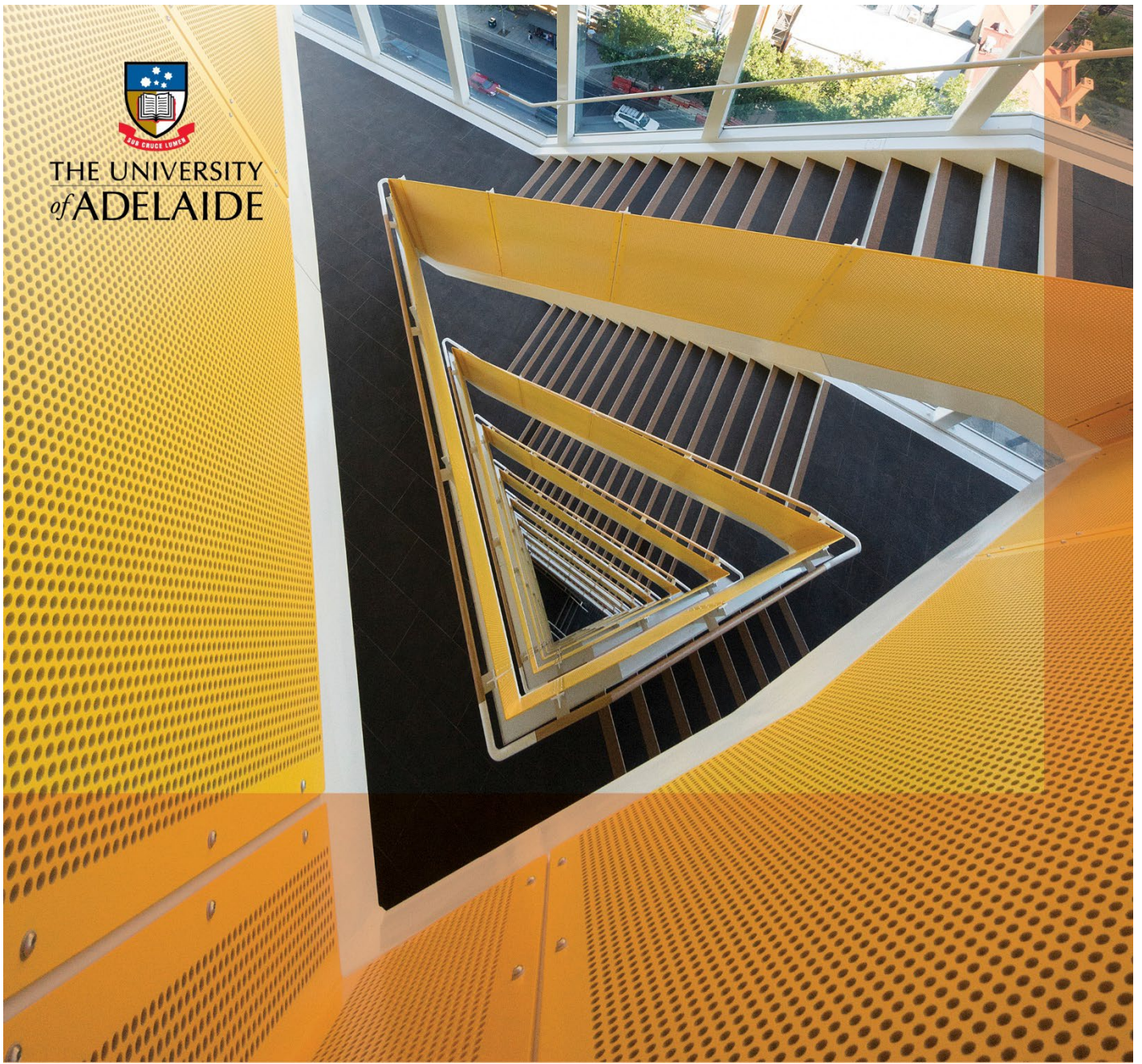




THE UNIVERSITY
of ADELAIDE



DESIGN STANDARD

[O. Sustainability Metrics](#)

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Revision log

Current issue

O. Sustainability Metrics - UoA Design Standards. Version 1. December 2024

Previous issues

Version	Authors	Description/ updates	Revision	Date
1.0	Vikram Kenjie and Dammika Weerakkody, UoA	O. Sustainability Metrics - UoA Design Standards	Version 1	December 2024

List of revised items

Version	Authors	Revised items	Date
-	-	-	

Revision management

It is anticipated that revisions to this document will be undertaken regularly to address practical situations and respond to changes in sustainability standards.

Endorsement body

Director of Infrastructure

Owner

Director, Capital Projects & Facilities Management

Contact person

Director, Capital Projects & Facilities Management

Authors and acknowledgements

The standard has been developed by Infrastructure Branch of UoA.

1. Abbreviations

(refer –Standard Volume A. Project Process Checklist)

2. Introduction

(refer –Standard Volume A. Project Process Checklist)

3. Technical Requirements

(refer –Standard Volume A. Project Process Checklist)

This volume must be read in conjunction with Vol. A Project Process Checklist. Particular attention must be given to obligations relating to:

- Communication with, and distribution of documentation to UoA stakeholders.
- Documentation and certification obligations at milestone checkpoints throughout the project.

Also, this volume must be read in conjunction with various volume of Design Standards eg Volume B to M for detailed design requirements.

3.1 General Documentation Requirements

The calculation tables specified in Section 4 of this document, regarding Sustainability Metrics requirements, must be provided by the consultants during the various stages of the project.

