Australian National University

Dhaagun[1] Environmental Management Plan 2022-2025

Management Proposal

November 2024

[1] *Dhaagun* is earth and environment in the local Walgalu (Ngambri) & Wiradjuri language

Image: the winged harvest sculpture – the artist Fiona Doley chose materials and imagery that have meaning for the indigenous inhabitants of the ACT. The poles contain historical recordings of the collection of the Bogong moth, and ceremony or ochre pit sites around Canberra. Treatments of the wooden poles include using traditional pigments, Bogong moth decoration and notching to recall climbing techniques. Sounds and plantings are also part of this installation. Plantings include native grasses and forbs found in the protected grasslands behind Crawford School and other parts of Canberra (Poa, Themeda, Wahlenbergia and Chrysocephalum). Behind the sculpture is a beautiful 250+year old yellowbox (Eucalyptus melliodora) tree.

Facilities & Services

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TEQSA Provider ID: PRV12002 (Australian University) | CRICOS Provider No. 00120C

Document Information & Control

Table 1 Document information

Category	Description
Title	Environmental Management Plan 2022-2025
Version	7.0, Final - Public Version
Purpose	The plan is a strategic document for the environmental management of the operations of the University, with an overarching aim of supporting Sustainable Development Goals and climate adaptation principles by helping to achieve the objectives of the Below Zero programme, Acton Campus Master Plan, the Acton Campus Energy Management Strategy and other related ANU policies and procedures. This document serves the purpose of a detailed EMP.
Approved by	University Council - 02.12.2022
Effective date	02.12.2022
Review date	Annually, through Campus Planning Committee, report to Council
Responsible - Senior Management Group	Deputy Vice-Chancellor (International and Corporate)
Functional responsible	Director - Facilities & Services
Administrative sponsor	Associate Director - Sustainability, Facilities & Services
Execution and point of contact	Environmental Sustainability Manager

Table 2: Document Control: Owner: Environmental Sustainability Manager

Version	Changes and remarks
V1.0	Initiated as a supplementary document, Dec 2021
V2.0-5.0	Improved based on stakeholder comments and was only available as PowerPoint slides
V6.0	Full EMP incl supplementary information, and budget: changes were made during reviews 10 Apr 2022, 05 Jul 2022 by F&S Leadership team
V6.3	Updated after the meetings with (outgoing) COO and GMSDDD forum 19 Jul 2022
V6.4	Updated after the meeting with DVCIC
V7.0 - Final*	Updated after the SMG meeting 24.11.2022 - target interpretation changed from Go8 average to ANU-based values to improve clarity, governance structure: fine-tuning the terms to reflect review instead of a steering committee
V8.0	Updated after Environmental Management Review meeting 29.10.24. GHG targets updated based on ANU Council meeting and other targets updated based on management review. Climate risk added as a new pillar. Cross-cutting themes. Updated Contents.

If printed, Uncontrolled

Contents

Message from the Vice-Chancellor and Chancellor

As Australia's national university, we recognise our responsibility to tackle pressing global sustainability issues. It is within this context that we present *Dhaagun*, the University's Environmental Management Plan (EMP) 2022-2025, a testament to our dedication to creating a better and more sustainable world, for generations to come.

Derived from the local Walgalu (Ngambri) and Wiradjuri languages, *Dhaagun* encapsulates the essence of the Earth while emphasising the precious and finite nature of our resources. Aligned with the ANU Strategic Plan and our commitment to strengthening our national mission through our research, teaching and operations, this EMP lays out clear actions to contribute to global environmental sustainability.

Central to our strategy is the integration of the United Nations' 17 Sustainable Development Goals, both in our planning and measurement processes. By aligning our efforts with these global benchmarks, we ensure that our actions have a meaningful impact and contribute to broader sustainability objectives. The EMP focuses on six key pillars:

1. Greenhouse gas emissions management
2. Energy management
3. Water management
4. Built environment
5. Circular economy
6. Biodiversity and conservation

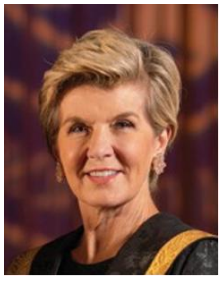
These pillars represent crucial aspects of environmental sustainability for the next three years but are by no means exhaustive.

The EMP provides a roadmap for collaboration with stakeholders, emphasising the crucial engagement of First Nations communities. We believe that by working together, we can achieve our shared responsibilities and make significant progress toward a sustainable future.

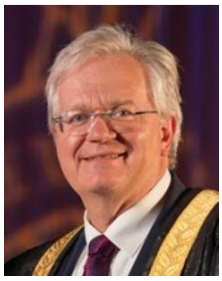
Now in its sixth iteration, the EMP takes into account the changes brought about by the pandemic era and the return of students to on-campus learning. As we respond to the global challenge of sustainability, the EMP sets ambitious targets for all ANU campuses, aiming to innovate and lead in reducing environmental impacts, including carbon emissions associated with our operations.

The EMP signifies a vital step on our journey to incorporate best practice sustainability principles into every facet of our work.

ANU Council endorsed the EMP in December 2022, reaffirming our commitment to sustainability. We are dedicated to diligently tracking our progress and providing regular updates to our valued stakeholders.



The Hon Julie Bishop
Chancellor



Professor Brian P. Schmidt ACFAA
Vice-Chancellor and President
2011 Nobel laureate (Physics)

EMP: Plan on a page

Greenhouse Gas Management

Ambition

Below zero emissions by 2040 for direct, energy & value chain emissions (Scope 1, 2 & 3 based on ~90% emissions reduction) and carbon neutrality for 2026 and beyond for direct and energy related emissions (Scope 1&2)

Key activities

- Electrify fleet and buildings
- 100% renewable electricity
- Embed carbon smart travel principles
- Use lower global warming potential refrigerants
- Set targets for Scope 3 emissions

Energy Management

Goal

Optimise the energy efficiency of our built environment, controls and processes to reduce the energy consumption of floor area by 10% in 2025 (from 2019 baseline)

Key activities

- Tune and upgrade buildings to be energy efficient
- Generate our own renewable energy
- Partner with building custodians to encourage behaviour change.

Water Management

Goal

Reduce per capita potable water use and increase the proportion of non-potable water* used in irrigation/toilet flushing

Key activities

- Identify and fix water leaks
- Identify and use alternative non-potable water sources including Sullivans Creek and rainwater harvesting

*baseline and quantitative targets to be validated against monitoring.

Built Environment

Goal

Enhance built environment sustainability by reducing operating footprint by 10% by 2028 (from 2023 baseline)

Key activities

- Develop campus-wide space policy
- Optimise the use of space and consolidate where possible
- Implement occupancy targets

Circular Economy

Goal

Reduce per capita waste landfill to 30kg/person (from 2023 baseline of 41kg) and increase waste diversion rate from landfills to 65%.

Key activities

- Improve waste and recycling segregation
- Remove single-use plastic from campus

Biodiversity and Conservation

Goal

Build landscape resilience and improve conservation outcomes on campus

Key activities

- Increase engagement with First Nations peoples to explore opportunities for traditional land management practices.
- Plant more trees and drought tolerant plants and reduce chemical use

Climate Risk

Goal

Disclose the University's climate risk in line with Commonwealth Climate Risk Disclosure and incorporate climate risk into the University's risk management framework by 2025

Key activities

- Develop climate scenarios for tertiary sector

Executive summary

The Environmental Management Plan (EMP) 2022-2025 results from a detailed planning exercise to set goals, targets and an execution plan with the intent to reduce the associated environmental risks and position ANU differently within global sustainability challenges. It is aligned with the ANU Strategic Plan and complements the University's landmark Below Zero initiative. This sixth EMP[2] continues the legacy work started in the late 1990s and presented in a unique time when environmental management is in the utmost focus. The EMP started with a literature review and a comprehensive engagement process representing the key internal stakeholder groups. A survey, a series of focused meetings and four workshops were organised to facilitate the consultation process.

The key outcomes of the stakeholder consultations are:

- Re-establishing the environment management unit and ANUgreen program
- Ensuring the EMP receives management approval
- Performing environmental assessments beyond compliance and reporting
- Integrate SDGs and Climate Adaptation into the EMP base
- More engagement and ownership opportunities for ANU students and staff

A strategy house was defined based on the stakeholder inputs and the anticipated environmental risks. The identified risks were assessed based on the ANU risk matrix. Six pillars were identified as the highest focused areas of this EMP to mitigate the identified risks and cater for the stakeholder demands. They are greenhouse gas, energy, water, built environment, circular economy, and biodiversity and conservation. Some key features of this EMP are listed below.

