

The background of the cover is a photograph of a modern university campus. In the foreground, a large, leafy tree stands on the left. A paved walkway leads from the bottom left towards the center. Several people are visible: a group of people sitting on a low concrete wall in the foreground, and others walking or standing in the background. In the distance, there are modern university buildings with large windows and glass facades. The sky is a clear, pale blue.

University of Canberra Master Plan Landscape Design Guidelines

May 2023
Prepared by OCULUS



**UNIVERSITY OF
CANBERRA**

Document details

Master Plan
Landscape Design Guidelines
FINAL

This document is the second of a four-part suite of design guidelines documents that support the Master Plan.

Date of issue

May 2023

Client

University of Canberra

Prepared by

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We acknowledge the Ngunnawal people as the traditional custodians of the lands where the Bruce Campus is situated. We honour Elders past, present and emerging, whose profound knowledge systems can teach us much about how we design and care for Country. We also acknowledge all other Aboriginal and Torres Strait Islander communities on whose lands we gather.

Date	Status	Compiled by
26.04.2023	Draft submission V1	MGS Architects / OCULUS
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Introduction

Document overview

The Landscape Design Guidelines develop upon the Landscape Priorities identified in the 2020 University of Canberra (UC) Master Plan. They provide guidance on how future landscape development should be designed in order to support the goals and objectives of the Master Plan document. These guidelines should be read in conjunction with the Master Plan.

This document sits within a suite of documents illustrated in the diagram opposite.

Master Plan

At a strategic level, the Master Plan provides guidance to decision makers on the development of the Campus over the next 20 years. It proposes the gradual delivery of built form and public spaces that will balance the varying needs of the UC community, connect the Campus to its context, and support UC's pedagogical ambitions.

Campus wide guidelines

Underpinning the vision outlined in the Master Plan, a series of Campus-wide design guidelines provide design guidance relating to the following categories:

- Built Form
- Landscape
- Indigenous UC
- Digital UC

Specific Neighbourhood/site control plans

Subsequent Development Control Plans will provide specific design advice and development controls relating to each site and Neighbourhood within the Campus.

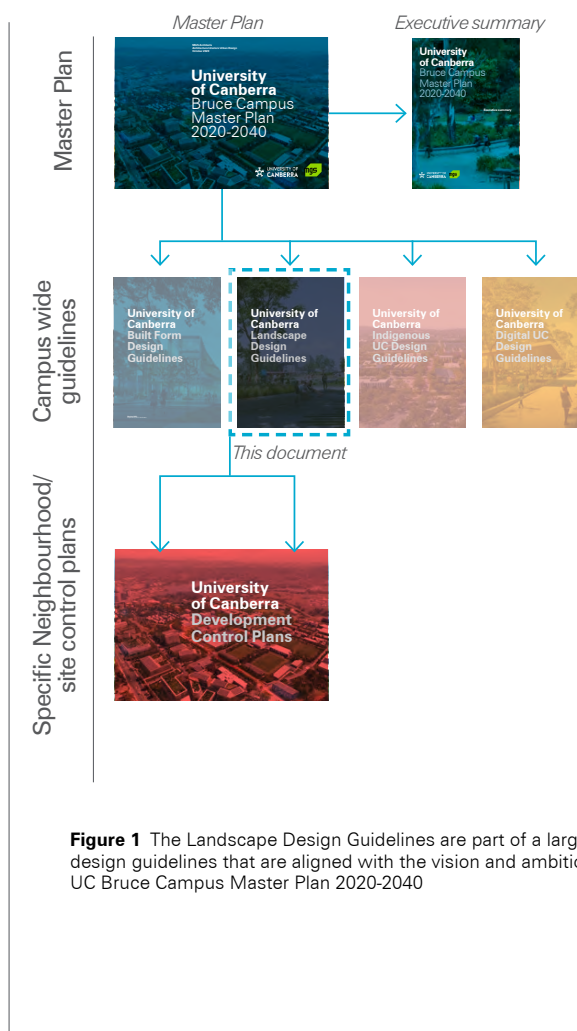


Figure 1 The Landscape Design Guidelines are part of a larger suite of design guidelines that are aligned with the vision and ambition of the UC Bruce Campus Master Plan 2020-2040

How to use this document

The document expands upon the six Landscape Design Priorities outlined in the Master Plan, providing a series of specific design guidelines that support their intent. Each priority is supported by several guidelines that describe a key directive and are supported by diagrams and precedent imagery.

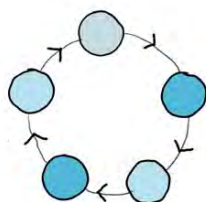
Introduction

Landscape Design Priorities and Guidelines

Landscape design priorities offer guidelines for the spaces between buildings, with the overarching goal of nurturing and enhancing unique existing landscape assets, while supporting UC's teaching, learning and research priorities.

DESIGN PRIORITIES

1



Ensure design excellence

Utilise existing governance structures and design review processes to ensure all projects adhere to framework principles and deliver excellence in design and sustainability.



2



Foster social landscapes

Create functional, habitable and welcoming spaces that are well connected, enhance learning in the landscape, and support the idea of Galambany; coming together as one – one university, one community.



3



Create a safe Campus environment

Implement Crime Prevention Through Environmental Design principles and champion diversity, inclusivity and equity to support a safe and comfortable Campus for all.



DESIGN GUIDELINES

1.1 Establish clear design processes

1.2 Engage with future users and stakeholders

1.3 Integrate maintenance within the design process

1.4 Respect the existing Campus and its historic legacy

1.5 Deliver exemplar landscape design solutions

2.1 Support learning and teaching in the landscape

2.2 Create social landscapes

2.3 Improve circulation and connectivity

2.4 Enhance legibility and wayfinding

3.1 Create safe and inclusive spaces

3.2 Design for equity and accessibility

3.3 Cultivate a culturally safe Campus with Aboriginal and Torres Strait Islander visibility

3.4 Promote diversity

DESIGN PRIORITIES

4



Advance the Bush Character

Promote native flora and fauna, increase native biodiversity and celebrate Indigenous knowledge systems to reinforce UC's unique 'Bush Campus' character.



5



Be climate proactive

Celebrate environmental sustainability across the Campus as well as within the landscape and make climate-wise design choices.



6



Enhance views and vistas

Ensure that views and vistas from the ridge and across the valley are protected and enhanced to maintain local visual connections, assist with wayfinding, respect site topography and heighten the awareness of adjacent spatial forms.