3.1.1 Purpose of Documentation

The University’s Sustainability Strategy 2030 – Here for Good outlines the institution’s strategic plan to address the accelerating environmental, social, economic, and human-induced climate changes occurring globally.

Under the “Here for Good” commitment, the University is working towards Net Zero operational targets, with campus refurbishment and building upgrade projects playing a vital role in this initiative.

Going forward, every Infrastructure capital project must include separately estimated improvements to various relevant sustainability metrics such as energy & associated cost savings, electricity network demand savings, carbon emission abatement, water efficiency improvement, reduced waste to landfill etc.

New reporting templates are now specified here when undertaking in the University’s updated UoA Design Standards. This document should be read in conjunction with the other UoA Design Standards volumes.

3.1.2 Scope and Time Delivery of Documentation (Sustainability Metrics)

Sustainability Metrics related data needs to be gathered as per the description on the Sustainability Metrics – Calculations spreadsheet during the various stages of the project defined under “Design Objectives and Scope of Services”.

Upon the final design, Phase 8 (Post Construction), the final Sustainability Metrics – Calculations for the current financial year, should be provided. This is to include all relevant post-project data. Data is needed to be gathered during various Phases of the project.

3.2 Glossary of Terms

All campuses/sites, buildings, levels, rooms and spaces where the University of Adelaide have occupancy, or have previously occupied, must be numbered and named in accordance with the Design Standard Volume K Documentation.

This includes accommodation that is new, deleted, retained, re-assigned to a new user, subdivided, or modified. This also includes spaces within leased accommodation (for example in hospitals).

Please refer to Design Standard Volume K Documentation for more details for below specific topics:

- Numbering and naming of facilities
- Site/ campus code
- Building code
- Floor code
- Room / Space Numbering and Naming
- Unique Room Identifier (Loccode)
- Area
- Capacity
- Occupancy

4. Sustainability Metrics Requirements

Sustainability metrics data requirements are outlined under following main categories:

Project ID (reference tab on the calculation sheet)	Project Title
PR1	PR1: Lighting
PR2	PR2: Space Heating, Cooling and Ventilation
PR3	PR3: Process Heating and Cooling
PR4	PR4: Building Envelope (BE)
PR5	PR5: Electrical (Equipment and Appliances)
PR6	PR6: On-site Renewable and Alternative Energy Initiatives
PR7	PR7: Water

Please see the following link for details: [Sustainability Metrics – calculations spreadsheet](#).

Each tab contains separate calculation under the main categories mentioned above. Please use the relevant tab.

4.1 Lighting

Identify energy-efficient/saving opportunities within lighting. The following is a list of example projects:

Sustainability Metrics Reference	Example Projects
PR1	LED Lighting upgrade
	Occupancy or timer controls
	Increased natural light / daylight dimming controls
	Other Lighting initiatives

The relevant calculations are outlined in the Sustainability Metrics data table included in PR1.

4.2 Space Heating, Cooling and Ventilation

Identify energy-efficient opportunities within space heating, cooling, and ventilation.

Sustainability Metrics Reference	Example Projects
PR2	High energy efficiency chillers / boilers
	Heat recovery systems
	Improved chiller / boiler usage strategy (e.g. low load chiller)
	Improved algorithms within BMS (Building Management System)
	Other Heating, Cooling and Ventilation

The relevant calculations are outlined in the Sustainability Metrics data table included in PR2.

4.3 Process Heating and Cooling

Identify energy-efficient opportunities within process heating and cooling.

Sustainability Metrics Reference	Example Projects
PR3	Improved staging via low-load chiller/boiler
	Fuel-switching
	Control and monitoring systems
	Emissions control and abatement
	Blowdown heat recovery
	High efficiency Induction Furnace

The relevant calculations are outlined in the Sustainability Metrics data table included in PR3.

4.4 Building Envelope

Identify energy-efficient opportunities for the building envelope during the design stage.

Sustainability Metrics Reference	Example Projects
PR4	Improved roof/wall insulation
	Improved thermal seals
	Replace existing glass areas with high performance glass
	Roof reflective paints
	Curtainwall
	Other building envelope modifications

The relevant calculations are outlined in the Sustainability Metrics data table included in PR4.

4.5 Electrical (Equipment and Appliances) - Hardwired

Identify energy-efficient opportunities in the equipment specified for the project.

Sustainability Metrics Reference	Example Projects
PR5	Voltage optimisation unit
	Power factor correction
	Battery storage for demand management
	High efficiency Refrigeration/Freezer units
	High efficiency hand dryers
	Timer control for minimising stand-by power
	Other appliances

The relevant calculations are outlined in the Sustainability Metrics data table included in PR5.

4.6 On-site Renewable and Alternative Energy Initiatives

Details of any renewable and alternative Energy projects identified during the project design stage are to be provided.

Sustainability Metrics Reference	Example Projects
PR6	Rooftop Solar Photovoltaics
	Biofuels for space or process heating
	Geothermal (active/enhanced)
	Combined Heat & Power/Cogeneration
	Green hydrogen electrolyzers/fuel cell
	Other renewable/alternative energy

The relevant calculations are outlined in the Sustainability Metrics data table included in PR6.

4.7 Water Management

Identify water-saving opportunities during the project design stage.

Sustainability Metrics Reference	Example Projects
PR7	AAA showerheads and basin taps
	Dual flush Toilets
	Rainwater/Greywater capture
	Wastewater processing/ reclamation systems
	Fit-for-purpose water for Landscaping water/irrigation systems
	Other water management initiatives

The relevant calculations are outlined in the Sustainability Metrics data table included in PR7.

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