- Recognised three potential partnership opportunities with the First Nations
- A synergised plan with the Below Zero programme with no duplications
- An extended governance structure to ensure the strategic intent and allow more participation
- SDGs were recognised as a base factor, and specific components were mapped
- Academic partnerships to promote more research and teaching in the EMP work
- Engaged and empowered stakeholders (e.g. proposed student environmental audit team)
- Pillar leaders were identified from technical functions to establish a lean environmental management unit

Key EMP goals were set against the considering the performances of other universities, which supported gauging the University's environmental performance, which was not satisfactory for many elements. Specific targets were set to close the gaps, and data improvement opportunities were identified. The execution was agreed upon with the relevant pillar leaders representing operational functions. A lean resourcing plan was proposed as an essential component of the EMP execution, considering the University's environmental management function does not exist. The Facilities and Service Division was identified as the sponsor organisation to establish the environmental management unit aligning with the previous EMPs, functional capabilities and leadership commitments.

An Environmental Management Plan (EMP) is referred to as 'establishing the objectives and processes necessary to deliver results in accordance with the organisation's environmental policy'[3].

[2] interim plan from Q3 2022-'25 to align with the ANU Strategic Plan

[3] ISO 14001 Environmental Management System standard definition


Australian National University
Sustainability Policy
Purpose
This policy supports ANU initiatives to improve environmental and su
across a range of indicators including energy and water consumptio
emissions, biodiversity, sustainable transport, waste and recycling.
ENVIRONMENTAL MANAGEMENT PLAN 2017-2021
Environmental Management at
The Australian National University
2016 Annual Rep
Australian National
THE AUSTRALIAN NATIONAL UNIVERSITY
Environmental Management Plan
Implementation Strategies
2009 to 2015
April 2009
Smart Cycling
Safe
Stress-free
Social
Recycling Station
ANUgreen
Steps towards sustainability
Campus Commuter Audit
Wednesday 26th October
8:00am-9:30am

1. ANU EMP History

The history of the ANU EMPs is explored[4] below to understand the objectives and the context of the previous EMPs and how they evolved.

The first EMP of the ANU was developed in the mid-1990s out of an activist movement. It applied pressure via the Council and, by a direct approach, to the Vice-Chancellor (Professor Deane Terrell), who eventually established a committee to develop an environmental policy in 1998. This committee was chaired by a senior academic and member of the University Executive structure[5] . The initial membership came from the "activist group" (several academics and students, all from the faculties) and expanded to include representatives from Research Schools and the Facilities and Services (F&S) Division[6]. The inclusion of F&S was intended to be a mechanism for steering the discussion towards operational issues, particularly waste management, water conservation and energy management.

The Council approved the policy in early 1999, and the drafting committee was disbanded. A new committee was established to develop the EMP. This group would eventually morph into the University Environmental Management Planning Committee (EMPC), which would have an oversight role in implementing the EMP. A senior research academic was appointed as chair[7]. The remaining membership consisted of student and academic groups representatives and ex-officio members from F&S and University Executive.

The first version of EMP addressed community education and engagement, environmental risk management, energy and water conservation, waste management, transport, and biodiversity. The Committee decided to make waste and recycling the initial priority in the EMP. The inclusion of environmental risk management was completed by a then member of the Committee and a PhD candidate in this area[8]. Establishing risk reduction targets within the EMP provided pathways to improve environmental performance and strengthen engagement across the management significantly. The plan emphasised Environmental Risk Management and Community Education and Engagement in the early years.

Once the plan was finalised, it was released for public comment and approved by the Vice-Chancellor. The Federal Minister for Environment formally launched the first EMP in late 1999. The decision was also made to give F&S management responsibility for implementing the environmental program, and initial funding was provided through a budgetary process known as the Capital Management Plan (CMP). The University established a budget line of $150,000 per annum for five years to support the EMP. The Environment Office was formally established in 2001, and ANUgreen was developed as a "brand" name for the campus environmental program. Over the first decade, this brand has been used very effectively to market sustainability on campus and has become the support hand for campus environmental management.

Other key elements of the program which have emerged from successive plans, worth noting, include:

- Collaboration between Environment Office and academics
- Employment of students as interns working on critical areas of the EMP
- Engagement with other universities both within Australia and internationally (e.g. IARU)

[4] Based on the document archived in G:\Environment folder

[5] Professor Richard Campbell, Dean of the Board of the Faculties.

[6] The F&S representative was Bart Meehan and eventually be given senior management responsibility for campus environmental management.

[7] Professor Henry Nix, then Director of the Centre for Resources and Environmental Studies (currently the Fenner School)

[8] Dr Su Wild-River

The second EMP (2003-2008) was launched after a consultation process. By that time, ANU Environmental Office was active, and the established ANUgreen was actively engaging the students and other interested parties. The following EMP elements were addressed in the EMP 2003-2008.

- Energy and Greenhouse Management
- Water Management
- Pollution Prevention/Environmental Risk Assessment
- Recycling and Waste Management
- Biodiversity
- Transport
- Community Awareness
- Environmental Management

The Council approved the third EMP and implemented it from 2009 to 2015. The plan has followed a program structure with People, Place, and Performance (3Ps). It has emphasised integrating the campus community in the EMP execution by making them owners and partners complimenting the ANUgreen programs. The plan has introduced quantitative visionary targets for the following environmental elements.

- Energy and Greenhouse Management
- Water management
- Material waste to landfill
- Residual pollution risk

The plan was also comprised of the below elements with the qualitative targets

- Sustainable transportation
- Sustainable landscape
- Environmental sustainability culture
- Promote academic collaboration

Some key achievements of this EMP include promoting Green Building principles and sustainable building initiatives, such as the iconic Frank Fenner building, which received a six-star Green Star rating, and the partial restoration of the Mount Stromlo Observatory site. ANU demonstrated its environmental leadership by green waste composting and reusing 100 per cent of the green waste on the Acton campus. The University has decreased its fleet size by one-third and fuel consumption by 41 per cent since 2006.

The EMP 2016-2020 is the fourth plan prepared by the Environmental Sustainability team in the Facilities and Services Division[9]. It has further inspired cultural change by including an annual Vice-Chancellor Environment Awards program to recognise the sustainability initiatives. The plan also proposed quarterly reporting EMP updates to the ANU Council. ANU community perceptions of sustainability survey were introduced to integrate the community-led actions in executing the EMP. EMP 2016-2020 has introduced quantitative targets as a continuation of the previous EMPs, and 2014 has been chosen as the baseline year (in previous EMPs, it was 2006). The only exception is the culture target based on the staff and student survey conducted in 2016.

The EMP has identified nine areas, including culture, targets and timeframes which were identified to execute them. They are Built Environment, Energy and Emissions, Recycling and Waste Management, Pollution Prevention, Water, Transport, Landscape and Biodiversity, and Heritage. However, the University management has not approved this EMP version.

By this time, the ANUgreen program was not fully functioning. Events organised by ANUgreen, such as the Green Leaders program, education programs for staff and students, and coordinated events such as Sustainability Day and Earth Hour, were no longer operational. The

[9] was led by John Sullivan, the former Environmental Sustainability Manager

last message that appeared on the Facebook page of the ANUgreen was in October 2019. This trend almost stopped the environmental culture inclusive activities such as the *On Campus* email newsletter, posters and publications, all while working with the Sustainable Learning Community, ANU Organic Garden, ANUSA, PARSA, ANU Environment Collective, and other student environmental groups.

An interim EMP was developed for 2019 to 2021, aligning with the previous one. However, it was also not approved by the management.

In 2020, ANU announced the Below Zero Program[10] with a goal to achieve below zero emissions by 2030 for energy, waste, work travel, and direct on-campus greenhouse gas emissions. The Council-approved program aims to transition ANU from being part of the problem to becoming part of the solution - from a source of greenhouse gases (GHG) to a sink for atmospheric carbon dioxide.

Current context

Environmental management at ANU does not exist as a full-time function currently. There are minimal operational activities, such as mandatory external reporting with the support of a few delegated team members within the Facilities and Services Division. The environmental data and information review processes do not function nor follow up on planned projects. The internal and external communications are on temporary hold, including the webpage. The environmental events have not been organised since late 2019. The approved environmental policy, as a part of previous EMPs, is also no longer active and cannot be accessible in the ANU Policy Library domain.

The ANU Below Zero initiative has established its Program Management unit and started executing the technical program on decarbonisation, emission removal and engagement activities with wider participation of interested parties.

The Below Zero program components and its organisational structure, including the planned expansions, were studied to avoid duplications and optimise the proposed environmental organisation structure through the EMP. The well-established Below Zero project's governance structure has been simplified and adopted in principle in the EMP development.

