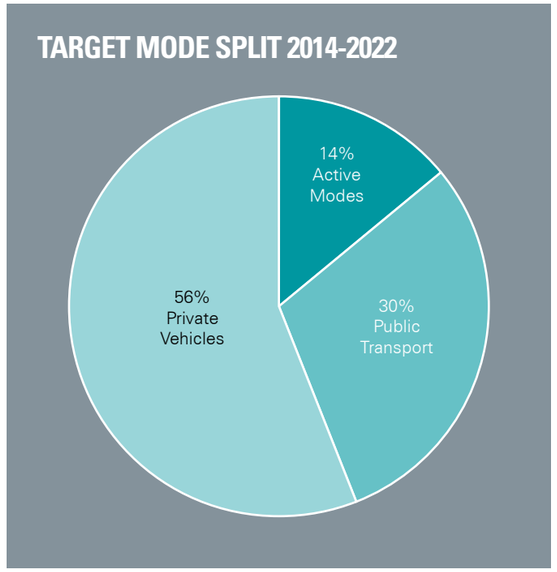
TARGET MODE SPLIT BY 2040

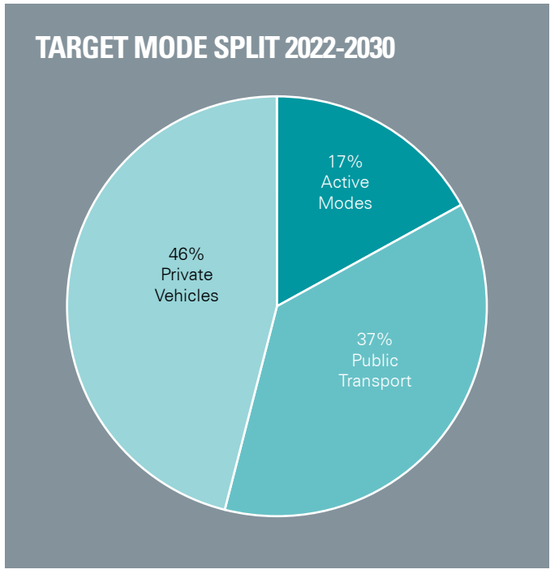
MODE OF TRANSPORT	CURRENT 2013	SHORT-TERM 2014-2022	MEDIUM-TERM 2022-2030	LONG-TERM 2030-2040
Active transport	10%	14%	17%	30%
Walking trips	7%	10%	12%	20%
Cycling trips	3%	4%	5%	10%
Public transport	21%	30%	37%	38%
Bus trips	12%	16%	19%	20%
Tram trips	9%	14%	18%	18%
Private vehicle	69%	56%	46%	32%
Car pool trips	19%	21%	23%	25%
Single occupancy vehicle trips	49%	34%	21%	5%
Motorcycle trips	1%	1%	2%	2%

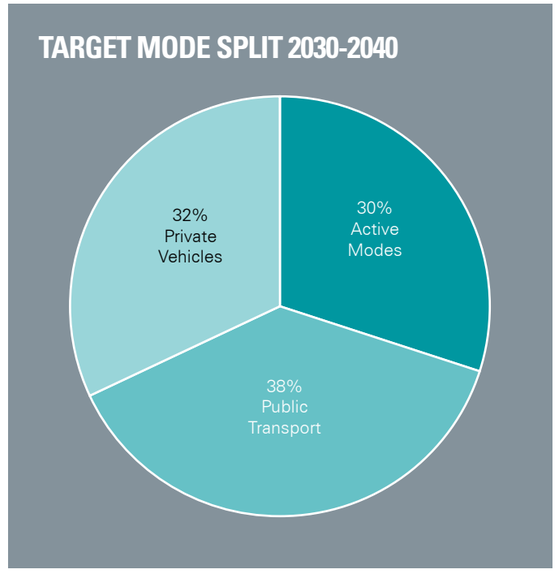
These mode share targets are built on a foundation of achieving desired growth through active and public modes of transport, without increasing on-campus car parking numbers.

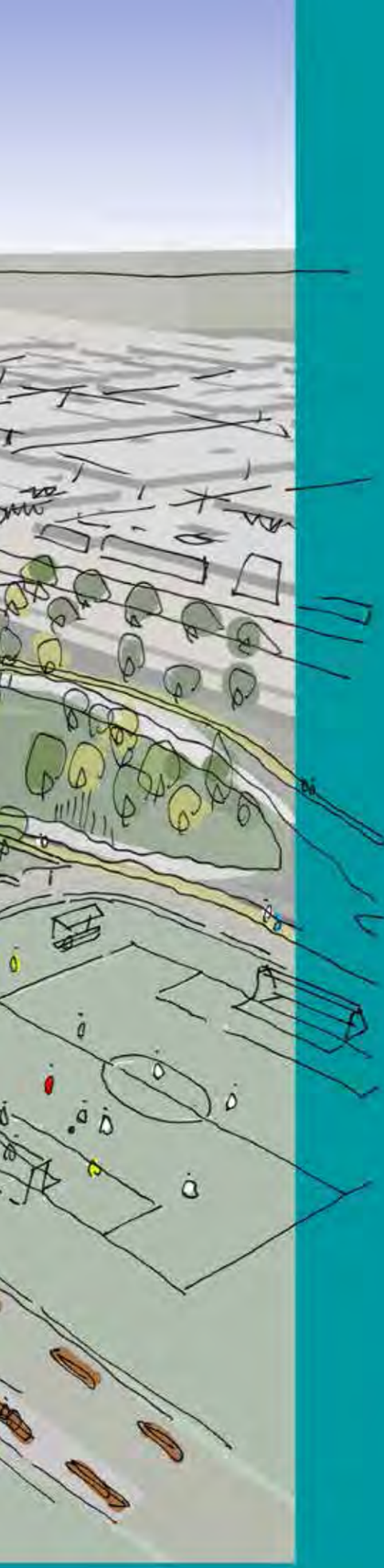
An ambitious transport mode shift will reduce the extent of car parking around the Core Campus, freeing up land for more productive purposes.











4.2 UNIVERSITY TOWN

NEIGHBOURHOODS STRATEGY

SUMMARY

Seven unique neighbourhoods will be established or enhanced to form the La Trobe University Town as a whole. Currently, each neighbourhood has its own strengths and weaknesses and opportunities for enhancement. The Master Plan will set the ambition for the campus' neighbourhoods, defining organising frameworks, focus activities, character, and partnership opportunities.

The current form and function of existing University Town Neighbourhoods could be better defined. Sometimes the potential of the campus' special attributes – such as its landscape qualities, levels of vitality and activity or significant research capacity – are undermined by inconsistent attention to connectivity and integrated place-making, or no direct intent for specific zones or landholdings.

The lack of cohesive neighbourhood zones and the means by which they should be connected, makes it more difficult for future planning projects to determine how they should respond to the campus setting and how they might best be located in order to contribute to the University Town vision.

Currently, the campus lacks adequate physical connections to surrounding neighbourhoods. In order to effectively realise the vision for a University Town, the University needs to strengthen links between the campus and its neighbours and the key destinations and networks therein.

The following text provides a summary of each neighbourhood's existing conditions and future vision.

Further information on each University Town Neighbourhood is provided in **Section 5.0 of the Master Plan**.

CORE CAMPUS

CONTEXT

- Approximately 23.8 hectares (10% of the campus).
- Strong agglomeration of academic uses and student and staff services underpinned by an exemplary 20th Century Master Plan framework and a coherent language of medium rise buildings connected at both ground and first floor level.
- A valued pedestrian network at both ground and upper levels.
- Established and valued formal landscapes, such as Simpson Place and the International Garden.
- Home of the highly valued Agora and Borchardt Library at the focal point of the campus organisational axis.
- A logical approach to academic 'precincts' (FHS/FSTE to the west; FED/FHSS/FBEL to the east). Most academic functions are within five minutes walk and are centred around the Library, retail services and major lecture theatres.
- A critical mass of retail and entertainment offerings are contained within the Core.

VISION

Over the coming decades, development in the Core Campus will continue to be a focus for facilities that meet the core academic needs of the University as the campus population expands. While respecting the strong ambition of the original campus Master Plan, development in the precinct will grow north and towards Plenty Road, blurring the line between academic uses and the town centre and expanded residential and health uses.

A cohesive network of generous pedestrian paths will be developed throughout the Core Campus, creating an easily traversable environment that links key destinations and a network of key public realm and landscape spaces, as well as surrounding neighbourhoods.

The redevelopment of Science Drive as a high quality public transport corridor will connect the Core Campus to the wider region, making public transport a much more viable choice for University Town visitors and residents.

Approximately 50% of the Core Campus area will be pervious in 2040 to help enhance biodiversity and ecological outcomes and to maintain the existing valued open space character of the campus. This ratio has also been applied to ensure that 'impervious area creep' does not occur over the Master Plan's duration.

WILDLIFE SANCTUARY & ECO-CORRIDOR

CONTEXT

The Melbourne campus is host to a series of small lakes (moats) and wetland systems, connected to Darebin Creek. As well as contributing to the campus' unique sense of place, the Moat network acts as an important water treatment and ecological system for the region. Due to its length and varied condition, the Eco-corridor has been examined in three sections:

THE WILDLIFE SANCTUARY

- A unique asset to the University and the region.
- A platform for a range of research and learning streams, including integration into archeology, botany and zoology courses and research activities, with further linkages to be established in the future.
- The land is host to sensitive ecological systems, with large areas of both native vegetation and water bodies suited to linkages with the University's Research Focus Areas.
- Provides a contained, controllable environment within which to study these sensitive systems.
- Held under a Trust for Nature Conservation Covenant.
- Presently challenged in its purpose by insufficient flood mitigation measures, pest and weed infestation, and low levels of accessibility and use for research and learning as well as poor external presentation.

THE MOAT

- A key interface with water and environment for the University community. The Moat is the single greatest open space asset within the campus, providing both an experiential and ecological green corridor.
- Provides connectivity between the key open spaces in the Core Campus and potentially to each of the neighbourhoods within the University Town.

SOUTH OF KINGSBURY DRIVE

- The area South of Kingsbury Drive includes the Sports Fields Lake and the Darebin Creek interface.
- Contains fragmented remnant riparian and plains woodland vegetation, and has the potential to form part of a significant habitat corridor linking the Darebin Creek, through the campus grounds and north to the Wildlife Sanctuary.
- The current configuration of the Sports Fields Lake does not optimise water retention or quality, nor does it enhance biodiversity or recreational outcomes.

VISION

THE WILDLIFE SANCTUARY

An outdoor 'living' laboratory for education and research will be created, providing a platform for the pursuit of the University's Research Focus Areas and accommodating archaeology, botany and zoology courses and research activities.

The Wildlife Sanctuary will primarily be a place of research and learning. The facilities will be upgraded to provide quality alternative research laboratories and classrooms, so students can spend more time 'in the field'. Providing access boardwalks and observation platforms will help facilitate learning, while also protecting the existing vegetation.

The Sanctuary is open to the public, and has the opportunity to host community planting days, provide limited indigenous plant sales and retail, enabling local involvement and investment. There will be excellent signage and wayfinding throughout the Sanctuary, providing knowledge and information to all visitors about the range of flora and fauna within the ecosystem.

A consolidation of service roads and storage areas (and their repositioning to more discrete locations) and enhanced fencing treatments will make the Sanctuary an attractive destination. Providing quality amenities for local visitors, and upgrading the nursery entry experience would make this a desirable outing for the community and school groups.

THE MOAT

The Moat system and environs will become a public destination within the campus – the Central Parkland. The Moat will have activated edge walks, and will facilitate shared bicycle use. Bridges will connect the Core Campus and the colleges at regular intervals, celebrating moments of art and sculptural form.

The Moat will be an activity spine, linking active and passive recreation areas with hospitality, events, learning areas, and research, employment, retail health, cultural and sporting hubs. Memorable attributes of the existing network will be complemented with new uses. Back of house areas and service road prioritisation will be discouraged. There will be event lawns, public lighting, curated artwork and place interpretation.

Primarily, the Moat will be a place of engagement with water and environment. It will have both formal interactions with the water's edge, and areas where the riparian water corridor is rehabilitated. The Moat presents significant opportunities for habitat, ecology, water quality, learning and landscape experience. The Moat will engage students, staff and the community in the ecological water story of the campus. It will be used to improve the water quality of the stormwater received into the system, and provide a learning/observation function that complements the University's RFA ambitions.

SOUTH OF KINGSBURY DRIVE

The vision for the area south of Kingsbury Drive is to provide an endemic revegetated and rehabilitated riparian and woodland ecosystem that completes the linkage between the Moat system and Darebin Creek. Importantly, the area will be set aside for offset planting to facilitate development in other areas of the campus and will be a repository for the enhancement of the University's stormwater harvesting, treatment and reuse.

Existing paths shall be consolidated and upgraded to control movement and provide quality connections between the Darebin Creek Trail and the campus, improving the amenity of the area.

In 2040, the percentage of pervious area within all three sections of the Eco-corridor will be approximately 95%. Impervious areas included within the neighbourhood currently include roads and path networks.

TOWN CENTRE

CONTEXT

- Approximately 36.9 hectares (16% of the campus).
- Exposure to the fast growing Plenty Road corridor.
- Large areas of undeveloped land.
- Proximity to public transport and the expanding mixed use Polaris Town Centre.
- An established health services presence that could be further expanded to meet regional demand and leverage research, public transport access, teaching and workforce synergies.
- A state and local government strategic ambition for higher density residential and mixed use development along the Plenty Road corridor.
- Proximity to the La Trobe Wildlife Sanctuary and Bundoora Park open space network.

VISION

The majority of University Town development will be concentrated in the north of the campus. The establishment of signature buildings and an expanded health presence along the growing Plenty Road corridor will create a dynamic and memorable gateway.

The Town Centre Neighbourhood will include a mix of University Town uses with a strategic ambition for higher density mixed use development along the campus' highly valued frontages.

The precinct will accommodate a diverse range of housing, both for the University and broader community. Ground level uses along major movement spines will seek to invest these connecting networks with a high level of vitality, safety, security and distinctiveness.

The primary pedestrian entries of abutting development will be directed to these interfaces, while vehicle access points will typically be via secondary networks and signalised entries to the site.

The Town Centre Neighbourhood will provide strong links into the Core Campus and surrounding neighbourhoods, helping to bridge the gap between the traditionally isolated core and the growing town centre to the north. Higher density built form in the precinct will provide active interfaces to public realm and pedestrian networks and will seamlessly integrate with renewed landscape spaces and water corridors.

Though taller than traditional campus scale, development will be configured to ensure primary connecting streets continue to enjoy access to sunlight year-round.

Due to its proximity to the Plenty Road corridor, the Town Centre is identified as a priority development zone for the University and as such has a lower pervious area percentage in comparison to other neighbourhoods (approximately 45%). However, this ratio is still considered generous in relation to other built up areas within Melbourne.

SPORTS & RECREATION

CONTEXT

- Approximately 31.4 hectares (13% of the campus).
- The playing fields can accommodate a number of sports, including soccer, hockey, AFL, cricket and baseball.
- Two pavilions currently service sporting teams and act as viewing platforms.
- The neighbourhood features expansive, undeveloped landholdings and potential for a greater presence on the Plenty Road and Kingsbury Drive frontages.
- Access to the Darebin Creek Trail and regional park network is via a walking and bicycle path.
- The precinct is currently a sports and recreation destination, with potential to become regionally significant provided that there is investment in key facilities.

VISION

Building on the University's established brand, the Sports and Recreation Neighbourhood will be a regionally significant sports and recreation destination. The future form of the precinct will cater for a diverse range of user groups; from elite athletes and professional organisations to local sporting clubs and the general public.

The proposed uses within the neighbourhood will provide an environment that allows the University community to deliver innovative, multidisciplinary teaching and research outcomes in sport, exercise and rehabilitation.

Development within the neighbourhood will help shape a highly accessible and connected place, providing enhanced, sustainable transport links to the growing Plenty Road corridor, the Core Campus, and the popular Darebin Creek Trail and parklands.

The Sports and Recreation Neighbourhood will act as a hub for campus-wide recreational networks, notably Stage 2 of proposed La Trobe Tan.

The neighbourhood will be anchored by a new Indoor Sports and Recreation teaching and research centre at the new intersection of Science Drive and Kingsbury Drive, where it will enjoy high quality pedestrian, cycle and public transport connections to the Core Campus.

In 2040, the percentage pervious area of the Sports and Recreation Neighbourhood will be approximately 70%.

HOUSING

CONTEXT

- Approximately 15.6 hectares (6% of the campus).
- The neighbourhood accommodates all of the University's on-campus Colleges (Glenn, Menzies and Chisholm).
- Convenient access to Core Campus activities and in easy walking distance to the Plenty Road public transport corridor and the Polaris Town Centre.
- The Union Building is located in the south of the neighbourhood, to the immediate north of Chisholm College. The building can hold events for 800-1,000 people, making it a unique facility in the north.
- The campus' existing Indoor Sports Centre is located in the north of the neighbourhood. While it is now reaching its capacity and requires upgrade, it provides a valued service to the University's students, especially those living on campus.
- The Infrastructure and Operations Group Maintenance Buildings are located to the north of the R&D Park and are in reasonable condition.
- The La Trobe University Museum of Art (LUMA) is located in the ground floor of Glenn College.
- The welcoming and open feel of the Housing Neighbourhood, specifically its bushland character, is a key attractor for many students who live on campus, especially those from regional backgrounds.
- The Housing Neighbourhood's proximity to the Moat network is a valued aspect for on-campus residents.
- While the recent development of the Polaris Town Centre and improvements to tram services has delivered enhanced amenity to on-campus residents, the campus has yet to be reconfigured to make these linkages as direct, safe and active as might be possible in the longer term.