DESIGN GUIDELINES

- 4.1 Encourage native vegetation
- 4.2 Protect and connect significant existing habitat
- 4.3 Promote biodiversity on Campus
- 4.4 Celebrate Indigenous knowledge systems

- 5.1 Green the Campus utilising appropriate species
- 5.2 Champion Water-Sensitive Urban Design
- 5.3 Create landscapes that respond to climatic and environmental factors
- 5.4 Select appropriate materials

- 6.1 Celebrate and respond to topography
- 6.2 Link to Campus to Country and protect Indigenous sight-lines
- 6.3 Connect internal and external spaces



Ensure design excellence

Utilise existing governance structures and design review processes to ensure all projects adhere to framework principles and deliver excellence in design and sustainability.

- 1.1 Establish clear design processes
- 1.2 Engage with future users and stakeholders
- 1.3 Integrate maintenance and management
- 1.4 Respect the existing Campus and its historic legacy
- 1.5 Deliver exemplar landscape design solutions

1

1.1

Ensure design excellence

Establish a clear design processes

- Adhere to the University of Canberra's governance structure.
- Ensure the project brief establishes clear design outcomes and aspirations.
- Embrace ideation, innovation and creativity within the establishment of the design brief and process.
- Ensure roles and responsibilities of the project team, key stakeholders and decision makers are clearly understood from project inception.
- Ensure milestones, deliverables and regular points of review are planned with key decision makers.
- In collaboration, establish a shared vision for each project, supported by a series of objectives and benefits.
- Promote the development of design options to test different approaches and directions, and to establish the best possible preferred design direction for each project.
- Utilise an internal review process and project team feedback loop to collectively assess the design options and identify the preferred approach.
- Develop the preferred approach following feedback from the internal review and design option process.
- Use competitive design processes (design competitions) for suitable projects.



PRECEDENTS (Top to bottom)

Figure 2 University of Canberra Landscape Architecture student and faculty member celebrating a completed Work Integrated Learning landscape project on Campus

Figure 3 University of Canberra staff and students planting native vegetation at the Ngunnawal Garden as part of a working bee event.

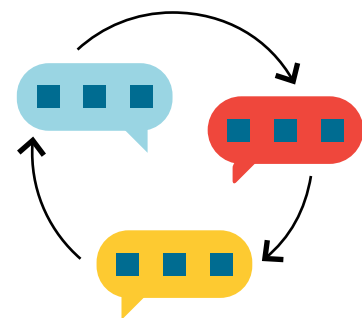
1.2

Ensure design excellence

Engage with future users and stakeholders

Consultation with user groups and stakeholders can provide invaluable insights and is key to understanding the needs and perspectives of future users.

- Consult students as part of the engagement process.
- Engage with stakeholders to ensure the project is fit for purpose and responds to key requirements.
- Ensure the remit of stakeholders in the design process is clear to ensure understanding of project influence.
- Engage the Ngunnawal community early in the process in any projects where opportunities for Indigenous celebration are anticipated.



DIAGRAM

Figure 4 Engage with future users and stakeholders

1.3

Ensure design excellence

Integrate maintenance and management

Landscapes are comprised of natural and human-made features that require various levels of maintenance and management to be successful and thrive as they evolve.

- Consider the level of landscape intervention and develop a corresponding maintenance strategy i.e., low, moderate and high level intervention.
- Engage with UC maintenance staff early to communicate design intent, incorporate feedback and develop and agree on maintenance strategies.
- Implement active management of the landscape through cultural / land management practices.
- Maintain key spaces regularly to increase the perception of safety and comply with CPTED principles.
- Utilise robust and long-lasting materials to ensure longevity.
- Include appropriate consolidation periods and handover processes to ensure the expected quality and standard of the work is upheld.
- Consider the life cycle and evolution of the landscape design against design objectives and outcomes.
- Evaluate completed landscape projects at key intervals to measure performance, assess lessons learnt and gain insights for future projects.



DIAGRAM

Figure 5 Integrate maintenance and management



PRECEDENTS (Top to bottom)

Figure 6 The Living Pavilion by the University of Melbourne combined ecology, sustainability, Indigenous knowledge systems and the arts together with community participation in a temporary 'living' installation.

Figure 7 Honours student project by Raina Emerson exploring the concept of Woody Meadows in a Canberra climate and context for her dissertation.

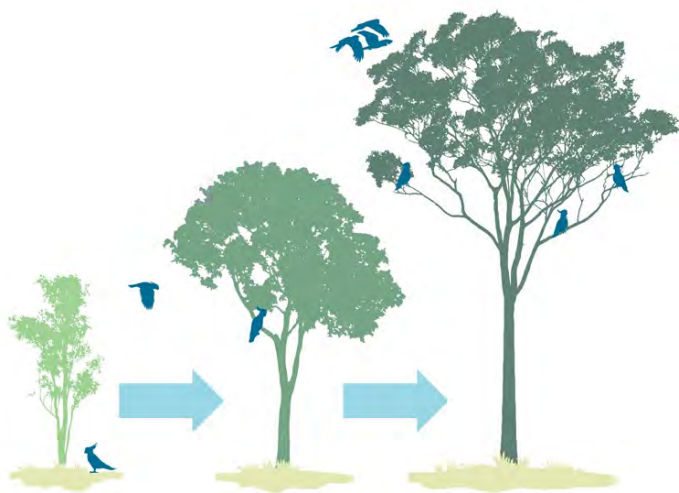
1.4

Ensure design excellence

Respect the existing Campus and its historic legacy

Meaningful respect and appreciation for the existing landscape, Campus and its historic legacy can increase the value of these assets overtime.

- Future landscapes should respect the Indigenous cultural landscape the Campus sits in.
- Future landscapes should respect existing valued landscapes that are distinct to the Campus. Where viable, promote the adaptation of existing landscapes, to ensure elements of value are protected and retained.
- Ensure landscapes respond sensitively to their immediate and surrounding context, including built form, urban character, function / uses and edge conditions.
- Utilise material, colour and plant palettes sympathetic to their immediate context, as well as, the Bush Campus and respective Neighbourhood character.
- Utilise and showcase locally sourced materials where appropriate to connect to the Campus context.



DIAGRAM

Figure 8 Respect the existing Campus and its historic legacy

PRECEDENTS (Top to bottom)

Figure 9 The Concourse is a key landscape of the University of Canberra Campus and treasured by both students and faculty.

Figure 10 The courtyard landscape frames views towards the iconic Building 7 which is home of the Faculty of Arts and Design.

1.5

Ensure design excellence

Deliver exemplar landscape design solutions

- Evaluate current and emerging practices, theories, design thinking and evidence based research relevant to each project, and incorporate where applicable, within the design process.
- Establish clear objectives and a baseline to assess performance throughout the duration of a project.
- Respond to site, context and design for place.
- Design for flexibility and adaptability.
- Implement appropriate design reviews at regular intervals to maintain high quality outcomes and respond to an evolving design process.
- Adopt an holistic approach.
- Integrate sustainability targets such as Green Star Communities or the Living Building Challenge.



