UNSW DESIGN STANDARDS SECTION I

# Capital Projects Sustainability Framework

v3.0 2025

UNSW SYDNEY

Image: UNSW CBD Fitout, 2025

# Contents



| Revision | Written | Approved | Date |
|---|---|---|---|
| 0 | Melissa Nouel | Tim Beattie | Nov 2025 |

UNSW SYDNEY

# Strategic overview & purpose

The *Capital Projects Sustainability Framework* supports Estate Management (EM) in its unique role in contributing to several pillars of *UNSW Strategy: Progress for All*.

To support EM in the delivery of UNSW Strategic goals, the UNSW *Environmental Sustainability Plan (ESP)* establishes high-level ambitions at a campus and entity scale, while this document (Section I of UNSW's *Design Standards)* establishes requirements for all capital projects delivered by *Design, Development and Delivery* teams and *Facilities Management* through their programs of work.

The framework is supported by a suite of documents to ensure consistent and transparent processes through internal and external implementation governance. As a result, EM will strive to set and communicate clear sustainability ambitions in project-specific feasibility stages, procurement documents, performance and reporting requirements.

The purpose of this Framework is to:

- Describe the **regenerative principles and priority themes** underpinning UNSW's approach to the development of its built environment.
- Provide guidance to EM for the **definition of project sustainability briefs** throughout feasibility and procurement processes.
- Communicate ambitious yet achievable targets to UNSW internal and external delivery teams, while outlining **internal tools and relevant third-party assurance** requirements to deliver them.
- Retain the **flexibility** to allow each project to explore and express what it is that makes it vital to an outstanding campus experience.

