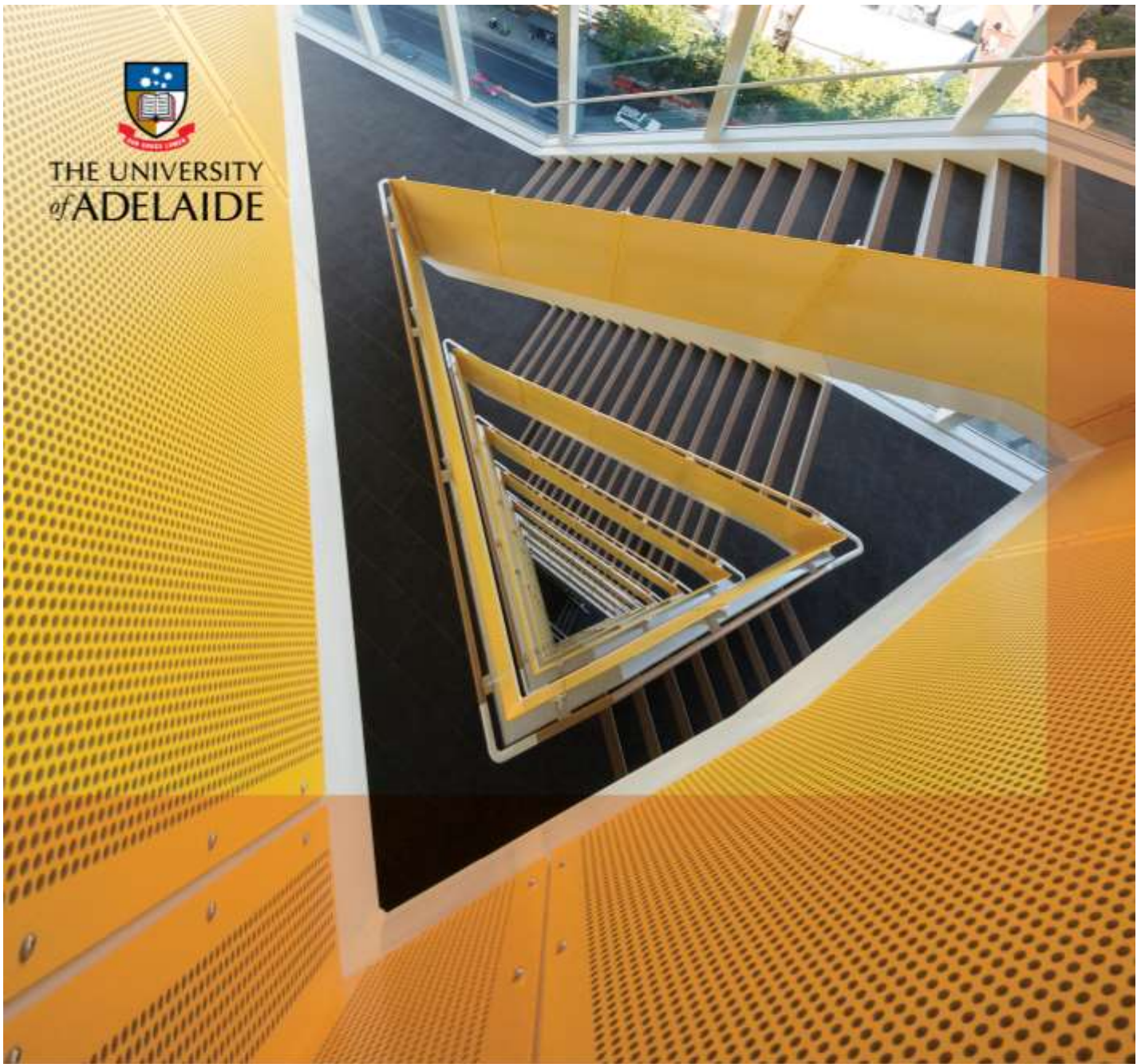




THE UNIVERSITY  
of ADELAIDE



# DESIGN STANDARD

J. External Works

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## Revision log

### Current issue

K. External Works - UoA Design Standards. FINAL Version 4. May 2023

### Previous issues

Version	Authors	Description	Revision	Date
1.0	Vicki Jacobs, Capital Project Delivery, UoA	K. External Works - UoA Design Standards.	DRAFT Version 1	December 2017.
2.0	Vicki Jacobs, Capital Project Delivery, UoA/ Stephen Mylius, Service Delivery, UoA/ GHD	K. External Works - UoA Design Standards.	DRAFT Version 2.	March 2017.
3.0	Vicki Jacobs, Capital Project Delivery, UoA/ GHD	K. External Works - UoA Design Standards.	DRAFT Version 3.	August 2018.
4.0	Vicki Jacobs, Capital Project Delivery, UoA/ GHD	K. External Works - UoA Design Standards.	FINAL version 4.	

### List of revised items

Version	Authors	Revised items	Date
4.0	Infrastructure, UoA	Abbreviations, 1.Introduction, 2.General Requirements removed and reference in Vol.A Project Process Checklist	May 2023

### Revision management

It is envisaged that revisions to this document will be undertaken at intervals of not more than two (2) years.

### Endorsement body

Director of Infrastructure

### Owner

Director, Capital Projects Delivery

### Contact person

Manager, Capital Project Delivery

### Authors and acknowledgements

The Standards have been developed by Capital Projects with the assistance of University of Adelaide staff, external consultants, contractors, and colleagues from other education institutions.

The University conveys its thanks to all parties who have participated in the development, assessment, and review of these Standards.

## Abbreviations

(refer –Standard Volume A. Project Process Checklist)

### 1. Introduction

(refer –Standard Volume A. Project Process Checklist)

### 2. General requirements

(refer –Standard Volume A. Project Process Checklist)

### 3. Technical requirements

This section outlines the specific technical requirements for J. External Works Design Standard.

#### 3.1 References

In addition to review of Campus Masterplan, analysis of the following documents must occur as part of the design process:

- Stormwater Management Plan for the campus
- Public Realm Masterplan for the campus (if available)
- Flora and Fauna (Biological) Surveys for the campus (Waite)