VISION

The provision of on-campus housing into the future will continue to be an important element of the La Trobe University experience. A long-term target of 15% of students housed on the campus will be pursued. This equates to approximately 6,000 beds on campus (derived from an indicative student population target of 40,000 EFTSL). Staff, short-term serviced apartment and hotel, specialist and private housing will also be located throughout the University Town.

Existing built form within the Housing Neighbourhood will be redeveloped and consolidated to optimise dwelling density, while still respecting the native Australian landscape setting as prescribed by the original Master Plan.

NEIGHBOURHOODS STRATEGY

HOUSING (CONTINUED)

The revitalised Indoor Sports Centre will become a key element of a new network of small-scale recreation and neighbourhood centres that are dispersed throughout the Housing and Town Centre Neighbourhoods, catering for the anticipated growth in student and staff population, general employment and University Town accommodation.

Redevelopment of the Union Building to accommodate a range of facilities to support the vitality of the student body, and particularly the surrounding residential population, will be pursued. It will be important to preserve the building's valued connections to the University, its ceremonies and cultural memory.

The Housing Neighbourhood will provide strong links into surrounding neighbourhoods, helping to connect the traditionally isolated Core Campus with the Eastern Interface and R&D Park to the east and south-east. New and redeveloped built form in the precinct will provide active interfaces to the public realm and pedestrian networks, and will seamlessly integrate with bushland landscape spaces and water sensitive urban design elements.

The relationship between housing and the environment will be highlighted with transitions from key pedestrian and eco-corridors to housing developed via transitional landscaped semi-private landscaped zones.

In order to maintain its valued bushland character, the percentage pervious area of the Housing Neighbourhood will be approximately 60% in 2040.

R&D PARK

CONTEXT

- At approximately 48.9 hectares, the R&D Park represents a significant portion of the Melbourne campus (20% of the campus landholding).
- The R&D Park neighbourhood can be divided into two sub-neighbourhoods:
  - The formal La Trobe Research and Development (R&D) Park to the north of Kingsbury Drive.
  - The southern landholdings owned by the University to the south of Kingsbury Drive.
- The R&D Park accommodates a number of University research and commercial partnership developments:
  - The Technology Enterprise Centre, which was the first building in the Park, built in 1991.
  - The Agri-Bio Building, opened in 2013 as a joint venture between the University and DEPI.
  - CAVAL Collaborative Solutions.
  - The Victorian Agri-Biosciences Centre, which is currently occupied by Victorian Police as an extension to the Forensic Services Centre.
  - The Walter and Eliza Hall Institute.
  - Rio Tinto Research and Technical Development; a privately owned parcel within the R&D Park.
- Three Offset Agreement Areas are also located within the R&D Park, occupying a total area of 2.63 Ha.
- The landholdings south of Kingsbury Drive currently accommodate the La Trobe Melbourne buildings, and the Barnes Way and Waterdale apartments.

VISION

The future development of the R&D Park will continue to support innovation, new product development and realisation, industry collaboration, and the commercialisation of intellectual property.

This neighbourhood presents one of the richest environments for partnership opportunities on the campus. It is expected that new built form partnerships will continue to focus on research and development, in line with the University's RFAs, especially *Securing Food, Water and the Environment* (the Agri-Bio building has recently been named as the headquarters of the National Food Innovation Precinct).

Land uses within the R&D Park will be intensified to:

- Ensure enough floorspace is available to satisfy the University's ambitious research goals.
- Increase activity and surveillance of the public realm.

The future development pattern for this neighbourhood will favour higher built form, reduced setbacks, consolidation of car parking, shared facilities, and shared open space provision, as it transitions away from the existing business park style of construction.

Additionally, the adjacency of the R&D Park to the Core Campus establishes unique opportunities for both informal and formal opportunities for knowledge sharing and partnership to be incorporated within new development throughout the precinct, as well as sharing of infrastructure, facilities and amenities.

Car parking will be consolidated and less obtrusive throughout the neighbourhood (e.g. multi-storey car parks wrapped by research uses, or basement car parking).

Subject to the University's appetite for R&D growth and market demand, University and partnership development will expand south across Kingsbury Drive. The unique location of the southern parcels, adjacent to the West Heidelberg Industrial Estate, and a northern address to Kingsbury Drive offers substantial scope to leverage the broader research, partnership and commercialisation goals of the University and diminished dependence on the Core Campus to meet the University's car parking needs.

Approximately 60% of the R&D Park's total area will be pervious in 2040, with much new built form to be developed on the site of existing at-grade car parks.

EASTERN INTERFACE

CONTEXT

- Approximately 18.3 hectares (8% of the campus).
- Located on the eastern edge of the main campus, the Mont Park Terraces are an expansive complex of buildings that provide a memorable interface between the campus and the established Springthorpe Estate.
- The Terraces primarily accommodate University administration, support functions, storage and a number of non-university tenants, such as the Australian-Italian Institute, the Australian Institute of Archaeology, and Environmental Protection Agency (EPA) offices and vehicle testing area.
- The Mont Park Terraces and grounds core as an important focal point in the region and act as an eastern gateway to the campus proper.
- To the south of the Mont Park Terraces is a 4.45 Ha landholding, which is currently vacant. The northern section of this landholding contains a band of established pine trees.

VISION

Future development of the Eastern Interface will actively seek to fulfil University Town ambitions by acting as a bridge between previously ignored residential uses to the east and the main campus activities to the west and south-west.

The Mont Park Terraces and related buildings and grounds will be enhanced as a key component of the Eastern Interface, adaptively reused to cater for a number of University, community development and services, and partnership activities.

Additional development (e.g. housing targeted at a range of groups) will be accommodated in the hinterland areas behind the Terraces.

The 4.45 Ha North of Forensics landholding will be developed and programmed in a manner that provides for the cohesive integration of the campus and surrounding residential areas.

In 2040, the percentage of pervious area within the Eastern Interface will be approximately 60%, which aligns with the Neighbourhood's desired landscaped character.

Further information on each University Town Neighbourhood is provided in **Section 5.0 of the Master Plan**.

UNIVERSITY TOWN NEIGHBOURHOODS: PERVIOUS & IMPERVIOUS SURFACE AREAS

	Total							
Neighbourhood area	**241 Ha**	24 Ha	66 Ha	37 Ha	31 Ha	16 Ha	49 Ha	18 Ha
Building footprints & development parcels	19%	31%	–	35%	16%	28%	24%	25%
Paths (walking & cycling)	5%	12%	5%	5%	4%	10%	2%	5%
Plaza spaces	3%	6%	–	8%	5%	–	1%	1%
Roads and car parks	6%	3%	–	8%	3%	1%	15%	9%
Water/Moat	4%	1%	12%	–	–	–	2%	–
Conservation & Offset Areas	22%	-	77%	–	–	–	5%	–
Playing fields	4%	-	–	–	29%	–	–	–
Formal landscapes	7%	10%	–	27%	–	–	–	28%
Other green spaces	30%	37%	6%	17%	43%	61%	51%	32%
Pervious surface area	**67%**	48%	95%	43%	72%	61%	58%	60%
Impervious surface area	**33%**	52%	5%	57%	28%	39%	42%	40%

LA TROBE UNIVERSITY MELBOURNE CAMPUS NEIGHBOURHOODS STRATEGY

0 50 100 250m

- Town Centre Neighbourhood
- R&D Park Neighbourhood
- Core Campus Neighbourhood
- Eastern Interface Neighbourhood
- Housing Neighbourhood
- Sports & Recreation Neighbourhood
- Eco-corridor Neighbourhood

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
CHARLES LA TROBE COLLEGE
MACLEOD RESIDENTIAL

PARTNERSHIPS & COMMUNITY ENGAGEMENT STRATEGY

CONTEXT

Similar to many Australian university campuses that were founded in the mid-20th Century, the Melbourne campus was developed as a 'citadel', separated from its surroundings by roads and a moat of car parking. The campus also logically turned its back on the institutions that used to exist to the north and east. In the intervening 50 years, much has changed and the campus is now positioned in the centre of the La Trobe National Employment Cluster.

A key plank of the Melbourne Campus Vision is to turn the University 'inside out' and reach out to the surrounding community. Rather than just the Core Campus and the R&D Park being the location for the majority of partnership activities, the entire campus will become the base for a wide range of opportunities.

VISION

The Melbourne campus will transform from its current introverted character to a University Town that fully engages with the surrounding community. Campus interfaces and gateways will be designed to better integrate with surrounding streets and neighbourhoods, celebrating and promoting the University's presence, values, role in Melbourne's north, and connection with the natural landscape and systems.

The Melbourne campus will be a beacon for significant local and regional partnerships that encompass education and research, sports and recreation, health and medical services, arts and culture, residential development, ecology and biodiversity, and sustainable transport.

DIRECTIONS

BLUR CAMPUS BOUNDARIES & INVITE THE COMMUNITY IN

- Invite the community onto the campus to optimise the use of shared facilities and help to generate day/night activation and vibrancy.
- Develop memorable community markers on visible campus interfaces.
- Make the presence of partnerships clear to the University and surrounding communities by locating partnership uses within the campus at street level.
- Ensure that spaces used by University partners are able to accommodate both day and night time uses.
- Provide for universal accessibility to all buildings and ensure access to all irrespective of age or ability.
- Ensure that the campus experience is not adversely affected by the activities of University partners.

PURSUE LOCAL & REGIONAL RESEARCH PARTNERSHIPS

- Strengthen the campus' reputation as a destination for research and development in Melbourne's growing north.
- Seek, build and strengthen mutually beneficial international, national and local research partnerships.
- Prioritise the siting of research activity within key areas on the campus:
  - R&D Park for large format research, development and commercialisation spaces.
  - Between Crissane Avenue and Kingsbury Drive for large format research, development and commercialisation activities that may require buffering or have synergies with current or future manufacturing within the West Heidelberg Industrial Estate.
  - Core Campus for smaller scale research activities with higher academic space needs.
- Identify, enhance and promote synergies between the activities of the University and surrounding research partners (existing and potential).

ENCOURAGE PRIVATE SECTOR COMMERCIAL DEVELOPMENT THAT ALIGNS WITH UNIVERSITY AMBITIONS

- Facilitate partnership projects at the campus edges that improve connections with surrounding communities and activities (e.g. cinemas, shops, restaurants, hotels, offices, commercial offerings, market housing, sport and recreation uses, and cultural facilities).

UTILISE PARTNERSHIPS TO DEVELOP SPORTS & RECREATION FACILITIES

- Pursue regional partnerships to help deliver, maintain and operate regional-scale sports and recreation facilities on campus.
- Invite private sector operators to provide small-scale recreation facilities, such as 24/7 gyms, within areas of activity, such as the Core Campus and the Town Centre neighbourhoods.

DEVELOP AN EXPANDED HEALTH & MEDICAL PRESENCE ON PLENTY ROAD

- Partner with a regional health care provider to create a health precinct on the campus' Plenty Road frontage.
- Integrate the health precinct with FHSS programme facilities and the Core Campus more generally.
- Ensure that the Health Precinct and the Core Campus are seamlessly linked by a high quality public realm and pedestrian facilities.

DEVELOP ARTS, CONFERENCE & CULTURAL FACILITIES AT KEY CAMPUS GATEWAYS & FOCAL POINTS

- Locate regional-scale arts and cultural facilities at highly visible gateway sites on the campus perimeter as a way of attracting the public into the campus.
- Pursue partnerships with regional and national funding bodies to help provide arts and cultural infrastructure for Melbourne's growing north.
- Ensure that arts and cultural facilities can be used by the University community, University partners and the general public.
- Co-locate complementary functions and activities within proposed arts and cultural facilities in order to strengthen funding bids.

PARTNER WITH THE PRIVATE SECTOR TO DELIVER ON-CAMPUS HOUSING

- Invite private sector partners to provide a diverse range of dwellings for students and staff, as well as market housing (as an additional offer to University-managed housing).
- Ensure that private sector-led housing meets University approved standards, especially for student accommodation.

PARTNER WITH REGIONAL STAKEHOLDERS TO ENHANCE CAMPUS ECOLOGICAL & BIODIVERSITY NETWORKS

- Work with regional stakeholders to mitigate flood impacts, improve water quality, and improve biodiversity outcomes. Areas of interest for the University include:
  - The Gresswell Grange lake system.
  - The Springthorpe lake system.
  - The Polaris Town Centre and Plenty Road corridor (run-off from impervious surfaces).
  - The Darebin Creek corridor.

USE THE CAMPUS' UNIQUE ECOLOGICAL FEATURES TO ATTRACT THE PUBLIC ONTO THE CAMPUS

- Promote the Moat system as a regional open space network, accessible to the broader community.
- Enhance the Wildlife Sanctuary visitor experience through the development of a visitors centre and improved educational and interpretive signage.

PURSUE SUSTAINABLE TRANSPORT INITIATIVES

- Work with state transport agencies to introduce a high frequency east-west shuttle service from Reservoir Station to the campus (Science Drive).
- Better light public road environments in proximity to the campus (partnerships with Councils and VicRoads).
- Partner with Darebin City Council and Banyule City Council to upgrade local path treatments, especially between key destinations, such as Bundoora Park, Northland Shopping Centre and Macleod Station.
- Work with transport agencies to improve public transport facilities within or in proximity to the campus, such as Plenty Road tram stops. Improvements should include upgrades to platform capacity, lighting, real-time service information, road crossing facilities, and general public realm treatments.

EARLY WINS

- Develop memorable community markers at major gateways to promote the presence of the University and invite the community into the campus (including digital events information).
- Partner with a range of regional stakeholders to develop a business case for the Regional Sports and Recreation Centre on Kingsbury Drive.
- Work with the MPA to develop an implementation strategy for short and medium term partnership projects within the La Trobe National Employment Cluster.
- Progressively redevelop outlier buildings throughout the Eastern Interface for child care, community and food retail functions.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Use the growing campus population and University Town as a case study for research into Building Healthy Communities.

SECURING WATER, FOOD AND THE ENVIRONMENT

- Pursue partnerships in water and the environment by capitalising on the unique resource of the Wildlife Sanctuary and Moat system.
- Pursue food research by expanding on the Agri-Bio partnership and associated facilities.

SPORT, EXERCISE AND REHABILITATION

- Ensure new and ongoing partnerships with elite sporting clubs and institutions deliver high impact research outcomes.

LA TROBE UNIVERSITY MELBOURNE CAMPUS
PARTNERSHIP & COMMUNITY ENGAGEMENT STRATEGY

0 50 100 250m

- Regional eco-corridor
- La Trobe Wildlife Sanctuary
- Health partnership zone
- Commercial/community development partnership zone
- Arts & cultural partnership zone
- Research, development and commercialisation partnership zone
- Sports & recreation partnership zone
- Potential delivery of housing via the private sector
- Memorable community marker
- The La Trobe Tan
- Sporting Avenue of Honour
- The La Trobe Sculpture Trail (30 sculptures positioned at approx 70 metre intervals)

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

TEACHING, LEARNING & RESEARCH STRATEGY

CONTEXT

ACADEMIC SPACE

A major priority for the University is to improve teaching and learning spaces throughout the Core Campus after years of under-investment.

Much of the Core Campus building stock dates from the early years of the University and requires regeneration to bring it up to 21st Century university standards. A number of academic and teaching spaces are perceived as poor and need to be upgraded.

The facilities that new students find on the campus are often of a lower quality than what they have experienced during prior secondary education. The mismatch between facilities throughout the campus presents problems as some students and staff have to move between high quality spaces and low quality, out-of-date spaces (e.g. the new Agri-Bio or LIMS building compared to the general Science buildings). Faculty workplace locations are often disaggregated (e.g. FHSS and FBEL).

RESEARCH SPACE

Research is currently disconnected throughout the campus. For example, the R&D Park is separated from the Core Campus by car parking and roads. There is no real focal point on the campus for researchers to connect at present.

The campus' labs and facilities are out-dated and will need to be improved or replaced if the University is to effectively double its research output. It will be too costly to demolish buildings completely and rebuild – existing built form will need to be adaptively reused.

The La Trobe R&D Park is largely hidden from view. Commuters travelling along Kingsbury Drive and students walking within the campus do not know what valuable research is undertaken within this area.

LIBRARY & LEARNING HUBS

The Borchardt Library (the Library) has become the central hub of activity on the campus. The building redevelopment, completed in 2010, is a fantastic example of how to retrofit buildings to enable better teaching, learning and research outcomes and is extremely popular with staff and students.

The Library's 24/7 area has been popular and night time access arrangements to and from the library are monitored by Campus Security. International students are one of the libraries biggest user groups, desiring 24/7 use.

The Library is currently at full capacity – much space is taken up by the print collections – and the facility is constantly under pressure as a result of the changing types of spaces that are desired by user groups.

Conversely, the Housing Neighbourhood learning spaces have become a second choice facility, with students opting to spend more time within learning spaces located in the Library.