DIAGRAM

Figure 11 Deliver exemplar landscape design solutions



PRECEDENTS (Top to bottom)

Figure 12 The Bendigo Kangan Institute was designed by SBLA in cooperation with the Dja Dja Wurrung community, the Bendigo TAFE Indigenous studies and art cohorts resulting in a considered design highlighting the endemic landscape.

Figure 13 The award-winning 'Reimagine your Creek' project by REALM Studios demonstrates exemplary sustainability and design excellence.



Foster social landscapes

Create functional, habitable and welcoming spaces that are well connected, enhance learning in the landscape, and support the idea of Galambany; coming together as one – one university, one community.

- 2.1 Support learning and teaching in the landscape
- 2.2 Create social landscapes
- 2.3 Improve circulation and connectivity
- 2.4 Enhance legibility and wayfinding

2

2.1

Foster social landscapes

Support learning and teaching in the landscape

The landscape should assist in achieving the Campus vision of outdoor learning and activation.

- Create opportunities within the landscape for teaching, studying, work-integrated learning and education through engaging with the landscape. Consider providing formal and informal spaces, positioned along circulation routes, or adjacent to similar internal functions.
- Provide appropriate facilities to support learning and teaching within the landscape including furniture, lighting, power access and weather protection.
- Establish learning walks that bolster the Neighbourhoods. Consider how the landscape can assist in defining and enhancing the unique characteristics of each learning walk.
- Create dedicated Indigenous learning and teaching spaces that reflect and promote Indigenous culture.
- Create a 'Living Laboratory' linked to the curriculum:
 - Create 'Learning Gardens' and 'Landscape Front Doors' and choose specific plant species to reflect interior programs.
 - Utilise the Campus to trial and test Climate Positive Design technologies, horticultural innovations and experimental practices
 - Make hydrological processes visible and celebrate changes within the environment.



DIAGRAM

Figure 14 Support learning and teaching in the landscape



PRECEDENTS (Top to bottom)

Figure 15 The Monash Earth Sciences Garden highlights the local geology, geomorphology and native flora and encourages a hands-on approach to outdoor learning and teaching.

Figure 16 Hassett Park by Jane Irwin Architecture makes hydrological processes visible in the landscape and inspires informal play and interaction with water.

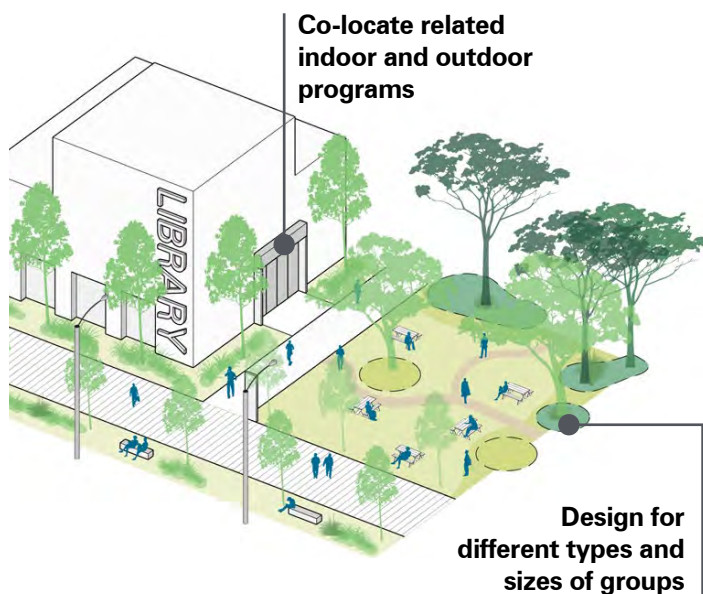
2.2

Foster social landscapes

Create social landscapes

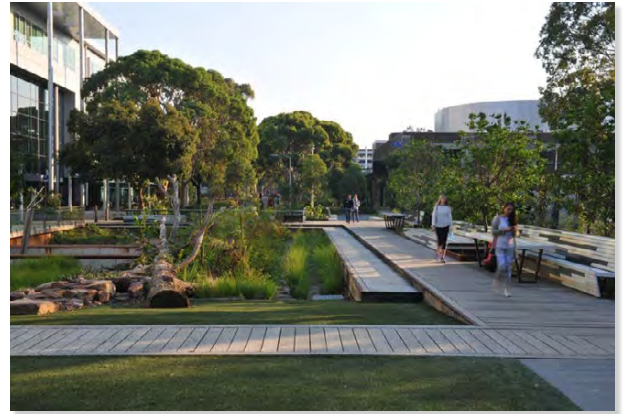
Design landscapes that foster social connections and support the Campus community.

- Create functional and welcoming landscapes and spaces that reinforce the character of each Neighbourhood and support the wider community.
- Provide a diverse offering of spaces for:
 - Active and passive recreation
 - Events and functions
 - Informal gatherings
 - Individual / group based activities
- Design occupiable spaces that accommodate different demographic/cultural/groups/individuals.
- Co-locate spaces adjacent appropriate internal/external functions to suit noise, light and access requirements.
- Integrate art within the Campus to support social engagement and enhance the character of each Neighbourhood.
- Support custodianship/stewardship within the Campus community through programs, working bees and education opportunities.



DIAGRAM

Figure 17 Create social landscapes



PRECEDENTS (Top to bottom)

Figure 18 The landscape design at Monash University's Western Precinct encourages social interaction and facilitates informal gatherings along key pathways.

Figure 19 The Northern Plaza is a key gathering space at Monash University offering a variety of furniture, including fixed and loose, to provide flexibility and accommodate different group sizes.

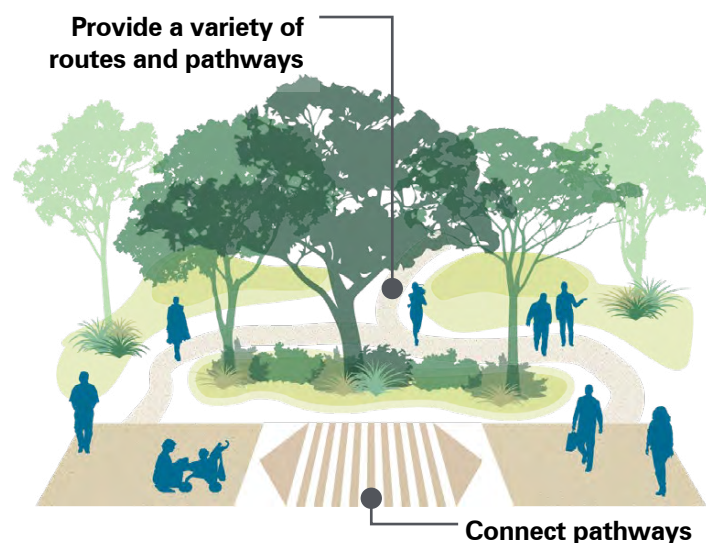
2.3

Foster social landscapes

Improve circulation and connectivity

A connected and logical circulation network can improve usability, access and the overall experience of the Campus.