#### 3.2 Masterplan design considerations

An integrated, approach must be taken for all works in the public realm. In reviewing campus masterplans and other reference documents, the project site must be critically considered as part of a larger precinct, and as part of an integrated campus. Particular consideration must be given to:

- Preference for indigenous flora
- Protection of indigenous fauna
- Equity of access
- Emergency access routes
- Pedestrian and cycling routes
- Vehicle routes and shared zones
- Rationalising (and minimising) vehicular movement on campus
- Servicing and delivery points
- Opportunities for Kaurna cultural interpretation
- Opportunities to enrich external space with public art
- Opportunities for campus branding
- Opportunities for external spaces to be used for informal study, learning and teaching
- Social spaces for staff, recreational uses, indigenous interpretation and public art
- Clarity of entrances
- Lighting
- Heritage places and curtilage
- Water sensitive urban design
- Opportunities to integrate end of trip facilities
- Operational requirements including service zones
- Security (including CCTV, lighting)
- Stormwater

Further discussion on these issues is provided below or within B. Building and Architecture.

### 3.3 Indigenous heritage

The Kurna Aboriginal people are the traditional owners of the Adelaide Plains and their cultural connection to country is celebrated and promoted by the University. The University continues to work in many ways with members of the Aboriginal and Torres Strait Island (ATSI) community to support cultural recognition on campus, engage and build relationships, encourage student recruitment and retention, develop an indigenous curriculum, support staff recruitment and retention, and champion Indigenous researchers and Indigenous research topics. Interpretation of the Kurna heritage through the campus landscape is a key opportunity that must be considered when developing proposals. Refer B. Building and Architecture Design Standard for further discussion on opportunities and processes related to Indigenous Heritage.

### 3.4 Materials selection

Selection of any grounds and landscaping elements need to be agreed in project brief on a project by project basis, with consideration of:

- Nature of project
- Intended use
- Materials
- Environment
- Price
- Future flexibility
- Safety and security
- Design life
- Warranty

### 3.5 Roadways

Consider opportunities for a variety of construction techniques, materials and treatment of roadways to reduce car speeds and improve aesthetics.