2. EMP Project 2022-2025

ANU has commenced detailed planning to update its existing EMP to align with the ANU 2025 Strategic Plan and complement the University's landmark Below Zero initiative. This EMP is proposed as an interim plan from Q3 2022-2025, assuming the next five-year EMP planning starts in 2024, aligning to the ANU Strategic Plan cycle. The Facilities and Services Division is leading this initiative by working collaboratively with the ANU Below Zero team, the ANU Institute for Climate, Energy & Disaster Solutions (ICEDS), and other internal interested parties across the University. The EMP Project 2022-2025 was initiated to establish an executable EMP to provide a strategic action plan to minimise the environmental risks, create value addition to ANU and complement the Below Zero program with effective stakeholder engagement and considering the existing resources.

[10] https://www.anu.edu.au/research/research-initiatives/anu-below-zero

Project structure

A Project Officer[11] was appointed to lead the EMP project reporting to the Associate Director - Infrastructure and Planning. During the EMP preparation process, the officer closely liaised with Engineering and Sustainability, Operations, Landscape and Conservation, Space Management, Projects, ICEDS, and Below Zero teams. The initial project term was for six months, and later, it was extended to nine months based on extensive stakeholder inputs and management expectations. The Director of the F&S Division is the project client. The F&S Director also functionally leads the ANU Below Zero decarbonisation pillar and reports to the Deputy Vice-Chancellor (International & Corporate) (DVCIC), the Senior Management Group member responsible for the Below Zero program. Therefore, the DVCIC is assumed to be the ANU Senior Management Group member accountable for the EMP execution.

Project phases

The project was executed in three phases (see Figure 1 below). The existing documents, reports, data sources and best practices/case studies in University setups are listed and extensively studied in the project planning phase. The most related and accessible individuals are identified as a result of this exercise. The second phase, stakeholder engagement, started with meeting the identified stakeholders, launching surveys, and organising workshop-style meetings. Management presentation, report preparation, budgeting and internal reviews were the key components identified in the last phase of the project. The EMP design and incorporation of the interested party comments started from the project's inception and evolved until the final draft. Financial and human resourcing were considered integral elements of the EMP.

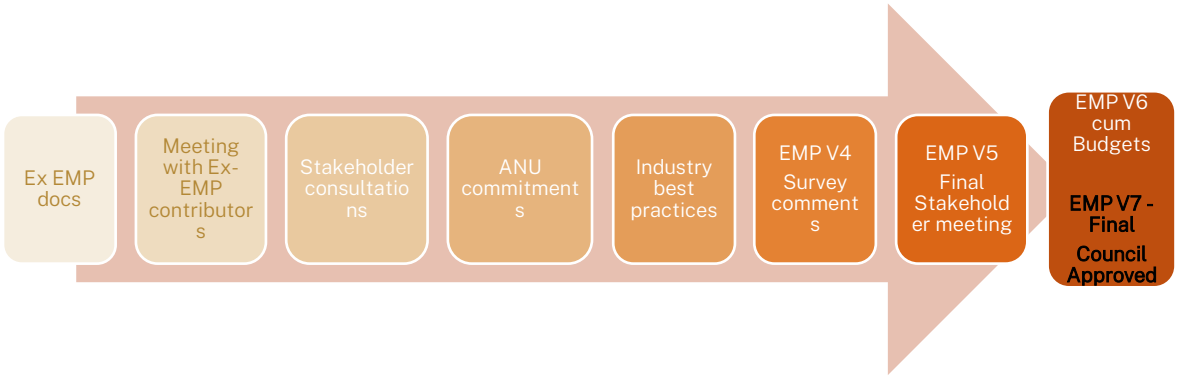


Figure 1 EMP Project phases

Some key highlights revealed from the document review process are listed below.

- The majority of the data reporting and reviewing processes do not function - no central environmental data management system
- The current energy and water data handling observed extensive manual data processing
- The supplier reported waste management data do not integrate into the environmental decision-making
- Some of the lacking data sources impacted the absolute target setting in the proposed EMP
- The Campus and Buildings Requirements Manual (CBRM) provides the ANU environmental sustainability requirements to the interested parties, especially the service providers such as contractors. The initial document review also revealed that a few more documents had been utilised for the same intent, including the ANU Sustainability Plan, Campus Master Plan and ANU Energy Policy are some of them, and they exist for unique reasons. However, potential

[11] Chalaka Fernando, the author of this document

confusion and duplication are observed by not integrating those document outcomes (procedures) into the CBRM document.

The recognition and maintenance of the CBRM document as the single document contact are emphasised in the proposed EMP. Also, a significant focus was given to environmental data management in the proposed EMP.

3. Stakeholder engagement

Stakeholder engagement is the second phase of the EMP. It was operationalised in three ways: a) focused group/individual discussions, b) voluntary survey and c) broader engagement events.

Focussed discussions

The stakeholders were identified for the focussed discussions in two forms. They are based on existing documents and records and through the connections of the Facilities and Services Division team. Around ten focused discussions were organised with those groups, and their ideas and inputs on the proposed EMP were listed. Many commented on comparing the legacy work and the opportunities to customise and improve them. The list of consulted internal stakeholders is shown in Table 6 in the Appendix. The discussion with the First Nations Portfolio office was a key success in identifying three potential partnering themes with the traditional landowners.

Survey

A university-wide de-identified and voluntary survey was administered by advertising via the ICEDS newsletter, PARSA and ANUSA student bodies, alumni network through ANU Advancement, and residential colleges. The survey ended with fifty qualified samples representing five Colleges with the most staff participation (72%).

Invited meetings

There were four invited meetings organised to engage stakeholders in the EMP process. The first three from the below list are organised to present the EMP Draft Version 4.

1) Meeting organised inviting the Building Custodians cum Facility Managers throughout the University
2) The Fenner School of Environment and Society academics and researchers
3) Open invitation as part of the EMP preparation - a virtual meeting
4) Present EMP Draft Version 5 - as a Hybrid meeting - 28 participants represented: student bodies, residential halls, building custodians, College Dean's Offices, Office of the Vice-Chancellor, and other service divisions.

Table 3 Engaged stakeholder groups (a detailed version can be found in Table 6 in Appendix 1)

Stakeholder group	Details
Academic and Research	Fenner School of Environment and Society, ICEDS
Associations	PARSA and ANUSA
University functions/portfolios	The First Nations Portfolio Office, Below Zero Program team, CGRO, OVC, Chief Procurement Officer, SDGs Workgroup on Time Higher Education Ranking, Business Development - CoS, Finance, HR – Work Environment, Residential Experience, ANU Advancement

Stakeholder group	Details
Legacy Team and Ex-EMP contributors	Bart Meehan, Dr Su Wild-River, John Sullivan Prof Katherine Daniell, Rebecca Blackburn
Building custodians	From Schools, Laboratories, Theatres, Kambri, office and admin buildings and other space categories
F&S – Division team	Infrastructure & Planning, Eng & Sustainability, Space Management, Operations, Landscape and Conservation, Compliance & Governance, Corporate, Security & Transport

Stakeholder consultation outcomes

Key suggestions and comments are classified into four categories for management focus and are presented below.

1) Continuing elements from previous EMPs
   a) Re-establish the ANU Environment Management Unit with a broader functional focus to support the Below Zero Program and other environmental elements (water, waste, biodiversity etc.)
   b) Revamp the ANUgreen program and promote student engagement activities - integrate environmental culture focus and utilise it in the change management process. Re-introduce an environmental volunteering program, a *win-win* approach to collect professional experiences for the students and execute more inclusive and cost-effective activities
   c) Apply the participatory approach to execute the EMP: engage the university-wide interested parties without confining only to the Facilities & Services team
   d) Re-establish the ANU Green fund as a rolling fund to invest in environmental sustainability initiatives
   e) Re-initiate the sustainable transportation programs - riding to the University and facilitating them, and a study to assess the public transit to the University
   f) Re-initiate the students' internship program: focus on specific, narrow scoped and continuation projects.

2) Transformative elements
   a) Combine the SDGs approach both in the EMP structure and performance measurement
   b) Partnering with the First Nations to access their traditional knowledge of environmental conservation
   c) Transfer environmental management work from a person-based to a system-driven approach
   d) Establish and maintain an Environmental Data Management system
   e) Integrate the climate-resilient and adaptation components into the EMP
   f) Explore avenues to engage students and provide more ownership to them in executing the EMP.