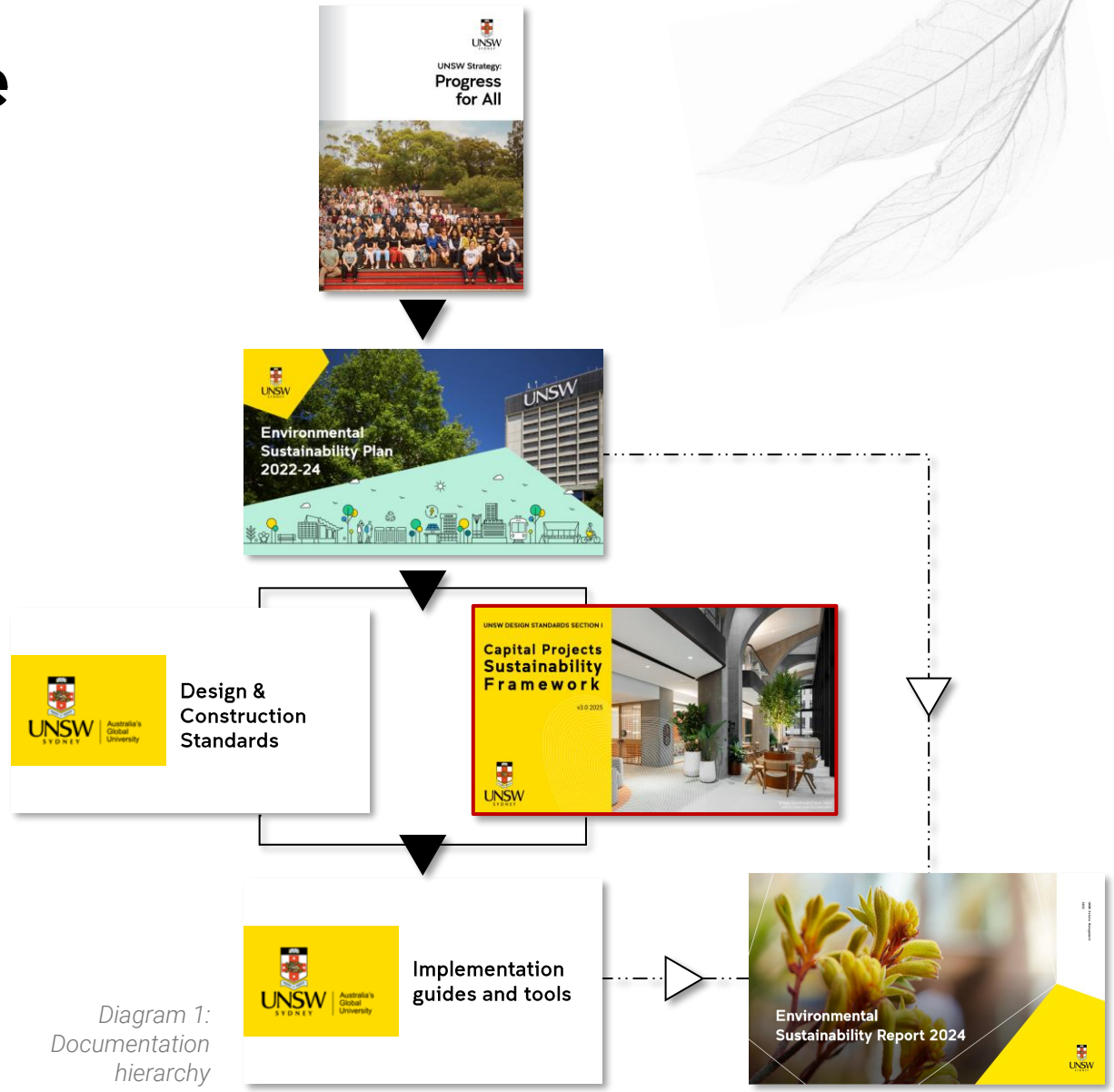



*Diagram 1: Documentation hierarchy*

# Capital Projects Sustainability Framework

## Regenerative principles

Regenerative principles go beyond objective of 'doing less harm' by aiming to restore systems from negative impacts and create further positive impacts for society, the environment and economy.

With regeneration in mind, this framework is based on a systems approach which, in contrast to methods that 'break the design into parts', uses fundamental concepts of boundaries and flows across different priority themes.

**Boundaries:** The built environment is considered part of a larger whole, interconnected within itself and through several scales - from fitout to building, campus, city, state, country, and the world.

**Flows:** This concept frames buildings and their operations as a continuous process through their life cycle and beyond, without a 'start' or a 'finish'. This includes natural flows (air, light, water, plants, animals), and other users in the area.

**Themes:** These are the main areas of focus for sustainability at UNSW's campuses. They are relevant across the different scales of the whole and are continually interconnected -and affected - by flows of users, energy, natural elements, etc.