ADMINISTRATIVE SPACE

Central Administration can be broken down into the following groups (excluding ICT):

- University Executive (comprising the Vice-Chancellor, Deputy Vice-Chancellors, Pro Vice-Chancellors and the Vice President, Operations).
- Administrative groups that report to the University Executives (excluding the administrative divisions).
- Administrative divisions (being Finance, Human Resources, Infrastructure & Operations, Student Services and La Trobe International) that also report to the Executive.

Collectively these groups comprise some 650 staff (EFT) and occupy 6,770sqm of office space in the Core Campus, Housing Neighbourhood and Eastern Interface (Mont Park Terraces).

As well as decanting between buildings within the Core Campus, a number of general administration functions have been identified to relocate to the Mont Park Terraces as part of a recent 10CDP Review. This includes:

- In early 2014, ICT from DMW (330sqm) and PW (800sqm) into TER12 and TER13
- From late 2014 an Administration Group (TBC) from either DMBE or PE into TER14.

It is also envisaged that Terraces 9, 10 and 11 will eventually be refurbished as part of the general administration hub to be located in the Terraces.

EXISTING USES WITHIN THE TOWN CENTRE NEIGHBOURHOOD

Currently, the Town Centre neighbourhood is home to a number of teaching and research functions:

- Agriculture Reserve (9.5 Ha).
- Zoology Reserve (2.1 Ha).
- Central Animal House (2,075 sqm/GFA).
- Glasshouses (1,300 sqm/GFA).
- Outdoor Laboratories (e.g. Lime Plot trials).
- Arboretum (0.6 Ha).

VISION

ACADEMIC & LEARNING SPACE

While the popularity of online learning grows and the University accepts that blended learning strategies will continue to be an important attribute of course mix, physical learning spaces remain an integral part of the La Trobe University experience for students and one that the Master Plan seeks to reinforce. University campuses provide a highly stimulating environment and the benefits of proximity cannot be underestimated. This is particularly so as research and learning challenges become increasingly multidisciplinary and team based in nature.

Through this shift the opportunity exists to make learning commons and teaching areas hubs that bridge mediums and bring disciplinary areas together.

While at the Melbourne campus this is less pronounced due to the central placement of the Library and lecture theatre areas, there remain major barriers to be bridged, such as between:

- The Core Campus and the R&D Park.
- The Colleges and the Core Campus.
- The campus and surrounding communities.

Existing building stock will be reprogrammed and the Core Campus and broader University Town will be joined up and extended, to ensure that opportunities for flexible cross-faculty teaching and learning are facilitated. The University will also be better able to engage externally through the appropriate placement and configuration of facilities along major movement networks and in areas conveniently located relative to public transport.

As continual change in pedagogy is inevitable, learning spaces will be flexible and adaptive in their design and their ability to embrace new technologies.

More broadly the campus as a whole must be considered as a learning space, with the Town Centre, Eco-corridor, sports and recreation facilities, and community facilities all providing opportunities for learning, research and knowledge transfer. Through this demonstration via design, the true potential of the University Town as a 'living laboratory' can be most effectively realised.

RESEARCH SPACE

According to the University's strategic plan, research output is expected to double. This will require more research space and facilities on the campus, as well as improvements to existing spaces.

Competitive advantages can be delivered through the University Town ambition and the manner it can deliver a range of choices and opportunities not easily manifested elsewhere.

At the core of the plan will be facilities that enable effective research in the key areas of research focus for the University. In some instances these facilities will be most effectively realised through broader partnerships and their conception as interdisciplinary or multi-user collaborative hubs.

While the focus of research and development activity is and will continue to be the R&D Park, the research ambitions of the University will be infused throughout all neighbourhoods of the University Town in a manner best aligned with the RFA ambitions. An example is the proposed multidisciplinary Regional Sports and Recreation Centre that is intended to incorporate both facilities for the broader community and University in conjunction with laboratories and research and teaching areas for sports science, as well as headquarters for peak sporting bodies.

The design of research spaces and the manner it teaches and makes manifest its ambitions also requires careful curation within the University Town environment. Wherever possible the aim should be to make research visible on the street and within buildings. This will both build understanding of the nature of activities therein and the diversity and value this research brings to the University Town.

Leading universities worldwide have recognised the importance of making research visible and where possible teaching and communicating key themes therein. This opening of the curtains has helped generate both considerable expansion of philanthropic and organisational support, but also importantly exposed students in other disciplinary areas to the opportunities and areas of inquiry occurring elsewhere in their neighbourhood, an outcome that has led to many fruitful new areas of research enquiry.

The design of spaces in research facilities must also be carefully conceived so that it both enables flexibility in team size and focus area over time and also facilitates collegiate interaction, both formal and informal.

As the Core Campus expands and transforms into a University Town, the role of technology becomes important. The opportunity to expand the wireless reach of the University network to these important campus edges with adjoining neighbourhoods should be seen as a key ambition in engendering a knowledge rich and enabled environment that will distinguish the University town from other locations in Melbourne's north. Whether sitting in a cafe within the Town Centre, running the La Trobe Tan, examining samples within the Wildlife Sanctuary, or reading notes on the lawns of Simpson Place, the opportunity should exist to be engaged with the online resources of the University.

R&D PARK

The R&D Park will continue to support innovation, new product development, industry collaboration, and the commercialisation of IP. In addition it will deliver high value employment opportunities in Melbourne's north. This will however not be most effectively achieved through the sub-divisional business park typology previously adopted that has led to detachment rather than interaction between neighbours. A series of new walks, collaborative and social areas and bridging research facilities will be developed enabling both formal and serendipitous interaction between organisations and RFAs.

Future development will favour higher built form, reduced setbacks, shared facilities, and shared open space. University and partnership development will expand south across Kingsbury Drive towards the West Heidelberg Industrial Estate.

Land uses within the R&D Park will be intensified to:

- Build the presence and identity of the La Trobe R&D Park as the premier hub for research, development and innovation in Melbourne's north and beyond.
- Ensure enough floorspace is available to satisfy the University's research goals.
- Increase activity and surveillance of the public realm.

At-grade car parking that depersonalises and separates activities will be consolidated into multi-deck and basement car parking nodes, providing users with a public realm of high amenity. Connections to the Core Campus will be improved and access to social spaces as well as the Eco-corridor will be enhanced.

Research facilities and how they interact with each other and the broader University Town will anchor the physical manifestation of the University's ambitious research agenda.

Those researching, working and learning in the R&D Park will enjoy access to a special native landscape setting, outstanding sports and recreation facilities, real choice in mode of access to the University Town, a range of housing typologies, and abundant lifestyle, cultural and community opportunities. Through this integrated strategy, the University will be positioned to attract and retain the best minds and partner organisations.

LIBRARY & LEARNING HUBS

Collaborative spaces dispersed across the campus, including learning hubs in academic, residential and partnership developments, will become crucial to the way the University functions into the future.

Equally, as the University Town diversifies in its population the role of library and learning spaces for the on-site resident and workforce community will need to expand to meet their needs. The opportunity to expand facilities to 'invite the community in' could particularly be focussed on these nodes.

A need for more on-campus resource hubs similar to the Library is forecast as the campus population grows in the medium and long-term.

Facilities on campus will need to be available 7 days per week. Much of the work and intensive activity will be on weekends for postgraduate students.

DIRECTIONS

IMPROVE & EXPAND ACADEMIC SPACE

- Improve operational measures (timetabling and office space standards) to more effectively utilise academic space.
- Expand the teaching calendar (longer operating hours, move beyond two teaching semesters) to create more capacity from existing space resources.
- Undertake a programme of adaptive reuse and refurbishment of Core Campus buildings.
- Work within the shells of existing buildings where possible.
- Improve the quality and organisation of the public realm to remove barriers between destinations, creating greater opportunities for activities that support academic and research ambitions.
- Instil flexibility in the design of teaching and learning spaces to accommodate the differing needs, technologies and learning modes and group sizes of students and staff.
- Provide resources to cope with the large numbers of students on campus as the modes of engagement of students continue to evolve.
- Develop a number of neighbourhood-focussed learning commons: hubs that are located throughout the campus.
- Create informal break-out spaces ('lounge rooms') for learning in easily accessible locations.
- Orient collaborative and social spaces 'outwards'. The refurbishment of the Agora has been successful by providing shelter from the elements, while still retaining an open environment.
- Interconnect programming throughout the campus (e.g. shop-top student housing above teaching and learning spaces).
- Deliver multi-purpose, cross-disciplinary venues, which include: large-format, flexible lecture spaces that are connected to other parts of the organisation (avoid fixed seating where possible); and informal teaching and learning spaces.
- Locate teaching and research facilities at prominent interfaces to engage with the community (e.g. health and sports facilities that treat patients, as well as providing a teaching and research environment).
- Develop cross-disciplinary venues and learning hubs for both the benefit of the University and the wider community (e.g. provide an 'executive lounge' to accommodate short-term staff / business people on the campus) and cinemas that might operate as lecture theatres Monday to Friday.
- Ensure that high quality wireless internet and charging devices are supplied campus-wide.

IMPROVE & EXPAND RESEARCH SPACE

- Ensure that the role of research becomes more visible throughout the University Town and is aligned with the University's RFAs.
- Brand the Kingsbury Drive interface as the research avenue of Melbourne's North and tell the La Trobe research story.
- Ensure the public realm of the University Town is imbued with a strong research and knowledge sharing ambition.
- Grow the R&D Park and create strong links into the Core Campus and other neighbourhoods.
- Develop 'Research Walk' as a high quality pedestrian and cycling boulevard between the Core Campus and the R&D Park.
- Use the Agri-Bio Building as a 'stepping stone' between activities in the Core Campus and the R&D Park.
- Strengthen industry and commercial engagement within the R&D Park.
- Ensure that the majority of all future research-oriented development is located within the R&D Park.
- Celebrate the University's research achievements within the landscape of the campus: the achievements of staff and alumni celebrated on every pole; the discoveries and research of the University embedded into the public realm.
- When identifying research partners, consider what facilities can be used efficiently by both parties.
- Recognise that supportive placemaking and social environments are important for effective places of inquiry.
- Build strong partnerships with schools, regional partners and international communities to position La Trobe as an attractive choice for staff and students seeking a research career or opportunity.

TEACHING, LEARNING & RESEARCH STRATEGY

ENHANCE THE LIBRARY & DEVELOP LEARNING HUBS

- Investigate reallocate of valuable Library floor space from lower use collection storage to student learning areas (to suit both individual and group study).
- Investigate reduction of collection storage space within the Library, develop an automated storage and retrieval system (ASRS), which is positioned at a subterranean level to the immediate north of the building.
- Ensure that the design of the subterranean ASRS facility does not preclude future development oriented towards the north lawn and Moat system.
- Build on the success of the Library as a student learning and gathering space by developing a series of 24/7, satellite, managed learning spaces throughout the campus.
- Ensure that satellite learning hubs offer secondary library services, such as Student Learning Advisors. These hubs will need to be monitored for safety and security. This will be best achieved if they are positioned on the Primary Pedestrian Network.
- Locate cluster learning spaces within each faculty (preferably at a point of potential nodal interconnection with adjoining disciplinary areas), while keeping print collections consolidated in the existing central location. Individual faculty clusters will provide: access to the Library's digital archive of research articles; relevant University personnel for assistance; and space for collaboration with students in complementary fields of study.

CONSOLIDATE ADMINISTRATIVE SPACE WITHIN THE MONT PARK TERRACES

- Adaptively reuse and refurbish the existing Mont Park Terraces to house non-student-facing administration staff for the short and medium-term.
- Refurbish Terraces 9, 10, 11, 12, 13 and 14 to create a general administration hub within the Mont Park Terraces complex.
- Improve connections between Mont Park and the Core Campus to facilitate efficient staff movements between these two neighbourhoods.
- Improve car parking arrangements to the rear of the Mont Park Terraces and to the street network interfacing the forecourt lawns to cater for an increased administration workforce and visitation within the neighbourhood.
- Provide small-scale retail/hospitality uses within the Ernest Jones Hall to improve amenity for University administration staff within the Terraces.
- Develop the Mont Park Terraces forecourt areas as effective breakout and social spaces consistent with the heritage controls governing the area.
- Investigate opportunities to better interconnect the Springthorpe community with the Core Campus, via well defined paths past and through the Terraces.

RELOCATE EXISTING TOWN CENTRE USES TO ACCOMMODATE UNIVERSITY TOWN ACTIVITIES

- Agriculture Reserve:
  - Relocate long-term animal holding to an off-campus site. Co-locate short-term animal holding with Central Animal House activities in the medium and long-term.
- Zoology Reserve (subject to further investigation):
  - Option 1: Relocate Reserve to south-eastern section of Wildlife Sanctuary (1.0 Ha maximum within Sanctuary, with 0.3 Ha maximum outside).
  - Option 2: Relocate Reserve to southern portion of the North Bushland Reserve and to the rear of Terraces 8 and 9.
- Central Animal House:
  - Redevelop in the short to medium-term and relocate to the R&D Park in the long-term.
- Glasshouses:
  - Redevelop in the short to medium-term and relocate to the Core Campus in the long-term (rooftop development).
- Soils Laboratory:
  - Relocate to the Sports & Recreation Neighbourhood, directly south of Preston General Cemetery (co-location of Buckland Laboratory, lysimeter testing and lime-plot trials into outdoor space approximately 1.2 Ha).
- Arboretum (subject to further investigation):
  - Option 1: Relocate or establish a new arboretum within the grounds of the former Kingsbury Centre.
  - Option 2: Relocate or establish a new arboretum within the grounds of the Mont Park precinct.

REFERENCE DOCUMENTS

- *Animal Holding Facilities Review & Future Strategy: Draft Report*, March 2014.
- *La Trobe University Library Space Review and Future Strategy: Report V2*, March 2014.
- *Update of the Space Master Plan (10CDP): Western Sector Review*, March 2013.
- *Melbourne Campus Vision 2012*, January 2013.
- *Update of the Space Master Plan (10CDP): Eastern Sector (North East & South East) Review*, January 2013.
- *La Trobe University Research Plan: 2013–2017*, 2013.
- *La Trobe University: Storage Review and Future Strategy*, 2013.
- *Future Ready Strategic Plan 2013–2017*, 2012.
- *Space Planning Guidelines: Edition 3*, Tertiary Education Facilities Management Association (TEFMA) Inc., 2009.

EARLY WINS

- Develop a series of informal study and learning areas throughout the public realm, using inexpensive yet hardy street furniture elements.
- Ensure that the University's research and academic achievements are proudly on display throughout the public realm.
- Continue to consolidate non-student-facing administration staff within the Mont Park Terraces to create critical mass in the Eastern Interface and provide space in the Core Campus for additional teaching and research activities.
- Relocate Agriculture Reserve activities off-campus.
- Relocate Zoology Reserve activities to the Wildlife Sanctuary (Option 1) or the North Bushland Reserve (Option 2).
- Activate early planting of selected botanical species in the confirmed option for the relocated Arboretum.

ALIGNMENT WITH RFAs

- The University's research ambitions will be clearly articulated throughout all neighbourhoods within the University Town.
- Interactive research elements will be installed throughout the campus to provide students, staff and visitors with the opportunity to learn about the University's RFAs.
- Campus gateways and interfaces will clearly articulate and promote the University's research ambitions to the surrounding community and the region.

LA TROBE UNIVERSITY MELBOURNE CAMPUS
TEACHING, LEARNING & RESEARCH STRATEGY

0 50 100 250m

- Library
- 5 minute walking radius
- Union Building ('bridge' between Core Campus and R&D park)
- 5 minute walking radius
- Academic building
- Research-oriented built form
- Major research hub
- Major teaching and learning hub
- Existing lecture theatre
- Potential for further academic expansion
- Complementary academic and research component
- Relocated Zoology Reserve and adjacent laboratory buildings (two options)
- Zone for relocated Central Animal House at upper levels
- Zone for relocated glass houses at upper levels
- Relocated Arboretum options
- Indicative Soils Laboratory
- Primary Pedestrian Network

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

HOUSING STRATEGY

CONTEXT

The Melbourne campus currently accommodates 1,600 students over six sites: Glenn College; Menzies College; Chisholm College; Barnes Way and Waterdale Apartments; Graduate House; and University Lodge. The latter two options cater mainly for mature age and postgraduate students.

The majority of housing on campus is focused on undergraduate students. 70% of residents are undergraduate (1st and 2nd year) and many come from regional Victoria. This leads to a fairly uniform residential cohort. On-campus residences are currently operating at close to 100% capacity.

The current housing stock consists mainly of undergraduate units with few options for postgraduates close to Core Campus facilities.

The majority of the existing stock has had no significant upgrade or investment since its construction. These dwellings are at risk of not meeting domestic and international student expectations in the near future.

The current provision of accommodation suffers from limited diversity (both in dwelling types and residents).

The back-of-house areas for residential services require coordination to improve efficiency.

The Housing Neighbourhood can become quite isolated at night as the rest of the campus shuts down after 6pm. After hours and at weekends there is very little opportunity for residents to easily access on-campus facilities and nearby emerging town centre facilities.

The surrounding residential market caters for the balance of students that are not able to be accommodated on campus. However, students commonly report having to live further away from the campus than they would prefer, due to a lack of affordable housing supply in the area surrounding the Melbourne campus.