3) Managerial elements
   a) Timely approval and adequate resourcing - significant concerns on the uncertainties of the EMP approval process and management commitments based on previous experiences
   b) Establish the ANU Environment function with no duplications with the Below Zero program

c) The University's environmental sustainability performance is not on par with other universities - a consistent action plan should be derived with resource commitments
d) Initiate the Environmental Steering Committee and engage stakeholders, importantly the students - it was known that students had not been involved in environmental decision-making or updates for the last five years.
e) Engage the Fenner School of Environment and Society academics and researchers in an advisory capacity in the EMP execution
f) Integrate EMP-related environmental management KPIs to the Building Custodians' job description to add value for them in contributing to achieving EMP targets.
g) Certify the ANU under the ISO14001-based Environmental Management System
h) Establish internal reporting and facilitate the stakeholders to engage in decision-making regularly
i) Minimise the duplications of the ANU Environmental Procedures and maintain the CBRM document as the only document by ensuring a systematic and periodic update procedure
j) Extend the environmental performance reporting to voluntary and external - as a medium-term goal
k) Engage with external agencies such as *ACT NoWaste* to streamline the ANU EMP with the local territory and country goals.
l) Report GHG emissions from the ANU investments and consider divesting the fossil-based investments
m) Employ the ANU risk Assessment Matrix in the EMP risk assessment process to maintain the consistent managerial decisions
n) Environmental incidents, opportunities to improve reporting - utilise the existing systems such as *fixmycampus*, *ANU OK* App and *Figtree* (WHS) reporting system.

4) Technical elements
   a) Perform the technical assessments beyond compliance - focus on cost benefits (building energy tune-ups, waste minimising audits, etc.)
   b) Perform rigorous environmental assessments to understand the environmental impacts within the ANU campuses (example: biodiversity assessments)
   c) Eradicate and replace a list of environmental weed species on campus. The weeds to be eliminated could include Agapanthus, Blue Periwinkle, Cotoneaster and Firethorn.
   d) Environmental monitoring & reporting related:
      i) Extend the Energy Dashboard project to integrate waste and water data and customised it to the building/space to make better-informed decisions
      ii) Extending the water metering system to quantify the potable water use in landscape irrigation
      iii) Establish a central reporting system for the specialised waste management data and review waste quantity trends at least annually
      iv) Integrate Construction and Demolition Waste (CDW) to the above iii.

There were two key concerns on the below proposed EMP targets:

1. Pillar: Built Environment, Target B2: Concerns on optimising the Gross Floor Area (GFA) per net person - stakeholders assume that this would lead to reducing the required space to facilitate the academic environment
2. Pillar: Greenhouse Gas, Target G4: Reduce Scope 3 emissions by prioritising travel - stakeholders share the importance of travelling in academic and research work, and the target should not hinder required travelling

4. EMP key principles and strategy

Rationale

The EMP principles and strategy are defined based on the current and anticipated risks associated with the environmental aspects and impacts of the University, and stakeholder interests listed above.

Associated risks of not having an EMP

The risk assessment was performed with the EMP pillar leaders to evaluate the risk based on the scenario in which an EMP is not executed based on the ANU risk assessment matrix. GHG emissions associated risk elements are not included in Table 4 since the Below Zero program is in place to mitigate them.

Table 4: Key associated risk elements by not having an EMP (Risk Categories are based on the ANU risk matrix by CGRO)

Risk level	Risk class	Related risk
Extreme risks	Governance	Potential governance risk for not reviewing the env data and possible reporting uncertainties
	Reputational	Lack of execution of previous EMPs or committed environmental actions
High risks	Governance	Potential compliance risk for not reviewing the specialised waste quantities, types, and document control
	Financial Mgt	Higher energy & carbon cost Project planning & justification issues with lack of energy assessments Space as a resource - cost management Resource utilisation issues Project planning & justification issues due to lack of building assessments data Non-productivity based on duplication of environmental documenting procedures Losing the vendor locking up opportunities due to the lack of Sustainability Procurement practises The extra purchase cost of artificial soil enhancers, if not improve the compost quality from garden and landscape waste.
	Reputational	Reputational losses based on onsite renewable energy generation Reputation loss for not being proactive on potable water consumption being the highest single water consumer in the ACT Reputation loss for not being aggressive on landfill waste reduction, considering the ACT government initiatives Reputational loss for not being proactive in biodiversity management on the Acton campus

A few extreme and high-risk elements were identified for not functioning a proper environmental management system and actioning. All the risk elements, including medium risks, are integrated into the EMP Risk and Budget, which can access in a separate file on request.

Principles and link with the ANU Strategic Plan 2020-2025

The principles are derived to align with the ANU strategic intents and to mitigate the identified environmental risks. Currently, the ANU does not maintain a materiality review related to environmental sustainability. Hence, the listed stakeholder comments[12] are considered near-materiality inputs for designing the principles.

Five principles are identified to establish the EMP based on the ANU Strategic Plan 2020-2025, associated risks, stakeholder comments and legacy work. The EMP supports achieving the University's strategic objective, *Contribute to global environmental sustainability* and the values: *Truth-seeking, transparency and accountability, Respecting, celebrating and learning from First Nations Peoples*, and *Safety and well-being*. The derived principles are listed below.

1) Transparency and accountability
   To ensure ANU meets its moral, ethical, and legal responsibility in managing the University's environmental sustainability linking with the SDGs, environmental inventory management and internal verification processes.
2) Learning from First Nations Peoples and Inclusion
   Partnering with First Nations and engaging a broader community to create ownership of EMP execution
   Engage with First Nations Peoples through academic work, convening key conversations, and the study of First Nations' traditional knowledge
3) Shared ownership
   Empower organisational units to lead the University's EMP pillars
4) Systems approach and Sustainability
   Transition to a system-based approach and apply Sustainable Development principles
5) Well-being
   Utilise Environmental Management activities to enhance student and staff well-being and productivity
   Build distinctive non-degree offerings that engage creativity and *talent, and Ensure a working environment that increases staff happiness and productivity*

Strategy House

The EMP strategy provides the intent and a structure to operationalise the EMP. The derived principles and associated risks are carefully considered in the strategy setting. The derived strategy house is presented in Figure 2 below.

The strategy house is comprised of three layers. The base represents the identified key stakeholder groups during the consultation process. The SDGs and Climate Adaptation are the cornerstones of the strategy house to cater to the holistic and timely environmental sustainability requirements demanded by stakeholders. They also represent a strong connection with global environmental sustainability demands. Hence, the strategy house is not isolated from the macro-environmental demands.

The middle layer represents the environmental pillars. Six pillars are identified to mitigate the derived risks and cater to stakeholder outcomes while aligning with the principles. The key differences compared to previous EMPs are a) the number of pillars is reduced to six instead of

[12] External stakeholders were not engaged in the EMP process, a requirement of a materiality review

nine[13], b) culture is considered as a common and in-built feature within each pillar and not treated separately, and c) system components identified in each pillar targeting the establishment of an Environmental Management System. The six environmental pillars are interconnected and not silos. The heritage management is not within the scope of this EMP.