**Priority themes are further described on the next page.**

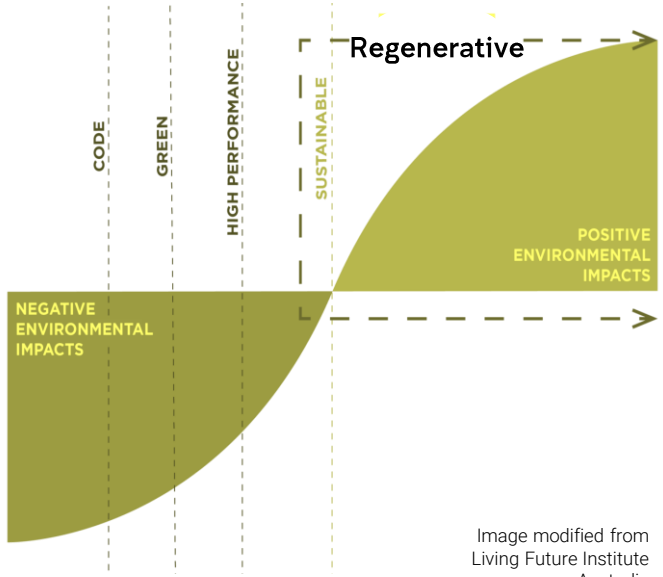



Image modified from Living Future Institute Australia

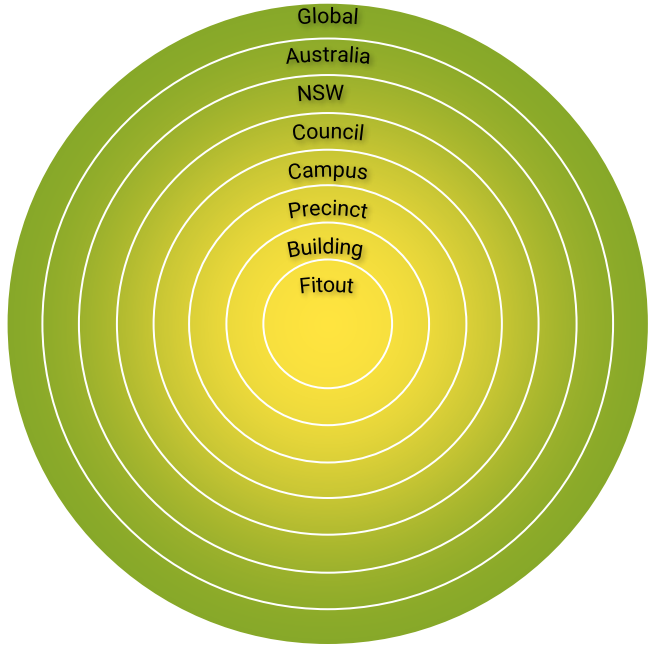



*Diagram 2: Regenerative Boundaries*

# Capital Projects Sustainability Framework

## Priority themes

Estate Management established the eight built environment-specific priority themes, which align with broader themes from *UNSW Environmental Sustainability Plan*.

### 1. Net zero pathway

The key actions for decarbonisation by Estate Management are:

- 100% green electricity procurement;
- Electrification program;
- Energy demand reduction;
- Energy use efficiency;
- Embodied carbon reduction;
- Refrigerants hierarchy.

### 2. Adaptation & resilience

To deliver resilient operations and physical environments, our strategy is comprised of:

- Entity-wide climate-related risk and opportunity assessment;
- Campus-scale climate adaptation plan;
- Project-scale climate adaptation plans; and
- Operational resilience improvements.

### 3. Mobility & connectivity

To enable movement to and from our campuses, while ensuring remote cyber connectivity, we consider the following:

- Campus-scale green transport strategy;
- Project-scale green transport plans;
- Physical accessibility; and
- Digital accessibility.

### 4. Nature

In response to the critical need to restore nature and biodiversity, Estate Management is focusing on:

- Supply chain nature roadmap;
- Increasing nature value across our campuses through green-blue infrastructure and water sensitive urban design (WSUD); and
- Water use efficiency and reuse strategies at the building scale.

### 5. Connection to Country

Aboriginal consultation is critical to leverage cultural, community-specific, and site relevant knowledge for all our campuses. We will deliver on this through:

- UNSW Indigenous Strategy;
- Project-specific consultation; and
- UNSW Sustainable Procurement Framework.

### 6. Circularity

Key strategies to reduce demand of materials and increase their useful lifespan are:

- Space demand reduction;
- Adaptive reuse of existing buildings;
- Design for disassembly, modularity and prefabrication;
- Dematerialization;
- Materials procurement and product specifications; and
- Operational flows (e.g. reuse & recycling hubs).

### 7. Community, health & wellbeing

To build community cohesion, physical and mental wellbeing, these themes must be key a consideration in the design and operations of our spaces.

### 8. Learning, research & innovation

We aim to leverage internal knowledge to advance innovation and learning through our projects.