Competitor universities are investing heavily in campus housing both in Victoria and interstate. Internationally, housing is seen as an increasingly important component of a sustainable business model with staff and graduate housing, short-term visitor serviced apartment and hotel accommodation also forming an important component of the model.

VISION

The continued provision of high quality student housing into the future to enrich the campus experience, is a central concern for the University. A long-term target of 15% of students will be housed on the campus. This equates to approximately 6,000 beds on campus (derived from a student population target of 40,000 EFTSL). A wide range of staff, short-term accommodation and private housing options will also be located throughout the Melbourne campus more generally.

The existing Colleges will be redeveloped and consolidated to optimise dwelling density, while still respecting the native Australian landscape setting as prescribed by the original campus Master Plan. New housing opportunities will be targeted within the Town Centre Neighbourhood, ultimately bridging between the existing Colleges and the joint Polaris and University Town Centre. A range of residential development will also be pursued within the Eastern Interface.

Increasing the number of on-campus residents will result in: decreased travel time between work, study and living; improved competitiveness for the best staff, students and researchers; diminished congestion and car dependency; enhanced retail and services for the University Town community and broader employment cluster; and enhanced safety and security. More people living and working/studying on the campus means less carbon emissions generated by travel, and increased on-campus activity and vitality that in turn underpin more demand for on-campus accommodation – creating a virtuous cycle.

DIRECTIONS

ENHANCE & EXPAND UNDERGRADUATE DWELLINGS WITHIN THE HOUSING NEIGHBOURHOOD

- Ensure existing undergraduate residential stock is upgraded in the short to medium-term to meet changing student housing expectations.
- Pursue higher density infill development within the Housing Neighbourhood, with a focus on student accommodation that is harmoniously integrated with the established native character of the area.
- Expand undergraduate residential development into the Core Campus (located at upper levels, with learning commons and services at ground).
- Increase activity within the Core Campus and Housing Neighbourhood to improve safety and security during the day and night.
- Ensure that new and redeveloped housing actively engages with the Eco-corridor where possible, providing both a memorable setting for residents and a safe environment for the broader community.
- Ensure that the College buildings remain an important resource to the greater University community, providing alternate teaching and learning spaces.

PROVIDE FOR A DIVERSE RANGE OF HOUSING WITHIN THE TOWN CENTRE NEIGHBOURHOOD

- Provide housing for undergraduate, postgraduate, staff, visitors to the region, and private sector residents within the Town Centre.
- Provide mid-rise residential building stock with integrated, satellite learning hubs and student services in the eastern portion of the Town Centre.
- Provide ‘shop-top’ housing product throughout the Town Centre, especially as part of a mixed-use offer (commercial/retail at ground level, residential on upper floors).
- Pursue higher density residential and mixed use development along Plenty Road.
- Locate grocery, cafe, and wellness/fitness facilities and learning environments at lower levels where they can be shared by the University and general community; thereby building the commercial case for enhanced services.
- Provide a hotel/serviced apartments/short-term accommodation offer in proximity to the Plenty Road frontage, potentially in combination with complementary activities (e.g. conference facilities).
- Expand the residential presence within the former Kingsbury Centre grounds (Graduate House) and pursue synergies with the adjacent Polaris Town Centre townhouses and apartments. There is also potential for the inclusion of community services, such as child care and community gardens.

PURSUE RESIDENTIAL OPPORTUNITIES WITHIN THE EASTERN INTERFACE

- Develop a postgraduate and/or staff residential offer to the immediate west of the Mont Park Terraces with potential ground and first floor connections into the Terraces for social and collective areas and recreational breakout zones.
- Develop the 4.45 Ha North of Forensics landholding for staff and private sector housing, carefully integrating it with surrounding residential neighbourhoods.

EARLY WINS

- Undertake improvement works to popular destinations in the Housing Neighbourhood. For example, the Airport Lounge within Glenn College provides a great opportunity: sound building fabric, location and view.
- Undertake a programme of rolling upgrades to existing facilities to more accurately reflect domestic and international student expectations.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Providing equity, affordability and quality of life for those living on the campus.

SECURING FOOD, WATER AND THE ENVIRONMENT

- Creating a thriving and more sustainable on-campus community.
- Less necessary travel = less carbon emissions.

SPORT, EXERCISE AND REHABILITATION

- Giving more people the chance to readily access the University’s sports and recreation facilities by growing a diverse on-campus population.

LA TROBE UNIVERSITY MELBOURNE CAMPUS HOUSING STRATEGY

0 50 100 250m

- Undergraduate housing focus
- Postgraduate housing focus
- Market housing focus
- Market focus development parcels
- Housing located at upper levels above academic programme
- Existing building outline
- Zone for University delivered and operated Housing
- Zone for University or private sector delivered and operated housing
- Zone for potential private sector delivered and operated housing
- Pedestrian Network

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
CHARLES LA TROBE COLLEGE
MACLEOD RESIDENTIAL

UNIVERSITY TOWN LIFE STRATEGY

CONTEXT

STUDENT SERVICES

A common desire from University stakeholders is for a self-sustaining community on campus. This underpins the ambition of the University Town and lies at the heart of a dynamic and creative learning environment. For a self-sustaining community to be achieved, a critical mass of students and staff on campus is needed during the day, evenings and weekends. However, students are typically spending less time on campus as cost of living pressures and lifestyles drive them to integrate work, family commitments and travel distance and time and perceived safety of departure considerations into their choices. This situation results in many facilities catering to a diminishing audience. While student numbers are increasing, their free time on campus has reduced dramatically in recent years.

In the coming decades, a large shift to graduate degrees will occur. As a result, the University should expect the growth of this cohort at a much faster rate than the general student population. This will therefore inform the future provision of student services on campus.

It is clear that students are seeking a University experience, not just a city experience. The right balance needs to be struck to ensure that the valued institutional aspects of the campus are maintained.

Delivering a compelling University Town experience involves a multi-platform response. National and international case studies reveal that a combination of the following attributes is required:

- Affordable and appropriate housing choices in and around the campus.
- Increased full and part-time employment choices and training opportunities in and around the campus.
- Increased lifestyle entertainment, recreation and social opportunities in and around the campus.
- Increased frequency and amenity of public transport services, car share and cycling choices to the campus and surrounding destinations.
- Expanded family and community support services in and around the campus.
- Expanded opportunities for social interaction.

A number of concerns regarding student services have been noted throughout consultation. These include:

- There are not enough attractions available to keep students on campus before or after their classes. The campus needs to be 'stickier' – there needs to be a reason to stay on the campus for longer periods.
- Health services continually poll as the worst service on campus in student and staff surveys.
- The campus does not have a suitable graduation hall. This needs to be rectified as it is a very important event for students and faculties.

STAFF SERVICES

The campus lacks a University Club and quality staff meeting places are needed throughout the campus.

Staff-oriented venues need to be open for extended periods, not just during teaching hours.

The John Scott Meeting House has proven inadequate as a regular staff meeting place, is poorly sited and will be repurposed, with its current functions relocated to a more central location.

ARTS & CULTURE

The campus has a limited number of arts and culture focused facilities. The majority of facilities are outdated, insufficiently sized, and in need of renovation.

The La Trobe University Museum of Art (LUMA) is located in the ground floor of Glenn College, with a Moat frontage. LUMA manages the University's Art Collection, one of the most significant University collections in the country. The existing facility is considered to be too small, lacks appropriate storage areas, and is perceived to be hidden within the College Precinct and largely inaccessible to the general public.

Student theatre is considered to be a valuable component of student life, which offers opportunities to engage students as well as external groups (schools, visitors, etc.). Student theatre currently operates out of make-shift spaces, however, some funding has recently been allocated for the upgrade of these spaces.

The current use of the Agora Cinema is ad hoc, consisting of use as a lecture venue with some use by student clubs for film events. The Cinema has had a number of operators in the past, with none of them able to run the venue in a viable manner over the long-term. A student-run film festival uses the Australian Centre for the Moving Image (ACMI) as its venue, mainly due to the difficulty attracting people to the Melbourne campus.

CHILD CARE

The Community Children's Centre (CCR) is a very successful facility, run by the division of Student Services. This facility is open to the general public and is operated on a first come, first served basis. The Centre provides 180 places (80% staff, 15% students, 5% external approximately).

There is unmet demand from University staff and currently there are 300 positions on the waiting list.

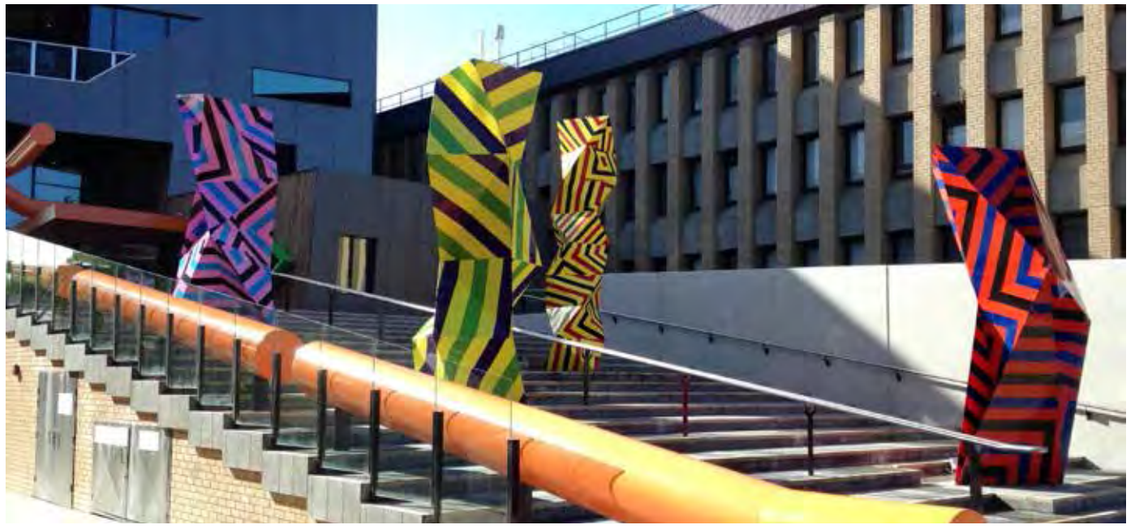
The expansion and potential decentralisation of child care facilities will be necessary to meet current and future demand.

THE UNION BUILDING

The Union Building is a major shared campus facility located within the Housing Neighbourhood. It plays an important role in University life by providing services, housing the Student Union, accommodating the Eagle Bar, and perhaps most significantly, providing Union Hall as a venue for events, exams and graduations. Union Hall can hold events for 800-1,000 people, making it a unique facility in the north.

Currently the Union Building is underutilised and in need of investment. The facility is considered to be tired and requires renovation or replacement (a large investment in either event).

The Union Building is a significant building on campus; its architectural language is part of the character and history of the campus. Its potential as an anchor building that welcomes people into the Housing Neighbourhood from the Core Campus to the north is significant



Examples of high quality University Town environments from La Trobe University's Melbourne campus, Australia and international locations.

UNIVERSITY TOWN LIFE STRATEGY

VISION

On-campus student and staff services will be enhanced and expanded to reflect the desire for a vibrant, 24/7 University Town experience. University operating hours will be expanded and more venues will be available, providing students, staff, visitors and residents with a wide range of activities to enjoy while on campus.

The University Town will seek to be both a regional attractor for events and facilities, as well as a place that facilitates learning, working and living locally.

A Cultural Precinct will be developed on the campus' Kingsbury Drive frontage, providing a major arts and cultural destination for Melbourne's north. Highly promoted arts and cultural events will be programmed year-round, bringing the University population and the surrounding community together.

The University Town will benefit from the inclusion of commissioned art and, where appropriate, works from the University's collection within the public realm in a curated manner. Integrated art within the remit of new building development will enrich the University Town experience, informing and challenging visitors.

As well as enhancing the existing CCR Children's Centre, a network of satellite child care centres will be developed throughout the campus to cater for the projected demand of the University Town. Satellite centres will be sized to complement other neighbourhood services, and located to effectively bridge between neighbourhoods and communities.

The Union Building will be redeveloped to accommodate a range of facilities that support the vitality of the student body, and particularly the growth of the surrounding on-campus residential population. The Union Building will also act as a bridge between Core Campus and R&D Park activities, providing places for formal and informal teaching, learning and research.

The development of a larger regional venue for graduations, exams, conferences and exhibitions will be accommodated in the longer term.

DIRECTIONS

IMPROVE THE CAMPUS EXPERIENCE FOR STUDENTS & STAFF

- Substantially increase the quality, location and extent of collaborative spaces for staff and students throughout the campus.
- Ensure that newly developed large-scale lecture theatres are flexible spaces that can house various events, such as art shows, reunions, graduations and conferences and are located on major movement networks or near key public transport routes.
- Expand on religious and spiritual offerings throughout the campus.
- Provide more employment and entrepreneurial opportunities on campus for students.
- Develop a high quality venue for staff and the research community of the campus to come together. This venue should be in a prominent location and cater for a variety of occasions, such as business lunches, formal dining, functions and small-scale ceremonies.
- Encourage the development of town centre uses to move south from the Polaris Town Centre into the campus, providing more activity for staff, students and visitors.
- Build sustainability and learning through the expansion of on-campus food and fibre production, environmental improvement and waste management and recycling.

PROVIDE A RANGE OF CHILD CARE FACILITIES ON CAMPUS

- Continue to operate the CCR Children's Centre as the primary child care centre on campus.
- Provide satellite child care facilities and centres on the campus to cater for existing and future demand. Co-locate complementary services with these facilities, such as research units that align with University RFAs.

ENHANCE & EXPAND ON THE CAMPUS ARTS & CULTURAL OFFER

- Develop a Cultural Precinct at an easily accessible and visible location as a magnet for community engagement and campus life. The precinct will be a hub for art, music, performance and live events in the north.
- Ensure that art and cultural facilities act as a landmark and encourage people to move into the University Town more genreally.
- Relocate LUMA to the Cultural Precinct in the medium to long-term. In the short-term, redevelop the building in its current location and ensure a design response that brings attention to this important facility.
- Develop the campus as a venue for regional events throughout the year.
- Repurpose the existing Agora Cinema (or develop a new cinema) that provides a point of difference to commercial cinemas, in the vein of the Nova and Westgarth Cinemas.
- Partner with a cinema operator to share the theatres (University use during teaching hours for lectures, cinema use at all other times).
- Create a Sculpture Walk by strategically relocating the University's 23 public sculptures. Use the sculpture walk to link major campus destinations, as part of a renewed and enriched pedestrian network.
- Programme events in the Moat Theatre (amphitheatre) throughout the year, such as live music and community fairs.

MAKE THE UNION BUILDING A NEIGHBOURHOOD FACILITY

- Refurbish the Union Building as an iconic graduation hall for the campus.
- Progressively redevelop the Union Building to accommodate a range of activities that support the vitality of the student body, and particularly the growing residential population.
- Develop a portion of the Union Building as a teaching, learning and research 'bridge', which acts as a connection between the Core Campus and the R&D Park, catering for students, staff and researchers.

EARLY WINS

- Extend University operating hours, including teaching periods, to provide more vitality and activity on the campus in the evenings and potentially on weekends.
- Utilise the University's outdoor sculpture collection to create a sculpture trail throughout the campus.
- Provide inexpensive 'pop up' cafe offerings throughout the campus to provide more choice for staff and students and activate spaces.
- Begin to develop a year-round events calendar (arts, culture, sport), with an emphasis on inviting the community into the campus.
- Establish a child care centre in proximity to the Mont Park Terraces and Ernest Jones Hall.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Ensure that campus environments in which staff, students and visitors live, work and socialise are health enhancing and sustaining.
- Develop the campus in a manner that ensures the health and wellbeing of under-served and disadvantaged groups is a priority.

TRANSFORMING HUMAN SOCIETIES

- Develop the campus as a 24/7 University Town, transforming the way that students and staff interact together (e.g. not a just a tertiary education experience).
- Ensure that indigenous cultures are recognised in everyday student and staff life.

REFERENCE DOCUMENTS

- *Melbourne Campus Vision 2012*, January 2013.
- *Future Ready Strategic Plan 2013–2017*, 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS CAMPUS LIFE STRATEGY

0 50 100 250m

- Community Children's Centre (with expansion)
- Potential satellite child care centre
- Location of potential upper level cinema facilities
- Proposed arts/cultural building
- Existing arts/cultural building
- Plaza
- 'Village Green' outdoor event spaces
- Moat Theatre
- The La Trobe Sculpture Trail (30 sculptures at approx 70m)
- Sporting Avenue of Honour
- Primary Pedestrian Network

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
CHARLES LA TROBE COLLEGE
MACLEOD RESIDENTIAL

RETAIL STRATEGY

CONTEXT

The La Trobe University Retail Development Strategy (2011) determined that retail provision on-campus accounts for a total of 4,000-5,000sqm of floorspace. The main cluster is at the Agora, which accounts for 27 tenancies and almost 3,300sqm of floorspace. Remaining areas included retail provided in the Union Building, in residential colleges, La Trobe Medical Centre and other satellite venues (e.g. the Indoor Sports Centre, small kiosks). At a broader level, there is demand for an additional 31,700sqm of retail floor space in the Darebin-Banyule region between 2010 and 2026.