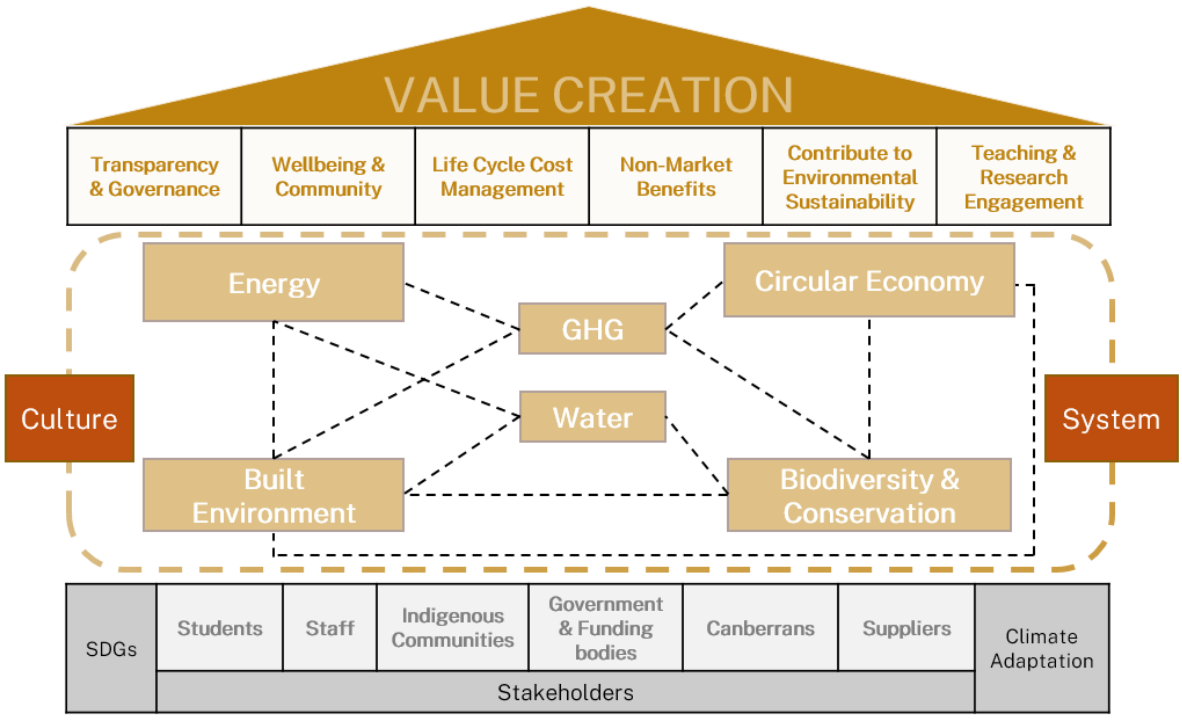


Figure 2 EMP Strategy House

The top layer of the strategy house represents the value additions of the EMP. They are positioned beyond reducing the environmental impacts with broader expectations. The identified value additions are carefully considered while setting the goals and targets, ensuring connectivity with derived principles. Hence, the strategy house demonstrates the EMP as an integral component of the ANU strategic intent, not an isolated system. The diversified value additions also represent the unique expectations of the different stakeholders.

[13] Nine themes of the EMPs 2019- '21: Culture; Built Environment; Energy and Emissions; Recycling and Waste Management; Pollution Prevention; Water; Transport; Landscapes and Biodiversity; and Heritage.

5. Goals and Targets

Goals and targets were identified, aligning with the strategy house and the identified risk elements in Table 4. After five iterations among interested parties, the listed goals and targets were derived based on the following assumptions.

1) The extreme and high risks should be lowered to at least the medium risk category before 2025
2) An environmental management unit will be established to lead, coordinate and technically execute the EMP, and the ANUgreen program will be revamped to support the engagement and culture components.
3) The EMP pillars will be led by the responsible functional managers to minimise the duplication of work and optimise the technical interventions
4) The ANU environmental performance targets were set considering the current performances and will be continuously checked against the performances of comparable universities
5) The EMP will lay the pathway to establishing an Environmental Management System which leads to certifying the ANU under ISO14001 standards.

The six pillars and leaders are listed below and presented separately in the next sections.

1.	Greenhouse gas management	Assoc. Director – Environmental Sustainability
2.	Energy management	Manager - Sustainability & Engineering
3.	Water management	Manager – Environmental Management Plan
4.	Built Environment	Assoc. Director - Infrastructure & Planning
5.	Circular Economy	Manager - Building Operations
6.	Biodiversity & Conservation	Manager - Landscape & Conservation

In 2025, five cross-cutting themes have been added to provide greater accountability around how the environmental sustainability team support the University's environmental goals.

The overall coordination, management and single-point contact for the EMP are proposed to lead by the proposed Environmental Manager role.

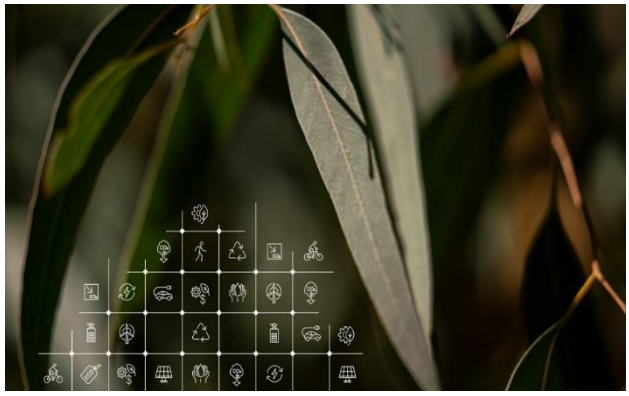
Key

Targets indicate in GREEN represent the culture and engagement activities

BROWN represents the partnerships with First National Peoples

Greenhouse gas management

Wirgany[14]



Transformational change is required to limit climate change to 1.5°C above pre-industrial levels, as agreed in the Paris Climate Agreement. Reducing our greenhouse gas emissions to as close to as possible is the first priority. The University will also work to remove any remaining hard to abate emissions for the long-term.

We aim to reduce the University's carbon footprint by leading programs that reduce the emissions associated with its activities. These programs seek to address the institutional, operational and behavioural mechanisms for change and drive innovation by integrating research and teaching.

Ambition: Below zero emissions by 2040 for direct, energy & value chain emissions (Scope 1, 2 & 3 based on ~90% emissions reduction) and carbon neutrality for 2026 and beyond for direct and energy related emissions (Scope 1 & 2) [15]

Targets

GG1. 100% electrification of buildings by end of 2040

GG2. 100% Electrification of fleet by end of 2030

GG3. 100% market-based renewable electricity usage by end of 2024

GG4. 50% reduction in university travel emissions by end of 2025 (from 2019 baseline)

GG5. 60% reduction in hydrofluorocarbons (HFCs) used as refrigerants by end of 2035 (from 2019 baseline)

GG6. Pilot the purchase of carbon credits in 2025 and claim carbon neutrality for Scope 1&2 emissions for 2026 calendar year and beyond**Error! Bookmark not defined.**Error! Bookmark not defined.**Error! Bookmark not defined.**

Pillar Leader: Associate Director – Environmental Sustainability | Facilities and Services Division

[14] Term Air in the local Walgalu (Ngambri) & Wiradjuri language
[15] See announcement endorsed by Council in April 2024.

Energy management

ANU is one of the largest energy users in the ACT. Significant growth in campus population and building space provides challenges in reducing total campus energy use. ANU has a large number of energy-intensive research facilities, including the housing of the National Computational Infrastructure building, which consumes approximately 12 per cent of the total electrical energy at the Acton campus. Energy accounts for the largest GHG contribution element in the ANU. The participation of all stakeholders is key to enhancing energy management.

Bagurany[16]

The goal: *Optimise the energy efficiency of our built environment, controls and processes to reduce energy consumption of floor area (MJ/m², annum) by 10% in 2025 compared to 2019.*

Targets:

E1. Reduce the energy consumption of Gross Floor Area (MJ/m², annum) by 10% in 2025 compared in 2019

E2a Assess 100% of the major buildings* based on the NABERS Energy scheme in 2025

*Major buildings redefined as those with GFA greater than 4,000m² (35) up from 1,000m² (90).

E2b. Implement energy efficiency tuning in 5% of buildings with Gross Floor Area greater than 1,000m² in 2025

E3. Double to 1MW the onsite renewable energy generation by the end of 2025 from 2021 baseline)[17]

Pillar Leader: Manager - Sustainability & Engineering | Facilities & Services

[16] Term Energy in the local Walgalu (Ngambri) & Wiradjuri language

[17] Estimated

Water management

ANU is one of the largest water users in the ACT. Managing water consumption is imperative to ensuring the University can continue maintaining the landscape and providing world-class facilities. The University has implemented programs to reduce water use per person. The current focus is to minimise the potable water in landscape irrigation and in the residential halls.

Galing[18]

The goal: Reduce per capita potable water use and increase the proportion of non-potable water* used in irrigation/toilet flushing
(*baseline and quantitative targets to be validated based on metering)

Targets:

W1. Reduce per capita potable water consumption*[19,20]

W2. Increase non-potable water to 11% for landscape irrigation*[21]

W3. Reduce the potable water as a percentage of total water usage*

W4. Perform a feasibility study on surface water intake from the Sullivan Creek

Pillar Leader: Manager – Environmental Management Plan | Facilities & Services

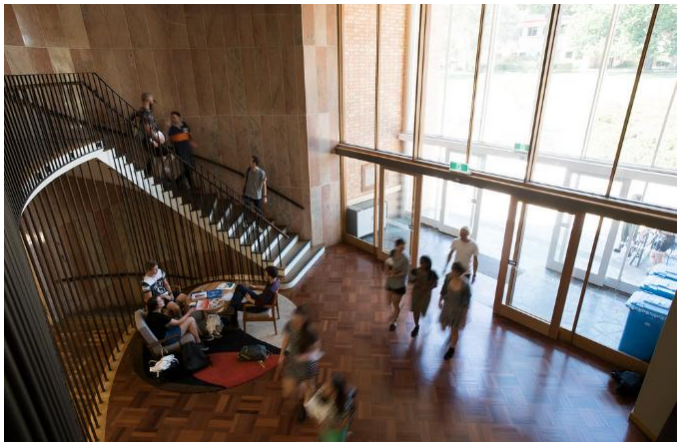
[18] Term Water in the local Walgalu (Ngambri) & Wiradjuri language
[19] Target will be defined based on the outcomes of W2
[20] based on TEFMA baseline report
[21] Target will be defined based on the outcomes of W3 and W5

Built environment

Ganya[22]

The Acton campus is situated in a bushland setting, and the design and construction of the built environment must consider this. Buildings and green spaces need to work in unison with their surrounding area to create a harmonious built and natural campus environment.