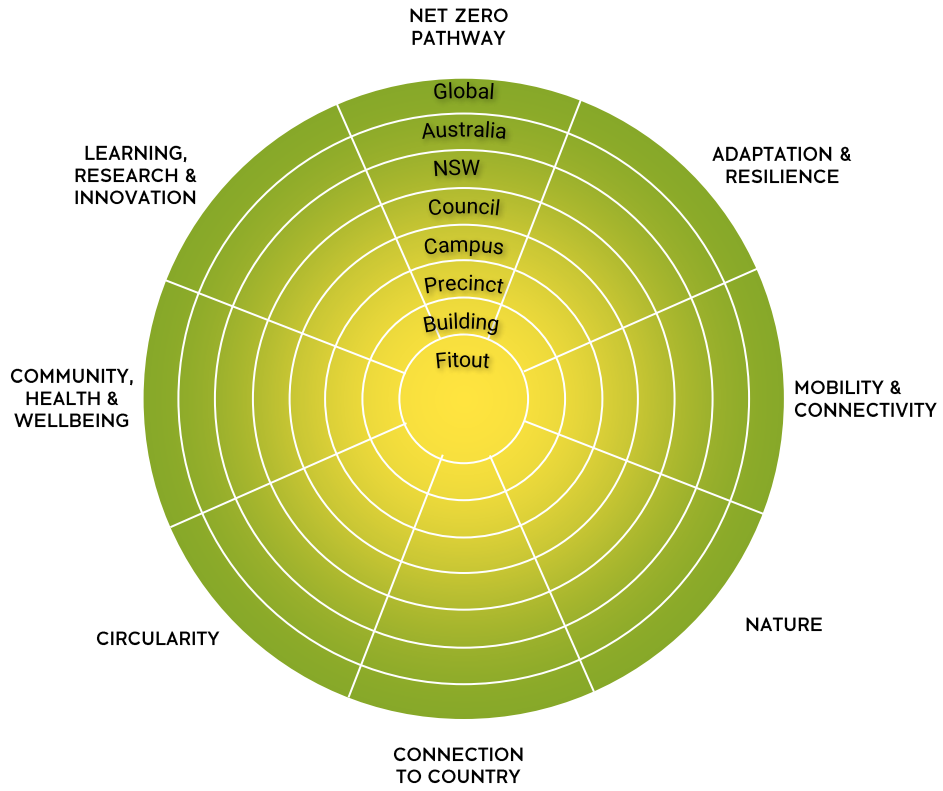



*Diagram 3: Priority Themes*

# Capital Projects Sustainability Framework

## Minimum requirements

To deliver on ambitions set by the *UNSW Environmental Sustainability Plan,* this framework establishes minimum requirements for built environment projects and refers to additional supporting documents.

### Regulatory compliance

All projects must align with relevant codes and standards, including:

- Applicable Development Approval reporting;
- National Construction Code compliance;
- SEPP 2023 requirements (only for NSW sites); and
- APS Net Zero in Government Operations strategy where applicable.

### Minimum requirements

- Maximised on-site solar capacity and consideration of batteries;
- Full building electrification and 100% renewable electricity procurement;
- **20%** energy efficiency improvement when compared to an all-electric reference building*;
- **30-40%** embodied carbon reduction*;
- **20%** potable water demand reduction when compared to a reference building*;
- Increase the use of bore water for non-potable requirements and maximise on-site stormwater infiltration to the Botany Sands aquifer.
- All new water consuming fittings and appliances (including toilets, taps and shower heads) should have a minimum 5-Star WELS rating.
- **Minimum 90%** native plant species for all new landscapes, with a preference for local and drought-tolerant species;
- **Minimum 90%** construction & demolition waste diverted from landfill.
- Implement climate adaptation measures, in alignment with *UNSW Climate Related Risks and Opportunities assessment* and *UNSW Climate Adaptation Plans;*
- **Target Nature value net gain** as per the latest ESP, by reporting against industry best practice (or interim UNSW *Nature Value Metric*), and by implementing nature positive briefs and guidelines.

### Project-specific requirements

- Applicable sustainability governance is defined by Estate Management in the **project brief**, according to Estate Management's internal *scoping guidance* and *third-party assurance criteria*. Subject to functional brief, projects may be required to:
  - Achieve third-party certification; OR
  - Report against *UNSW Capital Projects Sustainability Matrix*.