- Retain and create key visual/physical connections to place.
- Enhance the pedestrian experience.
- Provide circulation options including direct and meandering pathways.
- Create points of interest along routes and incorporate moments of rest/holding within the landscape.
- Provide appropriately scaled connections to support pedestrians/cyclists/any additional needs. Encourage active and public transport including light rail, bicycles and pedestrians.
- Provide bicycle parking in the landscape.
- Improve street design and character through the considerations of:
 - Hierarchy
 - Planting
 - Tree canopy cover and species
 - Parking



DIAGRAM

Figure 20 Improve circulation and connectivity

PRECEDENTS (Top to bottom)

Figure 21 One Central Park demonstrates a clear circulation hierarchy supported by a network of primary and secondary pathways, clear sightlines and visual connections to close and longer distance destinations.

Figure 22 New Acton Precinct provides playful pathway connections through and across the courtyard space, with moments of rest / pause nestled amongst lush plantings and artworks.

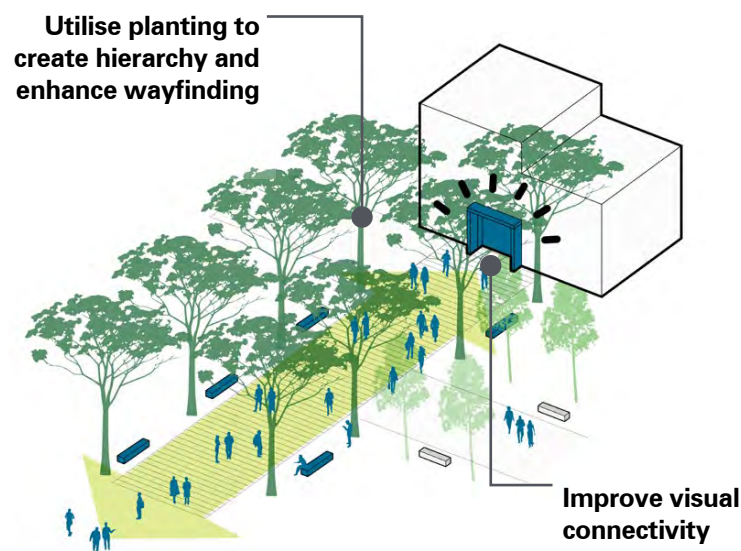
2.4

Foster social landscapes

Enhance legibility and wayfinding

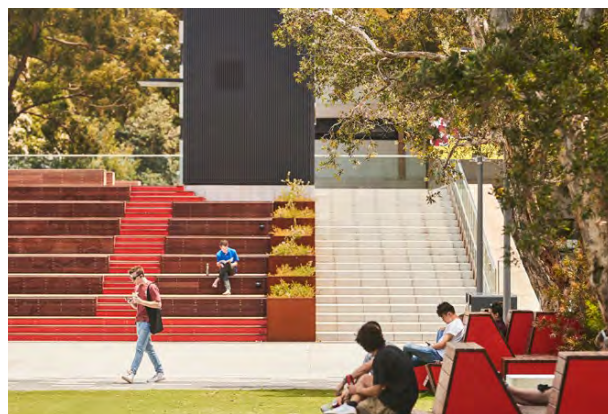
The landscape should support the creation of the network of learning walks and boulevards outlined in the Master Plan.

- Establish a sense of arrival for all modes of transport.
- Develop a hierarchy of spaces, paths and lighting that consider scale, use and location.
- Where appropriate and in proper consultation with Ngunnawal representatives, use and incorporate the local Ngunnawal language into signage and wayfinding.
- Create a clear Campus structure through defined nodes/courtyards/gateway sites/entries.
- Incorporate signage supporting the distinct characters of Neighbourhoods/Learning Walks.
- Formulate a consistent neighbourhood based design language: furniture/materials/colour palette.
- Improve visibility and legibility at gateways and across Campus.
- Utilise planting to support informal wayfinding.
- Consider ways to incorporate intuitive wayfinding opportunities.



DIAGRAM

Figure 23 Enhance legibility and wayfinding



PRECEDENTS (Top to bottom)

Figure 24 UNSW Alumni Park incorporates the consistent use of bright accent colours and Indigenous patterns in furniture to assist with general wayfinding and legibility.

Figure 25 Lonsdale Street Dandenong utilises planting and paving patterns to guide visitors around the precinct and clearly define vehicle and pedestrian zones.



Create a safe Campus environment

Implement Crime Prevention Through Environmental Design principles and champion diversity, inclusivity and equity to support a safe and comfortable Campus for all.

- 3.1 Create safe and inclusive spaces
- 3.2 Design for equity and accessibility
- 3.3 Cultivate a culturally safe Campus with Aboriginal and Torres Strait Islander visibility
- 3.4 Promote diversity

3

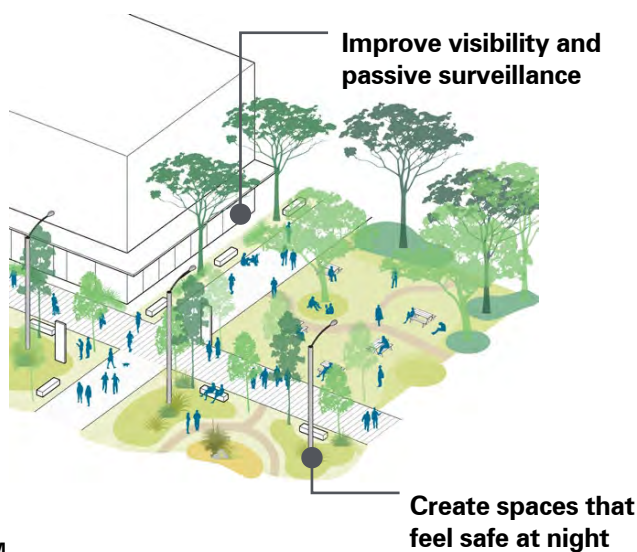
3.1

Create a safe Campus environment

Create safe and inclusive spaces

Contribute to the Campus community by providing safe and inclusive spaces for all people.