ANU manages over two hundred buildings on the Acton campus with a diverse and complex building stock. Optimising the functionality of the built environment is a significant factor in reducing environmental impacts.



The goal: Enhance built environment sustainability by reducing operating footprint by 10% by 2028 (from 2023 baseline)

Targets:

BE1. Introduce an occupancy target for allocated space, coupled with an office space allocation hierarchy based on staff role classification

BE2. Improve Acton campus space utilisation by identifying and implementing space consolidation opportunities

BE3. Draft and implement campus-wide space policy

BE4. Support ANU Green connect initiative, by providing space data to assist in facilitating project delivery

Pillar Leader: Associate Director – Infrastructure & Planning | Facilities & Services

[22] Land, also *gundygang, gunyi, gilguuma, dharaa* in the local Walgalu (Ngambri) & Wiradjuri language

Circular economy

Nanhaybungarra[23]

The first sustainability initiative at ANU was a waste reduction and recycling program, which started in 1999. Since then, the waste program has expanded to include office paper, cardboard, commingled waste, construction waste, garden waste and e-waste.

In 2019, ANU diverted 44 per cent of its waste to recycling and generated 54 kg/person of landfill waste. The current waste contract has a greater focus on recycling and has the ability to measure waste to landfill and recycling levels, making it easier to improve recycling programs. ANU applies the best onsite composting practices in the garden and landscape waste, and reusing it.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

The goal: Reduce per capita waste landfill to 30kg/person (from 2023 baseline of 41kg) and increase waste diversion rate from landfills to 65%.

Targets:

CE1. Reduce the waste to landfill to 30kg per person by 2025 (from 2023 baseline of 41kg)31F[24],32F[25]

CE2. Increase waste diversion rate (recyclable rate) to 65% by 2025 (from X baseline TBC) [25],33F[26]

CE3. Introduce a management program to eliminate single-use plastic waste from the Acton campus by 2025

CE4. Define recycled product categories and develop procuring procedures

CE5. Piloting an organic waste project on campus in 2022 and supporting at least one waste management in-house feasibility study per annum from 2023

Pillar Leader: Manager - Building Operations | Facilities & Services

[23] Term Waste in the local Walgalu (Ngambri) & Wiradjuri language

[24] measured by Full time student equivalent

[25] Target define in-progress

[26] based on TEFMA baseline report

Biodiversity and conservation

Ngurambang[27]

The University is required to manage landscapes and biodiversity under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

Over the past decades, the University has practised sustainable landscape management techniques, including minimising the use of water and pesticides and not planting weed species. The Acton campus is situated in a bushland environment and contains an impressive landscape of 9,600 trees. The focus of landscape management at the Acton campus has been on the critically endangered Old Canberra House Grassy Woodlands and the riparian zone along Sullivans Creek.

The goal: Build landscape resilience and improve conservation outcomes on campus

Targets:

BC1. Increase engagement and knowledge sharing with First Nation peoples to explore opportunities for the implementation of traditional land management practices

BC2. Increase and maintain tree numbers at Acton campus to 10,500 by 2032 while maintaining the diversity of tree population and continued protection of remnant and heritage trees

BC3. Protection and enhancement of habitat for native flora and fauna

BC4. Increase soil health through the refining of in-house compost as a soil-enhancing agent for wider application across the ANU by end of 2024

BC5. Increase the amount of drought-tolerant plant coverage in the landscape to 90% in 2025 while protecting and enhancing biodiversity

BC6. Conduct a chemical use assessment in landscaping activities and establish a reduction plan – 2022

BC7. Identify partnerships with ANU research groups to support the landscape and conservation strategy and create student biodiversity monitoring programs

Pillar Leader: Manager - Landscape & Conservation | Facilities & Services

[27] Term Landscape, Biodiversity in the local Walgalu (Ngambri) & Wiradjuri language

Climate Risk

The worsening impacts of climate change, evidenced by more frequent and intense extreme weather events such as the 2019/20 Bushfire Season, have prompted a necessary shift in climate risk management. As the world implements measures to reduce greenhouse gas emissions (GHG), managing the University's climate risk (both physical and transition) is becoming increasingly necessary to ensure we can continue to operate safely and effectively.

The goal: Disclose the University's climate risk in line with Commonwealth Climate Risk Disclosure and incorporate climate risk into the University's risk management framework by 2025

Targets:

CR1. Compliant climate risk reporting from 2025 (via ANU annual report).

CR2. Develop climate scenarios for the tertiary sector by end of 2025.

CR3. Integrate climate risk into ANU risk management framework by end of 2025.

Pillar Leader: Manager – Chief Risk Officer | Office of the Vice-Chancellor

6. Cross cutting themes

To improve accountability, five cross-cutting themes were added (in November 2024) to outline how the environmental sustainability team support the EMP pillars. These are:

Assessment, strategy development and facilitation

The goal: Assess opportunities and challenges, develop strategy and facilitate implementation of sustainability initiatives

Targets:

AS1. Develop or update strategies for key EMP themes by end of 2025

AS2. Assess and facilitate opportunities for improved environmental performance

Theme leader: Manager – Environmental Sustainability Manager

Governance

The goal: Embed sustainability into the University's policies, procedures and operations

Targets:

GO1. Develop and integrate sustainability into policy, procedure and corporate materials

Theme leader: Associate Director - Environmental Sustainability

Monitoring and reporting

The goal: Meet current and future reporting requirements and monitor progress towards EMP targets and goals

Targets:

MR1. Develop, document and implement robust and verifiable sustainability data management and reporting processes

MR2. Complete compliant mandatory and voluntary environmental sustainability reporting

Theme leader: Manager – Environmental Sustainability Reporting

Community engagement

The goal: To create an empowered and knowledgeable community on climate and sustainability action

Targets:

CO1. Develop and implement a minimum of 10 accessible, interactive opportunities for behavioural change each year

CO2. Develop and implement 15 motivating and inspiring communications and engagement opportunities linked to strategic projects each year

CO3. Engage in a minimum of eight external engagement activities each year

Theme leader: Change Manager – Environmental Sustainability

Research and teaching integration

The goal: To align and integrate environmental sustainability with ANU research, teaching and internship programs, functioning as a living lab, driving innovation and contributing to the employability of graduates

Targets:

CO1. Offer a minimum of five work-integrated learning opportunities for students

CO2. Integrate research expertise into a minimum of four operational projects

Theme leader: Engagement Manager – Environmental Sustainability

7. Execution plan

Proposed organisation structure

The organisation structure is a critical component of the EMP 2022-2025, being the Environment Management Unit is not functioning in the University. The process started with establishing a long-term vision statement considering the legacy team structure, the current context, the future external and internal demands, and the ANU positioning.

Visio: Position as the best environmental management team among the Go8 by 2030

Environmental Management Unit deliverables

The deliverables related to the environment management function are listed to understand the required organisation structure. The listed deliverables are based on the EMP goals and targets, stakeholder engagement outcomes and analysis of the actions led by peer organisations. These deliverables are in addition to the overall coordination, management and single-point contact for the EMP while effectively liaising and supporting the environmental pillar leaders. Hence, these deliverables exclude the Environmental Pillar-related commitments.

The deliverables are classified as short-term and medium-term to support the management decision process. The long-term deliverables are not considered as the EMP scope ends in 2025. Therefore, the planning process for the next EMP starting from 2026 is incorporated as a medium-term delivery.