### Design Standards

**All projects** must comply with *UNSW Design Standards*, including but not limited to the following requirements from *Section H Energy and Water Efficiency (or latest applicable):*

- Contribute to the nominated campus-wide energy and water efficiency targets.
- Use low-GWP refrigerants as per latest available *UNSW Refrigerant Hierarchy*, included in the project brief and/or available upon request.
- Highly resource efficient fittings, fixtures and appliances.

* Green Star or Section J modelling methodology as applicable

UNSW SYDNEY

# Implementation

## Values alignment and critical processes

This framework recognises that processes and systems are just as important to success as targets and ambitions. In doing so, it strives for alignment and teamwork, while seeking to provide stakeholders with the right tools during critical steps of their decision-making.

UNSW sets the expectation that the delivery of sustainability ambitions is a shared responsibility within Estate Management, and that it extends to our external project teams, with every person playing a crucial role.

This can only be achieved with critical and agile partnerships, based on the following:

- **Learner's mindset:** Seeking to learn through discovery and failing early, teams adopt a flexible and iterative approach to project delivery. This requires collaboration within and outside Estate Management, early and often.
- **Principles and values:** Project teams must be aligned on principles and values, which may require a degree of structural and cultural change, including capability training on sustainability literacy and how to manage the delivery of ambitious sustainability targets.
- **Critical processes, tools and methodologies:** These are the practical ways of strategising, planning, implementing, and delivering sustainability targets through a project's lifecycle. As such, we incorporate the following process requirements at key decision-making gateways and project milestones, and are described in the next pages:

| | |
|---|---|
| **Procurement stage** | 1. Request for tender/proposal and returnable schedules |
| **Design and delivery stages** | 2. Project sustainability tracker<br>3. UNSW Design Standards |
| **Post-delivery / operation stage** | 4. Reporting and lessons learned |

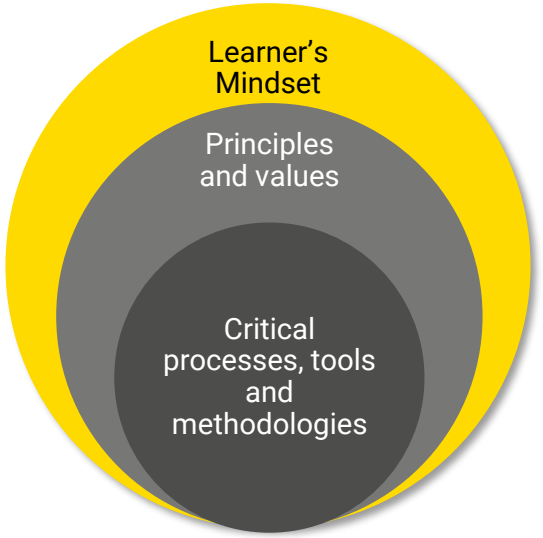



*Diagram 4: 'The agile onion'*

This section list **key activities, KPIs and responsibilities** related to the implementation of these governance processes and are distinct from specific KPIs for our Priority Themes. The latter are ultimately how UNSW will assess the successful delivery of our sustainability commitments and any stretch target.

**Key activities**

Cross-disciplinary consultation, user and first nations engagement, iterative processes, capability training, team building.

**Responsibility**

Design Development and Delivery, Environmental Sustainability, Design team, Contractor.

**KPIs**

Variety of participants, # of training & team building sessions, quality of engagement.

# Implementation
## Procurement stage

Procurement of consultant and contractor services for all UNSW projects includes minimum contractual requirements to support the delivery of our *Environmental Sustainability Plan* and this *Capital Projects Sustainability Framework*. These requirements are applicable to both design and construction tenders.