Wherever possible, promote a pedestrian campus by for example eliminating kerbs, using traffic calming strategies, or eliminating vehicle access entirely.

Provide properly identified services conduits under roads at appropriate locations for future expansion, and ensure locations and conduit sizes are documented.

Speed humps must be avoided and only used on paved roads where passive means of slowing vehicles is not available.

### 3.6 Paths and plazas

Critically interrogate both proposed use, and potential future use, of all paths and plaza spaces when establishing pavement loading. This may include a requirement for such things as:

- Emergency access
- Maintenance access to adjacent structures
- Flat-bed truck access
- Erection of marquees

All landscape areas, roads, hardstand plazas and all paths wide enough to take a scissor lift or forklift must be designed to be trafficable.

Hardstand paths around buildings must be adequate in size and designed to take a load scissor lift for building maintenance.

Wherever possible consider opportunities to reduce hard stand run-off and increase infiltration of water into soil.

Any concrete or pathway saw cutting and replacement must be done on whole panels to ensure replacement sections tie in neatly with existing.

Reduce the risk of slips, trips, and falls by specifying appropriate materials and design solutions. For example, single steps should be avoided. Where a single step is unavoidable, a kerb ramp must also be provided.

### 3.7 Existing vegetation

Investigate plants and landscape elements that have cultural significance to Indigenous peoples.

Protect and propose management plan for significant and endangered flora and fauna species.

Consider tree replacement policies and significant tree governance with the view to exceeding Council requirements and achieve carbon neutral objectives. Liaise with the UoA Ecovercity team for further details.

The environmental value of the site is not to be diminished beyond its previous state.

### **3.8 Planting**

The following design objectives apply to soft landscape design and plant selection:

- Create a distinctive and consistent campus character, with a diversity of flora and fauna;
- Identify landscape zones, and linkages of them;
- Respect existing cultural and historical evolution;
- Respond to unique climatic and environmental characteristics of site;
- Enhance biodiversity through the provision of local native species and habitat structures that attract desired native fauna and maximize benefits to the broader ecosystem

Selection of plant species needs to consider existing structures, in ground and over ground services, access ways, etc.

### **3.9 Irrigation**

Consider existing irrigation methods in the design of any new irrigation systems.

All new landscaping projects must be irrigated from a compliant non-potable water source such as a rainwater, grey-water harvesting, or treated effluent system.

Water saving smart technology must be adopted in irrigation systems, i.e. weather station driven controllers, drip and micro systems. Irrigation design must incorporate multiple stations for effective water management of different zones requiring different water qualities, e.g. lawn areas, garden beds.

Refer to K. Documentation Design Standard for requirements for Irrigation documentation including As-Built documentation. Labelling of assets must be consistent with UoA asset labelling structure. Liaise with UoA Service Delivery for further information.

### **3.10 Soil and mulch**

Selection of soil and mulch must be appropriate for the environment and the landscape.

### **3.11 Use of chemicals**

The choice and application of chemicals must be based on appropriateness for the task, and has the least toxicity on humans and the environment.

### **3.12 External furniture**

Consideration of existing, surrounding, external furniture palette and analysis of success of precedent selections, must occur prior to selecting external furniture.

Select external furniture that is durable and low maintenance.

### **3.13 Water features**

Any water feature should follow the principles of Water Sensitive Urban Design.

No water features are permitted that require the use of potable water as its main or backup source.

### **3.14 Decking**

Key considerations for the design of decking and selection of materials, must be durability, maintenance and whole of life cost.

All decking must be designed to allow ease of access to any services that exist under the decking.

Bearing capacity of the deck must be considered based on intended use of the deck and expected traffic and load.

### **3.15 Services Infrastructure to external areas**

Engage with stakeholders to establish both the current, and potential future use, of the external area. This may involve consultation with user groups that are outside the established project stakeholder group, for example, student union or faculty groups that use the space for functions. Identify the need for integrated services and infrastructure related to current and future uses. Carefully consider of how the infrastructure is to be mounted, secured, accessed and maintained.