THE AGORA

The Agora houses the majority of the food and beverage outlets and retail on the campus and is a vital economic and social hub.

The Agora is well located in the context of the overall campus. It occupies a central position at the cross points of major east-west and north-south axes.

Many of the academic, administration and teaching facilities lie within a few minutes walk of the Agora, making the space and facilities close and accessible for most staff and students in the Core Campus.

There is a need for physical and other improvements to retail spaces. These changes are necessary to ensure that the campus' facilities meet the contemporary needs of its stakeholders and keep it competitive with other learning institutions.

THE UNION BUILDING

The Union Building has a small selection of outlets, such as the Eagle Bar and Pings Moat Cafe. It is generally seen by students and staff as isolated from the Core Campus, even though it is just a few minutes' walk from the Agora.

SATELLITE RETAIL & HOSPITALITY

There are a number of retail outposts scattered throughout the campus, usually as part of more recent development, such as the Western Lecture Theatre and the Agri-Bio Building.

Until recently, the John Scott Meeting House was an established, although problematically located, meeting place for University academics and management staff and was used for business meetings and office functions. Its restaurant function has ceased and the building is being repurposed for academic use as a hub for the Graduate Research School. Over the short to medium-term future, other locations on campus will cater in a limited capacity for restaurant, staff and business meeting functions.

The Kingsbury Drive Community Market is held every Sunday in Car Park 2 between 9 am and 1 pm. It is a general market managed by Diamond Valley Community Support with money raised supporting their community service programmes.

POLARIS TOWN CENTRE

The mixed-use, commercial and residential Polaris Town Centre is currently under development to the north of the campus, abutting Plenty Road and Main Drive. The staged development includes a 'main street' based shopping centre anchored by a full-line supermarket. The development is also expected to include apartments, townhouses, a large community centre and medical centre.

The Centre is already an attractive retail option for students and on-campus residents and an alternative destination when retail facilities on campus are closed. Connections between the Core Campus and this centre are yet to be effectively developed for pedestrians.

ON-CAMPUS RETAIL CONCERNS

- Staff and students are consistently concerned with the quality and price of food and beverage on the campus.
- Retailers on campus face significant challenges, including semester-dependent trading periods, a finite customer base, falling student attendance levels and contact hours, increased competition on the campus, and constantly evolving consumer tastes.
- The Polaris Town Centre's location and offerings will attract University staff and students, potentially weakening campus retail and hospitality.
- Staff and students frequently request better seating, amenity improvements and weather protection.
- Upper level tenancies in the Agora have suffered from reduced trade due to a sharp fall in pedestrian volumes on this level (largely due to revised circulation arrangements).
- The La Trobe R&D Park presents a large catchment of potential customers. However, R&D Park staff perceive the Core Campus to be too far away to walk to.
- The Union Building is considered tired and needs to be renovated. It is somewhat removed from the campus and lacks a cohesive vision for its role as a retail and hospitality destination.
- The campus effectively closes at 5.00–5.30 pm on weekdays, providing students, staff and residents with few on-campus options after hours.
- With the closure of the John Scott Meeting House there is a long-term need for an appropriate venue for business meetings, restaurant events, and for staff to take visitors.

VISION

The University Town model recognises the importance of providing a variety of spaces for meeting and informal learning. A carefully curated retail offer, which includes cafes and eateries, helps to provide these informal spaces on campus.

The majority of retail offerings on the Melbourne campus will be located in two clusters: the Agora and within the northern Town Centre; a counterpoint to the Polaris Town Centre development. Satellite retail nodes will be provided around the campus, located at key University and community destinations.

New retail on the campus will be curated to ensure that it is complementary to both the Polaris and Agora offer, while providing a clear point of difference. The year-round and day/night viability of retail outlets will be secured by a growing on-campus student, worker and resident population.

These venues will be complemented by a series of high quality streets, squares, intimately-scaled laneway environments, and transitional protected external environments. Where possible, retail clusters will be surrounded by higher density office and residential uses that will drive underlying demand.

DIRECTIONS

- Complement the main retail offering and provide satellite retail nodes around the campus, incorporating venues sized and tenanted to meet the needs and activities offered therein.
- Cluster complementary retail around major destinations throughout the University Town, and consolidate offerings on ground level, with the exception of venues that are introverted in nature, such as black box theatre and cinema facilities better located at upper floor levels.
- Recognise the importance of informal areas throughout the campus for meeting and informal learning (cafes and eateries).
- Develop the forecourt and entrance of the Thomas Cherry Building and Agora West, and develop a hospitality venue to support the increasing bus passenger population and role of this area as a key entry to the campus.
- Locate town centre-style retail and hospitality uses on University land to the south of the Polaris Town Centre (within the Town Centre Neighbourhood) configured in a manner that ensures this precinct operates as an extended hour hub for social activity in the University Town.
- Ensure that the future Town Centre retail offer is complementary to both the Polaris and Agora offer, and provides a clear point of difference.
- In the long-term investigate a new staff club and restaurant located at the southern end of Science Drive. Deliver this facility in conjunction with the proposed cultural hub and capitalise on views to the lake network and synergies with other planned infrastructure.

EARLY WINS

- Provide an appropriately scaled and targeted hospitality offer within the Ernest Jones Hall to cater for the forthcoming increase in the University workforce located in the Mont Park Terraces, as well as existing residential communities and users of prospective child care facilities.
- Improve pedestrian connections between the R&D Park and the Core Campus to increase the effective catchment of the Agora retail offer.
- Improve connections between the campus and the Polaris Town Centre to facilitate enhanced catchments and choices for each neighbourhood .
- Develop enhanced east-west paths and forecourt treatments that better link Science Drive to the Core Campus retail offerings.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Ensure the campus retail and hospitality offer provides healthy food options.
- Encourage retailers to purchase goods locally where possible.
- Encourage walking and cycling on the campus by creating convenient and efficient connections to retail nodes.

REFERENCE DOCUMENTS

- *La Trobe Retail Development Strategy*, December 2011.
- *La Trobe University Retail Development Strategy Study*, Buchan Group, April 2011.

LA TROBE UNIVERSITY MELBOURNE CAMPUS RETAIL STRATEGY

0 50 100 250m

- Agora Retail Hub
- Future Town Centre retail hub
- Polaris Town Centre retail hub
- Existing satellite retail node
- Future satellite retail node (indicative location)
- 400m walking radius (5 minute)
- Primary Pedestrian Network

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

SPORTS & RECREATION STRATEGY

CONTEXT

The Melbourne campus provides an extensive range of sports facilities, including a multi-purpose indoor aquatic/leisure centre, tennis courts, multi-use playing fields, main oval and specialist baseball diamond. Associated amenities include sports pavilions, practice facilities, sports lighting and car parking.

Sports facilities can be found in two areas of the campus: the playing fields to the south of Kingsbury Drive; and in and around the Indoor Sports Centre in the north of the Housing Neighbourhood.

The University Town has the opportunity to put forward a physical model for urban development that encourages activity as a core ambition. There is likely to be growing demand for access to informal and casual sport and recreation participation opportunities and growing demand for access to appropriate multi-purpose spaces that can accommodate a range of health and fitness programmes. The future student and on-campus residential population will exacerbate the demand for high quality sports and recreation facilities.

INDOOR FACILITIES

- The Indoor Sports Centre facilities require substantial refurbishment (or redevelopment) in order to meet the contemporary needs and expectations of users. Inadequate facilities constrain further membership and growth for a number of University-based clubs.
- The Indoor Sports Centre field house is inadequate. Additional court space is urgently needed. The existing sports court was constructed with expansion in mind and does not comply with current association standards.
- Additional programming space/facilities are required in order to support a broader programme base, including wellness initiatives.
- There is a lack of storage space for a number of outdoor sports clubs' equipment.
- The topography of the area has created a split level facility with significant accessibility issues.

OUTDOOR FACILITIES

- The playing fields are physically and visually separated from the main campus by Kingsbury Drive, and there is a lack of clear and efficient connections between the playing fields and the Indoor Sports Centre.
- The Main Oval Pavilion and Lower Playing Field (LPF) pavilion are not adequately meeting the needs of sporting clubs and user groups.
- The facilities surrounding the baseball diamond require upgrade.
- The large spaces beyond the playing fields (including water bodies and significant vegetation that limits development potential) are underutilised and have poor connections to the campus.
- The existing gravel car park has no line marking and is relatively inefficient in its use of space.
- The La Trobe Golf Park (driving range) is located on the southern side of Preston General Cemetery, occupying much of the Plenty Road frontage.
- Facilities on the campus are generally not acceptable for elite sporting clubs and athletes.

VISION

The University aims to be the first choice for study, participation and partnerships with sport, with a mission to achieve this aim by 2022. The University's sports infrastructure will be integral to the implementation of the La Trobe Sport initiative.

Building on the University's established brand, the campus will develop as a regionally significant sports and recreation destination. The campus' sports & recreation facilities will cater for a diverse range of user groups; from elite athletes and professional organisations to local sporting clubs and the general public.

The proposed Regional Sports & Recreation Centre will provide an environment that allows the University community to deliver innovative, multidisciplinary teaching and research outcomes in sport, exercise and rehabilitation.

Sports and recreation facilities will be integrated within a highly accessible and connected place, benefitting from enhanced, sustainable transport links to the growing Plenty Road corridor, the Core Campus, and the popular Darebin Creek Trail and parklands.

DIRECTIONS

DEVELOP A REGIONAL SPORTS & RECREATION CENTRE

- Develop a Regional Sports and Recreation Centre in proximity to Kingsbury Drive. Key functions to be provided within the Centre include:
  - 6 – 8 multi-use courts.
  - 25 – 50m pool, rehab. pool and gym.
  - Rehabilitation and consulting room facilities.
  - Integrated teaching, learning and research spaces.
  - Integrated car parking node with clear and secure access to the Core Campus.
  - Offices for regional sporting clubs, and aligned peak sporting and wellbeing organisations.
  - Complementary offerings, such as retail and child care.
- Provide a direct link to the Centre from Plenty Road, catering for public transport and vehicles.
- Ensure the centre incorporates a high quality end-of-trip facilities for cyclists and generously scaled visitor cycling facilities.
- Co-locate complementary University facilities/ functions in order to establish an integrated service hub and key destination point.
- Investigate the long-term opportunity for Stage 2 regional sports infrastructure development on Plenty Road, as well as complementary uses (e.g. commercial, residential).

IMPROVE THE SOUTHERN PLAYING FIELDS & FACILITIES

- Upgrade existing sports venues and facilities to regional and state competition quality to attract a more significant programme of events throughout the year (including elite sports activities).
- Develop a walking and running track throughout the precinct to promote health and wellbeing and encourage community engagement (the La Trobe Tan Stage 2).
- Develop an 'avenue of honour' statue trail within the precinct, honouring the notable sportsmen and sportswomen of the University and the region.
- Expand the professional level turf upgrade to the west over time to ensure that multiple fields can be prepared.
- Ensure that future pavilions/viewing platforms are designed to provide viewing opportunities for multiple venues (wherever possible).
- Provide for an all-weather surface within the precinct, in proximity to complementary uses.
- Ensure that land is available within the precinct for the construction of a second all-weather surface in the long-term (subject to demand).
- Provide easy pedestrian and cycling connections between the Sports and Recreation Neighbourhood and surrounding neighbourhoods.

DEVELOP NEIGHBOURHOOD SPORTS CENTRES

- Improve the Indoor Sports Centre facilities to cater for on-campus residents and campus neighbours, such as the residents of Springthorpe and the new Polaris Town Centre.
- Develop a network of small-scale, complementary sports centres throughout the University Town to cater for the anticipated growth in student and staff population, general employment and on-campus residents.
- Provide a safe and efficient physical connection between the Sports & Recreation Neighbourhood and the Core Campus and Housing Neighbourhood.

PROVIDE INFORMAL RECREATION OPPORTUNITIES

- Provide informal recreation spaces throughout the campus, available to members of the University and the surrounding community.
- Develop the La Trobe Tan (Stage 1), a 3.0 kilometre walking and recreation track that circles the Core Campus, with exercise stations and water fountains at regular intervals along its length.

EARLY WINS

- Develop a safe and secure route between the Sports Neighbourhood and the Colleges.
- Develop Stage 1 of the La Trobe Tan.
- Undertake early planning for the siting, briefing and configuration of the Regional Sports & Recreation Centre.
- Undertake relatively inexpensive improvements to the baseball diamond and associated facilities to enable professional-level competition at the venue.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Improve the health and wellbeing of University students, staff and the general community.

SPORT, EXERCISE AND REHABILITATION

- Ensure that adequate facilities are available that allow for a happy and healthy staff and student population.
- Provide an environment that allows the University community to deliver innovative, multidisciplinary research outcomes in sport, exercise and rehabilitation.

UNDERSTANDING DISEASE

- Provide facilities that allow researchers to understand 'lifestyle' diseases, such as cancer, heart disease and Type 2 Diabetes.

REFERENCE DOCUMENTS

- *Bundoora Campus Sports Facilities Framework: Final Report*, October 2011.

LA TROBE UNIVERSITY MELBOURNE CAMPUS SPORTS & RECREATION STRATEGY

0 50 100 250m

- Sports and recreation facility
- Sports and recreation hub
- Opportunity for informal recreation activities
- Playing field
- Sports and Recreation Neighbourhood
- Avenue of Honour (celebration of La Trobe University's sporting heroes)
- La Trobe Tan Stage 1 (proposed)
- La Trobe Tan Stage 2 (future)
- Primary Pedestrian Network
- Regional bicycle paths

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
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4.3 PUBLIC REALM

LANDSCAPES STRATEGY

CONTEXT

La Trobe University's Melbourne campus was created in the 1960s and occupies more than 1.8 square kilometres. Currently home to over 22,000 students, the campus includes sporting and recreational facilities, and on-campus residential colleges. It is the largest university campus in the Southern Hemisphere. The campus has a constructed moat system through the centre, bordered by vegetation. Throughout the campus there are a series of open spaces.

The campus has an abundance of green space – it is surrounded by parkland, wildlife reserves, sporting fields, and has an extensive water system running through its core.

Compared to other university campuses in Victoria and prominent universities in the United States, it is clear that the Melbourne campus has a very high proportion of open space. However, these open spaces are currently not well utilised by the university community. Many of the spaces lack sufficient amenity, and are not activated by adjacent buildings. Many of the spaces do not provide shade or shelter from the elements, or adequate seating.

VISION

The University Town landscape vision is to transform the campus into a 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 only. Additional shared paths will be implemented across the site encouraging staff and students to walk or cycle around campus. This will reduce the requirement for large amounts of car parking on the site, and enable the transformation of portions of this land back into public open space.

The campus will be green; avenue planting will line key access corridors, and facilitate campus orientation. High quality garden courtyards will occupy the spaces between buildings, encouraging outdoor learning and recreation.

DIRECTIONS

CREATE AN ACTIVITY SPINE

- Create a strong pedestrian oriented spine with integrated public transport hubs.
- Activate key parts of the core, facilitate movement and link to the Polaris retail precinct.

FORM AN EAST-WEST GREEN AXIS THROUGH THE CORE

- Unite disjointed spaces within the campus.
- Build upon the success of the Agora, linking the Science Drive transport interchange and Simpson Place to create a sequence of activated urban plazas.

FORM A NORTH-SOUTH GREEN AXIS THROUGH THE CORE

- Create a series of high quality activated formal courts and lawns that connect the Moat, the Library with the Agora on a northern axis.
- Create an exemplar space adjacent to the Library that promotes and reveals water ecology.

TURN THE MOAT SYSTEM INTO A SIGNIFICANT ASSET

- Ensure the Moat system remains a vital and memorable recreational asset and a point of difference for the campus. It will have positive interactions with building interfaces, and be a linking element within the campus, facilitating pedestrian and cyclist connections.

PROVIDE A SIGNIFICANT GATEWAY EXPERIENCE

- Create a strong and welcoming gateway element to better connect with the community, and signify La Trobe University as one of Australia's pre-eminent universities.

CONNECT THE WILDLIFE SANCTUARY

- Ensure that the Wildlife Sanctuary is developed as a teaching, research and community education facility. It should be visually and physically connected to its surrounds with consideration of integrated research and interpretation hubs.

CREATE OPEN SPACE LINKS TO THE BROADER COMMUNITY

- Protect and enhance the campus' strong open space links, including to the Moat system and key parkland spaces.
- Ensure that landscape links are expanded to permeate through the research and residential communities, creating green habitat, recreation and circulation corridors that connect into the campus.

CONSOLIDATE KEY LANDSCAPE TYPOLOGIES

- Protect and celebrate the campus' significant landscape assets, which include areas of woodland, bushland and parkland.
- Consolidate and enhance these landscapes to protect their important ecological value.

FACILITATE LINKS TO THE SPORTING AREAS

- Connect the Sports and Recreation Neighbourhood, including Playing Fields, to the Core Campus.
- Create clear links for pedestrians, bicycles, and cars to facilitate the integration of the sports facilities into the campus.

MAKE PEDESTRIANS A PRIORITY ON CAMPUS

- Prioritise pedestrian movement at-grade in order to provide a safe environment for students, staff and visitors.