### 1. Request for tender/proposal (RFT/RFP) and Returnable schedules

The *RFT/RFP* communicates relevant sustainability requirements to proponent design teams and contractors throughout procurement processes. Organisational sustainability questions help UNSW score respondents in relation to their ESG initiatives while returnable schedules capture time allowance, resourcing, capability, experience and cost.

Ultimately, outcomes from this process are captured in contractual documents.

**Key activities**

Address the RFT/RFP requirement in each discipline's response.

Populate procurement scorecards as part of RFT/RFP submission.

**Responsibility**

Discipline proponents

Contractor

**KPIs**

Quality of tender/proposal response

Score of procurement response

# Implementation
## Design and delivery stages

To support the *Design Development and Delivery* office's internal and external project teams, this framework includes tools to plan and track sustainability deliverables and reporting results.

### 2. Project sustainability tracker

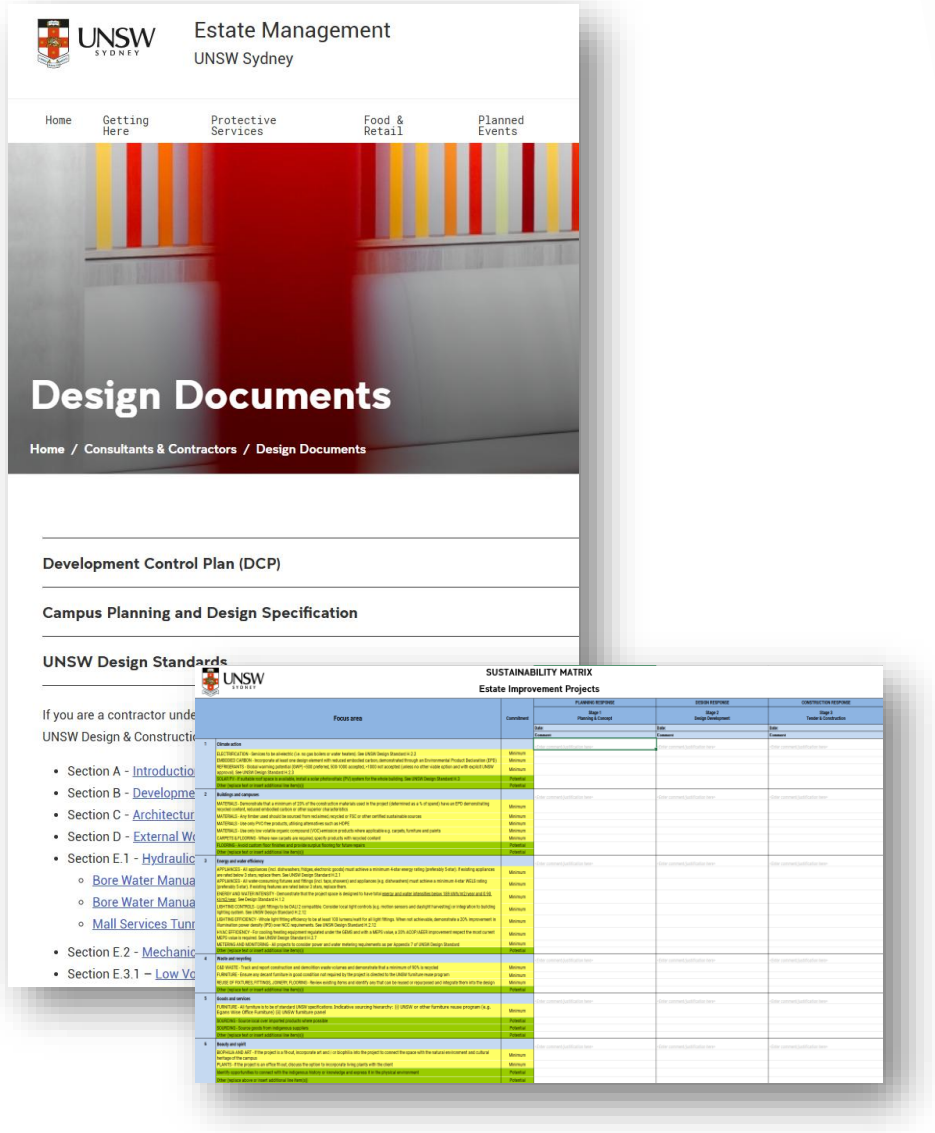
The UNSW *Project sustainability tracker* is a tool used to map out the expected deliverables for each development stage of the project.