- Embed Crime Prevention Through Environmental Design (CPTED) principles.
- Apply Gender Sensitive Urban Design (GSUD) principles in all landscapes to support a safe Campus including:
 - Sociability - provide spaces that encourage positive social experiences like feeling safe, welcomed and accepted.
 - Connections - provide clear, unimpeded connections that are inviting, well lit and are appropriate in scale.
 - Comfort and image - consider lighting levels, passive surveillance, materiality, edge conditions and opportunities for prospect and refuge.
 - Identity - provide spaces that celebrate and welcome all forms of identity.
 - Inclusivity - consider the requirements of all users and provide environments that foster and support inclusivity.
- Integrate and provide appropriate lighting that supports a safe Campus environment and facilitates the use of the Campus at night.
- Maintain clear view lines and visibility.



DIAGRAM

Figure 26 Create safe and inclusive spaces



PRECEDENTS (Top to bottom)

Figure 27 A landscape space at the University of Wollongong with clear sightlines, warm materials and soft landscaping where students gather and lounge in a comfortable environment.

Figure 28 Monash University Clayton Campus Eastern Precinct provides inclusive outdoor spaces with ample shelter, lighting and DDA compliant furniture.

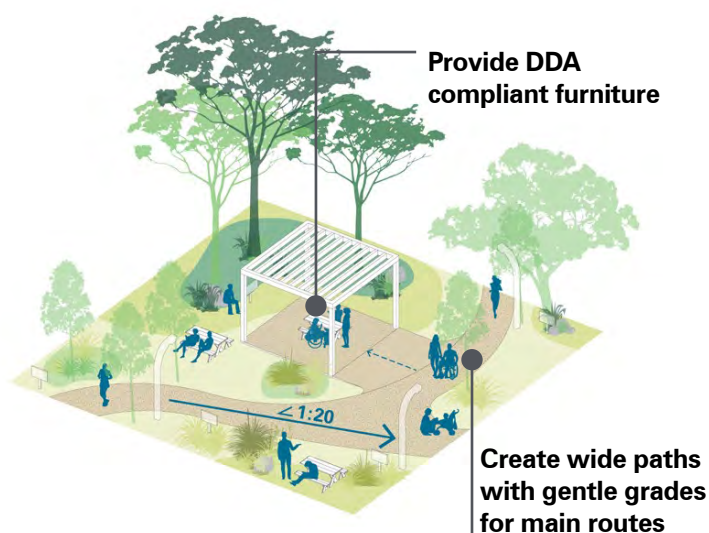
3.2

Create a safe Campus environment

Design for equity and accessibility

Enhance the Campus experience through considered, equitable design that caters to all users.

- Incorporate equal access across the Campus including to all buildings and primary circulation routes. Consider how materiality, path widths, obstacles, regular rest points and lighting can improve the experience for all people traversing the Campus.
- Provide equal opportunity and furniture that is wheelchair friendly, includes armrests and backrests where possible and that is easily accessible from pedestrian pathways.
- Apply universal design principles. Consider scale, context, use and flexibility and design spaces accordingly.
- Recognise needs of neuro-diverse people.



DIAGRAM

Figure 29 Design for equity and accessibility



PRECEDENTS (Top to bottom)

Figure 30 Monash University's Western Precinct offers shaded, wide, barrier-free pathways with lighting and regular rest points catering to people of all ages and abilities.

Figure 31 Bendigo Hospital switchback arrangement complete with steps, landings and low gradient walkways, with clear sightlines and surrounded by cascading green.

3.3

Create a safe Campus environment

Cultivate a culturally safe Campus with Aboriginal and Torres Strait Islander visibility

Embed Indigenous culture within the Campus through meaningful representation in the built environment.

- Create culturally safe spaces for Aboriginal and Torres Strait Islander Peoples that accommodate cultural functions, activities and other uses.
- Embed visibility of Aboriginal and Torres Strait Islander peoples in the built environment.
- Celebrate Ngunnawal culture on Campus gateways, through signage, landscapes, planting, art, programming, and built form as appropriate/refer to UC Master Plan Indigenous Design Guidelines.



PRECEDENTS (Top to bottom)

Figure 32 + Figure 33 Both the Curtin University Indigenous Learning Circle and the Yarning Circle at Kangan Institute Bendigo are exemplar projects demonstrating the successful engagement of local Indigenous groups to create culturally safe spaces for A&TSI peoples offering learning opportunities to the wider community.

3.4

Create a safe Campus environment

Promote diversity

Celebrate diversity within the University Community and represent people of all walks of life.

- Increase visibility of different cultures, genders, sexual orientations, abilities - particularly along entry nodes and at gateways to celebrate diversity and enforce a welcoming and inviting Campus.
- Offer diversity of experiences, spaces and activities as appropriate.
- Provide amenity suitable to all ages and abilities and cater to different interests - lighting and furniture placement, rest points, shelter, equitable footpath grades.



PRECEDENT

Figure 34 Dairy Road Precinct offers flexible landscape spaces to accommodate a variety of activities including community events and play opportunities to cater to all ages and groups.

Advance the Bush Character

Promote native flora and fauna, increase native biodiversity and celebrate Indigenous knowledge systems to reinforce UC's unique 'Bush Campus' character.

- 4.1 Encourage native vegetation
- 4.2 Protect and connect significant existing habitat
- 4.3 Promote biodiversity on Campus
- 4.4 Celebrate Indigenous knowledge systems

4

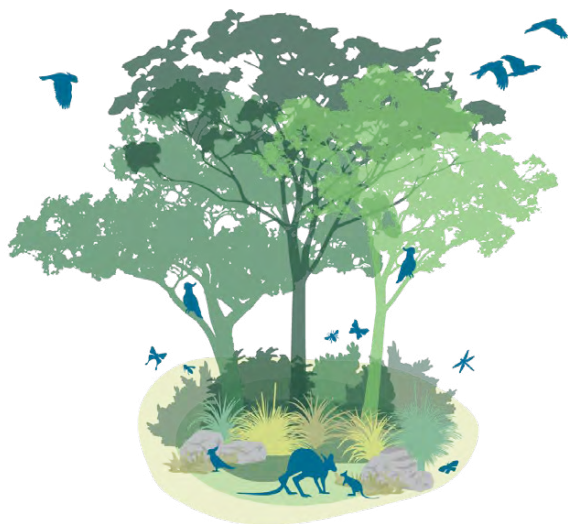
4.1

Advance the Bush Character

Encourage native vegetation

Native vegetation is integral to the Bush Campus Character at UC and should be prioritised in all landscape projects.

- Ensure the Campus respects and enhances its landscape context.
- Ensure predominantly native tree species and exclusively native mid and understorey planting, in keeping with the Bush Campus character, whilst also considering the Canberra climate.
- Encourage the use of local/endemic species, incl. trees, and utilise species that are currently thriving on the Campus.
- Respond to the impacts of climate change and consider the potential benefits of introducing seed stock from varying surrounding regions and climates.
- Utilise native vegetation to establish distinct landscape characters i.e. Neighbourhoods and specific uses.