REFERENCE DOCUMENTS

- *La Trobe University 10 Year Capital Development Plan: Landscape Design Guidelines*, October 2011.
- *La Trobe University Landscape Master Plan*, November 2004.
- *La Trobe University Master Plan*, Yuncken Freeman Architects, July 1965.

EARLY WINS

- Restrict vehicle access on campus, providing pedestrian priority across the Core.
- Upgrade key green spaces along the north-south and east-west Core Campus axes.
- Provide a significant gateway element to signify the University's presence on Plenty Road.
- Develop safe and secure access routes between University Town Neighbourhoods – especially between the Core Campus and the Sports and Recreation Neighbourhood, and the Housing Neighbourhood and public transport nodes.

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

- Facilitate thriving ecosystems throughout the Moat system by creating green corridors.
- Provide a platform for learning and interaction. The integration of the Moat system and Wildlife Sanctuary within the campus will enable the study of land and water management practices.

SPORT, EXERCISE AND REHABILITATION

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

LA TROBE UNIVERSITY MELBOURNE CAMPUS LANDSCAPES STRATEGY

0 50 100 250m

- Primary Garden Courtyards
- Primary Urban Spaces
- Core Campus in a Green Setting
- Moat/Eco Corridor
- Wildlife Sanctuary & Offset
- Campus Bushland Character
- Heritage Listed Grounds
- Water

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE
KINGSBURY DRIVE
PRESTON
PRESTON GENERAL CEMETERY
PLENTY ROAD
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD

ECOLOGY & BIODIVERSITY STRATEGY

CONTEXT

The Melbourne campus sits within a landscape of unique ecological significance.

The campus includes remnant vegetation patches from two indigenous bioregions; a number of native vegetation offsets with considerable biodiversity value; and is host to the La Trobe Wildlife Sanctuary. The campus also hosts a wetland system that feeds into Darebin Creek – a major wildlife corridor for the greater Melbourne region.

The area surrounding the campus is host to five listed threatened ecological communities, 29 listed threatened species, and 13 listed migratory species. In total, indigenous species include 214 birds, 20 mammals, 23 reptiles, 12 frogs, 9 freshwater fish and thousands of invertebrates.

The campus is surrounded by important indigenous habitat remnants, which contain large intact stands of River Red Gum Woodlands and indigenous grasslands, including the Gresswell Forest Reserve and the Harry Pottage Reserve.

Native habitat within the Melbourne campus represents a crucial eco-corridor or habitat link for the Bundoora region. The site is an important east-west stepping stone between larger regional habitat link, particularly for wetland species. As urban development increases in density, eco-corridors serve a critical function in supporting population size and genetic diversity for vulnerable native species.

VISION

The Melbourne campus will build a healthy, thriving, state significant corridor of native vegetation and wetlands that supports and enhances native biodiversity and water quality, both locally and on a regional scale.

As a basis for this vision, the following six key objectives have been identified for ecology and biodiversity at the Melbourne campus:

- Aim for a 'net gain' in native biodiversity across the Melbourne campus over the coming 30 years.
- Assist ecological capital to engage with community and build amenity.
- Enhance water quality outcomes on-site and for downstream receivers – particularly Darebin Creek.
- Improve the interface and function of the La Trobe Wildlife Sanctuary as a University asset of national significance.
- Build resilience to extreme weather events, such as drought and flooding under future climate scenarios.
- Identify and enhance opportunities for research and education throughout the campus.

DIRECTIONS

The following strategies to enhance ecology and biodiversity have been integrated throughout the Master Plan:

- Establish a native riparian 'eco-corridor' through the site as a regionally significant habitat link.
- Retain and integrate native vegetation throughout the built environment.
- Improve native biodiversity values along the eco-corridor by providing native revegetation, weed and pest control, and landscape rehabilitation.
- Establish and consolidate new ecological offset sites in strategic locations to achieve a 'net gain' in native biodiversity alongside increased campus development.
- Improve outcomes for water and wetland ecology through water sensitive urban design (WSUD) and improved stormwater retention, treatment and reuse.
- Identify ecological enhancement strategies that can set national precedents for University research and education, such as floating macrophyte islands for water treatment.
- Make use of indigenous species (particularly drought resilient species) wherever possible for campus landscaping.
- Improve the access, protection and enjoyment of ecological capital by improving defined bicycle and pedestrian networks throughout the primary eco-corridor and improving access to offset sites.
- Improve public interface and visitor infrastructure for the La Trobe Wildlife Sanctuary.
- Ensure that the balance between pervious and impervious surfaces is considered throughout each University Town Neighbourhood in order to enhance biodiversity and ecological outcomes and to maintain the existing valued open space character of the campus.
- Ensure that development controls for each University Town Neighbourhood provide a maximum limit for impervious surfaces (when measured as a percentage of the total area of each University Town Neighbourhood) to preclude unintended 'creep' over the Master Plan's duration. For a detailed breakdown of each Neighbourhood's pervious to impervious surface area ratio, please refer to the table within the **Neighbourhoods Strategy** (page 84).

ECO-CORRIDOR

A key direction for enhancing campus ecology and biodiversity is the establishment of a primary 'Eco-corridor', which spans the campus length along the existing wetland system. The Eco-corridor will provide a crucial habitat link between La Trobe Wildlife Sanctuary and other nature reserves and waterways to the north and east of the campus.

The Eco-corridor forms a bridge between:

- Darebin Creek Major Wildlife Corridor: follows the Darebin Creek from Banyule to the Yarra River, supporting a range of habitat remnants, which have been elsewhere depleted.
- Yallambie-Bundoora Plains Habitat Link: links remnant River Red Gum Woodlands across northern and western Banyule.
- Salt Creek Link: an important natural habitat link between the Gresswell Forest Reserve and the Yarra River Corridor.

EARLY WINS

- Investigate Moat and wetland works to enhance water quality and to establish a suitable bank grade for native riparian planting.
- Enhance the riparian habitat around the Moat and lakes through select removal of exotic tree species (particularly willows), weed control, landscape rehabilitation and native species vegetation.
- Undertake shared user pathway and wayfinding enhancements to improve access and appreciation of campus ecological capital.
- Select indigenous species throughout campus landscaping.
- Protect and rehabilitate the area south of the Sports Fields Lake as a priority area of high ecological value (refer to Ecological Offset Strategy, p. 108).

ALIGNMENT WITH RFAs

SECURING FOOD, WATER AND THE ENVIRONMENT

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

REFERENCE DOCUMENTS

- *Integrated Land and Water Management Plan: Melbourne Campus*, October 2011.
- *La Trobe University Sports Field: Flora, terrestrial fauna and net gain assessment*, May 2011.
- *La Trobe University Research and Development Park: Biodiversity Issues and Management Plan*, February 2005.

LA TROBE UNIVERSITY MELBOURNE CAMPUS ECOLOGY & BIODIVERSITY STRATEGY

0 50 100 250m

- Campus Eco-corridor
- Regional eco-corridors
- Existing Offset Agreement Area (to be revegetated and rehabilitated with strategic native vegetation)
- Proposed Offset Areas (to be revegetated and rehabilitated with strategic native vegetation)
- Native vegetation retained and used through campus landscaping where possible
- Wildlife Sanctuary Visitors Centre and allied facilities

BUNDOORA PARK
TO DAREBIN CREEK MAJOR WILDLIFE CORRIDOR
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
TO HABITAT LINK AND YALLAMBIE-BUNDOORA PLAINS
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
TO DAREBIN CREEK MAJOR WILDLIFE CORRIDOR
PLENTY ROAD
MONT PARK
TO SALK CREEK LINK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
TO SALK CREEK LINK
DAREBIN CREEK
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE
TO DAREBIN CREEK MAJOR WILDLIFE CORRIDOR
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD

ECOLOGICAL OFFSET & WILDLIFE SANCTUARY STRATEGY

CONTEXT

CONSERVATION COVENANTS

La Trobe University has in place a permanently binding conservation covenant over the La Trobe Wildlife Sanctuary. This agreement provides statutory protection of the site in recognition of its regional ecological significance. La Trobe University's Conservation Covenant is registered with Trust for Nature through the Victorian Conservation Trust Act 1972.

The Wildlife Sanctuary is a campus asset of national significance, which is currently underutilised. There is significant opportunity to develop a better public interface for the Sanctuary to improve public access, engagement, awareness and enjoyment.

The North Bushland Reserve, to the south of the Wildlife Sanctuary is also protected by a Conservation Covenant registered with Trust for Nature requirements.

OFFSET AGREEMENTS

The Melbourne campus hosts a number of sites holding Offset Agreements, established to compensate for native vegetation removal during campus development to date.

Offsets provide an opportunity to balance the need to protect critical indigenous flora and fauna species alongside the need to expand urban landscapes. Under the reformed Victorian native vegetation framework, certain native vegetation must be replaced on a 'no net loss' basis.

Existing offset sites are largely inaccessible due to restrictive fencing and a lack of connectivity with the wider campus. Offset Agreements are registered with DEPI through the Bush Broker Scheme. The four sites on the Melbourne campus are detailed in the table below:

Site number	Description	Area (Ha)
BB-2239-001	Central Bushland Reserve	1.11
BB-2239-002	South Bushland Reserve	1.31
BB-2239-003	Car Park 4 Bushland Reserve	0.21
BB-2239-004	Darebin Creek Bushland Reserve	0.46

VISION

The vision for ecological offset and covenant sites across the Melbourne campus is based upon improved visibility and access for existing sites, ecological 'net gain' through revegetation and weed control, and establishment of new ecological offsets to protect priority native habitat to the south and west of the Sports Fields Lake.

A major revitalisation of the Wildlife Sanctuary will be delivered through a suite of upgrades and improvement projects.

Enhancing access to offset sites will provide improved appreciation of campus natural capital, increase amenity value for the campus residents and visitors, and provide potential research opportunities for students.

DIRECTIONS

REVITALISE EXISTING OFFSETS

- Remove perimeter fencing (protective fencing will be used as necessary, for example to protect seedlings in revegetation zones).
- Provide informative/educational signage.
- Direct access via low-impact walkways where appropriate and in agreement with DEPI.

REVITALISE THE LA TROBE WILDLIFE SANCTUARY

- Relocate primary access to the south-west of the Wildlife Sanctuary, via Campus Crescent (the current Ring Road) to facilitate connections to the Core Campus.
- Develop a major new visitor centre, located between the interface of the campus and the new primary access point.
- Confirm facility scope for new visitor centre, validated by Project and Business Plan (existing facilities include indigenous plant nursery and spaces for retail, education and Sanctuary equipment). Site area to accommodate options for allied facilities.
- Develop an improved internal closed loop path network for visitors.
- Provide improved signage for wayfinding and educational purposes.
- Commit to ongoing revegetation, weed and pest control and strengthening of perimeter fencing.

FUTURE OFFSET SITES

Over coming years, new offset sites will be established to allow the expansion of urban environments in other areas and for the long-term protection of important biodiversity.

A suitable area for future offset sites has been identified to the south and west of the Sports and Recreation Neighbourhood. Extensive ecological surveys in this area indicate that the site is of high ecological significance and provides important indigenous habitat to protected and endangered species.

The location of these new offset sites will provide a strategically important habitat link between the campus eco-corridor and the Darebin Creek Major Wildlife Corridor.

In the short-term, strategic revegetation and rehabilitation will be implemented to further enhance the ecological and biodiversity values of the site. Offset Agreements will be established over the long-term in agreement with DEPI alongside continuing campus development.

OFFSET & COVENANT RESTRICTIONS

Permissible activities in a Conservation Covenant or Offset Agreement site may include:

- Controlled thoroughfare.
- Paths, internal fencing and signage.
- Education and research.
- Vegetation rehabilitation.
- Paths, internal fencing and signs.

Prohibited activities in these sites may include:

- Native vegetation removal.
- Vehicle use.
- Ground disturbance.

Other land-uses for a covenant or offset site may be allowed if they do not adversely affect the conservation of the land.

EARLY WINS

- Investigate strategic revegetation to the south and west of the Sports Fields Lake, prior to the establishment of new Offset Agreements.
- Revitalise existing Offset Agreement areas by removing perimeter fencing and providing low-impact pedestrian access and signage.

ALIGNMENT WITH RFAs

SECURING FOOD, WATER AND THE ENVIRONMENT

- Enhance ecology & biodiversity values throughout the campus.
- Improve stormwater outcomes and drought resilience through a healthier network of eco-corridors.
- Provide educational and research opportunities throughout Conservation Covenant and Offset Agreement Areas.
- Promote student, staff, R&D Park worker and wider community engagement throughout the University Town's network of Offset sites.

REFERENCE DOCUMENTS

- *Integrated Land and Water Management Plan: Melbourne Campus*, October 2011.
- *La Trobe University Sports Field: Flora, terrestrial fauna and net gain assessment*, May 2011.
- *Offset Management Plan for the Central Park, South Park, Car Park 4 and Darebin Creek Bushland Reserves, La Trobe University, Victoria*, July 2009.
- *La Trobe University Research and Development Park: Biodiversity Issues and Management Plan*, February 2005.
- *Relocation plan for Matted Flax-lily: La Trobe University R&D Park, Bundoora, Victoria*, October 2004.
- *Deed of Covenant for the Conservation of Land: La Trobe University of Bundoora 3083*, Trust for Nature (Victoria), January 2012.

LA TROBE UNIVERSITY MELBOURNE CAMPUS ECOLOGICAL OFFSET & WILDLIFE SANCTUARY STRATEGY

0 50 100 250m

Existing Conservation Covenant

Existing Offset Agreement Area

Proposed future Offset Areas
Offset Agreement Areas resulting from future vegetation removal to be directed to this region of the campus

WLS Visitors Centre, allied facilities and crossing works

COVENANT & OFFSET AREAS

La Trobe Wildlife Sanctuary Conservation Covenant	30.04 Ha
North Bushland Reserve Conservation Covenant	1.85 Ha
Existing Offset Agreements	3.09 Ha
Proposed Future Offset Areas	18.5 Ha
Total Proposed Protected Area	**53.5 Ha**

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
30.04Ha
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
NORTH BUSHLAND RESERVE
1.85Ha
MONT PARK
TERRACE WAY
BB-2239-003
CARPARK 4 BUSHLAND RESERVE
0.21 HA
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
BB-2239-004
DAREBIN CREEK BUSHLAND RESERVE
0.46 HA
13.70Ha
DAREBIN CREEK
2.07Ha
3.17Ha
BB-2239-002
SOUTH BUSHLAND RESERVE
1.31 HA
BB-2239-001
CENTRAL BUSHLAND RESERVE
1.11 HA
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD

CAMPUS AMENITY STRATEGY

CONTEXT

WIND AMENITY

The weather station located on the campus has provided detailed local climatic data. The area that the Melbourne campus sits within generally experiences relatively normal wind loads. The average annual wind speed at 9am is 10.8km/h, with the months of August to October considered to be the windiest (mean wind speed of 13.2km/h at 9am). Recordings taken in Viewbank (5.3 kilometres away) reveal an average annual wind speed at 3pm of 17.2km/h, with stronger wind speeds during Spring and Summer months.

There are clear diurnal and seasonal shifts in wind direction that all new development must take into account. Throughout the year, the prevailing wind is from the south, with lesser winds originating from the north and east.

The greatest levels of wind discomfort are experienced in the 'corridors' created between built form within the Core Campus, as well as in areas with little buffer landscaping or tree cover, such as the playing fields and car parks. In areas where there are only low buildings, the public realm generally experiences acceptable wind speeds.

SOLAR AMENITY

Overshadowing is generally not an issue throughout the campus, as it is predominately characterised by low to medium-rise buildings of 2-5 storeys. Some overshadowing of the public realm occurs on the south side of Core Campus buildings, which are oriented in an east-west direction (e.g. the recently constructed LIMS building).

ACOUSTIC AMENITY

The level of background noise experienced on the campus is generally acceptable. The primary noise emissions on campus originate from building plant and equipment, as well as traffic on the surrounding arterial road network (e.g. Kingsbury Drive and Plenty Road). As University Town activities grow significantly in the coming decades, attaining a reasonable level of acoustic comfort for the campus population (through noise mitigation measures) will become a greater issue than at present.

VISION

Public realm spaces and places throughout the campus will be developed to provide a high quality of amenity. A safe, sheltered environment that fosters day/night pedestrian activity will be provided to staff, students and visitors to the campus, throughout all seasons. The design of public realm spaces and built form will be underpinned by a strong commitment to environmentally sustainable design principles that work with climatic conditions.

The University Town experience will also be configured and organized to deliver urban environments that enhance the legibility and experience of places and spaces. Principal public realm spaces will be configured with a north-south bias, ensuring sunlight to alternate pavement zones through key times of the day throughout the year.

Major pedestrian arrival points and public realm areas will be configured so that they enjoy solar access and comfortable wind speed levels at street level to facilitate a range of activities for long periods of time.

The campus population and those living and working in surrounding neighbourhoods will not be adversely affected by noise generated by University and University-partner activities.

DIRECTIONS

PROVIDE SHELTER FROM THE ELEMENTS TO ALLOW EASY & COMFORTABLE PEDESTRIAN MOVEMENT THROUGHOUT THE CAMPUS

- Provide covered walkways that run along or parallel to the Primary Pedestrian Network. Ensure that sheltered pathways are as direct as possible to enable efficient travel between destinations during adverse weather conditions.