This 'live' document helps project teams update, track and report sustainability performance at key delivery milestones. Where projects are required to seeks third-party assurance, the tracker is complimented by detailed certification pathways.

Additionally, it is used to capture lessons learnt for each requirement or priority theme, to help inform future projects.

### 3. UNSW Design Standards

Albeit the CPSF comprises Section I of *UNSW Design Standards*, other sections contain critical discipline-specific requirements relevant to sustainability, and it is expected that their implementation strongly supports sustainability goals.




**Key activities**

Utilise the project tracking tools during design and delivery
Summarise performance
Seek third-party assurance.

**Responsibility**

Design teams reporting to:
Project Managers,
Development Managers

**KPIs**

% Deliverables completed per stage
% Targets on track
% Targets achieved
Certification ratings achieved

# Implementation
## Post-delivery stage

To support the *Design Development and Delivery* office's internal and external project teams, this framework includes tools to plan and track sustainability deliverables and reporting results.

### 4. Reporting and lessons learned

Reporting performance and lessons learned is a very important step upon final delivery stages.

This not only supports and enables organisational compliance against reporting requirements but promotes continual improvement by sharing key challenges and opportunities which may have arisen during the project lifecycle, and discussing how the team may anticipate these and proactively respond in the future.

The key reporting document is UNSW annual *Environmental Sustainability Report*, while lessons learned may be captured either (or both) in program de-briefing sessions and internal capability training featuring our own case studies.


**Key activities**

Utilise the project tracking tools during design and delivery
Summarise performance
Achieve third-party assurance.

**Responsibility**

Design teams reporting to:
Project Managers
Development Managers &
Environmental Sustainability

**KPIs**

% Deliverables completed per stage
% Targets on track
% Targets achieved
Certification ratings achieved

# Supporting information

### Entity wide

- UNSW Strategy: Progress for all
- UNSW Indigenous Strategy
- Sustainable Procurement Framework
- 2024 Supplier Charter
- Health & Wellbeing Policies
- UNSW DIAP - Disability Inclusion Action Plan

### Estate Management

- Estate Management webpage
- Kensington Campus - MazeMap
- UNSW 100% Green Electricity Procurement until 2036 and announcement

### Design, Development and Delivery

- UNSW Design & Construction Standards
- Sustainability implementation documents (available upon request or as part of the RFT/RFP)
  - Project-specific sustainability minimum requirements and scope of works
  - Returnable schedules – Excel
  - Project sustainability tracker - Excel
  - Initial Certification Pathways - Excel

### Environmental Sustainability

- Environmental Sustainability webpage
- UNSW Environmental Sustainability Plan
- UNSW Kensington campus sustainability map
- UNSW Climate Related Risks and Opportunities assessment
- Electrification Program Plans (available upon request)
- Laboratory Efficiency Assessment Framework (LEAF)
- Nature Positive
  - EM's Nature Positive webpage
  - Supply Chain Nature Impacts Roadmap
  - Nature Value Project brief
  - Nature Value calculator
  - UNSW Grounds Map
  - Randwick Health & Innovation Precinct – Living Infrastructure Strategy

### Facilities Management

- Operational Waste Management Plan (available upon request)
- Green Cleaning Standard (available upon request)

### Asset Management

- Future Campus
- Future Campus - Space principles

Additional and site-specific information may be available upon request.

High Street, Kensington NSW 2052
+61 2 9385 1000
unsw.edu.au

UNSW SYDNEY

Image: UNSW CBD Fitout, 2025