Table 5: EMP deliverables 2022-2025

Short term[28]	Medium-term
Support to establish the governance structure by coordinating and providing nominations for the steering committees	Management approval for the ANU Environmental Sustainability Policy - 2023 Establish an Environmental Management System and certify under ISO 14001 standard - end-2024
Establish Env monitoring, reporting, and review process: complete feasibility for the Environmental Database combined with the ANU Below Zero program	Establish an environmental KPI scheme for the critical functions and consult the staff on integrating them into the staff appraisal Report EMP KPIs to the ANU Executive Committee periodically - from 2023 onwards
Revamp and establish **ANUgreen** and roll out the first communications package Fix **ANUgreen** calendar events to align with global celebration days	Dissemination: Re-launch the Environmental Sustainability webpage Host an ACTS[29] event - 2023 Organise student-led Env Sustainability Conference - 2024
Train the first batch of Student Environmental Auditors and pilot the internal audits	Perform a materiality review for the scope of environmental management - 2023 Launch ANU Environmental report - aligned with the GRI-based environmental indicators - 2024

[28] First six months after the full recruitment process

[29] Australian Campuses Towards Sustainability

Start the dialogue with the College delegates on setting up environment research and learning partnerships	Management decides on external voluntary reporting - beyond GHG and climate disclosure
Materialise the partnership with the *ACT NoWaste- RecycleIt* and establish a Container Deposit Scheme (CDS) collection point at the ANU	Apply for sustainability award schemes Start reporting an additional SDG to qualify the Times Higher Education ranking to the next tier List and plan for the awards to apply from 2024
Start monthly environmental training: targeting the priority stakeholders	Planning EMP 2026-'30 align with the next ANU strategic plan
Start monthly Environment events and plan to introduce the Vice-Chancellor's Environment Award scheme[30]	Execute *ANU Green* fund to invest in environmental sustainability projects Identify and start applying for: potential funding and grants, and collaboration opportunities - 2023
Start drafting the Environmental Sustainability policy Inception proposal to re-establish the *ANU Green* fund	Integrate Environmental Risk, Incidents and Accidents reporting to existing platforms and start report generation - 2023
Finalise the external stakeholder list[31] for the EMP communications and plan meetings	Start CoP on the application of SDGs in the university systems

The below organisational structure is proposed considering the above deliverables and the overall EMP goals. The structure represents top to bottom functional and administrative functions or designations. The proposed reporting for the environmental management reviews is indicated on the right edge considering the Environmental Management System best practices. The steering committees are further discussed in the Section Proposed governance structure.

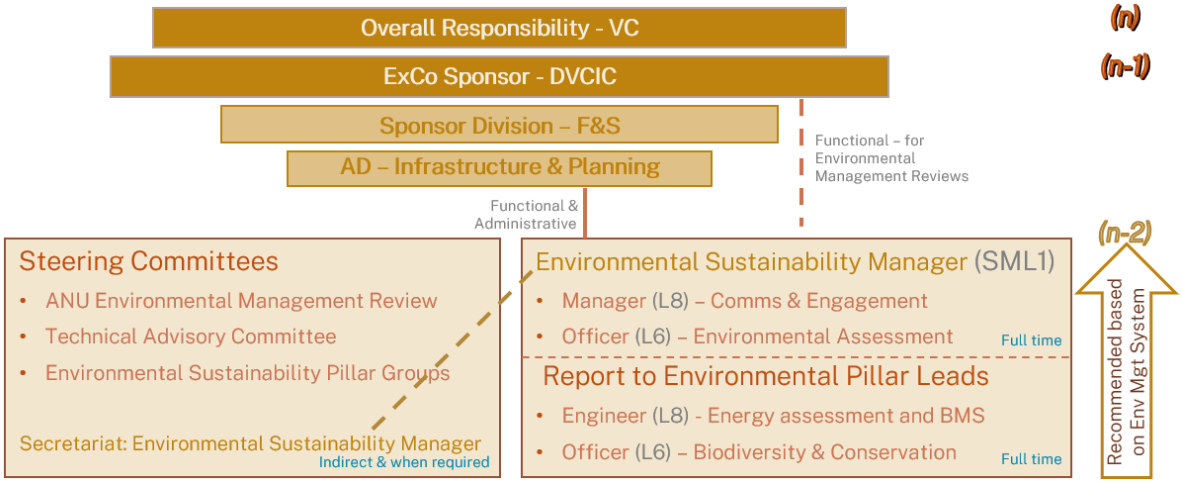


Figure 3: Proposed organisation structure - Environmental Function

[30] to be linked with the culture targets
[31] Align with Below Zero Engagement team

The draft KPIs for the proposed environmental management roles are listed below. It is important to document the responsibilities of each layer, including the Vice-Chancellor. The latter task is left to be decided based on a consultative process after the EMP is signed-off.

Environmental Manager (SML1) *acts as the point of contact for Environmental Management at ANU and will report to the Associate Director of Infrastructure & Planning, F&S Division*

- Env management function setting up and provide leadership to the EMP with effective coordination
- Establish the Env Monitoring & Reporting system and lead the auditing/verification
- Establish and maintain a research and learning community-based program to support and brand it to source funding independently by 2030 – internal & external
- Lead the funding and grants sourcing and collaboration work

Manager Comms and Engagement (L8) a*cts as the ANUgreen Liaison Officer and is responsible for communications, engagement, driving inclusivity and will report to Environmental Manager*

- Revamp ANUgreen program and establish the EMP interface with the stakeholders
- Increase engagement with stakeholders through an effective comms strategy and manage the communication portfolio
- Lead and execute the identified engagement and culture targets in the pillars, and awards

Officer – Assessment & Monitoring (L6)[32] - *to ensure timely implementation of Environmental compliance monitoring and ISO14001 Env Mgt System readiness and will report to Environmental Manager*

Engineer - Energy Assessment & BMS (L8)[32, 33] - *to ensure primary energy measures are monitored through regular energy assessments. This role will report to the Manager - Sustainability & Engineering.*

Officer Biodiversity & Conservation (L6)[32] - *to ensure the biodiversity action plan is operationalised, and the fauna aspects are equally considered[34]. This role will report to the Manager Landscape & Conservation.*

[32] KPIs to be defined
[33] This role is identified as a potent to fund by the Below Zero program.
[34] Currently no resources specialized/experienced in fauna in the Landscape & Conservation team

Proposed governance structure

The proposed governance structure is inspired by the ANU Environmental Management Planning Committee that functioned until the end of EMP 3 (before 2017) and the Below Zero programme governance framework (Version: Nov 2021). There are two new additions in the proposed governance structure compared to previous EMPs (see Figure 4). They are a) Environmental Technical Advisory Committee, b) Environment Management Team and c) Environmental Sustainability Pillar Groups. Integrating the Below Zero programme governance structure was also evaluated as an option. However, it was concluded as not practical since both programs are in the inception phase. Hence, the governance structure integration will be re-evaluated in the next EMP planning process.

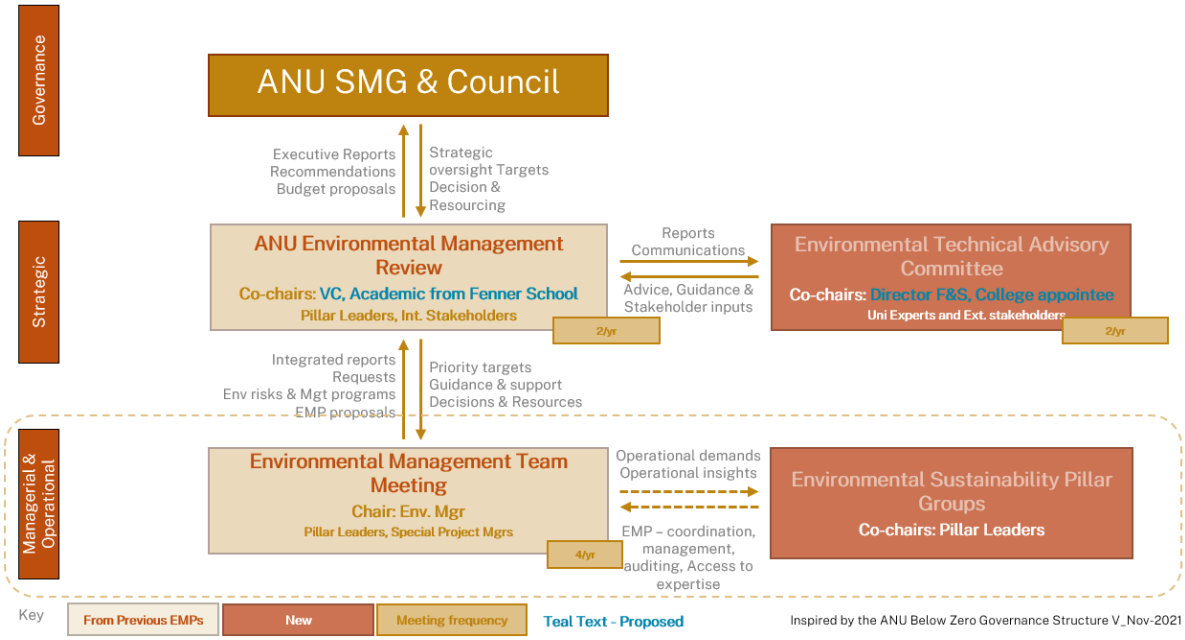


Figure 4: Proposed governance structure - EMP 2022-2025

The proposed composition of the Technical Advisory Committee is indicated in Figure 4. However, the Term of Reference has to be finalised once the EMP is approved. The Environment Technical Advisory Committee is constituted of high-level internal and external stakeholders who contribute to the EMP through their expertise, bringing perspectives and increasing the visibility of the EMP.