DESIGN FOR A COMFORTABLE EXPERIENCE YEAR ROUND

- Ensure that new and adapted spaces respect the human scale and enjoy good solar access and wind protection year round.
- Ensure that detailed wind studies are completed by specialist wind engineering consultants on all significant new built form greater than six storeys in height (e.g. within the Town Centre and R&D Park neighbourhoods).
- Employ design solutions that reduce wind turbulence, such as positioning of slender built form on podiums, which help to deflect wind before it reaches street level.

INVEST IN PUBLIC REALM WORKS THAT IMPROVE AMENITY

- Invest in outdoor elements that provide shelter from wind, rain and sun.
- Invest in robust street furniture to encourage informal and social activities around the campus.
- Increase tree and shrub plantings to create windbreaks, provide shade and cool the campus microclimate, while supporting biodiversity networks.

USE LANDSCAPING TO MODERATE CLIMATIC CONDITIONS

- Develop landscapes that offer green relief to hard paving and act to reduce 'heat island' effects within urbanised areas of the campus.
- Use soft landscape elements to provide shade and shelter within the public realm.
- Include landscaping features (such as natural foliage windbreaks) throughout wind trouble-spots to help reduce discomfort at ground level and in future development to ensure pedestrian comfort.

ENSURE SUNLIGHT ACCESS IS PROTECTED

- Provide adequate solar access, to both current and future built form, by undertaking solar analysis of all built form proposals.
- Ensure that future built form has sufficient setbacks to minimise impact on solar amenity and taller built form is orientated to minimise shadow effects.

ENSURE THAT DESIGN RESPECTS THE HUMAN SCALE

- Create high quality spaces and places designed to maintain a human scale and comfortable sense of enclosure, especially within the Town Centre and R&D Park neighbourhoods.
- Define open space and plazas by creating appropriately scaled buildings with activated frontages.

MAINTAIN SOLAR ACCESS FOR ENERGY PRODUCTION

- Ensure new developments consider overshadowing of solar reliant renewable energy initiatives, both existing and planned.

ENSURE THAT UNIVERSITY TOWN OPERATIONS DO NOT ADVERSELY IMPACT ON ACOUSTIC AMENITY

- Ensure that the design of all new development undergoes acoustic analysis to reduce noise impacts. This is especially important for buildings with major plant and infrastructure requirements.
- Ensure that new and redeveloped built form within each neighbourhood performs to best practice standards of acoustic engineering.
- Identify any conflicting uses with noise sensitive receivers (both within and in proximity to the campus) and ensure that suitable buffers and noise-mitigation measures are applied.

EARLY WINS

- Begin a staged rollout of shelter elements along the Primary Pedestrian Network, beginning with the connection between the Plenty Road tram stop and the Core Campus.
- Provide shelter elements throughout popular public realm spaces within the campus (this approach has already proven successful at the southern end of the Agora).
- Begin a programme of tree and shrub planting within exposed areas of the campus to create natural windbreaks.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Ensure the health and wellbeing of University students, staffs and the general community by developing a campus with high amenity.
- Increase the attractiveness of walking (and therefore health) by providing a more comfortable pedestrian environment.
- Ensure that existing and future noise emitters do not adversely affect those living, working and studying on the campus, or those within the surrounding area.

LA TROBE UNIVERSITY MELBOURNE CAMPUS CAMPUS AMENITY STRATEGY

0 50 100 250m

- Improved pedestrian amenity (high priority)
- Primary Pedestrian Network
- Level 1 Pedestrian Walkway
- Future Level 1 Walkway
- Sensitive use (noise reduction in this area)
- Existing noise emitter (noise reduction in this area)
- Future noise emitter (noise mitigation and buffers to be applied)

1. Plenty Road: ensure new built form sufficiently buffers Town Centre environment
2. Kingsbury Drive: ensure new built form sufficiently buffers Core Campus and R&D Park uses
3. Plenty Road Health Precinct: ensure emissions from plant and hospital operations are minimised
4. R&D Park (north of Kingsbury Drive): ensure that emissions from plant and R&D operations are minimised
5. R&D Park (south of Kingsbury Drive): develop built form as a buffer to adjacent Industrial Estate uses

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

SAFETY & SECURITY STRATEGY

CONTEXT

One of the chief safety concerns on the campus is the lack of safe pedestrian routes between major destinations during and after traditional University hours. In order to ensure the viability of a successful 24/7 University Town this issue will need to be addressed as a priority.

There is an ambition to light a network of paths on the campus (Corridors of Light Strategy), however only a few paths have been lit at this stage (response based on priority and incidents). 'Corridors of Light' on the campus include:

- Visitors' Car Park to the Library (to the north of Thomas Cherry).
- Northern section of Science Drive.
- Plenty Road / Kingsbury Drive tram stop to Science Drive intersection.
- Barnes Way residential up to the Kingsbury Drive intersection.

Uni-Safe Escort security officers are available to escort students and staff after dark between buildings, campus car parks and local transport points.

The campus effectively closes at 5.30pm on weekdays and is largely empty on weekends. This lack of vitality creates safety issues for the small number of staff and students on campus during these times.

Further areas of concern regarding safety include:

- La Trobe Avenue, which provides a poor connection between the colleges and the Polaris Town Centre. (especially the length of path adjacent to the Wildlife Sanctuary).
- The Waterdale Road / Kingsbury Drive intersection.
- The back of the Mont Park Terraces and Forensic Drive (regarding a lack of passive surveillance).
- The section of Kingsbury Drive west of the Core Campus (students crossing the road to access the car parking on the west of the road).
- The Plenty Road / Kingsbury Drive intersection (vehicle prioritised traffic light sequencing results in students and staff crossing the road against traffic in a hurry to catch the city-bound tram).

VISION

The campus will develop as an activated and vibrant University Town, which is safe and secure for students, staff, residents and workers during the day and night.

A multifaceted approach to safety will be employed campus-wide, including:

- Increasing the on-campus population and 'eyes on the street'.
- Activating built form frontages to increase passive surveillance.
- Improving lighting and landscaping along the Primary Pedestrian Network (PPN) to deliver a 'Green and Seen' network of walk improvements that improve wayfinding, amenity and integration of popular day and night time destinations.
- Providing landscape treatments that do not reduce visibility.
- Ensuring a security presence is frequently visible on campus.
- Employing deterrence measures, such as CCTV.

DIRECTIONS

PROVIDE 'EYES ON THE STREET'

- Ensure there are more 'eyes on the street' by increasing the day / night population on campus, in particular along the PPN. More people on the campus at nights and weekends will improve passive surveillance and the consequent sense of safety and security.
- 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.
- Diminish the expansive nature of at-grade car parks encircling the campus.
- Invest in projects at the campus edges that link the University with surrounding communities and activities (e.g. cinemas, shops, restaurants, hotels, offices, commercial offerings, market housing, sport and recreation uses, and cultural facilities).
- Ensure that the siting of venues is prioritised towards the PPN and that new extended hour venues, such as sports, entertainment, hospitality and public transport venues, are configured along this interface.

ADOPT A 'GREEN & SEEN' APPROACH

- Provide high quality, clear-trunk landscaping to streets and upgraded levels of lighting to key street networks, for both pedestrian and vehicle.
- Apply Crime Prevention Through Environmental Design (CPTED) principles when designing campus landscapes, especially in areas that are difficult to light and activate.
- All priority pedestrian routes should have generous lighting, low level plantings, signage, be DDA-compliant, and be equipped with CCTV.
- Ensure routes through buildings are provided for both safety and shelter.

ENSURE THAT SAFETY IS ON DISPLAY

- Provide an active and visible security presence on the campus, especially at times when street activity is reduced.
- Provide a police operations centre / community liaison point on campus as the on-campus population grows (students, workers and residents).
- Ensure that the CCTV network aligns with campus population growth and new development.
- Understand that CCTV cameras are only one part of the campus security solution.

ROLL OUT CORRIDORS OF LIGHT ACROSS THE CAMPUS

- Kingsbury Drive, through Car Park 3 to Chisholm College and the Core Campus (currently underway).
- Colleges to Car Park 6 (running between Menzies and Glenn Colleges).
- Core Campus through to the Polaris Development, via La Trobe Avenue.
- Visitors' Car Park through to the Agora, south of the Thomas Cherry Building.
- Along Terrace Way, through to the Core Campus.
- The path around the Moat and pedestrian access to Car Park 7 and 8.
- The pedestrian and cycle path from the Core Campus to the Darebin Creek Trail.

CONSIDER RISK MANAGEMENT

- Ensure that risk mitigation is included in the design of each new project.
- Apply a risk management 'go' or 'no- go' criteria to all campus development proposals.

EARLY WINS

- Undertake a staged programme of works to roll out the Corridors of Light strategy across the campus as a priority.
- Improve the pedestrian environment between the Route 86 tram stop and Science Drive.
- Develop a safe and secure route between the Sports & Recreation Neighbourhood, the Core Campus, and the Colleges.
- Improve the route between the Core Campus and Polaris Town Centre via La Trobe Avenue.

ALIGNMENT WITH RFAs

BUILDING HEALTHY COMMUNITIES

- Ensure the health and wellbeing of University students, staff 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 MELBOURNE CAMPUS SAFETY & SECURITY STRATEGY

0 50 100 250m

Corridors of Light day/night pedestrian paths (developed as a priority)

Primary Pedestrian Network

Improved road interface to reduce pedestrian and vehicle conflict

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

4.4 BUILT FORM & SERVICES

BUILT FORM & HERITAGE STRATEGY

BUILT FORM CONTEXT

Delivered as part of the original 1965 Master Plan, the main campus buildings were designed by Melbourne architecture firm Yuncken Freeman in a utilitarian, Post-War International style. The original built form present within the Core Campus has established a strong architectural character with a scale and materiality that provides:

- A high level of solar amenity for all buildings and most public realm spaces.
- A clear University built form identity.

Coherency of building stock is a distinguishing feature of the Core Campus' character and has been generally respected and referenced by new development.

In recent years, infill built form within the Core Campus, such as the La Trobe Institute for Molecular Science (LIMS) Building and the recently completed Sylvia Walton Building, has sought to align with the siting principles of the original Master Plan, while introducing an enriched palette of materials and a higher level of transparency.

This change in architectural approach has in part responded to the clear shift in the design of teaching, learning and research spaces from a model that is largely self-contained and introverted to one that is cross-disciplinary, collaborative and outward-reaching.

While ensuring that new built form reflects advances in pedagogy and learning spaces is an important consideration, future infill development should not be used as an opportunity to construct a monument to the architects or style of the day. New infill built form should instead refer to and complement the original architectural ambition of the Core Campus. There is a clear acknowledgement that the campus' architecture will evolve over time, but it needs to be done in a sensible and respectful manner.

There are many national and international examples, such as Stanford University, that provide elegant solutions to integrating new and impressive architecture seamlessly with older campus building stock. These solutions should be referred to when Core Campus infill development proposals are assessed.

HERITAGE CONTEXT

The Melbourne campus has recognised sites of cultural and heritage significance for buildings and landscape elements. Currently these primarily relate to former health institution uses.

Future campus development will need to be informed by a thorough understanding of cultural and heritage significance. In addition to former health institution uses, this understanding will need to take into account the merit of post 1965 development of the campus, Aboriginal and historic archaeology, as well as natural values. Updates to existing reports may be required along with some new heritage assessments.

The Mont Park Terraces and Ernest Jones Hall with associated land, and the Avenue of Honor along the north side of Cherry Street and the east side of the entrance road, form part of the Former Mont Park Hospital registration (H1872) on the Victorian Heritage Register. This recognition of State significance means that development is controlled pursuant to the Heritage Act 1995 for works to registered structures and on registered land. Advice should be sought from Heritage Victoria.

Other parts of the former Mont Park Hospital are recognised as being of local significance and included in the Darebin Planning Scheme Heritage Overlay. Similarly the former Kingsbury Centre to the north of Main Drive is also included in the Heritage Overlay. Exterior changes to these institutional buildings require Darebin Council consent.

Due to the nature of the institutional architecture of the former health establishments, changes to major vistas, and the carefully balanced main facades are likely to be limited. However, scope exists to the rear of the buildings and for smaller changes that do not interrupt the massing, rhythms or silhouettes, which are key design features of some of the buildings.

La Trobe University acknowledges the need to recognise and protect its heritage assets. It will be guided by the Australia ICOMOS Burra Charter as a way of ensuring good heritage practice. A key focus of this is the Burra Charter Process – the need to understand significance and develop policies to protect significance prior to making management and development decisions. This process is expressed in Conservation Management Plans, which can be undertaken prior to development and are able to inform decision-making.

BUILT FORM VISION

As the Melbourne campus transitions to a University Town, built form elements will become increasingly diversified in their use as the traditional University experience grows to include an expanded programme of retail, commercial, services and housing. This changing approach will impact on how buildings are expressed, as will the relationship between the buildings and the streets and spaces with which they interact.

The Master Plan will ensure that new infill buildings within the Core Campus reference the existing scale and dominant material palette within this neighbourhood. Modifications to the existing building stock within the Core Campus will be undertaken in a manner that acknowledges the cumulative contribution of the existing campus stock to the La Trobe identity.

New buildings will be invested with high architectural and placemaking design ambition and a commitment to industry good practice in environmental sustainability. In key locations on the campus, buildings will be required to incorporate programme that contributes to the broader University Town objectives in addition to core University business needs.

Towards the campus' Plenty Road and Kingsbury Drive frontages, the development of taller and more intensified built form will reflect state and local government strategic planning policy, which supports the area's transformation as a major cluster for knowledge-intensive employment, health and community services, and housing.

Throughout the University Town, new built form will: respect the human scale; be highly permeable and exhibit active frontages; and meaningfully contribute to the campus' unique sense of place.

A level of economic rationalism will be applied to the consideration of building project expenditure, to ensure that the scale of individual projects does not compromise the development of the overall Master Plan.

HERITAGE VISION

The history of the site, conservation of wonderful heritage buildings and landscapes, and the importance to Aboriginal people, are valuable parts of the Melbourne campus story. It will be important to ensure that future development of the campus takes advantage of this to make this a point of differentiation with other academic campuses and to create greater community engagement and awareness of these cultural assets.

BUILT FORM DIRECTIONS

MAINTAIN A COHERENT BUILT FORM LANGUAGE AND LANDSCAPE CHARACTER WITHIN THE CORE CAMPUS

- Ensure that new infill buildings within the Core Campus reference the existing scale and dominant material palette within this neighbourhood.
- Link key buildings and spaces throughout the Core Campus through a coherent architectural language of material, scale, landscapes and street profiles to provide visual clarity, clear wayfinding and hierarchy of places to the visitor.
- Ensure that new infill built form does not become a monument to architects or the architectural style of the day, but instead respects and references the maturing built form character of the Core Campus.

DEVELOP ICONIC BUILT FORM ON CAMPUS INTERFACES & PROMINENT INTERSECTIONS TO HELP PROMOTE THE UNIVERSITY'S TEACHING & RESEARCH AMBITIONS

- Ensure that iconic built form supports the core directions of the University and displays a point of difference, whether it be through technology, craftsmanship, programme, or architectural articulation, which sets it apart from its surroundings to the point that it is a wayfinding landmark in its own right.
- Recognise that an iconic design is one that stands the test of time, remaining a benchmark design for decades to come.
- Deliver a high quality of architecture and placemaking on campus interfaces to appropriately bridge between the emerging University Town and adjacent communities.
- Ensure that interface development reflects the values of the University and actively promotes its research focus areas.
- Ensure that iconic infill built form within the Core Campus does not detract from the valued presence of the original buildings.

INVEST NEW DEVELOPMENT WITH HIGH ARCHITECTURAL & PLACEMAKING DESIGN AMBITION

- Ensure that new buildings are invested with high architectural and placemaking design ambition.
- Ensure a commitment to industry good practice in environmental sustainability.
- Incorporate programme within key buildings that contributes to the broader University Town objectives in addition to those uses that are considered to be the University's core business.
- Favour built form projects that deliver building *and* public realm outcomes. This will ensure that new built form is seamlessly connected into the public realm and that sections of the University Town are delivered in a coordinated and efficient manner, rather than via an ad hoc approach.
- Ensure that the exterior elements of built form projects integrate seamlessly with the Primary and Secondary Pedestrian Network and landscape palette.

PURSUE DESIGN EXCELLENCE FOR ALL NEW DEVELOPMENT & REFURBISHMENT PROJECTS

- Ensure that all new and adapted built form achieves an adequate human scale at ground level and does not dwarf the surrounding pedestrian environment.
- Design building frontages to be permeable and activated to add interest, life and vitality to the pedestrian environment and engage with the public realm and landscapes.
- Invest new built form on campus interfaces with a high level of design quality and civic intent, particularly for those highly visible sites on the Plenty Road and Kingsbury Drive frontages.
- Ensure that built form higher than that designated within the University Town Neighbourhood Design and Development Controls is only permitted on merit and conforms to the established design review structures of the Master Plan.
- Ensure that the siting of building services or delivery points does not detract from the surrounding public realm.

The Borchardt Library at night.

LIMS1: recent Core Campus infill development.

1970: Orginal brick built form in the Core Campus.

The recently completed Sylvia Walton Building.