DIAGRAM

Figure 35 Encourage native vegetation



PRECEDENTS (Top to bottom)

Figure 36 + Figure 37 The Australian Garden showcases native vegetation in a curated landscape, whereas the Mitcham Library and Hawthorn Reserve utilises a more naturalised approach.

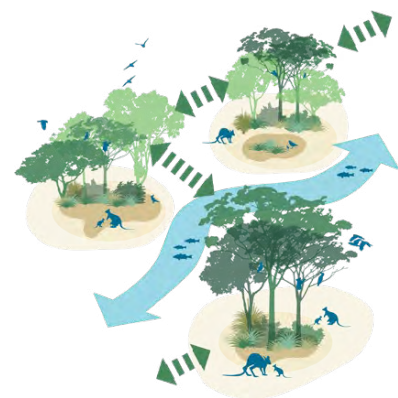
4.2

Advance the Bush Character

Protect and connect significant existing habitat

Ensure the success of existing and future ecological communities through a site wide approach to habitat protection and connection.

- Support and protect existing habitats.
- Ensure the active management and specific requirements of each habitat are recognised and consider what measures need to be put in place as the Campus evolves.
- Connect habitats to form new habitat corridors. Consider the creation of pollinator corridors.
- Bolster connections between the internal habitat network to the region's significant landscapes and habitat systems.
- Observe and apply Dark Skies principles to minimise the impacts of light pollution on habitats and the Environment.



PRECEDENT + DIAGRAM

Figure 38 The 'light touch' elevated boardwalk at Jock Marshall Reserve Nature Walk allows visitors to experience the wetlands with minimal impact to the existing habitat below.

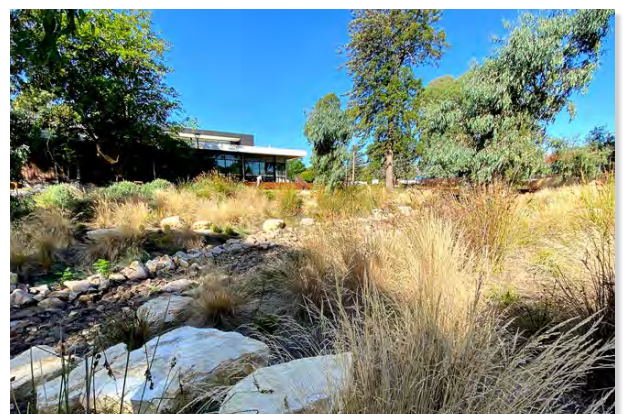
Figure 39 Protect and connect significant existing habitat

4.3

Advance the Bush Character

Promote biodiversity on Campus

- Integrate native biodiversity as part of a Campus wide approach. Consider how each landscape project can contribute to the overall biodiversity across Campus.
- Introduce targets for native biodiversity. Consider how this can be distributed across canopy, mid and understorey planting provision.
- Protect existing trees. Consider succession planting regimes and replacement strategies for trees reaching end of life.
- Ensure plant species support and attract endemic bird species and arboreal mammals/marsupials.
- Create new habitats. Consider introducing bee/insect hotels, bird boxes.



PRECEDENTS (Top to bottom)

Figure 40 The re-naturalisation of the stormwater infrastructure into a dry creek bed at Mitcham Library and Hawthorn Reserve supports local habitats linking them to the wider surroundings.

4.4

Advance the Bush Character

Celebrate Indigenous knowledge systems

Support University of Canberra's Strategy of embedding Indigenous cultures within the Campus through the integration of cultural practices and cultural exchange.

- Educate through the implementation of cultural land management practices on Campus through appropriate consultation and collaboration with First Nations Registered Aboriginal Organisations and community representatives.
- Create a native seed bank/nursery.
- Incorporate cultural use plantings such as species for food, medicine, tools / weapons and shelter.
- Integrate the Ngannawal calendar.
- Include didactic signage to provide opportunities for cultural exchange and education.



DIAGRAM

Figure 41 Celebrate Indigenous knowledge systems (Placeholder)



PRECEDENTS (Top to bottom)

Figure 42 TCL celebrate First Nations' knowledge systems in their art installation 'Cultivated by Fire'.

Figure 43 The Indigenous Learning Circle honours the cultural and educational contribution of Curtin University's Indigenous community.

Be climate proactive

Celebrate environmental sustainability across the Campus as well as within the landscape and make climate-wise design choices.

- 5.1 Green the Campus utilising appropriate species
- 5.2 Champion Water-Sensitive Urban Design
- 5.3 Create landscapes that respond to climatic and environmental factors
- 5.4 Select appropriate materials

5

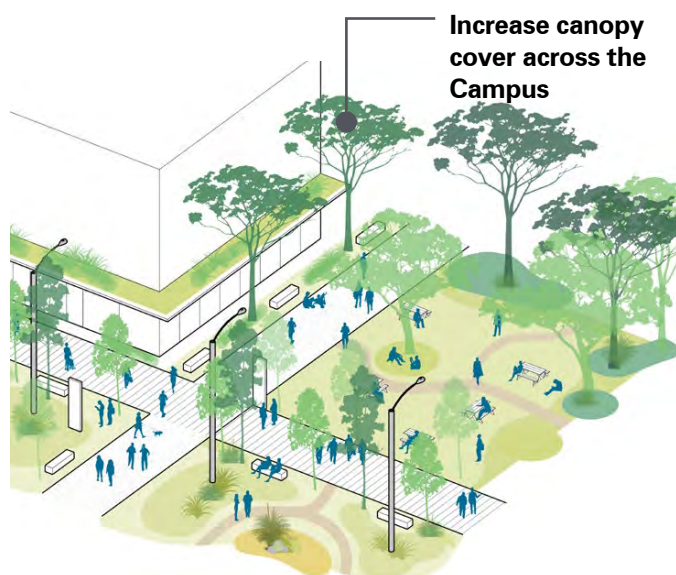
5.1

Be climate proactive

Green the Campus utilising appropriate species

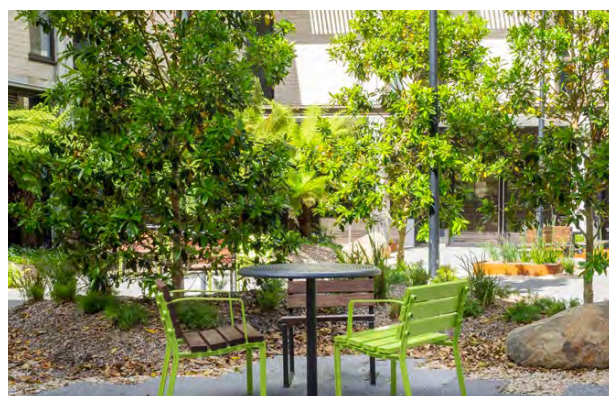
Prioritise the provision of natural assets across Campus, considering the Canberra climate and future impacts of Climate Change.