Both the Environment Management Group and Environment Sustainability Pillar Groups will function as management committees and be accountable for the execution of the EMP. Also, both are newly introduced to increase the ownership of the EMP among distinct functions and provide more opportunities to participate in the EMP process. The proposed meeting frequencies are indicative and align with the industry's best practices.

Appendix 1 - Stakeholder engagement summary

Table 6: List of consulted stakeholders during the EMP process

Function	Names	Key inputs
First Nations Portfolio	Paul House	Partnering opportunities with the First Nations communities: water and biodiversity-related activities were identified as the initial and relevant
PARSA	Environment Officer, Secretary, Campaign Advisor	Keen to follow up on the signing-off of the EMP as the last EMPs were not approved and reduced the environmental management performances and student engagement in the University The importance of engaging the students in the EMP No communications from the University with regards to the environmental management aspects during the last years other than the Below Zero Program Open to collaborating with the EMP activities Start greening the events and functions in the University
ANUSA	Environment Officer, Environment Collective Members	Importance of engagement and clear communication The GHG impacts of the ANU investments and the importance of de-investing in fossil-based investments Open to collaborating with the EMP activities
Fenner School of Environment & Society	A meeting with the Fenner School academics and researchers organised by the Director Fenner	It was identified as a lack of ownership and engagement in environmental management activities in the University, and highly recognised the initiative to revamp the EMP Engaging the interested academic cohort in the EMP preparation and execution is important. Focus on fauna elements in the EMP Explore opportunities to integrate internal capabilities in solving the EMP-related issues and the EMP execution Two key areas were identified that the Fenner School academics could be partnered with: Water and Biodiversity & Conservation activities, and agreed to reach the School once the EMP is signed-off[35]. Initiate student projects and provide more opportunities for students to engage. Fenner School will be fully supportive of promoting the student-led waste auditing

[35] a follow-up meeting was organised with Prof Saul Cunningham - Director of Fenner School on potential partnering opportunities and the Director was fully supportive in the process. Two key areas were identified to start the initiative with the students' projects and the presence of the Fenner Academics in the proposed Steering Committee structure. For student engagement through teaching, contact the Director of Education of Fenner School.

Function	Names	Key inputs
		Revamp the ANUgreen program for more active engagement of both staff and students
	Prof James Pittock	Transport roundtrip trip to the University: implement sustainable transportation options and revamp some of the previous practices Execute an effective Comms plan on the EMP and execution Rainwater harvesting - extend the scope to the treatment of stormwater Protection and enhancement of the Acton Peninsula grassy woodland
ICEDS	Prof Mark Howden, Clare de Castella, Juliet Meyer	Considering the SDGs and climate adaptation as base elements of the EMP and connecting them with the ongoing work through EMP pillars. Utilise the EMP to empower 'Transformation Research & Teaching' Consider the concept of 'well-being' as a value creation to align with the global goals and the development of the ACT government framework. It was 'create happiness' *in the EMP V5.0*. Promote more nature-based solutions such as renewable energy and substituted materials for virgin raw materials Importance of benchmarking the targets and their achievements - maintain consistency Minimise the duplications with the ANU Below Zero program while operationalising the EMP Importance of the resourcing of the EMP execution, both staffing and financing Readiness for a Plan B in the case of a challenge to find the budgets Engage with the University's ACE team during the transition period to the EMP for preparing an EMP-focused communications plan
Below Zero Program	Thomas Biederman	*Regularly engaged in optimising the synergies and minimising the duplications as a core-project partner Follow a similar governance structure to the Below Zero programme[36] Align the EMP Energy pillar goals and targets to support the Below Zero targets Maintaining a common environmental data management platform: water, energy, water and GHG inventory Explore synergies in biodiversity enhancement during the emission removal
CGRO	Neetha Johnson	Importance of employing the University risk matrix in the environmental risk evaluation process

[36] However, it was identified that integrating both programs into one governance structure is not practical in the first few years.

Function	Names	Key inputs
		How to collaborate in upcoming Environmental Sustainability audits under the Corporate Governance plan Updating the CGRO on significant outcomes of the Environmental Audits and especially if there is a risk of failing a statutory requirement
SDG working group on Times Higher Education ranking	Phillip Tweedie, representing Prof Sally Wheeler[37]	Identified the EMP as a supporting tool to achieve the next level of the Times Higher Education rankings by establishing a structured environmental sustainability reporting and review platform SDG 7[38] and 12 are identified as potential extensions to the current reporting. An inception meeting is proposed for early Q3 - 2022, with the assumption of approving the EMP
Business Development Manager - CoS	Hannah Gisz	The EMP can be an instrument to create an SDG working group / a Community of Practice (CoP)
University Finance team	Vibo Chandrasekera	The Draft EMP was shared
Building custodians	A virtual meeting organised on 1 Mar inviting University-wide Building Custodians and Facility managers	Importance to share the best practices and continue with the regular catchups with the Building Custodians Customise support to prevailing environmental concerns Explore the opportunity of centralised special waste management contracts (an outcome of the Specialised Waste Mgt Survey) Highlight the data access for their space/building areas for informed decision making
HR - Work Environment Group	Sheren Al-Obaidi	Possibility of extending Figtree in reporting Environmental incidents. The similarities are identified in the H&S reporting fields. However, the aspects required to change, which is possible to execute
Legacy Team / Engaged professionals in the ex-EMP development		
Ex-EMP teams	Bart Meehan, John Sullivan, Dr Su Wild-River	Focus on how to create the ownership for the EMP among all relevant stakeholders - the idea was not to see it as a plan of F&S only The importance of the culture piece in the success of an EMP Integrate the resilience component to the proposed EMP actions

[37] was out of the country

[38] It was later discussed SDG 7 Is the most significant in relevant to the ongoing Below Zero program

Function	Names	Key inputs
		The support required for the technical pillar leads by establishing a full-time Environmental Management office The student internship program was one of the best attractive programs under the ANUgreen program. The importance of establishing the Student Liaison Officer role for more interactive, effective ANUgreen functioning The importance of re-establishing the Building Custodians Alliance or a similar program with regular training for them, including mini projects as the post-training actions Focus on professional staff engagement in the EMP execution Identify specific projects with a narrow scope for students' internship program and establish an appreciation scheme (e.g., a certificate, ANU email address, etc.)
Ex-EMP collaborators	Prof Katherine Daniell, Rebecca Blackburn	Importance of introducing measurable targets Implement and action the College or School level Environmental Operational Committees Ensuring the management commitment to sign off the EMP Importance of establishing a governance structure Degraded engagement due to not resourcing the ANUgreen program, which once was a great success Revamping the ANUgreen and executing the social media campaigns to engage students Integrate 'environmental management' as an integral part of the ANU strategic plan Implementation champions representation: both from academic and professional staff Representation of the First Nations in the steering committee structure Map and identify the exciting cohorts for the environmental management activities from non-STEM areas (e.g., School of Music and Arts)
Facilities & Services - Sponsor division		
F&S - Infra. & Planning	Peter Geerdink	*EMP Project Supervision and the facilitator Increase the effective built environmental assessments Simplifying the Env Procedural Documents Engage Building Custodians more frequently
F&S - Eng & Sustainability	Keith Hickson, Andy Wayo, Andy Smith, Guy Walpole	Importance of data-based decision making, Env Data Management System, Drive the Env Culture engaging stakeholders Importance of primary energy-focused assessments

Function	Names	Key inputs
		Extending the water metering system to quantify the potable water use in landscape irrigation Engage Building Custodians more frequently
	Keith Hickson, Rajeel Naicker	Integrating the Env Sustainability indicators into the ongoing Energy Dashboard project: consider integrating water and waste data other than energy as transition steps of the proposed EMP
F&S - Space management	Sarah O'Callaghan[39]	Importance of the alignment with the TEFMA reporting guidelines and building/space categorisation
F&S - Operations	Trent Orchard, Mathew Maclay	Importance of a centralised waste management record system and informing the area /space custodians on the waste trends Integrate construction demolition waste into the data system (currently not reporting)
F&S - Compl. & Governance	Kin Lin, Karen Roberts	Importance of the 'Review' process of the Env data prior to management reporting and decision Study and analyse the WHS Management practices for environmental emergency preparedness, environmental complaint management and centralise reporting system
F&S - Security & Transport Manager	Joe Ducie	Utilising ANU OK app for environmental incident reporting

[39] Ex-point of contact for the TEFMA