BUILT FORM & HERITAGE STRATEGY

HERITAGE DIRECTIONS

ENSURE THE HERITAGE SIGNIFICANCE OF THE CAMPUS IS PROPERLY UNDERSTOOD

- Investigate the development of a Conservation Management Plan for the campus, which focuses on its establishment and development since the late 1960s.
- Understand Aboriginal heritage values and identify potential sites on the Melbourne campus.
- Understand historic archaeological values and identify potential sites for further investigation.
- Ensure all built environment projects initiated on campus are developed in consultation with these heritage frameworks and surveys from inception to protect cultural heritage values.

ENSURE DEVELOPMENT RESPECTS THE INTEGRITY OF MONT PARK & THE KINGSBURY CENTRE

- Progressively develop Conservation Management Plans for land under the University's ownership or control of the Former Mont Park Hospital and the Former Kingsbury Centre (building on the 1995 report).
- Progressively review the Former Kingsbury Centre – Vegetation Survey, prepared by Tree Logic P/L August 1999.
- Ensure that heritage buildings continue to be viewed as part of a related group of built form, which is dispersed within the landscape.
- Articulate redevelopment opportunities for these buildings to ensure that they remain linked to the emerging University Town.

ENSURE FUTURE DEVELOPMENT RESPECTS & BUILDS ON THE EXISTING CHARACTER OF THE CAMPUS

- Ensure heights are sensitive to the built environment surrounding a site.
- Ensure setbacks and alignments are sensitive to existing campus conditions.
- Ensure that new development builds on established character. The Core Campus has a particularly consistent character in terms of building height and massing, but also in terms of planning, alignments and the sequence of buildings within the public realm.

CREATE OPPORTUNITIES TO CELEBRATE THE CULTURAL ASSETS OF THE CAMPUS

- Ensure that future development seeks to celebrate the cultural assets of the campus through interpretive signage and displays that tell the La Trobe story.

ENSURE NEW DEVELOPMENT IS SENSITIVE TO HERITAGE SIGNIFICANCE

- Ensure that the form and articulation of new buildings provides sympathetic and sensitive interfaces to existing built form and responds to identified cultural heritage values.
- The heights and setbacks of new buildings are to consider existing buildings and the public realm to ensure the preservation of amenity, access to daylight and the preservation of heritage features in the layout and setting of the campus.
- Where possible new access points and pedestrian connections should seek to integrate with existing campus networks.
- Adhere to heights and alignments setout within the Design and Development Controls to ensure existing massing, vistas and alignments are respected.
- All projects are to provide documented consideration of these issues during the design phase for consideration and approval by the University.

REFERENCE DOCUMENTS

- *Banyule Planning Scheme*, DTPLI, 2014.
- *Darebin Planning Scheme*, DTPLI, 2014.
- *A cultural heritage survey of La Trobe Research and Development Park, Bundoora, Victoria*, Biosis Research, May 2002.
- *Psychiatric Institutions in the Mont Park Area: A Heritage Assessment*, Heritage Management Branch, Department of Planning and Development, 1995.
- *La Trobe University Master Plan*, Yuncken Freeman Architects, July 1965.

The heritage listed Ernest Jones Hall.

The Mont Park Terraces from the north east.

The Kingsbury Centre buildings with Graduate House beyond.

EARLY WINS

- Investigate the development of Conservation Management Plans for the campus.
- Incorporate a heritage trail throughout the campus, which includes interactive and educational displays that are aimed at a broad range of audiences.
- Pursue non-invasive interventions within the Mont Park Gardens to encourage use of this landscape asset by the community. This might include installing temporary shade facilities in summer months or deck chairs for open air concerts and events.

ALIGNMENT WITH RFAs

TRANSFORMING HUMAN SOCIETIES

- Appreciate the heritage and conservation values of the campus.
- Gain an appreciation of the campus' unique built form and landscape elements.
- Protect the heritage and conservation values of the campus, while providing an important educational experience to the University community and broader community.

LA TROBE UNIVERSITY MELBOURNE CAMPUS BUILT FORM & HERITAGE STRATEGY

0 50 100 250m

- State Heritage Registered building
- Local Heritage Registered building
- State Heritage Registered landscape
- Local Heritage Registered landscape
- Adjacent Heritage Registered sites
- Potential zone of Aboriginal Cultural Significance (within 200m of a named waterway)
- Iconic built form development opportunity
- New development within this infill zone will respect the valued built form character of the Core Campus

BUNDOORA PARK
POLARIS TOWN CENTRE
GRESSWELL GRANGE ESTATE
HABITAT LINK
MAIN DRIVE
LA TROBE WILDLIFE SANCTUARY
SPRINGTHORPE ESTATE
KINGSBURY DRIVE
PRESTON GENERAL CEMETERY
PLENTY ROAD
MONT PARK
TERRACE WAY
FORENSIC DRIVE
VICTORIAN POLICE FORENSIC SERVICES CENTRE
DAREBIN CREEK
DAREBIN CREEK ENVIRONS
WEST HEIDELBERG INDUSTRIAL ESTATE
WATERDALE ROAD
WAIORA ROAD
MACLEOD RESIDENTIAL
CHARLES LA TROBE COLLEGE

ENERGY STRATEGY

CONTEXT

The Melbourne campus was largely constructed in the late 1960s and 1970s. The campus' electricity and gas supply infrastructure will be upgraded to meet the current and future demand of an expanding campus and student body.

VISION

The vision for a future energy supply at the Melbourne campus is underpinned by objectives to improve energy efficiency and establish a resilient low-carbon energy supply, aligning with the University's objectives to enhance sustainability across its campuses, facilities and operations.

The Master Plan recognises that the Melbourne campus approach to energy will evolve over the coming 30 years alongside existing technologies and changing business cases.

Through background analysis and consultation, the Master Plan team has developed a vision for a resilient energy future at the Melbourne campus. This vision is underpinned by strategies to:

- Increase the proportion of energy supplied from renewable sources.
- Reduce grid electricity consumption and increase on-site renewable energy generation.
- Improve energy efficiency.
- Reduce peak energy demand and ongoing consumption on a per sqm (GFA) basis.

ENERGY FUTURES

- Although historically the cost of renewable energy technologies has been far higher than energy from fossil fuel sources, this gap is fast shrinking. Module costs for solar PV are falling particularly quickly as global production capacity has created economies of scale, and as technologies improve.
- Energy sector research published last year indicates that by 2020, large-scale solar photovoltaics may be cheaper than coal and gas (BNEF, 2013). Over the coming decades, the Australian economy is likely to be powered extensively by renewable energy, including small-scale on-site generation.
- Initial estimates indicate that large scale solar PV across new buildings in the R&D park alone could generate over 4,000 MWh of electricity in total per annum.
- Gas prices in Victoria have historically been stable and relatively low. In the future though, local gas reserves may become depleted and the large coal-seam gas (CSG) reserves in Queensland are likely to begin exporting significant quantities of gas overseas. This means that Victorian gas prices may increase and become more volatile, reducing the feasibility of on-site co-generation. How this will evolve is uncertain, and political decisions will impact the ability of gas producers to satisfy local and international markets.
- Gas prices are only one component of energy pricing. Typically up to half of the price is determined by the peak demand, which is much higher for grid electricity.
- Electric chillers have a higher conversion process efficiency than absorption chillers; the most feasible option of the two will fluctuate significantly according to peak demand as well as gas price.
- Market forces change continually and rapidly, and cannot be well predicted in the long-term, therefore all proposed technologies will need to be based on sound feasibility assessment at the time of development.

DIRECTIONS

Directions for energy generation and energy efficiency include:

SHORT-TERM ACTIONS (2014 – 2022)

- Supply capacity – new high voltage electricity feed from Heidelberg required as a priority.
- Existing co-generation plant – upgrade and expansion of existing co-generation plant, with additional absorption chiller technology (full tri-generation) to make use of waste heat by 2019 (decision to be made by 2016).
- Gas capacity – begin discussions with gas authorities regarding future gas supply.

MEDIUM-TERM ACTIONS (2022 – 2030)

- Reduce peak energy load – a suite of on-going initiatives to include:
  - Implementation of ecologically sustainable design (ESD) techniques to reduce energy demand across the expanding built environment.
  - Rollout of energy efficiency retrofits for existing buildings where business case is identified.
  - Extensive solar PV coverage for new and existing low to mid-rise buildings, with priority across the R&D Park and the new Sports Centre to best match energy generation with peak day-time use.
- New precinct tri-generation – opportunities to be investigated for a tri-generation facility to service the new Town Centre, potentially as a precinct partnership with surrounding commercial development.
- New northern gas feed from Plenty Road – to be implemented by 2025.

LONG TERM ACTIONS (2030 - 2040)

- On-site renewable energy – opportunities for on-site generation through waste to energy to be investigated and developed as appropriate.
- New southern gas feed from Waterdale Road – opportunities to be investigated for a gas feed to the R&D Park.

ENHANCE & EXPAND TUNNEL & CULVERTS NETWORK & HIGH TEMPERATURE HOT WATER (HTHW) NETWORK

- Extend tunnel and culverts network to meet existing demand (using existing capacity of waste heat) – Short-term.
- Continue to extend the tunnel and culverts network to serve new buildings within the R&D Park and the Sports & Recreation Neighbourhood – extension to Sports & Recreation Neighbourhood in the short-term; extension to new R&D Park development in the short and medium-term.
- Ensure that standard campus infrastructure is reticulated within the tunnel and culverts network (where possible), as well as the following:
  - HV internal rings.
  - HTHW reticulation.
  - Communications reticulation.

TARGETS

- Short-term (by 2022): Reduce greenhouse gas emissions (facility tCO2-e/GFA) by 30%.
- Medium-term (by 2030): Reduce greenhouse gas emissions (facility tCO2-e/GFA) by 40%.
- Long-term (by 2040): Reduce greenhouse gas emissions (facility tCO2-e/GFA) by 50%.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University 10 Year Capital Development Plan:*
  - *Building Services Infrastructure Study*, February 2012.
  - *Thermal Comfort and Energy Modelling*, October 2012.
  - *Detailed Co-Generation Study*, September 2012.
- *Vision for Future Generations: 2011–2020 (Environmental Sustainability Strategy)*, 2012.
- *La Trobe University Greenhouse Gas Emissions and Energy Management Plan*, October 2011.

LA TROBE UNIVERSITY MELBOURNE CAMPUS ENERGY STRATEGY

0 50 100 250m

- Possible location for large scale rooftop solar PV (4,000mwh/year)
- Upgrade existing tri-generation facilities
- Solar PV on top of Regional Sports & Recreation Centre
- Indicative tunnels/crawlways precinct
- Existing tunnels/crawlways
- Proposed tunnels/crawlways (indicative)
- Indicative culvert precincts beyond
- Existing culvert
- Proposed culvert (indicative)
- New tri-generation point to supply Town Centre
- New HV energy feed from Heidelberg
- New northern precinct gas feed from Plenty Road
- New southern precinct gas feed from Waterdale Road
- Indicative location for waste to energy plant

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WATER & SEWER STRATEGY

CONTEXT

WATER

There is separation of fire/domestic water – external to building. A new separate fire main is to be installed.

On average, 5% of domestic water infrastructure gets replaced due to leaks.

An increase in the on-campus residential population will place pressure on the campus water supply.

SEWER

There are two independent reticulated Authority sewer drains that pass through the site from the north end to the south-west end of the campus.

The existing Authority sewer drains appear to have the capacity to accept discharges from all the existing buildings on this campus, however any future sewerage discharge connections to these assets will require approval from Yarra Valley Water. In ground gravity property services sanitary drainage systems collect sewerage effluent from the various buildings and trade waste apparatus throughout the campus, which connect with the Authority sewer drains.

The condition of the in-ground property services sanitary drainage systems have not been exposed or internally photographed to confirm the condition of these sewer drains.

In general, the in-ground property services sanitary drainage and/or plumbing systems throughout the site are constructed of vitreous clay piping connecting to 'Fully Vented' or 'Fully Vented Modified' systems consisting of cast iron stacks with a mixture of copper, brass and UPVC waste branches.

All feeds to southern edge of the Core Campus at the David Myers building.

Current conditions are adequate in the short-term, but are likely to require upgrade as the campus population grows, in order to accommodate more buildings and people.

STORMWATER

Stormwater drainage represents a major liability for the University, and existing grates are not designed for maximum waterway area.

Major flood protection is unlikely to meet the requirements of a 100 year flood event; a problem that will compound under the likely future climate scenario.

The University's stormwater drainage system (series of lakes known as the Moat system) has received past accolades for innovative stormwater management. The University has also received past citations from Water Authorities for stormwater reuse as irrigation.

The University was recently awarded a Office of Living Victoria Grant to implement a stormwater reuse project across the campus, whereby the capacity of the Moat will be expanded by the elevation of two weir walls on the northern side of the campus. The capacity of the Moat will increase by 0.8 mega litres through development of a wetland and sedimentation pond.

VISION

Water is a dominant feature of the Melbourne campus landscape. Establishing a sustainable water future for the campus is essential in supporting a healthy future for local communities and landscapes.

The primary vision for water at the Melbourne campus is to provide a resilient water system that enhances, supports and promotes a productive campus, in line with the state government vision to establish a smart, resilient water system for a liveable, sustainable and productive Melbourne.

This vision is supported by the objectives for providing secure water supplies, protecting public health, protecting environmental health of urban waterways and supporting communities.

The University is uniquely positioned to be able to utilise and integrate a range of water sources to meet the campus' non-potable water demands, reduce reliance on mains water and to continue to support and enhance green and blue infrastructure across the entire University Town.

DIRECTIONS

SHORT-TERM (2014 – 2022)

- Review potable water supply feasibility to cater for increased demand across the University Town, investigating the requirement for additional feeds into the site particularly from the north into the proposed residential area.
- Review blackwater treatment/sewer mining as an option for recycled water supply, particularly for the Core Campus.
- Water body development to cater for increased surface run-off for ultimate Master Plan, including a total of 17,500m^3 of additional retarding basins to capture 1 in 100 year storm events and co-locate wetlands to meet Best Practice Environmental Management Guidelines.
- Provide storage for reuse within localised wetlands including at least 2,000m^3 for irrigation near the West Entrance in the Sports and Recreation Neighbourhood.
- Deepen existing Sports Fields Lake to increase water storage volumes for localised irrigation, including the partially formed existing lake west of the current soccer pitches.
- Review easements for sewer system and incorporate growth changes for all utilities into the expanded road corridors.
- Maintain the use and extend the tunnel network within the Core Campus to meet existing demand, and branch to culverts beyond the Core Campus.

MEDIUM-TERM ACTIONS (2022 – 2030)

- Widen the existing waterway to incorporate additional storage volumes in the Town Centre neighbourhood and provide water facing frontages.
- Maintain supply of water and sewer services to the growing University Town.
- Develop precinct-wide roof water harvesting schemes for the northern and southern regions, making use of underground storages built into proposed car parking areas.
- Integrate water sensitive urban design elements into new roadways and hard stand areas to treat stormwater runoff prior to entering storages.
- Install precinct sewer mining for the Core Campus by 2025 for incorporation as a key research area.

LONG-TERM ACTIONS (2030 - 2040)

- Continue to extend the tunnel and culvert network to serve new buildings for the R&D Park and Sports and Recreation Neighbourhood.
- Incorporate precinct wide water harvesting systems to achieve the targets listed below.

TARGETS

- Achieve Best Practice Environmental Management Guidelines (BPEMG) for stormwater runoff into waterways.
- Upgrade and build stormwater infrastructure to meet 1 in 100 year flood events.
- Desilting of waterways to achieve additional storage and maintenance of water quality treatments.
- Provide 100% of irrigation to all active open spaces including the sporting fields and lawns spaces using non-potable water.
- Continue with 10% reduction in potable water usage against baseline through efficiency measures by 2022.
- Achieve 30% reduction in potable water usage through efficiency measures (10%) and replacement of potable water supply with non-potable sources (20%) across the campus by 2040.

ACCOMPANYING DOCUMENTS

- *La Trobe University Melbourne Campus Master Plan 2014: Infrastructure and Services Strategy*, June 2014.
- *La Trobe University Melbourne Campus Whole of Water Cycle Assessment*, June 2014.

REFERENCE DOCUMENTS

- *La Trobe University 10 Year Capital Development Plan: Building Services Infrastructure Study*, February 2012.
- *Vision for Future Generations: 2011–2020 (Environmental Sustainability Strategy)*, 2012.
- *Integrated Land and Water Management Plan: Melbourne Campus*, October 2011.

LA TROBE UNIVERSITY MELBOURNE CAMPUS WATER & SEWER STRATEGY

0 50 100 250m

- Future rooftop rainwater harvesting across residential precinct
- WSUD initiatives (e.g. passively watered trees)
- Future stormwater storage beneath car parking nodes
- Pilot rooftop rainwater harvesting
- Possible site for sewer mining infrastructure
- Improved stormwater treatment areas used for biodiversity in the Wildlife Sanctuary and irrigation to the southern playing fields
- Existing sewer alignment
- Proposed sewer demolition
- New sewer along Science Drive and to support R&D Park
  Ensure that future development zones are avoided
- Existing water main and supply direction
- Additional water supply
- Proposed retarding basin
- Proposed pond deepening

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PRESTON GENERAL CEMETERY
300mm diameter
460mm diameter
MONT PARK
TERRACE WAY
300mm diameter
FORENSIC DRIVE
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