- Reduce heat island effect through increased planting provision and natural shade opportunities.
- Utilise planting to create comfortable environments inside and out.
- Exceed current ACT Gov. targets for tree canopy cover >30% and implement targets per site.
- Develop deep soil/contiguous soil targets.
- Establish site building/shade coverage targets, similar to minimum solar access requirements for buildings.
- Select species according to the following criteria:
 - Specific site conditions incl. thermal comfort
 - Climate appropriateness
 - Climate change resilience
 - Water requirements/drought tolerance
 - Fertiliser requirements
 - Maintenance requirements.
- Develop an indicative planting palette to suit varying site conditions.
- Ensure adequate soil volume availability for trees.



DIAGRAM

Figure 44 Green the Campus utilising appropriate species



PRECEDENTS (Top to bottom)

Figure 45 Bendigo Hospital utilises ample soft landscaping to create a lush and comfortable environment while mitigating the heat island affect .

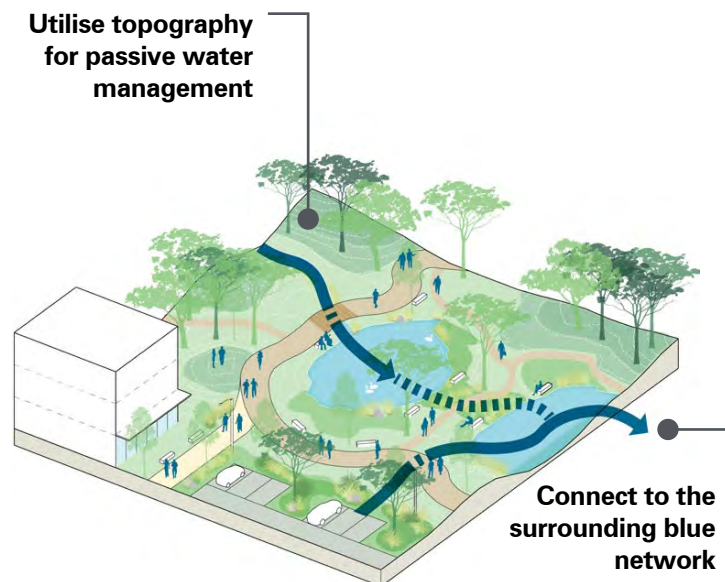
Figure 46 The University of Canberra Building 1 Courtyard demonstrates the selection of appropriate species to suit difficult microclimatic conditions.

5.2

Be climate proactive

Champion Water-Sensitive Urban Design

- Utilise topography and implement passive water management systems - swales, raingardens, riparian zones, passive irrigation.
- Incorporate a series of water bodies, on-site detention, retention and treatment for water re-use supply (irrigation).
- Implement WSUD throughout, particularly along streets and hardscaped areas.
- Repair and upgrade existing natural systems and stormwater infrastructure - drains, creeks, dams etc.
- Naturalise (de-construct) stormwater systems where possible.
- Create an integrated stormwater system to improve water quality on site and connect to the surrounding blue networks.
- Increase infiltration particularly to assist with ground water recharge.
- Implement dedicated permeability targets to suit different applications, i.e. carparks, parks, Concourse



DIAGRAM

Figure 47 Champion Water-Sensitive Urban Design

PRECEDENTS (Top to bottom)

Figure 48 The Sydney Park Water Re-Use Project incorporates recreational opportunities with exemplar Water-Sensitive Urban Design.

Figure 49 The naturalised creek bed at Mitcham Library and Hawthorn Reserve improves water quality downstream, benefiting the broader blue and green networks.

5.3

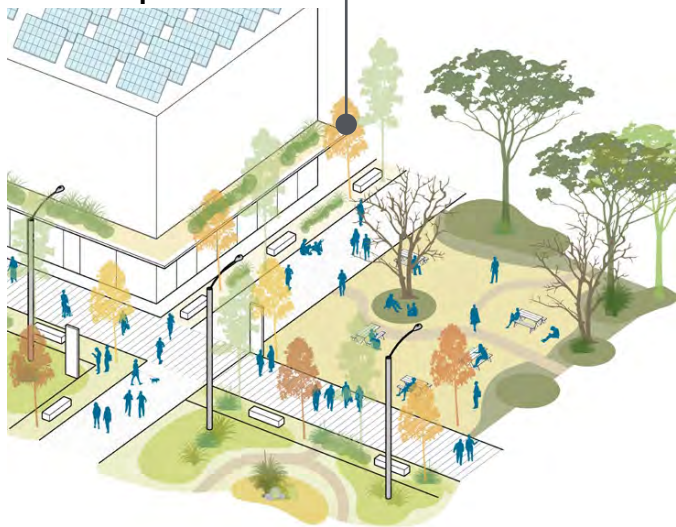
Be climate proactive

Create landscapes that respond to climatic and environmental factors

The landscape provides opportunities to positively contribute to the usability, functionality and comfort of interior and exterior spaces year round.

- Locate passive/active spaces to suit site conditions.
- Balance winter solar gain/summer sun protection.
- Adopt passive solar landscaping principles for built form energy efficiency.
- Provide covered walkways between key buildings.
- Minimise opportunities for water pooling/ice on paths.
- Integrate renewable energy alternatives.
- Provide electric vehicle (EV) parking and charging opportunities.
- Incorporate soft landscaping opportunities, where possible, to reduce operations costs and increase built form efficiencies.

Balance winter solar gain and summer sun protection



DIAGRAM

Figure 50 Create landscapes that respond to climatic and environmental factors



PRECEDENTS (Top to bottom)

Figure 51 Deciduous trees at Dairy Road Precinct provide shade during summer and solar gain during winter to create comfortable environments indoors and outdoors to suit Canberra's extreme temperature changes.

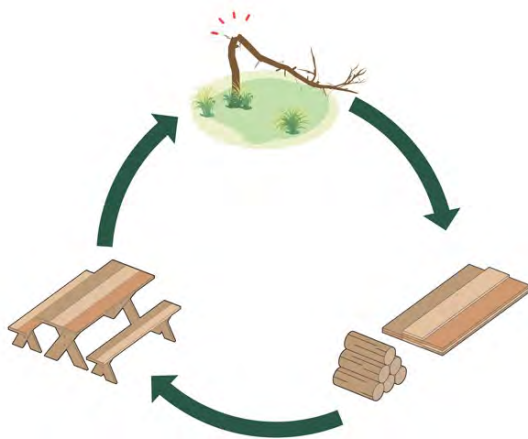
Figure 52 JCU Verandah Walk offers sheltered seating areas and covered walkways to protect pedestrians from the elements.

5.4

Be climate proactive

Select appropriate materials

- Select low carbon/low embodied energy materials.
- Consider the circular economy and utilise recycled/ recyclable materials where possible.
- Consider social and environmental responsibility aspects for each project
- Preference locally sourced materials to reduce each project's carbon footprint and to reinforce connection to place.
- Select materials that consider maintenance requirements and life cycle / expectancy.
- Ensure appropriate material selection considering context, environment, aspect and location.
- Select responsibly sourced materials from reputable suppliers.



DIAGRAM

Figure 53 Select appropriate materials



PRECEDENTS (Top to bottom)

Figure 54 Forrest Boardwalk utilises recycled timber from Thor's Hammer a local Canberra business specialised in timber re-use and design.

Figure 55 Wunggurrwil Dhurrung by Realm Studios incorporates local materials to reinforce the design's connection to Country and celebrate the colour palette of Australian landscapes.





Enhance views and vistas

Ensure that views and vistas from the ridge and across the valley are protected and enhanced to maintain local visual connections, assist with wayfinding, respect site topography and heighten the awareness of adjacent spatial forms.

- 6.1 Celebrate and respond to topography
- 6.2 Link to Campus to Country and protect Indigenous sightlines
- 6.3 Connect internal and external spaces

6

6.1

Enhance views vistas

Celebrate and respond to topography

- Recognise the undulating land form for its role in establishing a unique University setting.
- Retain visual connections between surrounding hilltops and the broader landscape.
- Ensure that views and vistas from the ridge and across the valley are protected and enhanced.
- Utilise the topography to assist with wayfinding and navigation.
- Enhance and curate views towards and from Campus.
- Create curated moments in the landscape.
- Utilise buffer planting to screen as well as enhance, frame and highlight key views and vistas.
- Provide destination based visual connections across Campus to assist with legibility and circulation and to give prominence to significant views. For example: sight-lines along the Concourse.
- Provide opportunities for 'prospect and refuge'.



PRECEDENTS (Top to bottom)

Figure 56 The dramatic undulating landform at the National Arboretum in Canberra is a key feature of the site, providing panoramic views and a landscape that responds to and embraces topography.

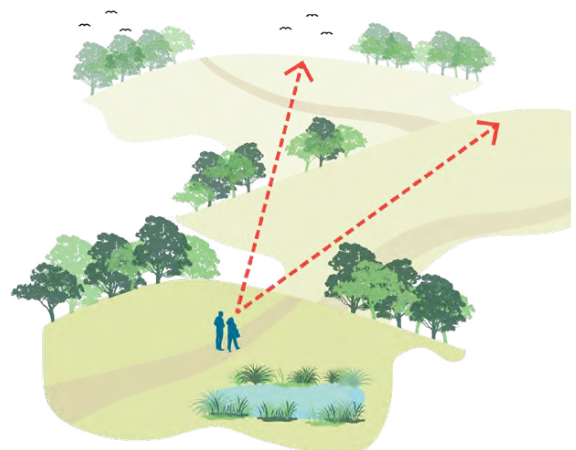
Figure 57 The picnic shelters at Lizard Log capture views across the bushland and nearby walking trails.

6.2

Enhance views and vistas

Link the Campus to Country and protect Indigenous sightlines

- Develop walking trails linking vistas with embedded interpretative material reflecting the cultural values of landscapes, waterways, plants and animals.
- Create and promote visual lines of sight that link the UC to significant Indigenous cultural sites surrounding the Campus.
- Utilise Campus hilltops, particularly University Hill, as a visual sight-line /interpretation hub/teaching space.



DIAGRAM

Figure 58 Link the Campus to Country and protect Indigenous sightlines

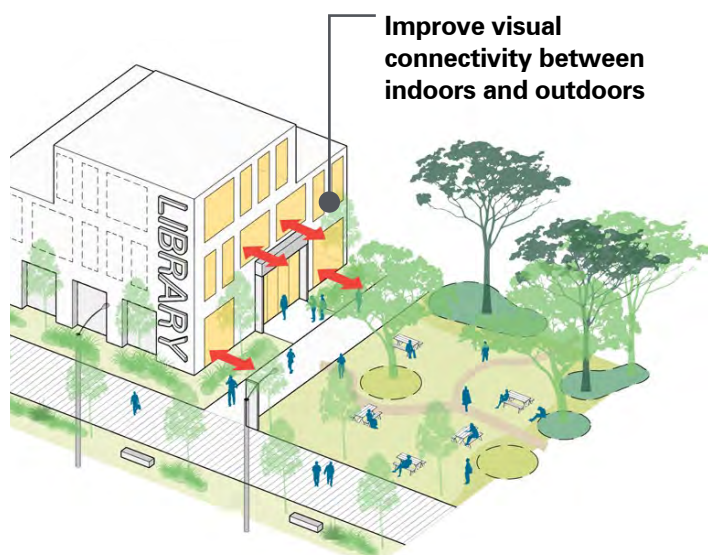
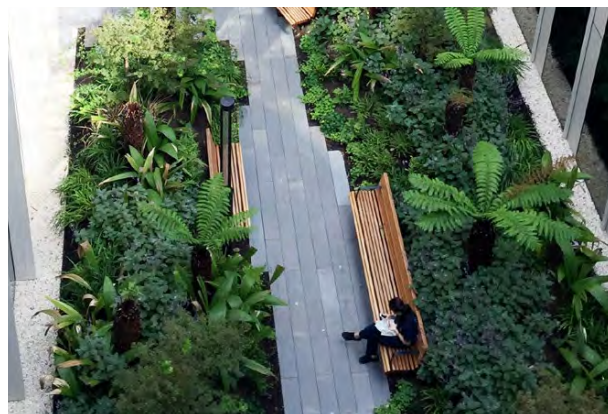
6.3

Enhance views and vistas

Connect internal and external spaces

Visual and physical access to natural elements provides positive benefits to users both inside and out.

- Provide visual connections between interior and exterior spaces to enhance connectivity and provide seamless indoor-outdoor activation.
- Provide opportunities for biophilic connections i.e. connections to nature through the visibility of environmental features, natural shapes/forms, patterns/processes, light/space and place.
- Co-locate specific landscape spaces adjacent to similar interior functions.



DIAGRAM

Figure 59 Connect internal and external spaces

PRECEDENTS (Top to bottom)

Figure 60 + Figure 61 The Bendigo Hospital and Riverside Green projects provide ample visual connectivity between the indoors and outdoor, utilising biophilic design principles to create an immersive experience.



